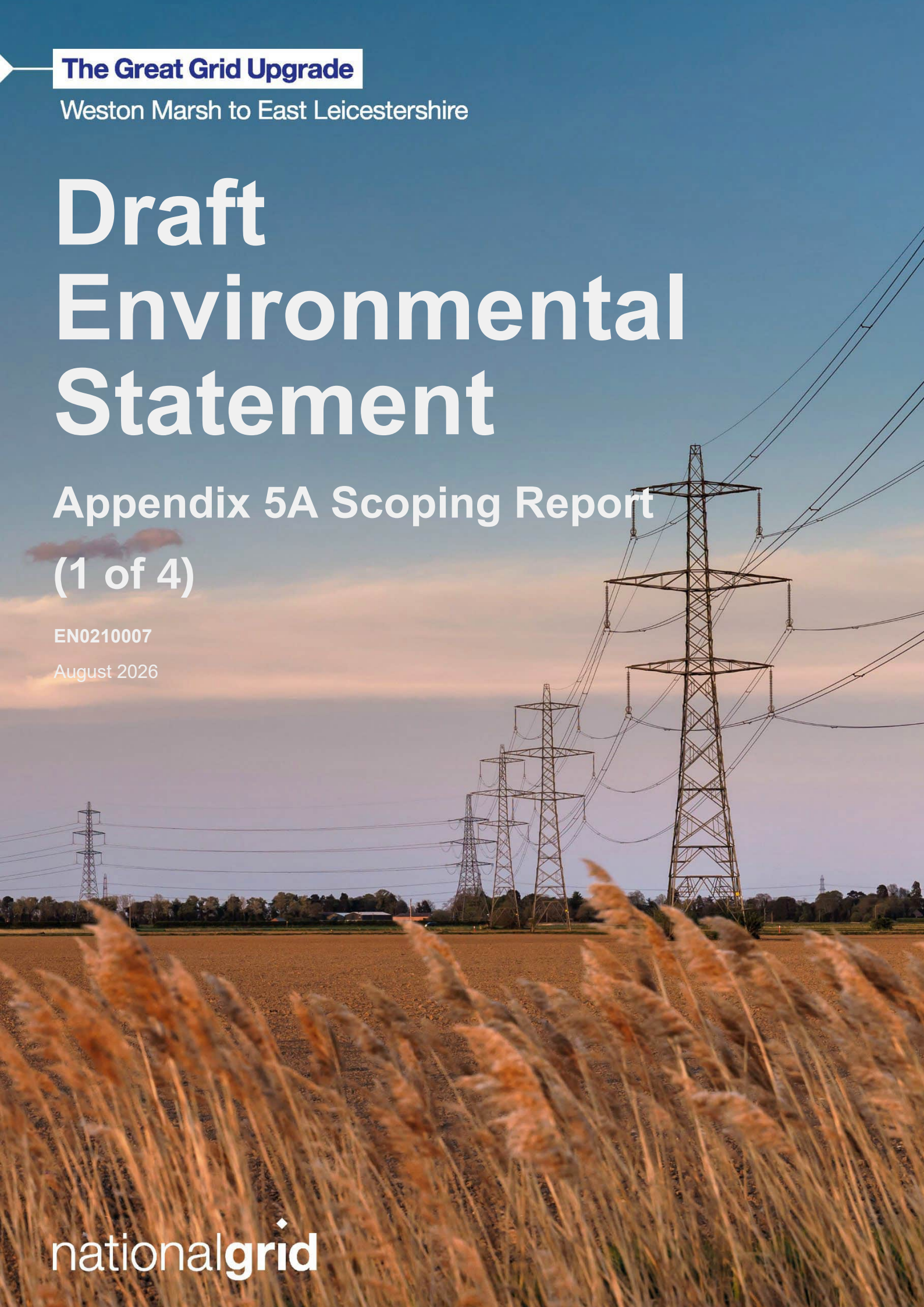




The Great Grid Upgrade

Weston Marsh to East Leicestershire

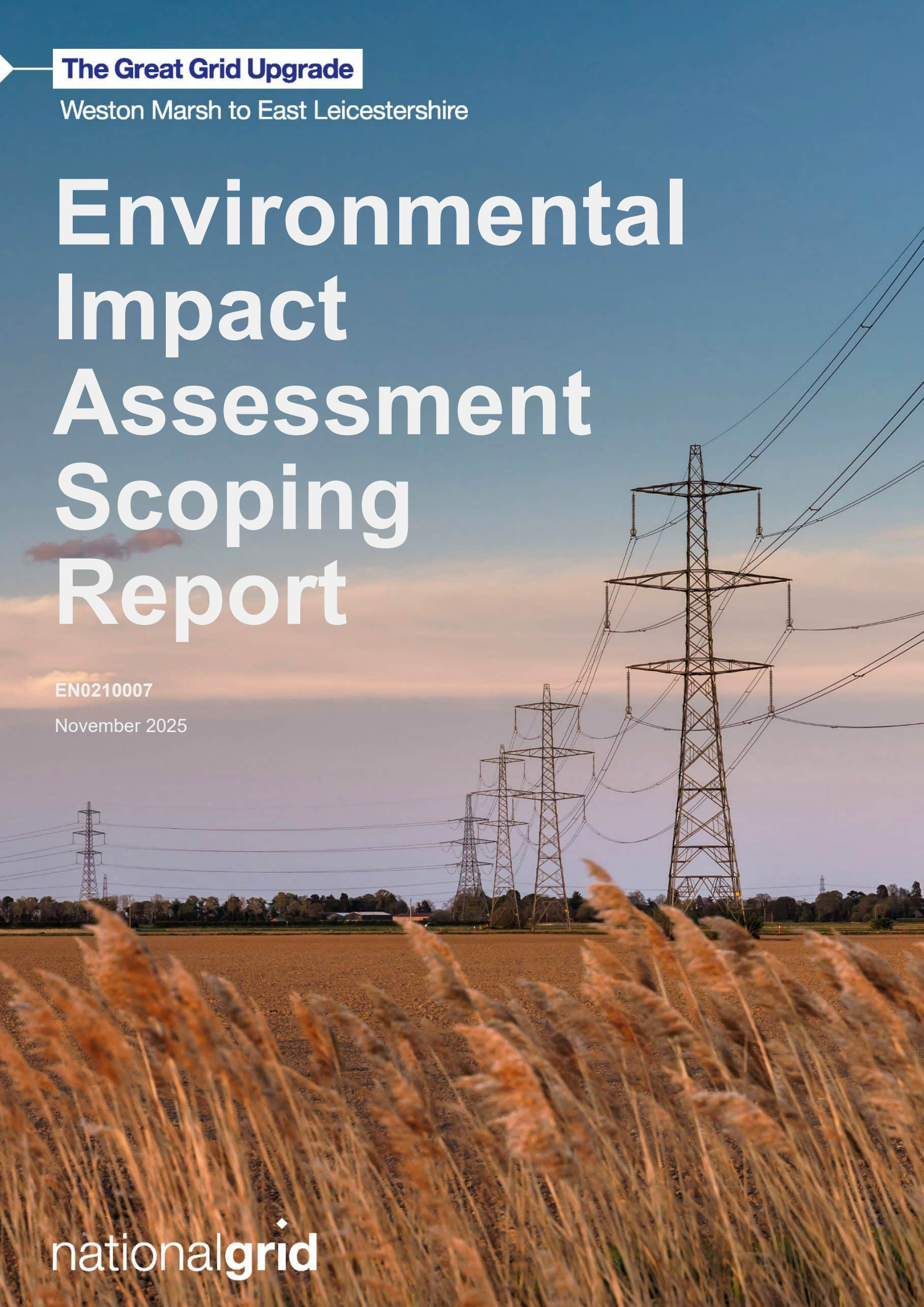
Draft Environmental Statement

Appendix 5A Scoping Report (1 of 4)

EN0210007

August 2026

nationalgrid



The Great Grid Upgrade

Weston Marsh to East Leicestershire

Environmental Impact Assessment Scoping Report

EN0210007

November 2025

nationalgrid

EIA Scoping Report Contents

1.	Introduction	1-1
2.	Regulatory and Planning Policy Context	2-1
3.	Main Alternatives Considered	3-1
4.	Description of the Project	4-1
5.	EIA Approach and Methodology	5-1
6.	Landscape	6-1
7.	Visual	7-1
8.	Ecology and Biodiversity	8-1
9.	Cultural Heritage	9-1
10.	Water Environment	10-1
11.	Geology and Hydrogeology	11-1
12.	Agriculture and Soils	12-1
13.	Traffic and Transport	13-1
14.	Air Quality	14-1
15.	Noise and Vibration	15-1
16.	Socio-economics, Recreation and Tourism	16-1
17.	Health and Wellbeing	17-1
18.	Climate Change	18-1
19.	Major Accidents and Disasters	19-1
20.	Summary	20-1

1. Introduction

Contents

1.	Introduction	1-1
1.1	Overview	1-1
1.2	The need for the Project	1-2
1.3	The requirement for Environmental Impact Assessment	1-2
1.4	Geographical Context	1-3
1.5	Purpose of the Scoping Report	1-3
1.6	Structure of this Scoping Report	1-6
1.7	Competence	1-7
1.8	Net Gain Commitments	1-7
1.9	Stakeholder Engagement	1-8
	Future engagement and consultation	1-10
1.10	References	1-11

Table 1.1	Compliance with Regulation 10(3) and PINS Advice Note Seven	1-4
Table 1.2	Structure of this Scoping Report	1-6
Table 1.3	Summary of engagement undertaken	1-9

1. Introduction

1.1 Overview

- 1.1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by National Grid Electricity Transmission plc (National Grid), to support a request for a Scoping Opinion from the Secretary of State (SoS) for the Department for Energy Security and Net Zero, for the purposes of Regulation 10(1) of The Infrastructure Planning (Environmental Impact Assessment Regulations 2017 (the “EIA Regulations”) (Ref 1.1) for the Weston Marsh to East Leicestershire Project (the “Project”).
- 1.1.2 The Project is a Nationally Significant Infrastructure Project (NSIP), as defined under Part 3(16) of the Planning Act 2008 (“PA 2008”) (as amended) (Ref 1.2) because it comprises a new electricity line above ground with a length of more than 2 kilometres (km), and with an operating voltage of above 132 kilovolt (kV).
- 1.1.3 The proposal by National Grid (the “Applicant”) is to reinforce the transmission network with a new 400 kV overhead transmission line over a distance of approximately 60 km. The new line starts from new 400 kV substation infrastructure (up to new two substations) at Weston Marsh to the north east of Spalding and continues west to a new 400kV substation proposed to the west of the village of Ab Kettleby and north west of Melton Mowbray, Leicestershire (referred to as ‘WMEL-B’), via a new 400kV substation proposed to the west of Coby Glen (referred to as ‘WMEL-A’). The Project also includes approximately 66 km of reconductoring of the existing overhead transmission line from WMEL-B substation to the existing Grendon substation, east of Northampton.
- 1.1.4 National Grid owns, builds, operates and maintains the electricity transmission network in England and Wales, transporting electricity from generators (such as wind farms, solar farms and power stations) to local distribution network operators. Under the Electricity Act 1989 (Ref 1.3), National Grid holds a transmission licence, under which it is required to develop and maintain an efficient, coordinated and economical electricity system.
- 1.1.5 National Grid is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to:
- Schedule 9(1)(a) ‘...have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest;’ and*
- Schedule 9(1)(b) ‘...do what [it] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects’.*

1.2 The need for the Project

- 1.2.1 The Government's recent British Energy Security Strategy (Ref 1.4) outlines the ambition to increase energy from offshore wind to 50 gigawatt (GW) by 2030 – more than enough to power every home in the UK. This has led to a shift towards offshore renewable generation of power away from coal powered generation in the north and the Midlands. The UK is also transporting more power between countries across the North Sea, using interconnectors. These factors have driven a change in the energy landscape across the UK and in the East Midlands (including Lincolnshire and Leicestershire) where reinforcement of the network of overhead lines, towers, cables and other infrastructure that transports electricity around the country is required to deliver this change.
- 1.2.2 The existing electricity transmission network in the East Midlands region was developed in the 1960s and has historically been able to meet demand. However, due to the changes noted above in terms of delivering net zero emissions, the existing network does not have the capability to reliably and securely transport all the energy that will be connected by 2030, whilst operating to the standards it is required to. The Project is part of The Great Grid Upgrade¹ and along with a number of other projects will support the UK's net zero target by reinforcing the electricity transmission network along the East Coast and facilitating the connection of planned offshore wind generation, interconnectors with other countries and other sources of electricity, allowing clean green energy to be carried on the network.
- 1.2.3 National Grid has considered alternative strategic options to reinforce the network and alternative route corridors, as part of the options appraisal process (see **Chapter 3 Main Alternatives Considered**). The reinforcement is necessary to support the connection of new generation projects in Scotland and the north-east of England in the next decade and beyond. National Grid identified that the existing transmission system would not be sufficient to meet connection demand going forward, as there is an increasing need to reinforce the transmission network from east-to-west to ensure that this new capacity can be safely transported to where it's needed. Without additional network capability, offshore wind and interconnectors will be constrained at times of high wind generations and high imports. The operation of the network would become sub-optimal in the long term, less efficient, and more carbon intensive sources of generation would potentially be used at those times, hindering progress towards net zero.
- 1.2.4 The network reinforcement would provide greater security to the network in the region and reduce the risk of outages (a period of interruption to electricity supply) from limited network availability. If the network is not reinforced, outages could result in a greater risk of widespread supply interruptions. The transmission network needs to be able to maintain a minimum level of security of supply, as defined within the National Electricity Transmission System Security and Quality of Supply Standards (Ref 1.5).

1.3 The requirement for Environmental Impact Assessment

- 1.3.1 Environmental Impact Assessment (EIA) is a process required by UK law which brings together information about the likely significant effects of a proposed

¹ Further information on The Great Grid Upgrade can be found online at: www.nationalgrid.com/the-great-grid-upgrade.

development. The original legal basis for EIA lies in European Community Directive 85/337/EEC2 (the “EIA Directive”). The EIA Directive remains transposed into UK law through several pieces of legislation.

- 1.3.2 In relation to NSIPs, EIA is required for certain developments under the EIA Regulations (Ref 1.1). Under the EIA Regulations, EIA is mandatory for development projects defined under Schedule 1. Those development projects defined in Schedule 2 only require EIA if they are likely to have significant effects on the environment by virtue of their nature, size or location. As the Project comprises an overhead electrical power line with a voltage of 220 kV or more and its length is greater than 15 km, the Project falls under Schedule 1. As such, National Grid hereby provides notice under Regulation 8(1)(b) of the EIA Regulations that the Project’s application for development consent will be accompanied by an Environmental Statement (ES).

1.4 Geographical Context

- 1.4.1 The Project is located in the East Midlands region, as illustrated on **Figure 1.1 Site Location Plan**. It lies within the following local authority administrative areas: the eastern part of the Project lies within South Holland (Lincolnshire County), the central parts of the Project lie within South Kesteven (Lincolnshire County) and Melton (Lincolnshire County), and as the reconductoring heads south from WMEL-B, the Project continues south through Harborough (Leicestershire County), North Northamptonshire and West Northamptonshire (unitary authorities).
- 1.4.2 The Project is located in an area that is predominantly rural, with large parts of the land under arable use. The towns of Spalding, Bourne, Melton Mowbray, Market Harborough, Kettering, and Wellingborough are located within 5 km of the Project. There are also multiple villages and individual properties near to the Project.
- 1.4.3 There are numerous 400 kV overhead lines of varying voltage in the vicinity of parts of the Project, as shown on **Figure 1.1 Site Location Plan**. Most notable is the existing 400 kV 4ZM overhead line which routes parallel to the eastern edge of the Scoping Boundary and through the Siting Zone for Weston Marsh substation infrastructure, the existing 400 kV 4VK to which the proposed WMEL-A Substation would connect, and the existing 400 kV ZA to which the proposed WMEL-B Substation would connect. There is also one existing 400 kV substation located within 1.5 km of the Scoping Boundary, the existing Spalding North Substation.
- 1.4.4 The Scoping Boundary is based on the emerging preferred corridor identified within the Corridor Preliminary Routing and Sitting Study (CPRSS) (Ref 1.6), a 2 km area around the existing ZA overhead line which will be subject to reconductoring, and the Siting Zone for Weston Marsh substation infrastructure. The option appraisal process for the new overhead line ensured impacts on key areas of high amenity and environmental value were avoided or minimised, such as residential properties, designated wildlife sites, woodland (including ancient woodland), and known heritage assets.

1.5 Purpose of the Scoping Report

- 1.5.1 Scoping forms a key stage of the EIA process in providing a framework for identifying potential likely significant effects arising from the Project and distinguishing the environmental topics to be addressed within the ES.

- 1.5.2 This Scoping Report sets out the proposed content, methodologies to be adopted and the potential likely significant effects that are proposed to be considered in the ES.
- 1.5.3 The opinion of the SoS is being sought specifically on:
- the environmental topics that should be included in the ES;
 - the relevant components of the Project and the resultant likely significant effects;
 - those effects not likely to be significant that do not need to be considered further;
 - the approach to setting the Study Areas for each topic;
 - the data that has been gathered (and will be gathered);
 - the assessment methods that will be used to determine likely significant effects; and
 - the approach to determining the environmental measures that could be incorporated into the Project to avoid, prevent, reduce or, if necessary, offset significant effects.
- 1.5.4 This Scoping Report has been prepared in accordance with the EIA Regulations (Ref 1.1) as well as having due regard to Planning Inspectorate (PINS) Advice Note Seven (Ref 1.7).
- 1.5.5 Regulation 10(3) of the EIA Regulations defines the information that must be provided when requesting a scoping opinion, namely:
- “(a) a plan sufficient to identify the land;*
- (b) a description of the proposed development including its location and technical capacity;*
- (c) an explanation of the likely significant effects of the development on the environment; and*
- (d) such other information or representations as the person making the request may wish to provide or make”.*
- 1.5.6 **Table 1.1** identifies where the information set out in Regulation 10(3) and PINS Advice Note Seven can be found within this Scoping Report.

Table 1.1 Compliance with Regulation 10(3) and PINS Advice Note Seven

Suggested information to be included within the Scoping Report	Location within this Scoping Report
The Project	
A plan sufficient to identify the land.	The Scoping Boundary is shown on Figure 1.2 Scoping Boundary
A description of the Project including its location and its technical capacity.	Chapter 4 Description of the Project

Suggested information to be included within the Scoping Report	Location within this Scoping Report
An explanation of the likely significant effects of the development on the environment.	This is presented within section 7 of the technical chapters (Chapter 6 to Chapter 18 , for Chapter 19 Major Accidents and Disasters , this is provided in Appendix 19A) and in Chapter 20 Summary .
EIA Approach and Topic Areas	
An outline of the reasonable alternatives considered and the reasons for selecting the preferred option.	Chapter 3 Main Alternatives Considered
An explanation of the approach to addressing uncertainty which remains in relation to the elements of the Project.	Chapter 5 EIA Approach and Methodology
A summary table describing each of the aspects and matters that are requested to be scoped out allowing for quick identification of issues.	Each of the technical chapters (Chapter 6 to Chapter 18) include a table describing those sources, impacts and receptors proposed to be scoped in and out of the ES. For Chapter 19 Major Accidents and Disasters , this is provided in Appendix 19A . A summary table is provided in Chapter 20 Summary .
A detailed description of the aspects and matters proposed to be scoped out of further assessment with justification provided.	This is presented within section 7 of each of the technical chapters (Chapter 6 to Chapter 19).
Results of desktop and baseline studies where available and where relevant to the decision to scope in or out aspects or matters.	Information on the baseline characteristics is included in section 5 of each of the technical chapters (Chapter 6 to Chapter 19).
Aspects and matters to be scoped in, the report should include details or the methods to be used to assess the impacts and to determine the significance of effect e.g. the criteria for determining sensitivity and magnitude.	Sources, impacts and receptors proposed to be 'scoped in' for the purpose of the ES are identified within section 7 of each of the technical chapters (Chapter 6 to Chapter 19). The proposed EIA approach and methods are described in Chapter 5 EIA Approach and Methodology and in section 8 of each of the technical chapters (Chapter 6 to Chapter 19) which describe how they will apply that methodology to their assessments or where it differs due to specific topic guidance, set out their proposed methodologies.
Any avoidance or mitigation measures proposed, how they may be secured and the anticipated residual effects.	These are set out within section 6 of each of the technical chapters (Chapter 6 to Chapter 19). An Initial Outline Code of Construction Practice

Suggested information to be included within the Scoping Report	Location within this Scoping Report
	(CoCP) is provided in Appendix 4A Initial Outline Code of Construction Practice .
Information Sources	
Reference to any practice and best guidance to be relied upon	This is presented within section 2 of each of the technical chapters (Chapter 6 to Chapter 19).
Evidence or agreements reached with consultation bodies	Section 3 of each technical chapter (Chapter 6 to Chapter 19) will include a table showing the summary of engagement undertaken with stakeholders to date.

1.6 Structure of this Scoping Report

- 1.6.1 The structure of this Scoping Report is outlined in **Table 1.2**. For ease of presentation, **Volume 1** presents the main text of this Scoping Report; **Volume 2 Appendices and Volume 3 Figures**.

Table 1.2 Structure of this Scoping Report

Chapter/Appendix	Content
Volume 1 – Main Text	
Chapter 1 Introduction	An introduction to the Project and the purpose and structure of the Scoping Report.
Chapter 2 Regulatory and Planning Policy Context	A review of the legislative and policy relevant to the Project.
Chapter 3 Main Alternatives Considered	This chapter outlines the evolution of the Project, reasonable alternatives considered and the reasons for selecting the preferred Project.
Chapter 4 Description of the Project	This chapter describes the Project including permanent features and associated temporary works. It describes the general characteristics of the Project, outlines areas of flexibility in relation to design parameters, and how the Project would be constructed, operated and maintained.
Chapter 5 EIA Approach and Methodology	A description of the overall EIA methodology (including cumulative effects) that is proposed for the Project including temporal durations and approach to mitigation.

Chapter/Appendix	Content
Chapter 6 Landscape	There is a chapter for each of the environmental topics which describe aspects to be scoped in and out of the EIA. These technical chapters are structured as follows: - the regulatory and planning policy context specific to the topic area; - the proposed topic Study Area; - a description of the relevant baseline including data sources used; - a summary of engagement undertaken to date presented in a table; - any embedded or good practice measures take into consideration when proposing the scope; - potential for significant effects; - proposed assessment methodology; and - concluding statements explaining the matters proposed to be scoped into and out of the ES.
Chapter 7 Visual	
Chapter 8 Ecology and Biodiversity	
Chapter 9 Cultural Heritage	
Chapter 10 Water Environment	
Chapter 11 Geology and Hydrogeology	
Chapter 12 Agriculture and Soils	
Chapter 13 Traffic and Transport	
Chapter 14 Air Quality	
Chapter 15 Noise and Vibration	
Chapter 16 Socio-economics, Recreation and Tourism	
Chapter 17 Health and Wellbeing	
Chapter 18 Climate Change	
Chapter 19 Major Accidents and Disasters	
Chapter 20 Summary	
Volume 2 Appendices	Provides the Appendices which support Volume 1.
Volume 3 Figures	Provides the Figures which support Volume 1.

1.7 Competence

- 1.7.1 Regulation 14(4) of the EIA Regulations (Ref 1.1) requires that an ES is prepared by “competent experts” and that the ES is accompanied by a competent expert statement outlining the relevant expertise or qualifications of such experts.
- 1.7.2 This Scoping Report has been prepared and coordinated by a team from organisations which are members of the Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment) EIA Quality Mark Scheme (Ref 1.8). This is an independently reviewed voluntary standard, requiring organisations to commit to excellence in their EIA activities. All specialists have demonstratable expertise in their fields. These credentials are demonstrated by ‘Competent expert statement,’ as detailed in **Appendix 1A Competent Expert Statement**.

1.8 Net Gain Commitments

- 1.8.1 Under the Environment Act 2021 (Ref 1.11) it will be mandatory for all (terrestrial) NSIPs submitted from May 2026 to deliver biodiversity net gain (BNG). The requirement is to achieve at least 10% measurable net gain, which is to be secured for at least 30 years. Defra is developing details on how BNG will apply to NSIPs, public consultation on its content was undertaken in July 2025.

- 1.8.2 National Grid's Environmental Action Plan 2021-2026 (Ref 1.12) makes a commitment to achieving at least 10% gain in environmental value (including biodiversity) on all construction projects by 2026.
- 1.8.3 This commitment requires delivery of quantifiable enhancement for biodiversity from the pre-development baseline, measured using the Defra statutory biodiversity metric (Ref 1.13) applicable at the time of assessment, with actions formalised and secured by long term management arrangements with external organisations and partners.

1.9 Stakeholder Engagement

- 1.9.1 This section sets out National Grid's approach to stakeholder engagement and consultation. It provides an overview of the general approach, the engagement and consultation that has taken place to date, and that is proposed in the future.
- 1.9.2 Engagement and consultation with technical stakeholders and the local community is a key element of the EIA process and will inform the design and assessment of the Project.

General approach

- 1.9.3 The Applicant will continue to ensure stakeholders are engaged and consulted in a useful and inclusive manner. The general approach to engagement and consultation includes:
- Engagement and consultation activities scheduled at key points of the design and assessment process.
 - Proactive and effective engagement with statutory and non-statutory stakeholders, including local residents who are most likely to be impacted by the Project.
 - A focus on the matters of greatest importance and relevance to stakeholders to ensure efficient use of their time.
 - Use of varied and accessible engagement techniques – including a mix of online and in person channels. One-way and two-way communications will be utilised.
 - Opportunities for stakeholders to share their experience and knowledge to help identify potential effects, mitigations and enhancements at an early stage of the design process.
 - Addressing stakeholder queries and concerns in an efficient and effective manner.
 - Feedback which will be recorded, analysed and used to inform the EIA, optioneering and design of the Project.

Summary of engagement and consultation undertaken

- 1.9.4 A summary of relevant engagement undertaken to date is provided in **Table 1.3**

Table 1.3 Summary of engagement undertaken

Date	Engagement and consultation activity	Stakeholders engaged/consulted
November 2024 – February 2025	Initial project briefings during options appraisal phase	Initial project briefings with various local authorities (engaged on the basis of the broad study area for the purposes of the CPRSS before the study area was narrowed down): • Charnwood Borough Council; • Harborough District Council. • Leicestershire County Council; • Lincolnshire County Council; • Melton Borough Council; • North Northamptonshire Council; • Nottingham County Council; • Rushcliffe Borough Council; • Rutland County Council; • South Holland District Council; • South Kesteven District Council; - and • West Northamptonshire Council.
11 June 2025 – 06 August 2025	Non-Statutory Consultation	Public consultation with communities and stakeholders. Feedback received from Statutory Environmental Bodies, non-statutory environmental groups, community members, parish councils and Members of Parliament.
July 2025 and ongoing	Statutory Environmental Bodies / Technical Stakeholders	Engagement with the following Statutory Environmental Bodies / Technical Stakeholders to discuss the Project: • Environment Agency; • Historic England; • National Highways; and • Anglian Water.

- 1.9.5 The Applicant has not yet engaged directly with Landowners given the extent of the preferred route option corridor and walkover surveys have been undertaken from publicly accessible land and rights of way only to support the design, environmental and socio-economic appraisal of options and in this Scoping Report. These discussions will commence following further design option development and in planning a full programme of surveys.

- 1.9.6 The Applicant will continue to engage with other developers in the area to consider opportunities for coordination, including Grimsby to Walpole, also being developed by National Grid.

Future engagement and consultation

- 1.9.7 In line with the requirements of the PA 2008 (Ref 1.2), the Applicant will undertake further consultation and engagement with communities and stakeholders as the Project continues to develop.
- 1.9.8 The programme of ongoing stakeholder engagement and consultation will be structured around key milestones in the design development and assessment process. This will provide the opportunity to update and consult stakeholders on the evolving design and decision-making process.
- 1.9.9 Engagement and consultation will continue throughout the stages of the Project, with the following stakeholders:
- Statutory bodies;
 - Non-statutory bodies;
 - Local authorities (including host authorities);
 - Directly affected individuals, landowners and asset owners; and
 - Local communities.
- 1.9.10 Statutory Consultation will be held in 2026, and the Preliminary Environmental Information Report (PEIR) will be issued as part of this. The PEIR will enable consultees to understand the likely significant environmental effects of the Project and help to inform their responses to the Statutory Consultation.
- 1.9.11 The Applicant will set up Technical Working Groups which will be themed to allow collaborative engagement across core environmental issues. The aim is to encourage attendees representing different environmental organisations to assist in reaching resolution with all parties, to inform the EIA.
- 1.9.12 Through the process of engagement and consultation the aim is to reach agreement, as far as possible, with stakeholders prior to the submission of the application for development consent. Statements of Common Ground will be developed between the Applicant and relevant stakeholders to document any remaining areas of disagreement and provided with the application for development consent. The Applicant will also initiate pre-application Principal Areas of Disagreement Summary Statements (PADSS) with relevant consultees.
- 1.9.13 A summary of the engagement and consultation activities undertaken, and how feedback has been taken into account will be documented in the Consultation Report which will accompany the application for development consent.

1.10 References

- Ref 1.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents/made> [Accessed 1 July 2025].
- Ref 1.2 Planning Act 2008 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/part/3> [Accessed 1 July 2025].
- Ref 1.3 Electricity Act 1989 [online]. Available at: <https://www.legislation.gov.uk/ukpga/1989/29/contents> [Accessed 1 July 2025].
- Ref 1.4 British energy security strategy, Department for Business, Energy & Industrial Strategy and Prime Minister's Office (April 2022) [online]. Available at: <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energysecurity-strategy> [Accessed 1 July 2025].
- Ref 1.5 National Electricity Transmission System (2021) Security and Quality of Supply Standard [online]. Available at: <https://www.neso.energy/document/189561/download> [Accessed 14 July 2025].
- Ref 1.6 National Grid (2025) Weston Marsh to East Leicestershire Corridor Preliminary Routeing and Siting Study. [online] Available at: <https://www.nationalgrid.com/document/561431/download> [Accessed 14 July 2025].
- Ref 1.7 Planning Inspectorate (2020). *Advice Note Seven. EIA: Process, Preliminary Environmental Information, and Environmental Statements* [online]. Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an> [Accessed 1 July 2025].
- Ref 1.8 Institute of Sustainability and Environmental Professionals. EIA Quality Mark Scheme [online]. Available at: <https://www.isepglobal.org/corporate-programmes/eia-quality-mark> [Accessed 3 October 2025].
- Ref 1.9 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/407/contents> [Accessed 18 August 2025].
- Ref 1.10 Overarching National Policy Statement for energy (EN-1) 2023 [online]. Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1> [Accessed 18 August 2025].
- Ref 1.11 Environment Act 2021 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents> [Accessed 1 July 2025].
- Ref 1.12 National Grid (April 2021). Our 2021-2026 Environmental Action Plan [online]. Available at: <https://www.nationalgrid.com/electricity-transmission/document/155131/download>. [Accessed 1 July 2025].
- Ref 1.13 Department for Food, Environment and Rural Affairs (2021). Biodiversity metric: calculate the biodiversity net gain of a project or development [online]. Available at: <https://www.gov.uk/guidance/biodiversity-metric-calculate-the-biodiversity-net-gain-of-a-project-or-development> [Accessed 1 July 2025].

2. Regulatory and Planning Policy Context

Contents

2.	Regulatory and Planning Policy Context	2-1
2.1	Introduction	2-1
2.2	Key Legislation	2-1
	The Planning Act 2008	2-1
	The Infrastructure Planning (EIA) Regulations 2017	2-2
	Electricity Act 1989	2-3
	Countryside and Rights of Way Act 2000	2-3
	Related Assessments	2-4
2.3	National Planning Policy	2-5
	Overarching National Policy Statement for Energy (EN-1)	2-7
	National Policy Statement for Electricity Networks Infrastructure (EN-5)	2-10
	Proposed amendments to the energy NPS (including EN-1 and EN-5)	2-10
	National Planning Policy Framework	2-11
2.4	Marine Legislation and Planning Policy	2-11
	Marine and Coastal Access Act 2009	2-11
	Marine Policy Statement (MPS)	2-12
	Overarching National Policy Statement for Energy (EN-1)	2-12
	Regional Marine Plans	2-12
2.5	Local Planning Policy	2-12
2.6	National Grid Policy and Guidance	2-14

References	2-15
------------	------

2. Regulatory and Planning Policy Context

2.1 Introduction

- 2.1.1 This chapter provides an overview of the relevant legislative and planning policy context that applies to the Project. This includes national, regional, and local planning policy and marine policy, which has been considered across all environmental topic chapters in the preparation of this Environmental Impact Assessment (EIA) Scoping Report. The Planning Statement which will accompany the application for development consent will identify and consider relevant legislation and policies and provide analysis on planning policy compliance.
- 2.1.2 Legislation and policies relevant for different environmental topics are set out below with specific details included in **Appendix 2A Environmental Legislation**, **Appendix 2B National and Regional Planning Policy** and **Appendix 2C Local Policy**.
- 2.1.3 The Applicant will consider and have regard to all relevant national, regional and local planning policy and relevant legislation in the evolution of the design of the Project, and in the assessment of the impacts of the Project in accordance with Section 104 of the Planning Act 2008 (PA 2008) (Ref 2.1).
- 2.1.4 During the pre-application stage and in the preparation of the Preliminary Environmental Information Report (PEIR), the Environmental Statement (ES) and other appropriate application documents the Applicant will also have due regard to the National Infrastructure Planning Guidance in accordance with Section 50 of the PA 2008. There are two parts of the National Infrastructure Planning Guidance that are most relevant to the pre-application stage:
- Introduction to National Infrastructure Planning Guidance (April 2024) (Ref 2.2), which sets out the role and scope of the National Infrastructure Planning Guidance; and
 - Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects (April 2024) (Ref 2.3) which provides guidance on the pre-application stage for NSIPs.

2.2 Key Legislation

The Planning Act 2008

- 2.2.1 The PA 2008 provides the statutory framework for determining development consent order (DCO) applications for Nationally Significant Infrastructure Projects (NSIPs). It also defines the application process under which a DCO is sought. The PA 2008 provides that projects meeting certain defined criteria are classified as NSIPs. It requires that developers wishing to construct, operate and maintain NSIPs must obtain a DCO from the relevant Secretary of State (SoS) to authorise the Project.

- 2.2.2 As the Project consists of the installation of an electric line above ground of more than 132 kV and more than 2 kilometres (km) in length, it is classified as an NSIP under Section 14(1)(b) of the PA 2008, and therefore it is necessary to seek permission via a DCO from the SoS.

The Infrastructure Planning (EIA) Regulations 2017

- 2.2.3 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the “EIA Regulations”) (Ref 2.4) govern the EIA process relevant to NSIPs. Schedule 1 of the EIA Regulations lists those projects for which an EIA is required and Schedule 2 lists projects which may be considered EIA development, based on the selection criteria provided in Schedule 3 on characteristics of the development, its location and the types and characteristics of the potential impacts.
- 2.2.4 Under these Regulations (paragraph 20 of Schedule 1), a project is Schedule 1 if it fulfils the following criteria “*Construction of overhead electrical power lines with a voltage of 220 kV or more, and a length of more than 15 km*”. The Project comprises the construction and operation of a new 400 kV overhead electricity transmission line over approximately 60 km, therefore the Project falls under Schedule 1 and requires a statutory EIA.
- 2.2.5 This EIA Scoping Report provides formal notification to the SoS, under Regulation 8(1)(b) of the EIA Regulations, that the Applicant proposes to provide an ES in respect of the Project and requests a Scoping Opinion from the SoS under Regulation 10 of the EIA Regulations. Therefore, this Project is EIA development through Regulation 6(2) of the EIA Regulations.
- 2.2.6 Regulation 5(2) states that the EIA must:
- “identify, describe, and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors-*
- (a) population and human health:*
- (b) biodiversity, with particular reference to species and habitats protected under Directive 92/43/EEC and 2009/147/EC:*
- (c) land, soil, water, air, and climate:*
- (d) material assets, cultural heritage, and landscape; and,*
- (e) the interaction between the factors referred to in sub-paragraphs (a) to (d)”.*
- 2.2.7 These factors are considered within the topic-specific chapters (**Chapter 6 to Chapter 19**).
- 2.2.8 In addition, Regulation 5(4) states that the EIA should include, where relevant:
- “the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development”.*
- 2.2.9 This is considered within **Chapter 19 Major Accidents and Disasters**.
- 2.2.10 Schedule 4(5) of the EIA Regulations sets out the information for inclusion in the ES, and states that a description should be included, of the significant effects arising from:

“the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”.

- 2.2.11 The approach to addressing this requirement is set out within **Chapter 5 EIA Approach and Methodology**.

Electricity Act 1989

- 2.2.12 Section 9(2) of the Electricity Act 1989 (Ref 2.5) places general duties on National Grid as a license holder:

“to develop and maintain an efficient, co-ordinated and economical system of electricity transmission...”

- 2.2.13 In addition, Section 38 and Schedule 9 of the Electricity Act 1989 requires an electricity licence holder such as National Grid, when formulating proposals for new lines and other works, to:

“have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and shall do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.”

- 2.2.14 National Grid’s Stakeholder, Community and Amenity Policy (Ref 2.6), published December 2016, sets out how the company will meet the Schedule 9 duty placed upon it by the legislation.

Countryside and Rights of Way Act 2000

- 2.2.15 The Countryside and Rights of Way Act 2000 (CRoW) Act (Ref 2.7) sets out the legal basis to ensure public access to the countryside and strengthens environmental protections. It has five key parts: Part I grants the public a legal "right to roam" on designated open land (including registered common land); Part II sets out the legal basis for the definition of Public Rights Of Way (PRoW); Part III boosts nature conservation and enhances the powers of conservation bodies; Part IV provides a statutory framework for the protection and management of Areas of Outstanding Natural Beauty (AONBs); and Part V includes various supplementary provisions to support the Act’s implementation.

- 2.2.16 A National Landscape is, from November 2023, the new name for AONBs, designated under the provisions of Part IV of the Countryside and Rights of Way Act 2000. National Grid, as a statutory undertaker, has a duty under Section 85 of the Act (as amended in s245 of the Levelling up and Regeneration Act 2023) (Ref 2.8) which states:

“In exercising or performing any functions in relation to, or so as to affect, land in an AONB in England, a relevant authority must seek to further the purpose of conserving and enhancing the natural beauty of the AONB”.

- 2.2.17 There are no National Landscapes within the Scoping Boundary or any likely to be affected by the Project, however the CRoW Act may be relevant in respect of PRoW or habitats within the Scoping Boundary. Further information on designated

landscapes is included in **Chapter 6 Landscape**, information on habitats is included in **Chapter 8 Ecology and Biodiversity** and information on PRoW is included in **Chapter 16 Socio-economics, Recreation and Tourism**.

Related Assessments

- 2.2.18 In addition to the EIA, the Project will be assessed in accordance with the other regulatory regimes, where they apply. Information on these is included in the environmental topic chapters of this Scoping Report where applicable. These include the Conservation of Habitats and Species Regulations 2017 (Ref 2.9), as amended by the Conservation of Habitats and Species (Amended) (EU Exit) Regulations 2019 (Ref 2.10), the Flood Risk Regulations (2009) (Ref 2.11) and the Water Framework Directive (WFD) (Ref 2.12).

Habitats Regulations

- 2.2.19 The Habitats Regulations 2017 (Ref 2.9) transposed the requirements of European Council Directive 92/43/EEC ('the Habitats Directive') (Ref 2.13) into English law. The Habitats Regulations apply to plans and projects that may have significant effects on the Natura 2000 ecological network (sites designated under the Habitats Directive and the Wild Birds Directive (Council Directive 2009/147/EC (Ref 2.14), which codified 79/409/EEC (Ref 2.15)). Sites designated in England under the Habitats Regulations include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs).
- 2.2.20 Following changes made to the Habitats Regulations (as amended) by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 2.10), SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network and now form part of the 'UK National Site Network' (UK 'NSN'). The term 'European sites' is used to refer collectively to such sites throughout this Scoping Report. It is also government policy that Ramsar sites, potential SPAs, possible SACs, and sites used to compensate for adverse effects on European sites are considered in the Habitats Regulations Assessment (HRA) process. This is described in paragraph 194 of the National Planning Policy Framework (NPPF) (Ref 2.16).
- 2.2.21 The Habitats Regulations require an Appropriate Assessment if a project is likely to have a significant effect on a European site. If that Appropriate Assessment concludes that a project will have an adverse effect on a European site then a derogation case must be considered. A Habitats Regulations Assessment Screening exercise will be undertaken as the Project has the potential to impact European sites including the Upper Nene Valley Gravel Pits SPA and Ramsar site, located adjacent to the existing Grendon substation where the existing overhead line will be subject to reconductoring above the sites. The works required in the European sites are not yet confirmed, however if the screening exercise concludes that likely significant effects cannot be excluded, a Report to Inform Appropriate Assessment will be produced in consultation with relevant consultees and provided with the application for development consent.

Flood Risk Regulations

- 2.2.22 The Flood Risk Regulations (2009) (Ref 2.11) transposes the European Commission Floods Directive (2007/60/EC) (Ref 2.17) into law in England and Wales and implements its provisions. The key objective is to coordinate the assessment and

management of flood risks within Europe. The Flood and Water Management Act (2010) (Ref 2.18) places a series of responsibilities on local authorities with the primary aim of improving local flood risk management.

- 2.2.23 The Regulations and Act require an appropriate Flood Risk Assessment (FRA) to be submitted as part of the application for development consent. The FRA will assess the flood risk both to and from the Project and demonstrate how that flood risk will be managed over the Project's lifetime, including with due regard to climate change.

Water Framework Directive

- 2.2.24 The Water Framework Directive (WFD) (2000) (Ref 2.19) was transposed into domestic law by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (the 'WER Regulations') (Ref 2.12). It provides a structure for the protection and enhancement of surface fresh water, estuaries, coastal waters and ground water.
- 2.2.25 The primary aim of the WER Regulations is to improve/maintain the Ecological Status/Potential of all water bodies and to prevent deterioration in status of the water bodies and their associated WFD quality elements.
- 2.2.26 Regulatory bodies responsible for implementing the WER Regulations are the Environment Agency (main rivers) and Local Authorities/Lead Local Flood Authorities (ordinary watercourses).
- 2.2.27 The ES will be supported by a standalone WFD/WER Regulations compliance assessment in relation to hydrological receptors. The assessment findings will be integrated into the relevant ES Chapters (**Chapter 10 Water Environment** and **Chapter 11 Geology and Hydrology**).

2.3 National Planning Policy

- 2.3.1 This section sets out the current national planning policy documents which the SoS must have regard to when determining the DCO application for the Project, and which are considered relevant in the context of the EIA and in the preparation of this EIA Scoping Report.
- 2.3.2 The Project is an NSIP which requires development consent under the PA 2008 (Ref 2.1). Section 104 of the PA 2008 outlines the importance of National Policy Statements (NPS) to the decision-making process against which applications for development consent are considered. Section 104(2) states, inter alia:
- "In deciding the application, the SoS must have regard to –*
- a) any additional policy statement which has effect in relation to development of the description to which the application relates (a 'relevant national policy statement')...*
- d) any other matters which the SoS thinks are both important and relevant to the SoS decision"*
- 2.3.3 As identified in paragraph 1.3.4 of the Overarching NPS for Energy EN-1 (Ref 2.20), for infrastructure projects providing above ground electric lines at or above 132 kV (meeting the thresholds set out in the PA 2008), the following NPSs will be the primary basis for SoS decision making:

- Overarching National Policy Statement for Energy (EN-1) (NPS EN-1) (adopted 17 January 2024) (Ref 2.20); and
- National Policy Statement for Electricity Networks Infrastructure (EN-5) (NPS EN-5) (adopted 17 January 2024) (Ref 2.21).

- 2.3.4 As background to the adopted NPSs referred to above, it is noted that an Electricity Networks Commissioner was appointed in 2022 to work with and advise the Government on how to halve the build time for new transmission infrastructure from around 12-14 to 7 years. The Commissioner's report (Ref 2.22) and a companion report (Ref 2.23) including a set of 43 recommendations, referred to as the 'Winser Report', was published in August 2023. This Report acknowledged that speeding up the delivery of strategic transmission is both vital and challenging, and the recommendations on how to accelerate the deployment of strategic electricity transmission infrastructure in Great Britain covered every part of the process and set out an integrated programme of reform.
- 2.3.5 The Government's response to the Winser Report was set out in the Transmission Acceleration Action Plan (November 2023) (Ref 2.24). This Plan recognises that Great Britain's transmission network must undergo unprecedented expansion, as the economy electrifies to deliver energy security and Net Zero. It confirms that with the increasing shift towards electrification of transport, heating and industrial processes, a significant amount of additional grid capacity is required, and to deliver this expansion in time, there is a need to significantly reduce the current end-to-end build time for transmission infrastructure. The Action Plan accepted the 43 recommendations set out in the Winser Report, to accelerate the expansion of the transmission network.
- 2.3.6 In July 2024 the Energy Secretary chaired their first Clean Energy Superpower Mission Board, where the drive to make Britain a clean energy superpower with a push for British-based clean, homegrown energy was continued. Following this, the Clean Power 2030 Action Plan (December 2024) (Ref 2.25) was developed to set out a path to decarbonise the electricity grid and strengthen Britain's energy security. The Action Plan sets out the objective to accelerate transmission and distribution network build in order to deliver a decarbonised power system by 2030.
- 2.3.7 The adopted versions of NPSs EN-1 and EN-5 report the requirement to ensure the appropriate balance between the need to build vital infrastructure and the impacts this can have on the environment and communities and to ensure that the planning policy framework is suitably robust to support the infrastructure required for the transition to net zero carbon emissions. Low-carbon infrastructure, including large electricity grid infrastructure projects, are given 'Critical National Priority' status to reflect the need for critical national infrastructure. Further details are provided below in sections on NPS EN-1 and EN-5.
- 2.3.8 Consultation on proposed amendments to the energy NPS (including EN-1 and EN-5) was undertaken between 24 April – 29 May 2025 (Ref 2.26). The amended energy NPSs would only have effect in relation to those applications for development consent accepted for examination after the publication of the final amended energy NPSs. However, any emerging draft energy NPSs (or those amended but not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the relevant SoS to consider within the framework of the PA 2008 and with regard to the specific circumstances of each application for development consent. Changes made to the revised NPS recently consulted on are set out in paragraphs 2.3.33 to 2.3.36.

Overarching National Policy Statement for Energy (EN-1)

- 2.3.9 NPS EN-1 (Ref 2.20) sets out the Government's overarching policy regarding the development of NSIPs in the energy sector. It outlines high-level objectives, policy, and the regulatory framework. NPS EN-1 emphasises the need for new energy projects to contribute to a secure, diverse, and affordable energy supply. NPS EN-1 is underpinned by the principle that there will be a need for significant amounts of new large-scale energy infrastructure to meet the Government's energy objectives. Paragraph 2.1.3 states:
- "To produce the energy required for the UK and ensure it can be transported to where it is needed, a significant amount of infrastructure is needed at both local and national scale. High quality infrastructure is crucial for economic growth, boosting productivity and competitiveness."*
- 2.3.10 It states at paragraph 2.1.6 that large-scale energy infrastructure:
- "will be required to ensure the UK can provide a secure, reliable, and affordable supply of energy, while also meeting our decarbonisation targets".*
- 2.3.11 Section 3 of NPS EN-1 explains why the Government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why the Government considers that the need for such infrastructure is urgent. However, it is recognised at paragraph 3.1.2 that:
- "...it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts. These effects will be minimised by the application of policy set out in Parts 4 and 5 of this NPS. See also Part 2 of each technology specific NPS."*
- 2.3.12 NPS EN-1 refers to the urgent need for infrastructure covered by the NPS, and the weight that should be accorded to the need, and states at paragraphs 3.2.6 and 3.27 that:
- "3.2.6 The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part."*
- 3.2.7 In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008."*
- 2.3.13 Paragraph 3.3.4 to 3.37 of EN-1 recognise that there are several different types of electricity infrastructure that are needed to deliver the Government's energy objectives, which includes electricity networks which are needed to connect the output of other types of electricity infrastructure with consumers and each other.
- 2.3.14 Paragraph 3.3.68 of EN-1 states that substantial onshore reinforcement works are needed to meet decarbonisation targets, and that forecasts show that the transmission network will require substantial reinforcement in the Midlands to accommodate increased power flows and substantial reinforcement in East Anglia to handle increased power flows from offshore wind generation.
- 2.3.15 Paragraph 3.3.69 recognises that it is important to note that the crucial national benefits of increased system robustness through new electricity network infrastructure projects are shared by all users of the system.

- 2.3.16 Critical National Priority (CNP) infrastructure is defined as nationally significant new offshore wind development and supporting onshore and offshore network infrastructure and related network reinforcements. Paragraph 3.3.70 states that:
- “As all new grid projects have a role in efficiently constructing, operating and connecting low carbon infrastructure to the National Electricity Grid, the scope of networks CNP infrastructure is not limited to those associated specifically with a particular project.”*
- 2.3.17 Paragraph 3.3.71 of EN-1 recognises that for regions with multiple windfarms or offshore transmission projects it is expected that a coordinated approach will be delivered which is likely to reduce the network infrastructure costs as well as the cumulative environmental impacts and impacts on coastal communities by installing a smaller number of larger connections, each taking power from multiple windfarms instead of individual point-to-point connections for each windfarm.
- 2.3.18 It also acknowledges in paragraph 3.3.78 that the case for a new connection or network reinforcement is demonstrated if the proposed development represents an efficient and economical means of:
- *“...connecting a new generating station to the network;*
 - *reinforcing the network to accommodate such connections; or*
 - *reinforcing the network to ensure that it is sufficiently resilient and capacious (per any performance standards set by Ofgem) to reliably supply present and/or anticipated future levels of demand.*
- In considering the ‘economic and efficient’ approach the network project also needs to follow good design, avoidance, and mitigation principles (and/ or biodiversity compensation where needed for transmission in the marine environment), as referenced in EN-5”.*
- 2.3.19 Paragraph 3.3.79 recognises the crucial role of networks in connecting other kinds of electricity infrastructure (such as generation stations) and states that:
- “... it is especially important that the Secretary of State considers network projects as elements of a coherent and strategically necessary system, whether or not they are linked together in specific NSIPs. For instance, when evaluating applications for new electricity networks infrastructure the Secretary of State should have regard to the fact that given,*
- i) the government’s strategic commitment to ambitious levels of interconnection capacity and offshore wind generation, and*
 - ii) the tightly interdependent infrastructure chain linking interconnection and offshore generation with onshore demand centres, delays in the approval of associated new network developments could cause significant economic waste and set back the strategically vital goals of decarbonisation and energy security.”*
- 2.3.20 Paragraph 3.3.80 supports a coordinated approach for electricity network infrastructure should be considered at both the strategic and more detailed project design levels for onshore transmission, offshore transmission, and offshore generation and interconnector developments. This coordinated approach is likely to provide the highest degree of consumer, environmental, and community benefits and reduce the potential for unwarranted and avoidable disruption, inefficiency, and visual impacts.

- 2.3.21 Paragraph 3.3.83 refers to the urgent need for new electricity infrastructure and states that:
- “Given the urgent need for new electricity infrastructure and the time it takes for electricity NSIPs to move from design conception to operation, there is an urgent need for new (and particularly low carbon) electricity NSIPs to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy.”*
- 2.3.22 Section 4 of EN-1 sets out the general policies for the submission and assessment of applications relating to energy infrastructure and the weighting of impacts and benefits of projects to be applied by the SoS in decision making. Paragraph 4.1.3 states:
- “Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the Secretary of State will start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused.”*
- 2.3.23 Section 4.6 provides details of how environmental and biodiversity net gain should be considered and confirms that this approach to development aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements. The ES should include a statement demonstrating how wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design of the Project.
- 2.3.24 Section 4.7 provides details on the criteria for good design for energy infrastructure. Paragraph 4.7.1 states:
- “The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important.”*
- 2.3.25 Section 4.10 of EN-1 details how the effects of climate change should be taken into account during the design stage to ensure new energy infrastructure is sufficiently resilient against the possible impacts of climate change. Specifically, as new energy infrastructure is typically likely to remain operational over many decades, the direct and indirect impacts of climate change when considering the Project location, design, build, operation and where appropriate decommissioning will need consideration.
- 2.3.26 Part 5 of NPS EN-1 sets out generic impacts in respect of matters such as air quality and emissions, greenhouse gas emissions, biodiversity and geological conservation, civil and military aviation and defence interests, coastal change, dust and odour, flood risk, historic environment, landscape and visual, land use, noise and vibration, socio- economics, traffic and transport, resource and waste management, and water quality and resources. These generic impacts have been considered in the preparation of this Scoping Report in **Chapters 6 to 19**.

National Policy Statement for Electricity Networks Infrastructure (EN-5)

- 2.3.27 NPS EN-5 (Ref 2.21) relates to electricity networks, and Part 2 provides general assessment principles and technology-specific policies relating to matters including climate change adaptation, consideration of good design, biodiversity and geological conservation, landscape and visual and noise and vibration. Section 2.12 of EN-5 establishes a co-ordinated approach to offshore-onshore transmission.
- 2.3.28 Paragraph 2.1.5 of NPS EN-5 reinforces Section 4.2 of EN-1 which supports the urgent need for new low carbon infrastructure and confirms that:
- “all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure... are considered to be CNP infrastructure.”*
- 2.3.29 Paragraph 2.2.10 of EN-5 reiterates the duties under Section 9 of the Electricity Act 1989, both in relation to developing and maintaining an economical and efficient network and, in formulating proposals for new electricity network infrastructure, to:
- “have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiological features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and...do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.”*
- 2.3.30 Section 2.3 of NPS EN-5 details how electricity network infrastructure should consider climate change adaptation and resilience within the design of new schemes.
- 2.3.31 EN-5 includes policies on the design of electricity network infrastructure, and paragraph 2.9.20 states:
- “Although it is the government’s position that overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e. National Park, The Broads, or Area of Outstanding Natural Beauty).”*
- 2.3.32 These policies have been considered in the preparation of this Scoping Report as set out in **Appendix 2B National and Regional Policy**.

Proposed amendments to the energy NPS (including EN-1 and EN-5)

- 2.3.33 New draft versions of the energy NPSs, including EN-1 and EN-5 were published for consultation on 24 April 2025. The consultation subsequently ran until 29 May 2025 and feedback is now being analysed.
- 2.3.34 The Department for Energy Security and Net Zero (DESNZ) published a Non-Technical Summary in April 2025, identifying key changes to the proposed NPSs.
- 2.3.35 An overview of the material changes to EN-1 and EN-5 relevant to this Project and identified by DESNZ include:

- Updates to the narrative of EN-1 to bring the Clean Power 2030 Action plan to the forefront of policy. Infrastructure projects relevant for Clean Power 2030 can be deemed as CNP, with a presumption in favour of consent.
- Building upon the 'Pathway to 2030' Holistic Network Design for offshore wind and 'Beyond 2030' reports, the Centralised Strategic Network Plan (CSNP), published as a draft methodology for consultation in June 2025, aims to reduce the overall impact of infrastructure by taking a coordinated view of the onshore and offshore network.

2.3.36 At the time of writing this Scoping Report, the draft NPSs are still subject to the feedback submitted at consultation and may change, and therefore have not been reviewed in detail for this Scoping Report. Any updates to the NPSs (EN-1 to EN-5) which came into force on 17 January 2024, will be considered in greater detail as the Project develops.

National Planning Policy Framework

2.3.37 The NPPF was most recently updated in December 2024 (Ref 2.16). Paragraph 5 of the NPPF sets out that it does not contain specific policies for NSIPs and states that:

“These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework)”.

2.3.38 Notwithstanding the above, paragraph 161 of the NPPF confirms the Framework's support for the transition to a low carbon future in a changing climate. It states that the planning system:

“...should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience...and support renewable and low carbon energy and associated infrastructure.”

2.3.39 While EN-1 (Ref 2.20) and EN-5 (Ref 2.21) remain the prime decision-making documents, each technical chapter of the ES will consider whether there is important and relevant policy in the NPPF that may require consideration by the decision-making authority.

2.3.40 The NPPF is supported by the National Planning Practice Guidance (NPPG) (Ref 2.27).

2.4 Marine Legislation and Planning Policy

2.4.1 The Project has limited interaction with the marine environment, in so far as the proposed route of the overhead electricity line will cross a tidal section of the River Welland, which falls under the jurisdiction of the Marine Management Organisation (MMO).

Marine and Coastal Access Act 2009

2.4.2 The Marine and Coastal Access Act 2009 (MCAA 2009) (Ref 2.28) sets out a spatial planning system for the management of the marine environment, which includes a requirement to obtain a marine licence for works affecting the sea from the appropriate marine licensing authority, the MMO. The MMO is responsible for

determining applications in accordance with the Marine Policy Statement (MPS) (Ref 2.29) and any applicable marine plans, unless relevant considerations indicate otherwise.

- 2.4.3 Licensable marine activities are defined under Section 66 of the MCAA 2009, and include activities related to construction works over the sea. The definition of the 'sea' includes any area which is submerged at mean high water springs and the waters of every estuary, river or channel where the tide flows at mean high water spring tide up to the Normal Tidal Limit (NTL). The NTL is the extent to which a body of water is affected by the ebb and flow of the tides. This may encompass rivers and their estuaries, including those areas that are controlled by locks. The definition of 'over' the sea includes a location directly above or overhanging the sea such as a bridge, open piled structure or cantilever.
- 2.4.4 Applicants can apply for a 'Deemed Marine Licence' as part of the DCO process under Part 4 of the MCCA 2009 and by virtue of Section 149A of the PA 2008 which was inserted by the MCCA 2009. The Applicant will include a Deemed Marine Licence within its draft DCO if appropriate and required to facilitate the crossing of tidal waterways of the River Welland by the overhead electricity lines proposed in the Project.

Marine Policy Statement (MPS)

- 2.4.5 The MPS (March 2011) (Ref 2.29) provides the framework for preparing Marine Plans and taking decisions affecting the marine environment.
- 2.4.6 Relevant policies contained in the MPS will be considered as part of the assessment of the Project and compliance with the MPS.

Overarching National Policy Statement for Energy (EN-1)

- 2.4.7 Section 4.5 of NPS EN-1 provides details of how effects on the marine environment should be considered, noting that individual Marine Plans must be consulted to understand the marine relevant specific considerations, and suggests that the marine license regulator (the MMO in England) is approached during the pre-application stage to understand any need for additional marine licenses alongside the DCO application.

Regional Marine Plans

- 2.4.8 Regional Marine Plans are also relevant to the Project. The East Inshore and East Offshore Marine Plan (Ref 2.30) will be considered in the preparation of the application for development consent.
- 2.4.9 For further information, see **Appendix 2B National and Regional Policy**.

2.5 Local Planning Policy

- 2.5.1 Local planning policies provided by relevant County and District or Unitary Authorities have also been considered in the preparation of this Scoping Report due to the Project intersecting with their administrative areas. The full list of plans is provided in **Appendix 2C Local Policy**. The main local planning policy documents that could be relevant to the Project comprise the following.

- Lincolnshire County Council
 - Lincolnshire Minerals and Waste Local Plan: Core Strategy and Development Management Policies, adopted in 2016 (Ref 2.31);
 - Minerals and Waste Site Locations, adopted 2017 (Ref 2.32).
 - A new Lincolnshire Minerals and Waste Development Local Plan is being prepared and consultation on the plan took place between July and September 2024 (Ref 2.33).
- South Holland District Council
 - The South East Lincolnshire Local Plan 2011-2036, adopted 2019 (Ref 2.34), was produced with Boston Borough and South Holland District Council to shape future development.
 - The South East Lincolnshire Strategic Flood Risk Assessment (SFRA) (March 2017) (Ref 2.35) is used to undertake the Sequential Test for flood risk in South Holland.
- South Kesteven District Council
 - The South Kesteven District Council Local Plan 2011-2036, adopted 2020 (Ref 2.36).
 - A new South Kesteven District Council Local Plan is being prepared and the next consultation on the Regulation 18 Draft Local Plan Focussing on Additional Sites will take place in June/July 2025 (Ref 2.37).
- Leicestershire County Council
 - The Leicestershire County Council Strategic Plan 2024-2026, adopted 2024 (Ref 2.38)
 - The Leicestershire Minerals and Waste Local Plan, adopted 2019 (Ref 2.39).
- Melton District Council
 - Melton Local Plan 2011-2036, adopted 2018 (Ref 2.38).
 - A new Melton Local Plan is being prepared and consultation on the Melton Pre-Submission Local Plan Update was undertaken between January – February 2025 (Ref 2.41).
- Harborough District Council
 - Harborough Local Plan 2011-2031, adopted 2019 (Ref 2.42).
 - A new Harborough Local Plan for 2020-2041 is being prepared and consultation was held between March – May 2025 (Ref 2.43).
 - Harborough District is also covered within the Leicestershire Minerals and Waste Local Plan up to 2031, adopted 2019 (Ref 2.44).
- North Northamptonshire Council
 - North Northamptonshire Local Plan includes the Joint Core Strategy (Part 1) (2016) (Ref 2.45) and the Local Plans (Part 2) (Ref 2.46);
 - Northamptonshire Minerals and Waste Local Plan Update (2017) (Ref 2.47).

- A new North Northamptonshire Local Plan and revised Local Development Review is being prepared and consultation on the Scope and Issues was undertaken between March and May 2022 (Ref 2.48). Publication of the draft (Reg 18) plan for public consultation is anticipated for early 2026.
- West Northamptonshire Council
 - West Northamptonshire Local Plan was adopted in 2014, which includes the Joint Core Strategy (Part 1) and Local Plans (Part 2) (Ref 2.49).
 - A new West Northamptonshire Local Plan is being prepared, and consultation on a Regulation 18 Draft Plan was undertaken between April and June 2024 (Ref 2.50). The next public consultation on the local plan will take place in October 2025.

2.6 National Grid Policy and Guidance

2.6.1 National Grid has its own policies and processes that are followed when developing projects. The policies that are applicable to the Project comprise:

- Holford Rules (Ref 2.51): A series of guidelines/rules for the routeing and design of new overhead lines or overhead line extensions. The guidelines were initially developed in 1959 and have been reviewed on a number of occasions by National Grid and by the other UK transmission licence holders. The guidelines provide a set of design criteria that have stood the test of time and became accepted industry best practice in overhead line routeing. The guidelines now form an important part of national planning policy relating to the development of electricity networks, as set out in NPS EN-5.
- Horlock Rules (Ref 2.52): A series of guidelines/rules for the siting and design of new substations, or substation extensions, including consideration of line entries and sealing end compounds¹. The guidelines were initially developed in 2003 and have been reviewed on a number of occasions by National Grid, with a revised version issued in 2009. The Horlock Rules provide a set of principles which avoid, or reduce the environmental impacts associated with the development of new substation infrastructure.
- National Grid's Stakeholder, Community, and Amenity Policy (Ref 2.6): This document describes the ten commitments that National Grid has made to the way that electricity and gas works are carried out in the UK. This includes setting out how National Grid will meet its amenity responsibilities and how stakeholders and communities are involved on projects; and
- National Grid's Approach to Consenting (Ref 2.53): This document outlines the project development process for major infrastructure projects, from initial inception to consent and construction.

¹ Cable sealing end compounds are where high-voltage underground cables join onto an overhead line. The transition from one to the other requires termination points, known as sealing end compounds.

References

- Ref 2.1 Planning Act 2008 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 19 June 2025].
- Ref 2.2 Department for Levelling Up, Housing and Communities (2024) Introduction to National Infrastructure Planning Guidance [online]. Available at <https://www.gov.uk/guidance/introduction-to-national-infrastructure-planning-guidance> [Accessed 17 July 2024].
- Ref 2.3 Department for Levelling Up, Housing and Communities (2024) Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects [online]. Available at: <https://www.gov.uk/guidance/planning-act-2008-pre-application-stage-for-nationally-significant-infrastructure-projects> [Accessed 19 June 2025].
- Ref 2.4 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents/made> [Accessed 08 July 2024].
- Ref 2.5 Electricity Act 1989 [online]. Available at: <https://www.legislation.gov.uk/ukpga/1989/29/contents> [Accessed 08 July 2024].
- Ref 2.6 National Grid (2016). National Grid's commitments when undertaking works in the UK: Our stakeholder, Community, and Amenity Policy [online]. Available at: <https://www.nationalgrid.com/gas-transmission/document/81026/download> [Accessed 28 March 2024].
- Ref 2.7 Countryside and Rights of Way Act 2000 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2000/37/contents> [Accessed 08 July 2024].
- Ref 2.8 Levelling-up and Regeneration Act 2023 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2023/55/contents> [Accessed 08 July 2024].
- Ref 2.9 The Conservation of Habitats and Species Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/1012/contents/made> [Accessed 08 July 2024].
- Ref 2.10 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 [online]. Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573> [Accessed 08 July 2024].
- Ref 2.11 The Flood Risk Regulations 2009 [online]. Available at: <https://www.legislation.gov.uk/uksi/2009/3042/contents/made> [Accessed 08 July 2024].
- Ref 2.12 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/407/contents/made> [Accessed 08 July 2024].
- Ref 2.13 Council Directive 92/43/EEC [online]. Available at: <https://www.legislation.gov.uk/eudr/1992/43/contents> [Accessed 08 July 2024].

- Ref 2.14 Directive 2009/147/EC of the European Parliament and of the Council [online]. Available at: <https://www.legislation.gov.uk/eudr/2009/147/contents> [Accessed 08 July 2024].
- Ref 2.15 Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC) (repealed) [online]. Available at: <https://www.legislation.gov.uk/eudr/1979/409/contents> [Accessed 08 July 2024].
- Ref 2.16 Department for Levelling Up, Housing and Communities (2024). National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf [Accessed 16 April 2024].
- Ref 2.17 Directive 2007/60/EC of the European Parliament and of the Council [online]. Available at: <https://www.legislation.gov.uk/eudr/2007/60/contents> [Accessed 08 July 2024].
- Ref 2.18 Flood and Water Management Act 2010 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2010/29/contents> [Accessed 08 July 2024].
- Ref 2.19 Water Framework Directive 2000 [online]. Available at: <https://eur-lex.europa.eu/eli/dir/2000/60/oj/> [Accessed 18 July 2025]
- Ref 2.20 Department for Energy Security & Net Zero (2024). Overarching National Policy Statement for Energy (EN-1) [online]. Available at: <https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed 08 July 2024].
- Ref 2.21 Department for Energy Security & Net Zero (2024). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf> [Accessed 08 July 2024].
- Ref 2.22 Winser. N (2023). Electricity Networks Commissioner Letter to Secretary of State for Energy Security and Net Zero [online] Available at: <https://assets.publishing.service.gov.uk/media/64c8e96e19f5622360f3c0f0/electricity-networks-commissioner-letter-to-desnz-secretary.pdf> [Accessed 15/ April 2024]
- Ref 2.23 Energy Systems Catapult Limited. (June 2023). Electricity Networks Commissioner – Companion Report Findings and Recommendations [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1175647/electricity-networks-commissioner-companion-report.pdf [Accessed 05 April 2024]
- Ref 2.24 Department for Energy Security & Net Zero. (2023) Transmission Acceleration Action Plan [online]. Available at: Transmission Acceleration Action Plan: Government response to the Electricity Networks Commissioner’s report on accelerating electricity transmission network build ([publishing.service.gov.uk](https://www.publishing.service.gov.uk)) [Online] [Accessed 10 April 2024]
- Ref 2.25 Department for Energy Security and Net Zero. (2024). Clean Power 2030 Action Plan: A new era of clean electricity [online]. Available at: <https://assets.publishing.service.gov.uk/media/677bc80399c93b7286a396d6/clean-power-2030-action-plan-main-report.pdf> [Accessed 23 June 2025]

- Ref 2.26 Department for Energy Security and Net Zero. (2025). Planning for new energy infrastructure: 2025 revisions to National Policy Statements [online] Available at: <https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-2025-revisions-to-national-policy-statements> [Accessed 23 June 2025]
- Ref 2.27 Ministry of Housing, Communities and Local Government (2024). National Planning Practice Guidance. Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 18 September 2025]
- Ref 2.28 Marine and Coastal Access Act 2009 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2009/23/contents> [Accessed 08 July 2024].
- Ref 2.29 HM Government (2011) UK Marine Policy Statement [online]. Available at: <https://assets.publishing.service.gov.uk/media/5a795700ed915d042206795b/pb3654-marine-policy-statement-110316.pdf> [Accessed 08 July 2024].
- Ref 2.30 HM Government (2014) East Inshore and East Offshore Marine Plans [online]. Available at: <https://assets.publishing.service.gov.uk/media/5a7ec0eced915d74e33f2342/east-plan.pdf> [Accessed 15 April 2024].
- Ref 2.31 Lincolnshire County Council (2016) Lincolnshire Minerals and Waste Local Plan: Core Strategy and Development Management. [online] Available at: <https://www.lincolnshire.gov.uk/downloads/file/2361/core-strategy-and-development-management-policies> [Accessed 18 July 2024].
- Ref 2.32 Lincolnshire County Council (2017) Lincolnshire Minerals and Waste Local Plan Site Locations [online]. Available at: <https://www.lincolnshire.gov.uk/downloads/file/2274/adopted-site-locations-pdf> [Accessed 18 July 2024].
- Ref 2.33 Lincolnshire County Council (2024). Minerals and Waste Local Plan: Preferred approach consultation [online]. Available at: <https://www.letstalk.lincolnshire.gov.uk/minerals-and-waste-local-plan> [Accessed 23 June 2025].
- Ref 2.34 South East Lincolnshire (2019). South East Lincolnshire Local Plan 2011-2036 [online]. Available at: <https://southeastlincslocalplan.org/media/21941/South-East-Lincolnshire-Local-Plan-2011-2036/pdf/Local-Plan-text-March-2019.pdf?m=1720710748483> [Accessed 23 June 2025].
- Ref 2.35 South East Lincolnshire (2017). South East Lincolnshire Strategic Flood Risk Assessment [online]. Available at: https://www.sholland.gov.uk/media/7937/South-East-Lincolnshire-Strategic-Flood-Risk-Assessment-Report-March-2017-including-guidance-on-applying-the-Sequential-Test-for-planning-applications/pdf/SE_Lincolnshire_SFRA_2017_v6.pdf?m=1607959961710 [Accessed 23 June 2025].
- Ref 2.36 South Kesteven District Council (2020). The South Kesteven District Council Local Plan 2011-2036 [online]. Available at: https://www.southkesteven.gov.uk/sites/default/files/2023-08/Local_Plan_2011-2036_%28Final_inc_covers%29%20%281%29.pdf [Accessed 23 June 2025]

- Ref 2.37 South Kesteven District Council (2025). Local Plan Review [online]. Available at: <https://www.southkesteven.gov.uk/planning-building-control/planning-policy-local-plans/local-plan-review> [Accessed 23 June 2025].
- Ref 2.38 Leicestershire County Council (2022). Leicestershire County Council Strategic plan Refresh 2024-2026. [online] Available at: <https://www.leicestershire.gov.uk/sites/default/files/2025-01/LCC-Strategic-Plan.pdf> [Accessed 18 September 2025]
- Ref 2.39 Leicestershire County Council (2019) Leicestershire Minerals and Waste Local Plan (Adopted September 2019). [online] Available at: <https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/10/3/Leicestershire-Minerals-and-Waste-Local-Plan-Up-to-2031-Adopted-2019.pdf> [Accessed 18 September 2025].
- Ref 2.40 Melton District Council (2018). Melton Local Plan 2011-2036 [online]. Available at: <https://www.meltonplan.co.uk/adoptedplan> [Accessed 23 June 2025]
- Ref 2.41 Melton District Council (2025). Melton Local Plan Partial Update [online]. Available at: <https://www.meltonplan.co.uk/localplanupdate/pre-submission> [Accessed 23 June 2025]
- Ref 2.42 Harborough District Council (2019). Harborough Local Plan 2011-2031 [online]. Available at: https://www.harborough.gov.uk/downloads/file/5714/harborough_local_plan_2011-2031_-_adopted_april_2019 [Accessed 23 June 2025]
- Ref 2.43 Harborough District Council (2019). Harborough New Local Plan [online]. Available at: https://www.harborough.gov.uk/info/20004/planning_strategy/528/new_local_plan [Accessed 23 June 2025]
- Ref 2.44 Leicestershire County Council (2019). Leicestershire Minerals and Waste Local Plan [online]. Available at: <https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/10/3/Leicestershire-Minerals-and-Waste-Local-Plan-Up-to-2031-Adopted-2019.pdf> [Accessed 23 June 2025]
- Ref 2.45 North Northamptonshire Council (2016). Joint Core Strategy 2011 – 2031 [online]. Available at: <https://www.northnorthants.gov.uk/planning-strategies-and-plans/north-northamptonshire-local-plan> [Accessed 23 June 2025]
- Ref 2.46 North Northamptonshire Council (2016). Joint Core Strategy - Part 2 Local Plans [online]. Available at: <https://www.northnorthants.gov.uk/planning-strategies-and-plans>
- Ref 2.47 Northamptonshire Council (2017). Adopted Minerals and Waste Local Plan [online]. Available at: [Adopted Minerals and Waste Local Plan | North Northamptonshire Council](#) [Accessed 23 June 2025]
- Ref 2.48 North Northamptonshire Council (2025). Local Development Scheme 2025 to 2027 [online]. Available at: [Local Development Scheme 2025 to 2027 | North Northamptonshire Council](#) [Accessed 23 June 2025]
- Ref 2.49 West Northamptonshire Council (2014). West Northamptonshire Joint Core Strategy Local Plan (Part 1) [online]. Available at: [West Northamptonshire Joint Core Strategy Local Plan \(Part 1\) | West Northamptonshire Council](#) [Accessed 23 June 2025]

- Ref 2.50 West Northamptonshire Council (2025). New Local Plan for West Northamptonshire [online]/ Available at: [New Local Plan for West Northamptonshire | West Northamptonshire Council](#) [Accessed 23 June 2025].
- Ref 2.51 National Grid. The Holford Rules: Guidelines on Overhead Line Routeing [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 15 April 2024].
- Ref 2.52 National Grid. NGC Substations and the Environment: Guidelines on Siting and Design [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> [Accessed 23 March 2024].
- Ref 2.53 National Grid (2022) Approach to Consenting (April 2022) [online]. Available at: <https://www.nationalgrid.com/electricity-transmission/document/142336/download> [Accessed 07 May 2024].

3. Main Alternatives Considered

Contents

3.	Main Alternatives Considered	3-1
3.1	Introduction	3-1
3.2	National Grid Approach to Options Identification and Selection	3-1
3.3	Background to the Project	3-3
3.4	Strategic Options Considered for the Project	3-3
3.5	Options Identification and Selection	3-5
	Overview of Approach to Routeing and Siting	3-5
	Study Area	3-7
	Preliminary Corridors and Siting	3-7
	Route Options	3-10
	Option Selection	3-11
3.6	Development of Graduated Swathe	3-14
3.7	Development of the Scoping Boundary	3-14
Image 3.1 National Grid's Consenting Process (Our Approach to Consenting, National Grid, 2022)		3-2
Image 3.2 CPRSS Methodology (Weston Marsh to East Leicestershire Corridor Preliminary Routeing and Siting Study, National Grid, 2025)		3-6
References		3-15

3. Main Alternatives Considered

3.1 Introduction

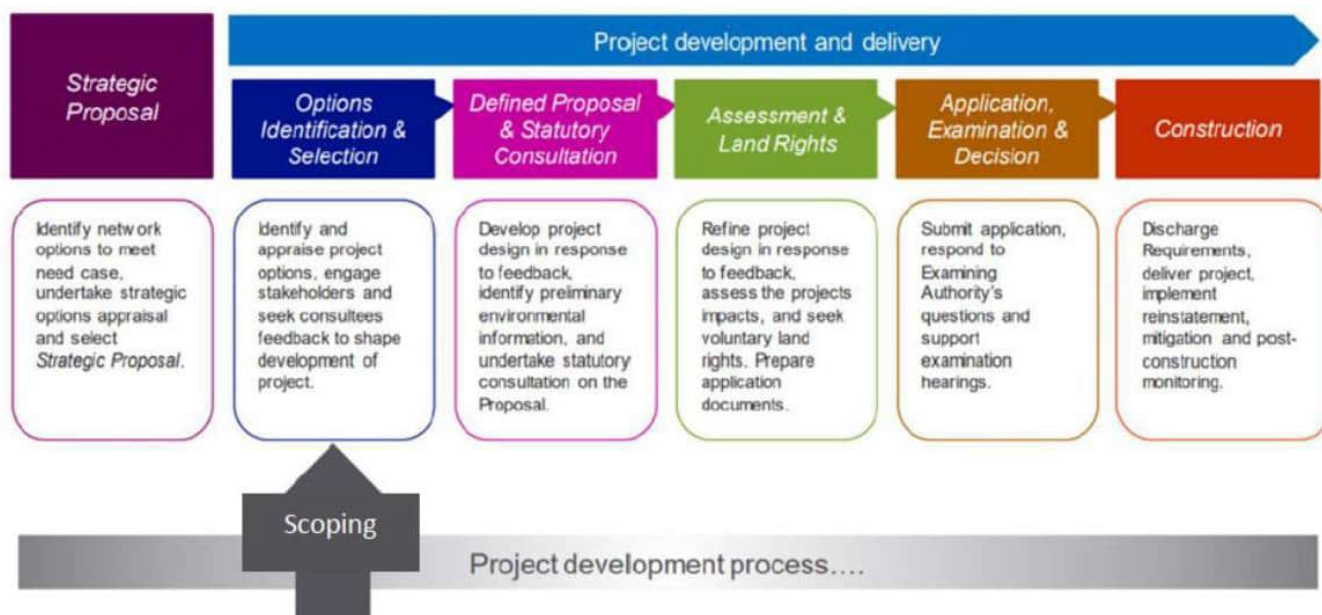
- 3.1.1 As required by Regulation 14(d) in conjunction with Schedule 4, paragraph 2 of The Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (Ref 3.1), the Environmental Statement (ES) will include a description of reasonable alternatives studied by the promotor and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects. While there is no statutory requirement to include an assessment of alternatives in support of a request for a Scoping Opinion, the Planning Inspectorate's Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (Ref 3.2) recommends that a Scoping Report includes "*an outline of the reasonable alternatives considered and the reasons for selecting the preferred option*".
- 3.1.2 The Project was originally recommended by the National Energy Systems Operator (NESO) as part of the Network Options Assessment (NOA) 2021/2022 Refresh (Ref 3.3) and subsequently recommended to proceed as critical enabling and wider works in the NESO Beyond 2030 report (Ref 3.4.) Following the identification of a strategic proposal, National Grid has been through an iterative options identification and selection process to determine the preferred option for the Project, which comprises the emerging preferred corridor on which the Scoping Boundary has been based (**Figure 1.2 Scoping Boundary**). A preliminary exercise has also identified where it might be more appropriate to site the Project within the emerging preferred corridor, the outcome of which is referred to as the "graduated swathe" (**Figure 3.7 Overhead Line Graduated Swathe, Figure 3.8 WMEL-A Substation Graduated Swathe and Figure 3.9 WMEL-B Substation Graduated Swathe**) comprising coloured shading of varying intensity to indicate areas more likely (darker colour) and less likely (lighter colour) to be the location of the proposed infrastructure.
- 3.1.3 The design process will continue up to the application for development consent in parallel with, and informed by, the EIA process and statutory consultation.

3.2 National Grid Approach to Options Identification and Selection

- 3.2.1 National Grid's Approach to Consenting (Ref 3.5) outlines the development process for major infrastructure projects, from initial inception to consent and construction. The approach is divided into the following six stages, as detailed on **Image 3.1** (Ref 3.5).
- Stage 1: Strategic Proposal;
 - Stage 2: Options Identification and Selection;
 - Stage 3: Defined Proposal and Statutory Consultation;
 - Stage 4: Assessment and Land Rights;

- Stage 5: Application, Examination and Decision; and
- Stage 6: Construction.

Image 3.1 National Grid's Consenting Process (Our Approach to Consenting, National Grid, 2022)



- 3.2.2 National Grid undertakes option identification and selection for its individual projects. There are often a number of different ways that a project can be developed, involving different locations, technologies or designs. Each project requires judgements and decisions about the most appropriate way to achieve the required outcome. The options appraisal process provides information to help inform those judgements during the options identification and selection process.
- 3.2.3 Options appraisal is a robust and transparent process that is used to compare options and to assess the positive and negative effects they may have, across a wide range of criteria including environmental, socio-economic, technical, and cost factors. The aim is to determine a preferred option or options that can be consulted upon, taking into account National Grid's statutory duties, established policy and principles, and any other relevant information. Further details on the options identification and selection process can be found in Our Approach to Consenting (Ref 3.5).
- 3.2.4 At each stage in the options identification and selection process, transparent methods are used to inform the iterative decision-making and design development processes, including inputs from engineers and environmental consultants. Interim decision making takes into account feedback from prescribed bodies, as defined in the Planning Act 2008 (Ref 3.6), other stakeholders and the local community through an extensive programme of engagement and consultation. Such feedback continues to be taken into account throughout the process. In addition, the Project has been subject to periodic internal challenge and review to ensure the robustness of the decisions are made in the light of a changing environmental baseline related to technical, physical and economic matters.
- 3.2.5 Project decisions have considered National Grid's statutory obligations set out in Sections 9 and 38 of the Electricity Act 1989, its licence requirements, policy and guidance including the relevant National Planning Statements (NPSs) EN-1 and EN-5

and the Holford and Horlock Rules (Ref 3.7 and Ref 3.8), which provide industry-guidance on the routing and siting of electricity transmission infrastructure, and all other relevant considerations.

- 3.2.6 The following sections provide a background to the Project and a summary of the alternatives that have been considered at each stage to date.

3.3 Background to the Project

- 3.3.1 The way we generate and consume electricity is changing, with more renewable energy being generated in Britain. Demand is also set to significantly increase as the way we power our homes, businesses, industry and transport changes. The fossil fuels which once powered our economy are being replaced with sources of low carbon energy i.e. offshore renewable generation helping to decarbonise our economy and providing homes and businesses with clean, secure and affordable energy. The UK is also sharing more power with countries using interconnectors, including across the North Sea. These factors are driving the need for change in the energy landscape across the UK and in particular, the east and East Midlands, where reinforcement of the network is required to meet this change.
- 3.3.2 The forecast growth in offshore wind capacity in Scotland and the north east of England, as well as interconnectors to European power grids, will put pressure on the existing network.
- 3.3.3 Therefore the reinforcement of the network in the Lincolnshire, Leicestershire, and Northamptonshire areas is essential to ensure optimal operation of the transmission network system and a reliable economic long-term supply.

3.4 Strategic Options Considered for the Project

- 3.4.1 National Grid Electricity Transmission (NGET) ('National Grid') (the owners of the transmission infrastructure and 'the Applicant') undertook a Strategic Options Review at the Strategic Proposal Stage (Stage 1) which identified the most advantageous strategic solution to bring forward. The Strategic Options Review is reported in the Strategic Options Report (SOR) (Ref 3.11) which describes the future network requirements and the options appraised to meet them. The consideration of strategic options was part of an iterative process in response to the interaction of a range of emerging energy projects.
- 3.4.2 As detailed in the SOR, there are three distinct issues that need to be resolved by system reinforcements:
- Provision of 5,793 MW of boundary capability to the B9 boundary¹.
 - Provision of 6,930 MW capacity to the EC3 boundary.
 - Connect the east to west corridors to alleviate power flow constraints in the east coast.
- 3.4.3 The SOR identified a long-list of technically feasible options which individually meet the need case set out in paragraph 3.4.2. The potential benefits of each technically

¹ B9 and EC3 boundaries refer to different areas of the transmission network owned and operated by National Grid.

feasible options were then considered, allowing focus on those that best meet the obligations to the environment and consumers.

- 3.4.4 The focussed list of strategic options was then taken forward for appraisal and evaluated across a range of environmental, socio-economic, and technical factors. Capital costs were identified for each option based on National Grid's recent market knowledge. Strategic options considered included onshore options as well as offshore options.
- 3.4.5 However, the offshore options were substantially more expensive than any of the onshore options and onshore options were therefore preferred. Additionally, offshore options increase constructability risk and require challenging maintenance compared to onshore as explained in more detail in paragraph 3.4.9 below.
- 3.4.6 The six options appraised within the SOR included:
- Walpole B to new Wymondley.
 - Walpole B to new Wymondley (via Burwell).
 - Weston Marsh/Walpole B to new Ryhall and Eaton Socon to Grendon to Sundon.
 - Weston Marsh to new Market Harborough (via new Ryhall).
 - Walpole B to Tilbury (subsea).
 - Walpole B to Norwich.
- 3.4.7 The SOR appraisal identified Option 4, a new primarily overhead line connection between Weston Marsh to a new substation north of the existing Market Harborough substation (now referred to as WMEL-B) (via a new substation to the north of the existing Ryhall substation (now referred to as "WMEL-A")), as the emerging preferred option.
- 3.4.8 This option provides increased system flexibility due to the proposal to implement two circuits out of the new Weston Marsh and new Ryhall and mitigates the overloading of the Ryhall-Eaton Socon circuit under fault conditions.
- 3.4.9 The SOR considered the alternative technologies to deliver this connection including overhead line and underground cable. The summary of this appraisal's conclusions included:
- Overhead line provides greater opportunity to avoid sensitive receptors through careful routing and siting e.g. designated sites, habitats, archaeology and built heritage assets, the water environment, and geology and soils.
 - The option did not impact National Parks, National Landscapes, World Heritage Sites, therefore overhead line should be the starting assumption in accordance with NPS EN-5.
 - Overhead line would normally be expected to offer the most economic, efficient, and co-ordinated development and would meet NGET's obligations under Section 9 of the Electricity Act.
 - Overhead line is low risk in terms of construction complexity and standard construction and access techniques can be adopted for this option, as well as operation and maintenance. The same applies for the crossings that would be required for the roads and rail lines.

- Overhead line has the lowest capital and lifetime cost for new circuits.

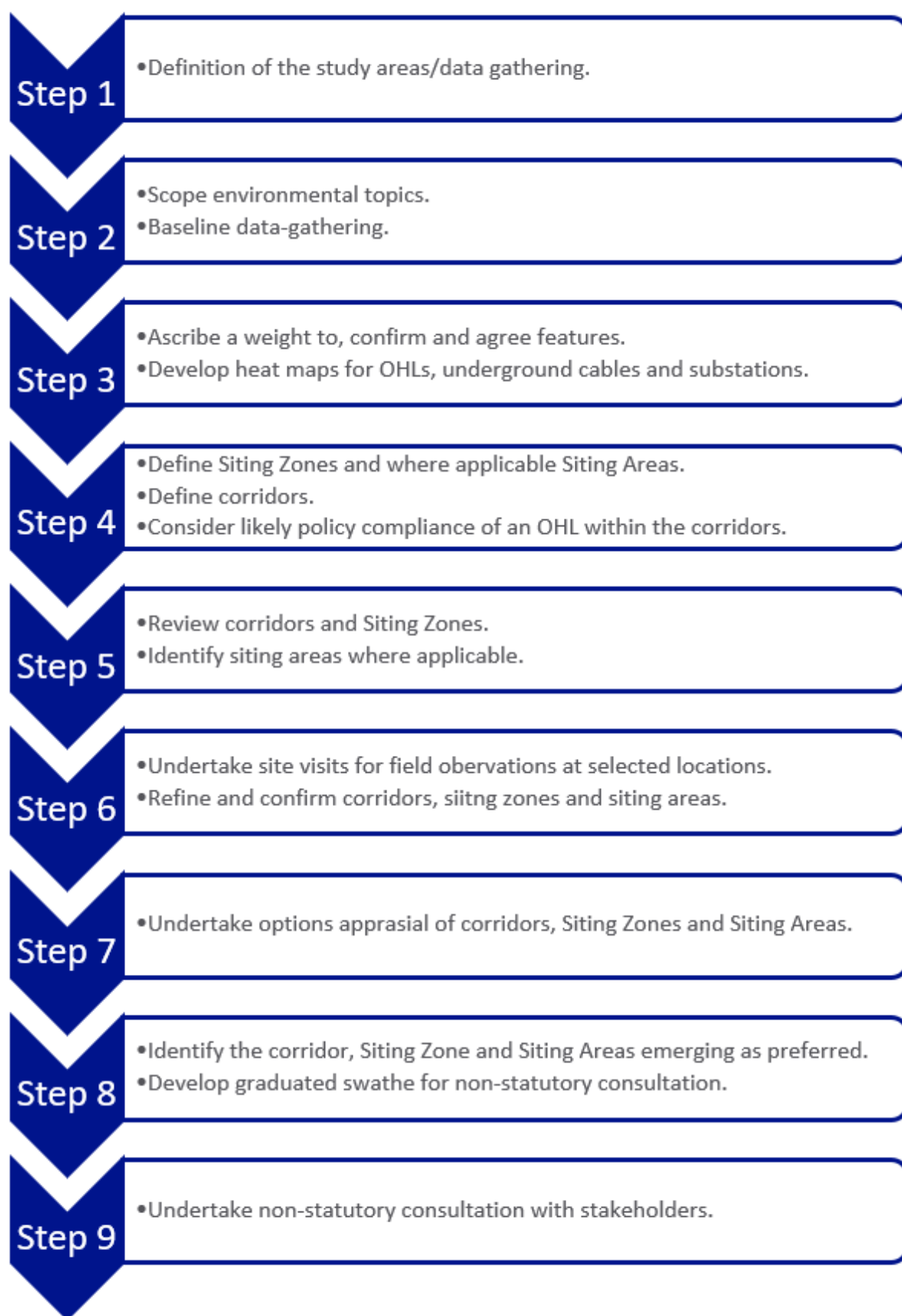
3.5 Options Identification and Selection

- 3.5.1 Following identification of the Strategic Proposal, National Grid undertook a comprehensive appraisal of routing and siting options identified to deliver the strategic objectives as described and reported in the Corridor Preliminary Routeing and Siting Study (CPRSS) (Ref 3.12). This presents the findings of the Option Identification and Selection Stage which identified and assessed preliminary route corridors for the new overhead line, substation Siting Zones and Siting Areas, and concluded with the identification of an emerging preferred corridor and Siting Areas forming an end to end solution. This section summarises the approach to this stage and the key considerations in the identification and assessment of alternatives. For further detail, please refer to the CPRSS (Ref 3.12).
- 3.5.2 The NPS for Electricity Networks Infrastructure – EN-5 makes clear that that the Holford Rules should be followed by developers when designing their proposals for overhead lines. Paragraphs 2.9.20 to 2.9.21 state that, *“Although it is the government’s position that overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e., National Park, The Broads, or National Landscape). In these areas, and where harm to the landscape, visual amenity and natural beauty of these areas cannot feasibly be avoided by rerouteing overhead lines, the strong starting presumption will be that the applicant should underground the relevant section of the line.”*
- 3.5.3 However, EN-5 paragraph 2.9.22 goes on to state that *“undergrounding will not be required where it is infeasible in engineering terms, or where the harm that it causes...is not outweighed by its corresponding landscape, visual amenity and natural beauty benefits. Regardless of the option, the scheme through its design, delivery, and operation, should seek to further the statutory purposes of the designated landscape. These enhancements may go beyond the mitigation measures needed to minimise the adverse effects of the scheme.”*
- 3.5.4 In accordance with NPS EN-5 as quoted above, undergrounding was not considered further at this stage of the Project as there are no nationally designated landscapes within the defined overhead line Study Area.

Overview of Approach to Routeing and Siting

- 3.5.5 The routeing and siting approach is a phased process which enables National Grid to make informed and proportionate decisions on the selection of corridors and allows possible route alignments to be further refined. This process allows for options to be appraised on a comparable basis, so that a preferred option can be identified and progressed.
- 3.5.6 The methodology employed included nine steps, as defined for this Project, for the Options Identification and Selection Stage as summarised in **Image 3.2**.

Image 3.2 CPRSS Methodology (Weston Marsh to East Leicestershire Corridor Preliminary Routing and Siting Study, National Grid, 2025)



Study Area

- 3.5.7 The approach to developing the Study Area for the CPRSS was based on balancing National Grid's duty to develop an efficient, co-ordinated and economical system of transmission (Section 9 of the Electricity Act 1989), National Grid's environmental duties under Section 38 and Schedule 9 of the Electricity Act 1989, Holford Rule 1 (which is to *"avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the first line in the first place, even if the total mileage is somewhat increased in consequence"*) (Ref 3.7) and Horlock Rule 2 (which is to *"as far as reasonably practicable seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections"*) (Ref 3.8).
- 3.5.8 Given the geographical extent of the Project, four distinct but interrelated Study Areas were defined for the CPRSS. A Study Area for each component of the Project (new 400 kV overhead line connection, new WMEL-A Substation, new WMEL-B Substation, and reconductoring of existing overhead line) was identified through a five-phase process which is detailed in the CPRSS (Ref 3.12) and illustrated on **Figure 3.1 Routeing and Siting Study Area**. At that stage only alignment options for the new overhead line to connect into the Weston Marsh substations Siting Zone were considered; the Weston Marsh substation infrastructure, and consideration of alternatives at Weston Marsh, were only considered as part of the Grimsby to Walpole project.

Preliminary Corridors and Siting

Corridors, Segments, and Links

- 3.5.9 Five Preliminary Corridor options were identified in the CPRSS (Ref 3.12) within the overhead line Study Area, as illustrated on **Figure 3.2 Preliminary Corridors (Overhead lines)**. The complex network of corridors were divided into 'segments,' with a series of connection 'links' to allow for a clear and comparative analysis.
- 3.5.10 Only two of the Preliminary Corridors provided a complete end-to-end solution, however the complexity of the network of corridors and links allowed many potential routes across them. Therefore, the corridors were divided into segments and links at locations where potential routes could follow multiple directions, which allowed parts of different corridors (the segments) to emerge as more or less preferred based on the environmental, socio-economic and technical criteria considered in the appraisal methodology.
- 3.5.11 The individual segments of the corridor were referenced with a segment number and a letter, e.g. Preliminary Corridor 1 segment a is known as Segment 1a.
- 3.5.12 The links were named according to the corridors they join with the prefix "L", e.g. L2-1 provides a Link from Preliminary Corridor 2 to Preliminary Corridor 1.

Identification of Siting Zones and Siting Areas

- 3.5.13 A Siting Zone is an area which has the capacity to accommodate multiple Siting Areas. A Siting Area is an area which has the capacity to accommodate the siting of a single substation.

- 3.5.14 The identification of the Siting Zones and Siting Areas takes into consideration the key drivers for each substation, the technical parameters and the relevant environmental and technical constraints identified.
- 3.5.15 In siting substations) areas that benefit from the below factors were identified:
- Appropriate topography.
 - The availability of existing screening elements and the potential to introduce additional screening elements.
 - Proximity to major roads, to minimise the extent of required new access roads.
 - Outside of Flood Zones of a medium risk (Flood Zone 2) and high risk (Flood Zone 3), in line with the policy tests (sequential and exception tests) as set out in Section 5 of NPS EN-1.
- 3.5.16 Identification of the Siting Zones and Siting Areas was informed by the Horlock Rules (Ref 3.8) and Holford Rules (Ref 3.7) to take account of the combined effects of both the substations and the overhead line connections. The following guiding principles informed identification:
- Financially less-expensive options, both in terms of capital and lifetime cost, will generally be of benefit/advantage, as these support National Grid's statutory duty under Section 9 of the Electricity Act 1989 to develop and maintain an '*efficient, coordinated and economical*' transmission network'.
 - Options which avoid or minimise and mitigate impacts on environmental or socio-economic features will generally be of benefit/advantage compared with those which would have likely significant residual effects, as less environmentally damaging or socially disruptive sites support National Grid's statutory duty under Schedule 9 of the Electricity Act 1989 to '*have regard to the desirability of preserving amenity*', and will more readily achieve consent'.
- 3.5.17 Once the corridors, Siting Zones and Siting Areas had been identified an options appraisal process was undertaken which considered environmental constraints, socio-economic factors, technical considerations, and cost.
- 3.5.18 The key drivers for the location of the WMEL-A and WMEL-B substations include:
- Minimised length and technical complexity of connections between the new substation and the existing overhead line it needs to connect to, minimising the quantity of diversion towers and potential impacts.
 - Requirement for the new WMEL-A substation to connect to the new 60 km overhead line and the ZA² existing route. The substation footprint should be optimised to accommodate how the transmission line will terminate at the substation.

WMEL-A Substation

- 3.5.19 The Project proposes the construction of a new substation (known as 'WMEL-A') required to connect the new overhead line proposed as part of the Project, to the existing 400 kV 4VK overhead line (Cottam - Eaton Socon – Wymondley). An initial

² This is the National Grid code applied to identify each transmission line, ZA being the existing Cottam – Grendon – Staythorpe) overhead line.

Study Area of 2 km around the existing ZA overhead line was considered to identify potential constraints and areas that could accommodate a substation. The functional footprint of the substation, assuming that it is an Air Insulated Switchgear (AIS) substation, was assumed to be 720 m x 400 m to allow for appraisal of potential sites (see **Image 4.4** in Chapter 4 for an illustrative example of an AIS substation).

- 3.5.20 Potential Siting Zones were identified where Preliminary Corridors intersected the WMEL-A Study Area, resulting in four WMEL-A Siting Zones which were further considered in the Options Appraisal. From north to south these were:
- Siting Zone WMEL-AZ1;
 - Siting Zone WMEL-AZ2;
 - Siting Zone WMEL-AZ3; and
 - Siting Zone WMEL-AZ4.
- 3.5.21 The WMEL-A Siting Zones and Siting Areas are illustrated within **Figure 3.3 WMEL-A Substation Siting Zones**, a full description of the Siting Zones can be found in Chapter 6 of the CPRSS (Ref 3.12).

WMEL-B Substation

- 3.5.22 The Project proposes the construction of a new substation (known as 'WMEL-B') required to connect the new overhead line proposed as part of the Project, to the existing ZA overhead line (Cottam - Grendon - Staythorpe). Potential Siting Zones were therefore identified where the Preliminary Corridors intersected the WMEL-B Study Area. The functional footprint was assumed to be the same as described above for WMEL-A.
- 3.5.23 Potential Siting Zones were identified where the Preliminary Corridors intersected the WMEL-B Study Area, resulting in three WMEL-B Siting Zones which were considered in the Options Appraisal. From north to south these were:
- Siting Zone WMEL-BZ1;
 - Siting Zone WMEL-BZ2; and
 - Siting Zone WMEL-BZ3.
- 3.5.24 The WMEL-B Siting Zones and Siting Areas are illustrated in **Figure 3.4 WMEL-B Substation Siting Zones**, a full description of the Siting Zones can be found in Chapter 6 of the CPRSS (Ref 3.12).

Conclusions from Appraisal of Preliminary Corridors and Substation Siting

- 3.5.25 From Preliminary Corridor 1, Segments 1a, 1b, 1c, 1d, 1e, 1f, 1g, L1-1a and L1-1b were progressed for further assessment as they presented constraints and opportunities and allow an end-to-end solution and routeing through to WMEL-AZ1, WMEL-BZ1 and WMEL-AZ2. Link L1(1-1) was not progressed as the utilisation of the Link would require a number of direction changes leading to an indirect route, which is not preferred under the Holford rules.
- 3.5.26 All of Preliminary Corridor 2 (Segments 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h and L2-1) was progressed for further assessment as they presented constraints and opportunities and allow an end-to-end solution and routeing through to WMEL-BZ1, WMEL-BZ2 and WMEL-AZ2.

- 3.5.27 From Preliminary Corridor 3, Segment 3d was retained to provide a potential link between Segments 2g and 4d, allowing for a potential Route Option to WMEL-BZ2. Segments 3a, 3b, 3c and L3-2 were discontinued from further consideration primarily owing to pinch points limiting direct routing of the overhead line. Discontinuing these segments also discontinues WMEL-AZ3 from further consideration.
- 3.5.28 From Preliminary Corridor 4, Segments 4d and 4e were both progressed for further assessment as both presented opportunities for routing through to WMEL-BZ2. Segment 4a was not progressed due to the presence of an internationally designated site (Baston Fens SAC) and an airfield limiting routing options, and poor ground conditions. Link L4-3 was not progressed due to priority broadleaved woodland and residential settlement complicating routing, and as Segments 3b, 3c and Link L3-2 were not progressed, no end-to-end solution is available utilising the Link. Segment 4b was not progressed due to the presence of the consented EN010127 - Mallard Pass Solar Farm constraining Route Options and access. Segment 4c was not progressed as it would require crossing Exton Park Registered Park and Garden (RPG) and the proximity to Rutland Water Special Protection Area (SPA) and Ramsar site, internationally designated for its bird population. Although Segments 4a, 4b and 4c were not progressed, WMEL-BZ2 has been progressed for further assessment as there is still an opportunity to form an end-to-end solution via Segments 2g, 3d, 4d and 4e. As Segment 4c was not progressed, WMEL-AZ4 was not progressed for further assessment.
- 3.5.29 From Preliminary Corridor 5, Segment 5a was discontinued due to the required crossing of the 400 kV overhead lines and numerous other overhead lines, and the interaction with the proposed new Grimsby to Walpole 400 kV overhead line. Segment 5b was also discontinued due to the proximity of Rutland Water SPA/Ramsar/SSSI, residential properties, heritage assets, and greater potential for landscape and visual impacts as a result of topography and recreational routes, compared to other options. Siting Zone WMEL-BZ3 is constrained by high and steep topography, impacting transport and access, landscape and visual receptors. In addition, discounting Segments 5a and 5b means there is no end-to-end solution to connect to WMEL-BZ3 therefore this Siting Zone was discounted from further appraisal.

Route Options

- 3.5.30 Following the appraisal of the Preliminary Corridors and Siting Zones, the corridor Segments and Links emerging as preferred could then be combined to form end-to-end Route Options taking account of the siting of substations, as illustrated in **Figure 3.5 Route Options** and described in Chapter 7 of the CPRSS (Ref 3.12).
- 3.5.31 The Route Options were numbered one to five, from north to south of the Study Area these were:
- Route Option 1;
 - Route Option 2;
 - Route Option 3;
 - Route Option 4; and
 - Route Option 5.

- 3.5.32 The Route Options were then further reviewed by National Grid, engineers, and environmental and socio-economic specialists, to confirm their technical feasibility and ensure that key issues, and the interaction of constraints, had been fully considered.

Option Selection

- 3.5.33 As described in Chapter 9 of the CPRSS (Ref 3.12), the route was split into three sections to allow closer scrutiny and appraisal across the options when approached in a sequential manner routing east to west, and the overall Route Options and substation locations in the end-to-end solution. The sections are shown in **Figure 3.6 Comparative Appraisal Sections** and were titled:

- Section 1 – Consider the Route Options between Weston Marsh and Rippendale/Haconby
- Section 2 – Consider the Route Options between Rippendale/Haconby and Buckminster/Sewstern, and Substation Siting Zones WMEL-AZ1 and WMEL-AZ2
- Section 3 – Consider the Route Options between Buckminster/Sewstern to the existing 400kV ZA overhead line, and Substation Siting Zones WMEL-BZ1 and WMEL-BZ2.

Section 1 Weston Marsh to Rippendale/Haconby

- 3.5.34 Section 1 in the CPRSS considered the following route options between the proposed Weston Marsh substation infrastructure and the area around the settlements of Rippendale and Haconby:

- Route Option 1 and 2 (Segments 1a, 1b, and 1c); and
- Route Option 3, 4 and 5 (Segments 2a, 2b, 2c).

- 3.5.35 Route Options 1 and 2 would result in converging routes with the existing 400 kV 4ZM (Bicker Fen-Walpole) overhead line. The need for multiple angle towers here would result in cumulative landscape and visual impacts as well as complex infrastructure interactions and diversions due to the existing converging overhead lines.

- 3.5.36 Route Options 3, 4 and 5 were preferred primarily as they avoid the existing 400 kV 4ZM overhead line and other NSIPs located north and south of Weston Marsh. These Route Options provide a more direct route and are less constrained by residential and agricultural properties resulting in fewer/lower potential visual impacts.

Section 2 Rippendale/Haconby to Buckminster/Sewstern

- 3.5.37 Section 2 in the CPRSS considered the following route options and Siting Zones from the area around the settlements of Rippendale and Haconby to the area around the settlements of Buckminster and Sewstern:

- Route Option 1 (Segments 1d, 1e, and 1f);
- Route Option 2 (L1-1a and I1-1b and Segment 1f);
- Route Option 3, 4 and 5 (Segments 2d, and 2e); and
- Siting Zone WMEL-AZ1 and WMEL-AZ2.

- 3.5.38 Segments 1d, 1e and 1f were not preferred due to the presence of an additional NSIP, the complexity of crossing the A1 and ECML near Great Ponton, and the presence of aviation constraints. Links L1-1a and L1-1b were not progressed due to the technical complexities of the A1/B6403 crossing, the presence of artificial ground near the crossing, and the greater number of ancient woodland and priority broadleaved blocks.
- 3.5.39 Segments 2d and 2e were preferred primarily as they avoid other NSIPs, complex highway crossings, and alignment can avoid aviation constraints. These segments provide a more direct route and are less constrained.
- 3.5.40 Siting Zone WMEL-AZ1 was not preferred due to the environmental and technical challenges associated with the tight grouping of the ECML, existing 400 kV overhead line and the River Witham constraining the Siting Zone. WMEL-AZ1 is further constrained by residential settlements limiting access to main roads. Siting Zone WMEL-AZ2 was preferred and progressed as it is considered to have fewer environmental and technical constraints.

Section 3 Buckminster/Sewstern to ZA Overhead Line

- 3.5.41 Section 3 in the CPRSS considered the following segments and substation Siting Zones from the area around the settlements of Buckminster and Sewstern to the existing 400kV ZA (Cottam – Grendon – Staythorpe) overhead line:
- Route Option 2 (L2-1);
 - Route Option 1, 2 and 3 (Segment 1g);
 - Route Option 4 (Segments 2f, 2g and 2h);
 - Route Option 5 (Segments 2f, 2g, 3d, 4d and 4e); and
 - Siting Zone WMEL-BZ1 and WMEL-BZ2.
- 3.5.42 Segment 2f was not preferred due to the presence of the Birmingham to Peterborough rail line which would require an additional complex rail line crossing. Segments 4d and 4e were not preferred due to the presence of extensive moderate to steep slopes which would be likely to create pinch points and constructability constraints.
- 3.5.43 Link L2-1 and Segment 1g were preferred as the routeing would be the most direct, reducing the need for multiple angle towers and minimising landscape and visual impact. This segment also does not require an additional rail line crossing, which would further reduce technical complexity.
- 3.5.44 WMEL-BZ2 is not the preferred zone for the new substation due to the elevation, changes in gradient and presence of heritage features constraining the Siting Zone. Siting Zone WMEL-BZ1 was preferred and progressed as it is considered to have fewer environmental and technical constraints regarding elevation, slope gradient, and heritage features.

WMEL-A Siting Comparative Appraisal

- 3.5.45 Within Siting Zone WMEL-AZ2, Siting Area WMEL-AZ2.C was determined preferable with regard to landscape character and visual amenity, heritage, technical, and traffic and transport constraints. The other options were likely to result in greater adverse

impacts associated with nearby residential properties, heritage features, rail infrastructure and Public Rights of Way (PRoWs).

WMEL-B Siting Comparative Appraisal

- 3.5.46 Within Siting Zone WMEL-BZ1, Siting Area WMEL-BZ1.B was determined preferable with regard to landscape character and visual amenity, heritage, technical and traffic and transport constraints. The other options were likely to result in greater adverse impacts associated with nearby residential properties, heritage features, and PRoWs.

New Weston Marsh substation infrastructure

- 3.5.47 The new Weston Marsh substation infrastructure was considered in the optioneering process and technical appraisal of the Grimsby to Walpole project CPRSS (Ref 3.13) and may potentially be included in this Project. For the purpose of siting, the functional footprint of a Weston Marsh substation, assuming AIS, was up to 700 m by 200 m.
- 3.5.48 The identification of potential siting zones was driven by the presence of scattered residential properties, blocks of woodland, a dense drainage network, and proximity to the Spalding Tee-Point. Taking these factors into consideration four Siting Zones were identified. From west to east these were:
- Siting Zone WMZ1;
 - Siting Zone WMZ2;
 - Siting Zone WMZ3; and
 - Siting Zone WMZ4.
- 3.5.49 A detailed description of the four Siting Zones, including how Siting Zones WMZ2 and WMZ3 were identified as the emerging preferences can be found in Chapter 11 of the Grimsby to Walpole CPRSS (Ref 3.13). These were further refined as part of the Stage 2 statutory consultation for the Grimsby to Walpole project and referenced as the Refined Weston Marsh Substation Siting Zone. As part of the Grimsby to Walpole project, National Grid will undertake further targeted Stage 2 consultation on Weston Marsh substation infrastructure (including publication of preliminary environmental information) at a future date when further design work has been completed.
- 3.5.50 The main alternatives considered in relation to the Weston Marsh substation(s) will be detailed in the ES for this Project.

Conclusions from Option Selection

- 3.5.51 In summary, Route Option 3 was identified as the emerging preferred corridor and consists of Segments 2a, 2b, 2c, 2d, 2e, L2-1, and Segment 1g. Siting area WMEL-BZ1.B, and Siting Area WMEL-AZ2.C were identified as the emerging preferred Siting Areas. An overview of the preferred end-to-end solution including the emerging preferred substation Siting Areas for WMEL-A and WMEL-B can be found in **Figure 3.10 End to End Solution**. This does not include the Refined Siting Zone for the Weston Marsh substation infrastructure, which can be seen added to the eastern end of the corridor, to the north east of Spalding, in **Figure 1.2 Scoping Boundary**.

3.6 Development of Graduated Swathe

- 3.6.1 Following the selection of the emerging preferred corridor, preferred Siting Zones and preferred Siting Areas, a preliminary design exercise was undertaken to identify where it may be more appropriate to locate the required infrastructure within the corridor (based on the information understood about the emerging preferred corridor option at the time of writing the CPRSS (Ref 3.12)). This exercise considered the Holford and Horlock Rules alongside features such as larger settlement areas, environmental and socio-economic constraints, and other technical and cost considerations. The outcome of this exercise is shown by a 'graduated swathe' – coloured shading of varying intensity to indicate areas more likely (darker colour) and less likely (lighter colour) to be the location of the proposed infrastructure.
- 3.6.2 The overhead line graduated swathe is illustrated in **Figure 3.7 Overhead Line Graduated Swathe**. For WMEL-A substation, this is illustrated in **Figure 3.8 WMEL-A Substation Graduated Swathe** and for WMEL-B substation in **Figure 3.9 WMEL-B Substation Graduated Swathe**.
- 3.6.3 The outcomes of the analysis, as depicted in the graduated swathe, may be subject to change as the design and consenting process continues, more information becomes available, surveys are undertaken, and the views of stakeholders and communities are considered.
- 3.6.4 Where there is more than one potential alignment option with the same probability of having infrastructure in part of the corridor, non-statutory consultation responses and further assessment can influence the final selection of the preferred alignment. The ES will describe the progression of the graduated swathe and how the Scoping Boundary has been refined to become the Order Limits for the application for development consent.

3.7 Development of the Scoping Boundary

- 3.7.1 A final preferred option for the alignment of the Project has not yet been confirmed. To retain flexibility, a Scoping Boundary has been defined based on the new overhead line emerging preferred corridor, the new Weston Marsh substation infrastructure Siting Zone, the new WMEL-A and WMEL-B substation preferred Siting Areas, and an assumed area around the existing ZA overhead line to allow for reconductoring works, see **Chapter 4 Description of the Project**. The Scoping Boundary aligns with the geographical extent of the emerging preferred corridor for new overhead line identified by the CPRSS (Ref 3.12) (described above in **Section 3.5** and shown in **Figure 3.10 End to End Solution**), combined with a 2 km area around the existing ZA overhead line for the proposed reconductoring, and the Weston Marsh substation infrastructure Siting Zone (for which options have to date been considered by the Grimsby to Walpole project).
- 3.7.2 The Scoping Boundary has been used to consider the potential environmental effects in determining the scope for the ES. The cut-outs from the Scoping Boundary include residential properties and ancient woodland which have been removed for the purposes of Scoping, therefore, no infrastructure will be located within/oversail these cut-outs.

References

- Ref 3.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents> [Accessed 1 July 2025].
- Ref 3.2 Planning Inspectorate. (2008). Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements. [online]. Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an> [Accessed 1 July 2025].
- Ref 3.3 National Grid Electricity Systems Operator (2022). Network Options Assessment 2021/22 Refresh [online]. Available at: <https://www.nationalgrideso.com/document/262981/download> [Accessed 1 July 2025].
- Ref 3.4 ESO (2024). Beyond 2030 [online]. Available at: <https://www.neso.energy/document/304756/download> [Accessed 25 July 2025].
- Ref 3.5 National Grid (2022). Our Approach to Consenting [online]. Available at: <https://www.nationalgrid.com/electricity-transmission/document/142336/download> [Accessed 1 July 2025].
- Ref 3.6 The Planning Act 2008 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 1 July 2025].
- Ref 3.7 National Grid (no date). Holford Rules [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795The%20Holford%20Rules.pdf>. [Accessed 1 July 2025].
- Ref 3.8 National Grid (no date). Horlock Rules [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf>. [Accessed 1 July 2025].
- Ref 3.9 National Grid Electricity Systems Operator (2023). Future Energy Scenarios [online] Available at: <https://www.nationalgrideso.com/document/283101/download> [Accessed 1 July 2025].
- Ref 3.10 National Grid Electricity Systems Operator (2022). Electricity Ten Year Statement [online] Available at: <https://www.nationalgrideso.com/document/275611/download>. [Accessed 1 July 2025].
- Ref 3.11 National Grid (2025). Strategic Options Report [online]. Available at: <https://www.nationalgrid.com/document/561311/download> [Accessed 25 July 2025].
- Ref 3.12 National Grid (2025) Weston Marsh to East Leicestershire Corridor Preliminary Routeing and Siting Study. [online] Available at: <https://www.nationalgrid.com/document/561431/download> [Accessed 14 July 2025].

Ref 3.13 National Grid (2024) Grimsby to Walpole Corridor Preliminary Routeing and Siting Study. [online] Available at: <https://www.nationalgrid.com/document/352621/download> [Accessed 18 September 2025].

4. Description of the Project

Contents

4.	Description of the Project	4-1
4.1	Introduction	4-1
4.2	Project Overview	4-2
4.3	Description of each section within the Scoping Boundary	4-4
4.4	Project Design Approach	4-13
	Good Design Principles	4-13
4.5	Planning Policy	4-14
4.6	Design and control mitigation measures	4-14
4.7	Project Components	4-17
	Overhead Line	4-17
	Substation Connections	4-20
	Reconductoring	4-22
4.8	Construction	4-23
	Construction Programme	4-23
	Construction Compounds	4-23
	Overhead Line Construction	4-24
	Reconductoring	4-28
	Cable Installation	4-29
	New Substations	4-30
4.9	Operation	4-31
	Overhead Line	4-31
	New Substations	4-32
4.10	Decommissioning	4-32

Table 4.1	Description of principle features within the Scoping Boundary east to west by Section	4-5
-----------	---	-----

Image 4.1 Components of a Typical Transmission Connection (towers are synonymous with 'pylons' in this image')	4-18
Image 4.2 Suspension tower (left) and Angle tower (right)	4-19
Image 4.3 Alternative Tower Types (towers are synonymous with 'pylons' in this image')	4-20
Image 4.4 Illustrative example of a typical AIS substation	4-21
References	4-34

4. Description of the Project

4.1 Introduction

- 4.1.1 This chapter provides a description of the Project and an outline of key activities that would be undertaken during construction, operation, and decommissioning.
- 4.1.2 The area of land presented in **Figure 1.2 Scoping Boundary** is the Scoping Boundary which is the subject of this Environment Impact Assessment (EIA) Scoping Report. The Scoping Boundary is based on the new overhead line emerging preferred corridor, the new Weston Marsh substation infrastructure Siting Zone, the new WMEL-A and WMEL-B substation preferred Siting Areas, and an assumed area around the existing ZA overhead line to allow for reconductoring works. The proposed infrastructure has all been the subject of consultation prior to the date of this Scoping Report. The Scoping Boundary comprises of land identified, at this stage of the Project development and design process, as potentially being required to construct, operate and decommission the Project, within which the final alignment will be developed. The area cut outs have been removed from the Scoping Boundary for the purposes of Scoping and typically include constraints to be avoided such a residential properties and ancient woodland. No project infrastructure is intended to be located within those cut-outs, which were also presented at non-statutory consultation.
- 4.1.3 The alignment of the Project, location of construction compounds and haul road(s) are not available at this stage as they are still under development. Feedback from the non-statutory consultation is currently being processed and may result in changes to the design of the Project. Therefore, the Scoping Boundary has been used to inform the scope of the Environmental Statement (ES) proposed in this Scoping Report. The Scoping Boundary covers the maximum extent of where infrastructure could be located and is presented on **Figure 1.2 Scoping Boundary**. The Study Area as defined by each technical discipline reflects the area where significant effects are likely to occur from the construction and operation of the infrastructure located within the Scoping Boundary.
- 4.1.4 For the purposes of scoping, the Scoping Boundary allows sufficient area for flexibility in design. The Scoping Boundary will be refined through the development of the Project and will take account of:
- ongoing technical and design development;
 - environmental surveys and assessment; and
 - feedback received through stakeholder engagement.
- 4.1.5 A more detailed description of the Project will be presented in the Preliminary Environmental Information Report (PEIR) and subsequently the ES which will accompany the application for development consent .
- 4.1.6 This chapter sets out the evolving description of the Project and has been split into the following sections, which provide:
- an overview of the Project;

- a description of the Project from east to west (new overhead line) and north to south (reconductoring);
- an overview of project design principles and design mitigation measures;
- an overview of the planning policy relevant to the Project design;
- an overview of the proposed infrastructure of the Project;
- the construction methods that are outlined for installing the infrastructure associated with the Project;
- operation and maintenance requirements; and
- how the Project is proposed to be decommissioned, if required.

4.2 Project Overview

- 4.2.1 The Project, a Critical National Priority (CNP), directly supports the delivery of the UK Government's energy objectives and plays an important role in building a more secure and resilient energy future by reinforcing the electricity transmission system and enabling renewable energy onto the National Electricity Grid transmission network.
- 4.2.2 It forms part of a major programme of reinforcement of the electricity transmission system to accommodate major increases in north-south power flows, helping take power generated from renewable sources (especially from offshore wind) to areas of consumer demand across the UK. This would be achieved by reinforcing the national transmission network with a new 400 kilovolt (kV) electricity overhead transmission line over a distance of approximately 60 kilometres (km) starting from the new 400 kV Weston Marsh substation infrastructure and ending at a new 400 kV substation in East Leicestershire.
- 4.2.3 The Project, which this EIA Scoping Report covers, is at an early stage of development, but is expected to include the following elements:
- Approximately 60 km of new 400 kV overhead transmission line.
 - A new 400 kV substation to be built in the vicinity of the existing 4VK (Cottam – Wymondley) 400 kV overhead line near Corby Glen, South Kesteven (to be referred to as WMEL-A).
 - A new 400 kV substation to be built in the vicinity of the existing ZA (Cottam – Sundon) 400 kV overhead line near Ab Kettleby, Melton (to be referred to as WMEL-B).
 - Reconductoring of approximately 66 km of the existing ZA 400 kV overhead line from WMEL-B to the existing Grendon substation. Routeing and siting appraisal (as reported in the CPRSS) has led to an increase in reconductoring from 55km to the current 66km, due to a change in the initial estimated location of WMEL-B substation (on the existing ZA circuit also referred to as WMEL BZ2 in the CPRSS) near Ab Kettleby, approximately 10km further north along the existing ZA circuit (WMEL-B siting in CPRSS).
 - Replacement of short sections of existing 400 kV overhead line and local changes to the lower voltage distribution networks to facilitate the construction of the new overhead line and substations.
- 4.2.4 The Project may potentially include new substation infrastructure and associated connections, including up to two new 400 kV substations to be built to connect to the

existing 400 kV 4ZM transmission line that runs south east of Sleaford towards King's Lynn, and the existing 400 kV 2WS transmission line that runs east of Spalding towards a Tee-Point with the 400 kV 4ZM transmission line between Sleaford and King's Lynn (to be referred to as Weston Marsh substation infrastructure) ¹.

¹ The Weston Marsh substation infrastructure is currently being developed by the Grimsby to Walpole Project, also being promoted by National Grid. The works have been included in this Scoping Report to ensure that all receptors and potentially significant effects resulting from the Project are identified as the consenting strategy for the infrastructure is developed and confirmed.

4.3 Description of each section within the Scoping Boundary

- 4.3.1 The location of the components of the Project including temporary working areas within the Scoping Boundary are not known at this stage.
- 4.3.2 The Scoping Boundary has therefore been selected to represent the potential area within which the components of the Project would be located.
- 4.3.3 For the purpose of scoping, the Project has been divided into five Sections based on the boundaries of the local authorities in which works would be required, including the new 400 kV overhead line, the new substations, and the reconductoring. The five Sections are described in **Table 4.1** and shown in **Figure 1.2**.

Table 4.1 Description of principle features within the Scoping Boundary east to west by Section

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
Section 1	South Holland	Lincolnshire	The Scoping Boundary within this Section comprises of the new Weston Marsh substation infrastructure and approximately 11 km of new overhead line from the new Weston Marsh substation infrastructure to South Forty Foot Drain.	As shown in Figure 1.2 Sheet 1 this Section runs in a predominately westerly direction from the new Weston Marsh substation infrastructure to South Forty Foot Drain. The Section falls within The Fens National Character Area (NCA) and is characterised by a flat low-lying topography and productive arable land use. It is a large scale and predominantly open landscape, divided by linear ditches and drains and occasional linear tree belts along field boundaries. This is a relatively well settled landscape consisting largely of dispersed clusters and individual properties. The closest town is Spalding, with the villages of Surfleet, Crossgate, Pinchbeck and Northgate adjacent to the Scoping Boundary. There are a number of waterbodies in this Section including the River Welland, Vernatt's Drain, River Glen, South Forty Foot Drain and numerous unnamed ordinary watercourses. The western 2km of the Section is located on two areas of Source Protection Zone (SPZ) 1 – Inner Protection Zone, surrounded by SPZ 2 – Outer Protection Zone and SPZ 3 – Total Catchment which share the same boundaries. The majority of the Section falls within Flood Zones 2 and 3. Principle transport links present include the A16, B1172 and the Peterborough to Lincoln rail line. Within the Section there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages. Environmental features include The Wash Ramsar and Special Protection Area (SPA) and The Wash and North Norfolk Coast Special Area of Conservation (SAC) located 7.6km north east of the Section and are hydrologically connected via the River Welland and Vernatt's drain. Baston Fen SAC: Inland waterbody is located

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
				7.6km south and hydrologically connected via the South Forty Foot drain and River Glen. Wykeham Chapel scheduled monument, Moated site of monastic grange with adjacent earthworks at Rigbolt House scheduled monument, and Moated site of Newhall Grange scheduled monument are within or adjacent to the Section. Listed buildings are also within the Section.
Section 2	South Kesteven	Lincolnshire	The Scoping Boundary within this Section comprises of new overhead line from South Forty Foot Drain to WMEL-A 400 kV substation, then new overhead line onward to The Drift road south of Sewstern. The approximate length of this section is 28 km.	As shown in Figure 1.2 Sheet 2 this Section runs in a predominately westerly direction from the South Forty Foot Drain to the proposed WMEL-A substation, then onward to The Drift road and is approximately 28 km long. The east of the Section falls within The Fens NCA before transitioning into the Kesteven Uplands NCA which are broadly characterised by an undulating large-scale agricultural landscape. The topography is variable consisting of a series of low, broadly north south ridges and valleys, rising towards the west. The closest town is Bourne, with the villages of Dunsby, Haconby, Morton Stainfield, Hanthorpe, Morton, Bulby, Irnham, Swinstead, Corby Glen, Swayfield, North Witham and South Witham within or adjacent to the Section. There are a number of waterbodies in this Section including South Forty Foot Drain, Rippingale Running Dike, Car Dyke, Old Beck, East Glen River, West Glen River, River Witham and numerous unnamed ordinary watercourses. Most of the Section is located on SPZs, with SPZ 3 covering all of the Study Area other than a small area extending 5km west of Lobthorpe. SPZ 2 covers all the area east of Swayfield. Much of the eastern most 4km of the Section is covered by SPZ 1, this is in the area west of Haconby. Flood Zones 2 and 3 cover most of the eastern area, with further Flood Zones 2 and 3 present around the waterbodies noted above. Principle highways in the Section include the A15, A151 and A1. Other roads include the B1176. The East Coast Main Line (ECML)

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
				rail line is also present. Within the Section there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages. Environmental features include the Baston Fen SAC: Inland waterbody located 7.6km south and hydrologically connected via the South Forty Foot drain. Dunsby Wood Site of Special Scientific Interest (SSSI), Swinstead Valley SSSI, The Hermitage SSSI, Tortoiseshell wood SSSI, and Porters Lodge Meadow SSSI are located adjacent to the Section. Ancient woodlands Breaches Wood, Norwood/West Wood, South Wood, Bitchneaves Wood, Dodey Wood, Elliots Wood, Herrico Wood, Beaumonth Wood, Mickley Wood, Battlebourn Head Wood are within the Section. Spring Wood, Callans Lane Woods, Thorney Wood, Dunsby Wood, Old Park Wood, Great Osgrove Wood, Little Osgrove Wood and Twyford Forest ancient woodlands are adjacent to the Section. Settlement between Rippingale Running Dike and Long Drove scheduled monument, The Hermitage moated site, 400 m north east of Corby Pasture Farm scheduled monument, Corby moated mound scheduled monument, the Remains of Knights Templar preceptory, watermill and fishponds scheduled monument, Grimsthorpe Castle Registered Park and Garden (RPG), and multiple listed buildings are encompassed by or adjacent to the Section.
Section 3	Melton	Leicestershire	The Scoping Boundary within this Section comprises approximately 19 km of new overhead line from	As shown in Figure 1.2 Sheet 3 this Section runs in a predominately westerly direction from The Drift road to WMEL-B substation, then a southerly direction to an area near the B6047 south of Twyford and is approximately 32 km long. The east of the Section falls within the Kesteven Uplands NCA before transitioning to the Leicestershire and Nottinghamshire Wolds NCA in the west. The Leicestershire and Nottinghamshire

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
			The Drift road to WMEL-B 400 kV substation. Reconductoring of approximately 13 km of the existing 400 kV ZA overhead line will take place from WMEL-B to an area near the B6047 south of Twyford.	Wolds are characterised by undulating agricultural land with a variable sense of scale, openness and enclosure, influenced by topography, tree cover and field pattern. The southern extent of the Section falls within the High Leicestershire NCA and is characterised by rolling topography forming broad ridges and shallow valleys. This is a predominantly agricultural landscape with pasture on higher, sloping land and arable fields on lower, flatter areas. Tree cover is variable and largely confined to field boundaries and small woodlands. There is a variable sense of scale, largely related to the underlying field pattern. The closest town is Melton Mowbray, with the villages of Sewstern, Garthorpe, Holwell, Ab Kettleby, Wartnaby, Ashfordby, Frisby on the Wreake and Twyford within or adjacent to the Section. There are a number of waterbodies in this Section including the River Eye, Thorpe Brook, Scalford Brook, River Wreake, Gaddesby Brook and numerous unnamed ordinary watercourses. It also contains Flood Zones 2 and 3 around these waterbodies. Principle highways in the Section include the A607, A606, A6006 and A1. Other roads include the B676, B674, and B6047. The Melton Mowbray to Nottingham rail line, and Melton Mowbray to Leicester rail line are also present. Within the Section there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages. Environmental features include Cribbs Meadow SSSI, Holwell Mouth SSSI, Frisby Marsh SSSI which are within by or adjacent to the Section. Freeby Wood ancient woodland is also in this Section. Moated grange at Spinney Farm, Melton Mowbray scheduled monument, Moated site at Ab Kettleby scheduled monument, Kirby Bellars Priory scheduled monument, Garden, moat and five fishponds at Kirby Bellars scheduled monument, and multiple listed buildings are within or adjacent to the Section.

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
Section 4	Harborough	Leicestershire	The Scoping Boundary within this Section comprises approximately 19 km of reconductoring of the existing 400 kV ZA overhead line from an area near the B6047 south of Twyford to the confluence of Langton Brook and the River Welland, south west of Welham.	As shown in Figure 1.2 Sheet 4 this Section runs in a predominately southerly direction from an area near the B6047 south of Twyford to the confluence of Langton Brook and the River Welland, south west of Welham and is approximately 19 km long. The Section predominately falls within the High Leicestershire NCA. The closest town is Market Harborough with the villages of Marefield, Lowesby, Cold Newton, Tilton on the Hill, Halstead, Skeffington, Tugby, Rolleston, Noseley, Goadby, Glooston, Stonton Wyville, Cranoe, Slawston, Thorpe Langton, Willham, Great Bowden, and Little Bowden within or adjacent to the Section. There are a number of waterbodies in this Section including the River Jordan and numerous unnamed ordinary watercourses. It also contains Flood Zones 2 and 3 around these waterbodies. Principle highways in the Section include the A47, A6, A4304 and A508. Other roads include the B6047. The Midland Main Railway Line is a railway route connecting London, Birmingham, Leicester, Nottingham and Sheffield and passes through the southern end of this Section near Market Harborough. Within the Section there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages. Environmental features include Leighfield Forest SSSI and Great Bowden Borrowpit SSSI. Other features include Tilton Wood, Skeffington Wood, Crow Wood, Priest Hill, Brown's Wood, Hoothill Wood, Tugby Wood, Loddington Reddish, Rolleston Wood, Noseley Wood, Rough Spiney, Glooston Wood, and Staton Wood ancient woodland. North Marefield deserted medieval village and moated site scheduled monument, Lowesby deserted medieval village with three fishponds scheduled monument, Cold Newton shrunken medieval village and moated site scheduled monument, Roman villa 200m south of Station Cottages scheduled monument, Mound

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
				220yds (200m) NNW of church scheduled monument, Churchyard cross, St Peter's churchyard scheduled monument, Moated site at Tilton scheduled monument, Churchyard cross in St John the Baptist's churchyard scheduled monument, Medieval village earthworks, fishponds and mill leat at Stonton scheduled monument, St Mary in Arden Church scheduled monument, Grade II Lowesby Hall RPG are within or adjacent to the Section. Lowesby conservation area, Tilton on the Hill conservation area, Skeffington conservation area, Tugby conservation area, Rolleston conservation area, Slawston conservation area, and multiple listed buildings are within the Section.
Section 5	North Northamptonshire and West Northamptonshire	North Northamptonshire and West Northamptonshire	The Scoping Boundary within this Section comprises Reconductoring of approximately 34 km of the existing 400 kV ZA overhead line from the confluence of Langton Brook and the River Welland, south west of Welham to the existing Grendon 400 kV substation.	As shown in Figure 1.2 Sheet 5 this Section runs in a predominately southerly direction from the confluence of Langton Brook and the River Welland, south west of Welham to the existing Grendon 400 kV substation, and is approximately 34 km long. The Section falls within the Northamptonshire Vales NCA an open landscape of gently undulating clay ridges and valleys with occasional steep scarp slopes. There is an overall visual uniformity to the landscape and settlement pattern, with diverse levels of tranquillity, from busy urban areas to some deeply rural parts. Mixed agricultural regime of arable and pasture, with arable land tending to be on the broader, flat river terraces and smaller pastures on the slopes of many minor valleys and on more undulating ground. Relatively little woodland cover but with a timbered character derived largely from spinneys and copses on the ridges and more undulating land, and from waterside and hedgerow trees and hedgerows. A strong field pattern, with distinctive river valleys of the Welland and the Nene. The closest towns are Market Harborough and Wellingborough with the villages Weston by Welland, Sutton Bassett, Dingley Braybrooke, Harrington, Orton, Loddington, Mawsley, Great

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
				Cransley, Broughton, Pytchley, Orlingbury, Little Harrowden, Hardwick, Mears Ashby, Wilby, Great Doddington, Earls Barton, Castle Ashby and Grendon within or adjacent to the Section. There are a number of waterbodies in this Section including the River Welland, River Jordan, River Isle, Slade Brook, Swanspool Brook, River Nene and numerous unnamed ordinary watercourses. It also contains Flood Zones 2 and 3 around these waterbodies. Principle highways in the Section include the A427, A6, A14, A43, A509, A4500 and A45. Other roads include the B664, B574 and B573. The Market Harborough to Kettering rail line is also present. Within the Section there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages. Environmental features include the Upper Nene Valley Gravel Pits SPA and Ramsar which the existing ZA overhead line passes through. Other features within the Section comprise Cribbs Birch Spinney and Mawsley Marsh SSSI, Badsaddle Withmale Park and Bush Walk Woods SSSI, and Upper Nene Valley Gravel Pits SSSI. Faxton Corner, Mawsley Wood, Cransley Wood, Badsaddle Wood and Withmale Wood ancient woodlands is also encompassed by the Section. There are multiple listed buildings are within this Section, and the following scheduled monuments: • Braybrooke Bridge; • Braybrooke Castle: the remains of a medieval moated manor and medieval settlement remains; • Site of manor house; • Earls Barton motte castle;

Section Name	Local Authority	County Authority	Project Proposals and Approximate Section Length	Description of Principal Features within the Section
				• Roman villa 200m W of Doddington Mill; and • Medieval cross 170 m south west of Hall Farm.

4.4 Project Design Approach

Good Design Principles

- 4.4.1 The Project will be designed, constructed, maintained, operated and decommissioned in accordance with applicable health and safety legislation and regulations. The Project will comply with relevant design safety standards including the National Electricity Transmission System Security and Quality of Supply Standards (NETS SQSS) (Ref 4.1) which sets out the criteria and methodology for planning and operating the National Electricity Transmission System. National Grid policies and processes, which contain details on design standards required to be met when designing, constructing, maintaining, and operating assets such as those proposed on the Project, will be adhered to.
- 4.4.2 Design principles will be established, informed by National Infrastructure Commission (NIC) guidance (Ref 4.2 and Ref 4.1) and the Planning Inspectorate advice on Good Design (Ref 4.3) to inform the development of the Project design, both for construction and operation. Design principles set desirable design outcomes which the Project should endeavour to achieve, as far as is reasonably practicable, and facilitate an integrated design approach which draws together engineering, environment, sustainability and social value design considerations. Design principles ensure that these aspects are robustly addressed during the design, assurance and environmental assessment of the Project. Applying the design principles additionally helps to ensure that the Project meets the criteria in the relevant National Policy Statements (NPS), which are EN-1 (Ref 4.4), the Overarching National Policy Statement for energy and EN-5 (Ref 4.5), the National Policy Statement for electricity networks infrastructure.
- 4.4.3 The new section of the Project is currently being designed as an overhead line using the guidance provided in Section 2.9.20 in EN-5 (Ref 4.4): *“overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e. National Park, The Broads, or Area of Outstanding Natural Beauty).”*. As the Project does not cross any part of a nationally designated landscape there is presumption for overhead electricity lines.
- 4.4.4 The Project is being designed in accordance with The Holford Rules (Ref 4.6) which are mentioned in Sections 2.9.16 and 2.9.17 of EN-5 (Ref 4.5), as well as The Horlock Rules (Ref 4.7) which are also mentioned in EN-5 in Sections 2.9.18 and 2.9.19.

The Holford Rules

- 4.4.5 Paragraph 2.8.7 of the existing NPS EN-5 (Ref 4.6) makes clear *“that the Holford Rules, and any updates, form the basis for the approach to routeing new overhead lines”*.
- 4.4.6 Whilst the guidelines were initially developed in 1959, they have been reviewed on a number of occasions by National Grid and by the other UK transmission licence holders. One of the reviews was against the Electricity Act 1989. The guidelines have

stood the test of time and have become accepted industry best practice in overhead line routing.

The Horlock Rules

- 4.4.7 The Horlock Rules (Ref 4.7) predominately apply to the siting of substations and line approaches. The general principles underlying the Horlock Rules (Ref 4.7) are the avoidance of areas of high amenity and apply equally to the siting of Sealing End Compounds (SECs), although the balance of impacts and constraints will often be different.
- 4.4.8 As detailed above, the National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 4.5) in paragraph 2.9.18 confirms that the Horlock Rules *“should be embodied in applicants’ proposals for the infrastructure associated with new overhead lines”*.

4.5 Planning Policy

- 4.5.1 **Chapter 2 Regulatory and Planning Context** sets out the overarching policy relevant to the Project including NPS EN-1 (Ref 4.4) and EN-5 (Ref 4.5). Paragraph 4.7.1- 4.7.2 of EN-1 states:

‘The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important.

Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.’

- 4.5.2 Paragraph 2.4.3 of NPS EN-5 (Ref 4.5) states that the design principles set out in EN-1 should be considered by the Applicant however *‘the Secretary of State should bear in mind that electricity networks infrastructure must in the first instance be safe and secure, and that the functional design constraints of safety and security may limit an applicant’s ability to influence the aesthetic appearance of that infrastructure.’*

4.6 Design and control mitigation measures

- 4.6.1 National Grid’s options appraisal process seeks to embed and mitigate environmental effects through route and site selection as part of the design process.
- 4.6.2 Sensitive routing and siting is a principal design measure that has been embedded into the Project design since the start. This measure aims to avoid and reduce, as far as practicable, impacts on identified receptors and ensures compliance with NPS EN-1 (Ref 4.4) and NPS EN-5 (Ref 4.5) as well as The Holford (Ref 4.6) and Horlock Rules (Ref 4.7).

- 4.6.3 Another design measure that will be embedded into the Project is the selection of the most appropriate technology type which is currently under consideration.

Compliance with policy

- 4.6.4 The Project will be compliant with the guidelines and policies relating to transmission infrastructure stated in NPS EN-5 (Ref 4.5), and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines (1998) (Ref 4.8), as well as adhering to National Grid design standards. Compliance with these guidelines ensures the Project is adhering to policies related to: biodiversity and geological conservation, landscape and visual, noise and vibration, Electromagnetic fields (EMF) and sulphur hexafluoride (SF₆).
- 4.6.5 The Project will also comply with design safety standards including NETS SQSS (Ref 4.1) and the suite of National Grid policies and processes which contain details on design standards required to be met when designing, constructing, and operating its projects.
- 4.6.6 Standard control and management measures would be implemented during construction of the Project to limit impacts through adherence to good site practices and achieving legal compliance. Such measures are detailed within **Appendix 4A Initial Outline Code of Construction Practice**.

Limits of Deviation

- 4.6.7 The ES will include the proposed locations of the Project infrastructure. However, as recognised by the Planning Inspectorate's Advice Note Nine (Ref 4.9), a necessary and proportionate degree of flexibility needs to be incorporated into the design of a development so that unforeseen issues encountered after a development has been consented can be addressed. In this instance, for example, previously unidentified poor ground conditions, or the identification of significant unrecorded archaeological remains, may require a tower to be re-sited. Therefore, to allow for this necessary and proportionate degree of flexibility, Limits of Deviation (LoD) will be developed for the Project components. The LoD would provide a maximum distance or measurement (horizontal and/or vertical) of variation within which every component of the Project would be located. All surveys and assessments will be of sufficient spatial scale to incorporate any LoD for all permanent infrastructure.

Approach to materials and waste

- 4.6.8 Delivery of the Project requires sourcing of materials for construction. These fall into the following broad categories:
- new materials required for the Project, such as galvanised steel for towers, reinforced concrete for the foundations, insulator sets (typically glass, porcelain or polymeric) and aluminium/copper conductors.
 - recycled materials.
 - temporary materials, such as aggregate for access routes and site compounds, works cabins and security fencing would be required during construction. Where practicable temporary materials would be sourced from other construction projects within the region and reused at other construction projects after completion of the Project.

- 4.6.9 The ES will include a description of the nature and quantity of the materials used, and information regarding the anticipated quantities and types of waste that will be produced during construction only, as operational waste and materials for an infrastructure project of this nature will be negligible and not quantifiable. This information will only be used to inform those assessments that consider waste generation and material consumption in their assessment methodology, for example, greenhouse gas calculations or vehicle trips used in traffic and transport, not warrant separate assessment of waste generated on waste infrastructure capacity or material supply chains, for the reasons set out below.
- 4.6.10 The material sources are unlikely to be identified until the detailed design stage of the Project, which would typically happen post consent. The nature of the Project means that it is difficult to use secondary sources during construction of the Project, as this can affect the operation and the design life of the Project. However, National Grid has existing processes in place to source materials from sustainable sources and to use recycled materials where these do not compromise the required design standards and operational life of the Project.
- 4.6.11 Waste materials would be produced by the Project. The contractor would be required to produce a Site Waste Management Plan (SWMP) prior to construction (commitment GG23 in **Appendix 4A Initial Outline Code of Construction Practice**). This would set out the measures to reduce the generation of waste in the first place and appropriate measures to reuse and recycle materials where practicable. It would also identify appropriate waste facilities to dispose of materials.
- 4.6.12 Soil may need to be removed from site in certain circumstances, such as where the soil was found to be contaminated, in which case, the soils would be managed in an appropriate manner, as set out in the good practice measures within **Appendix 4A Initial Outline Code of Construction Practice** and the future SWMP.
- 4.6.13 Where the Project crosses through mineral safeguarding areas, a standalone Minerals Assessment Report will be provided with the application for development consent to ensure compliance with policy on this matter. This will identify all safeguarded minerals and provide an appraisal of the effects of the Project against relevant minerals policy. However, the limited presence of minerals and nature of the Project, i.e. the small permanent footprint of towers (which can be micro sited with approximately 300 to 350 m between them) it is not likely to result in significant effects in EIA terms.
- 4.6.14 If an assessment of material and waste effects from a project of this type were to be carried out, it would be undertaken following Institute of Sustainability and Environmental Professionals (ISEP) (formally Institute of Environmental Management and Assessment (IEMA)) Guidance (Ref 4.10) and consider the potential material use against known supply chain availability, and the amount of waste produced against the likely impact on landfill void capacity. However, given the limited amounts of waste produced and measures to reduce and manage it, and the landfill capacity across the counties and region over which the Project will be delivered, it is unlikely that any assessment would identify a likely significant effect. Material supplies are typically readily available and/or planned well in advance across the Great Grid Programme (GGP), therefore, it is also unlikely that any assessment would identify significant impacts on the availability of materials.
- 4.6.15 Therefore, waste and materials are proposed to be **scoped out** of further assessment and will not be considered further in the ES. This approach and scope

has been accepted on recent examples of similar National Grid overhead line projects for which Scoping Opinions have been adopted.

Approach to energy consumption

- 4.6.16 The Project aims to support the UK's transition to Net Zero emissions by 2050. As outlined in **Chapter 3 Main Alternatives Considered**, National Grid has a statutory duty to develop and maintain an efficient, coordinated, and economical electricity transmission system. Therefore, the Project would contribute to supporting the UK's Net Zero transition. Notwithstanding the role of the Project in achieving the UK's Net Zero transition, it will result in energy consumption during construction.
- 4.6.17 The Project would consume energy during manufacture and construction. The Project will consider a range of measures to reduce energy consumption during construction, such as the use of energy efficient plant and tools. The Project will aim to use local grid connections for temporary site power, where viable. Where not viable an alternative sustainable option should be used, such as appropriately sized alternatively fuelled or hybrid generators, where practicable.
- 4.6.18 An outline Construction Traffic Management Plan (CTMP) will be submitted with the ES which will set out measures to reduce journeys and hence energy consumption from those journeys, such as car sharing and using public transport where practicable. It will also set out commitments regarding using electric vehicles or vehicles conforming with emission standards ratings (see commitment TT01 and TT02 in **Appendix 4A Initial Outline Code of Construction Practice**).
- 4.6.19 Energy consumption during maintenance and operation would be limited to the energy required to maintain and operate the Project and transmission losses. National Grid also has existing processes in place to monitor its energy consumption across the network. If consented, the operational energy requirements would be managed as part of the wider network operation.
- 4.6.20 The measures outlined above would reduce the energy consumption of the Project during both construction and operation in line with the good design principles.

4.7 Project Components

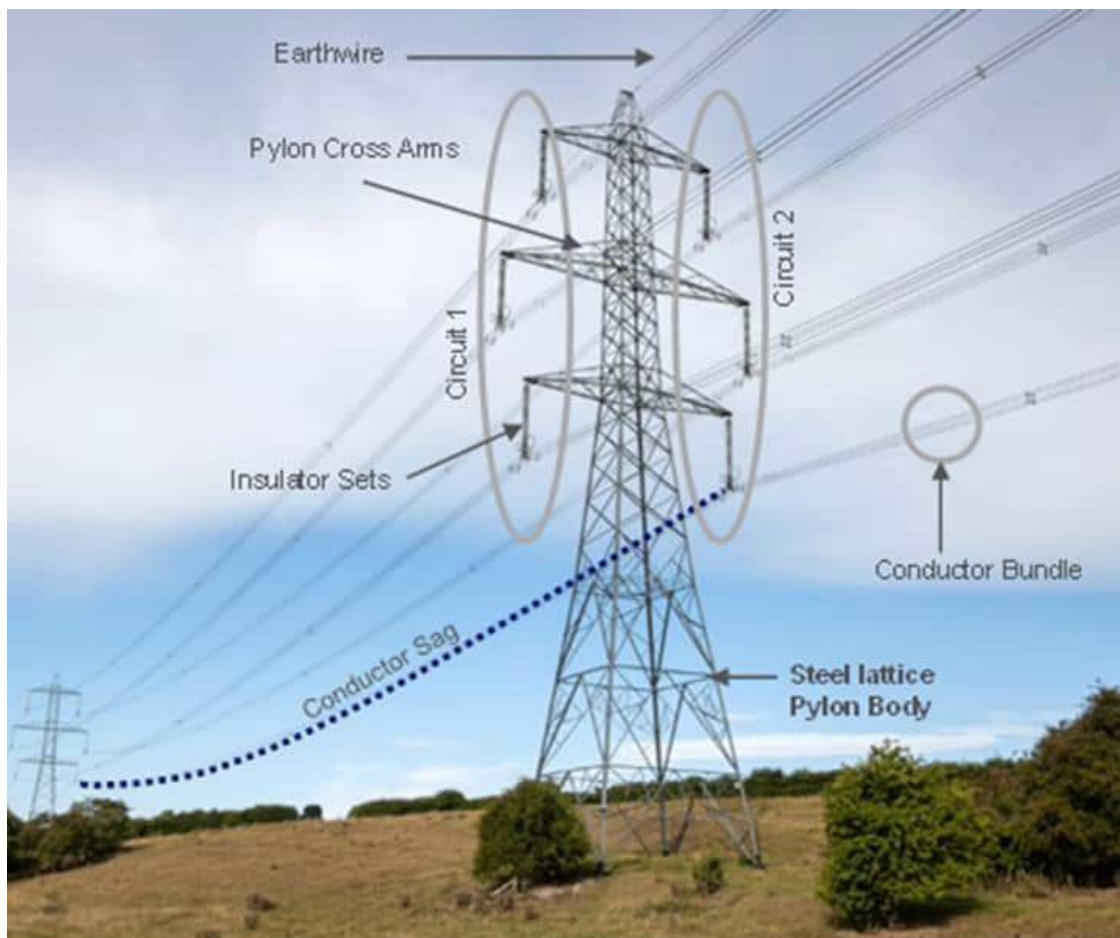
Overhead Line

- 4.7.1 It is an assumption under paragraph 2.9.20 of NPS EN-5 (Ref 4.5) that “*overhead lines should be the strong starting presumption for electricity networks in general*”. Where used on the Project the overhead line would comprise of conductors supported by towers. A typical tower operating at 400 kV is approximately 50 m in height but can be 60 m in height if required, depending on topography and to allow extra height to clear existing features. A typical span distance between towers is approximately 350 m. In broad terms there are typically three towers for every kilometre of overhead line. The ES will provide parameters for the towers to be constructed, including maximum heights and widths of the steel work itself, along with information on the foundations that would be required.
- 4.7.2 Towers are either suspension (line) towers, which support the overhead line in a straight line; or tension (angle) towers, which support the overhead line where the line changes direction. The conductors are connected to the tower by an assembly of insulators and steel fittings and conductor clamps. Additional fittings, such as spacers

and vibration dampers, would be fitted to the conductors. Spacers prevent the sub-conductors from touching each other and vibration dampers prevent oscillations from the conductors from reaching the insulator fittings and minimise effects of fatigue loading. Arcing horns will also be required to protect insulators from damage due to dangerous electrical conditions, such as overvoltages due to electrical faults or lightning strikes.

- 4.7.3 The main components of an overhead line are shown in **Image 4.1**, which shows a typical steel lattice suspension tower.

Image 4.1 Components of a Typical Transmission Connection (towers are synonymous with 'pylons' in this image')



- 4.7.4 Where the route of the overhead line changes, angle towers (sometimes referred to as tension towers) are used. Angle towers have slightly wider bases and differing alignments between the insulators and conductors, as they take strain of the sideways forces created by the change in direction. An angle (tension) tower is shown in **Image 4.2**.

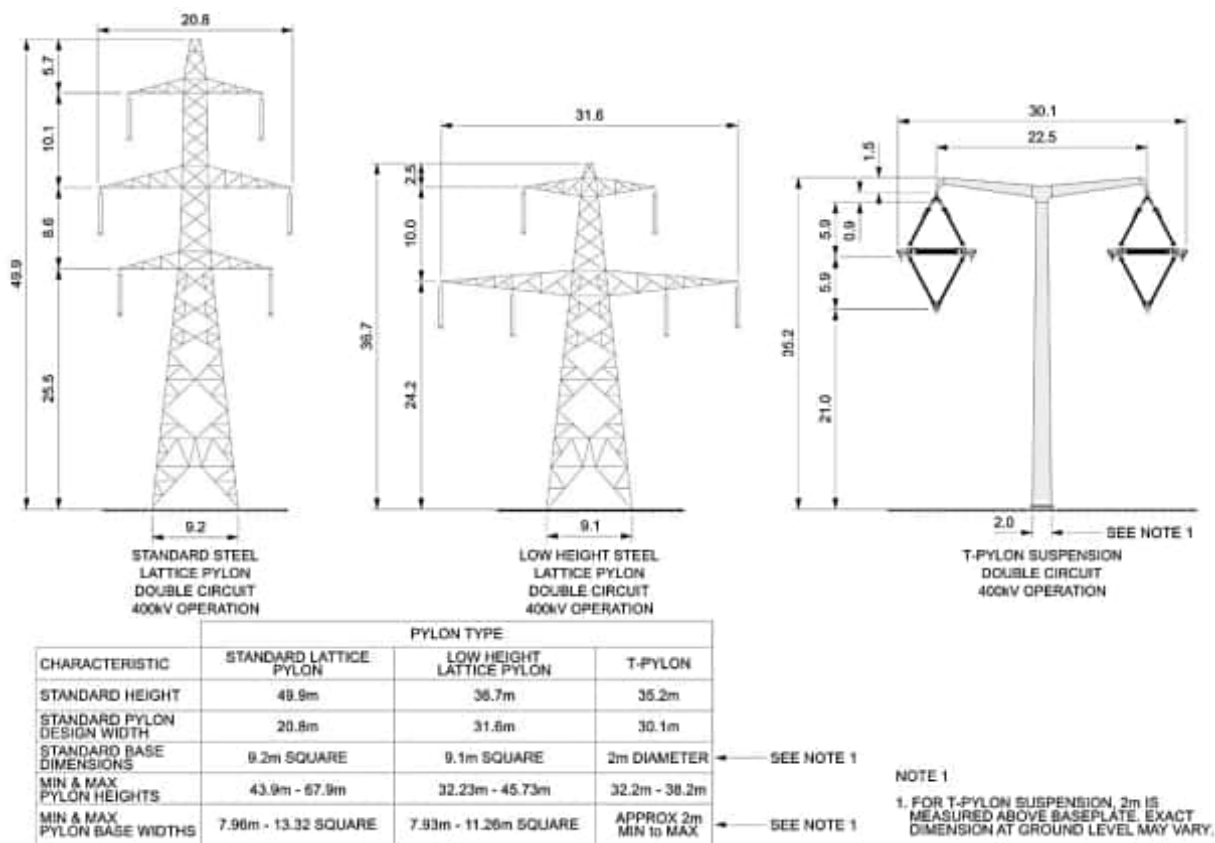
Image 4.2 Suspension tower (left) and Angle tower (right)



Towers

- 4.7.5 It is likely that the proposed towers for the Project would comprise steel lattice with three arms on either side of a central body. Typical heights for steel lattice towers are around 50 m, however the proposed height of each tower would depend on the specifics of each location such as topography, land use and crossings. Indicative tower heights will be provided within the ES which will be limited by a vertical LoD to be defined through the development of the Project and the need to cross other electricity networks, watercourses and other obstacles.
- 4.7.6 Alternative tower designs may also be considered, where mitigation (e.g. for landscape and visual effects) is required. This will be considered during design development and assessment and reported in the chapter on alternatives in the ES. The alternative designs which may be considered are:
- Low height steel lattice
 - T pylon.
- 4.7.7 Alternative tower designs are illustrated in **Image 4.3**.

Image 4.3 Alternative Tower Types (towers are synonymous with ‘pylons’ in this image’)



Conductors and insulators

- 4.7.8 The conductor (shown in Image 4-1) type is expected to be triple Araucaria comprising a maximum of three conductors per bundle, and a total of 18 conductors per tower together with an earthwire/fibre optic cable.
- 4.7.9 Insulators can be made of different types of material, but the most common industry standard is either glass, porcelain, or polymeric.
- 4.7.10 Suspension towers would typically have a single insulator string hanging vertically downwards from each crossarm end to carry the conductor bundle. A tension tower would typically have one insulator string per conductor on both sides of the tower (i.e. two insulator strings for a conductor bundle consisting of two conductors, giving four insulator strings on each cross arm when both sides of the tower are taken into account) and these are oriented roughly horizontally outwards from the crossarm ends and take the tension of the conductors.

Substation Connections

- 4.7.11 The Project would connect up to four new 400 kV substations and ensure that the Project meets the relevant technical standards for the network reinforcement it is seeking to achieve.
- 4.7.12 There are two main types of substations: Air Insulated Switchgear (AIS) substations and Gas Insulated Switchgear (GIS) substations.
- 4.7.13 An AIS substation is constructed with switchgear which relies on open air components, can require large clearance areas for operation and safety and takes up a larger area of land compared to a GIS substation. AIS substations are typically

lower cost and typically involve less construction time, with fewer components required and easier maintenance. However, they require a larger area of land and, as they are exposed to the elements, are not recommended for certain environments such as coastal areas.

- 4.7.14 A GIS substation is constructed with switchgear using gas filled components, which allows operation and safety clearances to be reduced when compared to an AIS substation. GIS substations typically require less space, and this may have a reduced visual impact as a result. However, they tend to be more costly, require specialised operation and maintenance, have longer outage repair times and typically require the use of sulphur hexafluoride (SF₆) - a greenhouse gas that has a global warming impact 22,800 times that of carbon dioxide.

New Weston Marsh substation infrastructure

- 4.7.15 The new Weston Marsh substation infrastructure will allow for up to two new substations to connect to the existing 400 kV 4ZM transmission line that runs south east of Sleaford towards King's Lynn, and the existing 400 kV 2WS transmission line that runs east of Spalding towards a Tee-Point with the 400 kV 4ZM transmission line between Sleaford and King's Lynn.
- 4.7.16 The new Weston Marsh substation infrastructure will be located within Section 1 of the Scoping Boundary, situated in the local authority of South Holland. With reference to **Figure 1.2 Scoping Boundary**, the Refined Siting Zone for the Weston Marsh substation infrastructure is located at the eastern end of the Scoping Boundary, to the north east of Spalding. The functional footprint of the substation(s), assuming that they are AIS substations, would be approximately 550 m by 200 m (approximately 11 ha) and approximately 380 m by 200 m (approximately 8 ha). It should be noted that this excludes related development including access arrangements, drainage, landscaping and other associated environmental works. See **Image 4.4** below for an illustrative example of an AIS substation.

Image 4.4 Illustrative example of a typical AIS substation



New WMEL-A and WMEL-B substations

- 4.7.17 These two new substations are known as WMEL-A and WMEL-B. The exact footprint of these two new substations is yet to be determined precisely, however, they are currently assumed to be located within the emerging preferred Siting Areas shown in **Figure 3.8 WMEL-A Substation Graduated Swathe** and **Figure 3.9 WMEL-B**

Substation Graduated Swathe. These locations are within the Scoping Boundary and considered in this report.

- 4.7.18 The two new substations (WMEL-A and WMEL-B) are required to connect the new 400 kV overhead line to the existing 400 kV 4VK (Cottam - Eaton Socon – Wymondley) overhead line and 400kV ZA (Cottam - Grendon – Staythorpe) overhead line.
- 4.7.19 The new WMEL-A Substation will be located within Section 2, approximately 1.2 km west of Corby Glen and 1.54 km north west of Swayfield. The new WMEL-B substation will be located within Section 3 approximately 0.35 km south west of Wartnaby and 0.6 km north of Saxelbye.
- 4.7.20 The precise location of the substations will be confirmed through further design, assessment, and consideration of stakeholder feedback, published at statutory consultation. The functional footprint of the substations will also be confirmed however, assuming that it is an AIS substation the WMEL-A Siting Area considered to date allows for an area approximately 575 m in length by 250 m wide, with eight to ten bays, and gantries approximately 12 m in height. Assuming that it is an AIS substation WMEL-B allows for an area 575 m in length by 225m to 300m in width with eight to ten bays, and gantries approximately 12 m in height. It should be noted that this excludes related development including access arrangements, drainage, landscaping and other associated environmental works.

Reconductoring

- 4.7.21 Reconductoring involves upgrading existing electricity transmission lines by replacing old conductors with new, more efficient ones. This process is crucial for enhancing the capacity and reliability of the existing ZA overhead line to which the Project will connect. Reconductoring aims to increase the amount of electricity that can be transmitted over existing lines by using efficient conductors that generally operate at higher temperatures and carry more power.
- 4.7.22 The process involves replacing the existing conductors strung between transmission towers with new ones that can transfer higher electrical loads. This will require careful planning and coordination to minimise disruptions to the power supply, however, as the works replace existing conductors, there is no horizontal, and limited vertical realignment proposed that that would result in some potentially significant operational effects, which are typically expected from new overhead line. These include landscape and visual impacts, or impacts to the setting of heritage assets, as the electricity transmission lines already exist in the environment.
- 4.7.23 The reconductoring is part of a broader project to modernise the 4VA overhead line (known as 'SGRE') to ensure it is capable of meeting future energy demands and supporting the transition to a cleaner energy system. The reconductoring of the existing ZA overhead line in this Project would extend from the WMEL-B substation to the existing Grendon substation near Northampton, as shown in **Figure 1.2**. The works would comprise replacement of existing conductors and associated fittings, possibly strengthening of tower steelwork. Structural surveys have not yet been undertaken however one side of the conductors was replaced around 12 years ago and it is anticipated that strengthening works would likely be required, rather than tower replacement. If any tower replacement is identified as required by proposed condition surveys it is likely to be limited in number. Any replacement towers would be in similar locations in close proximity to existing towers and of similar heights and

appearance to the towers that they would replace and, if required, will be considered in the ES.

- 4.7.24 The existing ZA overhead line requiring reconductoring is located in Section 3, Section 4 and Section 5, in the Local Authorities of Melton, Harborough and West Northamptonshire and North Northamptonshire.

4.8 Construction

- 4.8.1 This section describes how the infrastructure described above would typically be constructed and installed. An Initial Outline Code of Construction Practice (Initial Outline CoCP) has been produced and is included in **Appendix 4A Initial Outline Code of Construction Practice**. The topic chapters (**Chapters 6 to 19**) have taken account of the control and management measures which are set out in the Initial Outline CoCP when determining the proposed scope of assessment.
- 4.8.2 The ES will describe the number of anticipated vehicle movements during all phases of the Project (including diverted traffic) and explain the assumptions upon which these have been established. An Outline CoCP will be submitted with the application for development consent and its delivery secured as a Requirement of the DCO.

Construction Programme

- 4.8.3 Subject to gaining development consent, assumed to be granted in 2029 following an application in 2028, it is anticipated that access and construction of the Project would commence in 2030, starting with enabling works including site clearance activities, the installation of construction compounds and access roads. It is expected the main construction works (construction of substations and overhead line) would continue through to 2034 (four years).
- 4.8.4 Reinstatement would be required following the construction period.
- 4.8.5 The construction programme will be developed as the Project progresses and will take account of seasonal constraints such as protected species breeding or hibernation seasons.

Construction Compounds

- 4.8.6 Construction activities would begin with the preparation and installation of construction compounds. The main and satellite construction compound locations and dimensions will be determined through the development of the Project, and any likely significant effects associated with the construction compounds will be assessed in the ES.
- 4.8.7 A typical layout for a construction compound includes the following:
- security gate house
 - plant and construction vehicle parking
 - site office parking area
 - site offices and welfare facilities
 - fencing

- lighting
- laydown area
- storage area
- wheel wash
- collection, storage and disposal of surface water, in addition to water from within the compound including grey and foul water
- soil bund
- spoil storage area
- power supplies (where feasible to do so, alternatively fuelled generators will be used and/or a local grid connection)
- fuel storage.

4.8.8 Smaller satellite compounds may be required at specific working areas along the route to ensure the provision of welfare, storage, and mess room facilities for site operatives.

Overhead Line Construction

4.8.9 The construction of the 400 kV overhead line would generally follow the sequence outlined below as work progresses along the length of the overhead line:

- survey
- ground investigation
- installation of bellmouths and creation of visibility splays at highway accesses
- installation of stock proof fencing and gates or equivalent
- topsoil stripping, temporary drainage installation where required
- installation of access tracks (including culverts and bridges) and demarcated tower
- working areas
- installation of tower foundations (pad and column, mini pile, pile or bespoke)
- working area and layout of steelwork in preparation for erection
- assembly (painting if required) and erection of steelwork
- installation of protection prior to stringing of conductors, including scaffolding
- installation of insulator assemblies on suspension towers
- establishment of machine sites for conductor stringing
- conductor stringing
- temporary earthing
- installation of insulator assemblies on tension and terminal towers

- installation of tower signage including safety notice plate and anti-climbing devices
- removal of construction equipment and reinstatement of ground and restoration of soils
- removal of access tracks and bellmouths
- removal of construction compounds and reinstatement of ground.

- 4.8.10 Activities such as surveys, archaeological investigation, ground investigation, construction of bellmouths and access tracks could commence without the full construction compounds in place.
- 4.8.11 Vegetation clearance may be undertaken prior to or during any of the activities identified above, this would be in accordance with any ecological requirements identified through the ES assessment.
- 4.8.12 Dependant on local conditions, haul roads may be required to be established from suitable access points from the existing road network in the area.
- 4.8.13 The following sections provide summary information about the activities listed above.

Installation of bellmouths and the creation of visibility splays

- 4.8.14 Where new accesses or widening of existing accesses from the public highway are required, bellmouths would be installed. The installation of bellmouths may require realignment of existing underground services and the creation of visibility splays to create a line of sight for the safe use of the bellmouth. Within the visibility splay, vegetation would need to be cut to a specified height or visual obstacles removed depending on local conditions, the speed rating of the road and whether traffic management was in place.

Topsoil stripping

- 4.8.15 The topsoil may be required to be stripped from the access tracks, site compounds and tower working areas. The topsoil would be stored carefully to one side; typically, topsoil would be stored in bunds. To avoid the growth of weeds, such as thistles and ragwort, a suitable herbicide application will be used. Temporary drainage would be installed as required, with necessary environmental protection measures (such as fabric silt fences).

Drainage

- 4.8.16 Temporary drainage would be required during construction, to deal with rainfall and water encountered during excavation where appropriate. The drainage design will include a variety of potential measures to address silt runoff. Construction sustainable drainage systems (SuDS) or proprietary measures would be used if necessary and where appropriate to do so.

Installation of access tracks (including culverts and bridges) and tower working areas

- 4.8.17 A two-way stone access track/haul road would typically be 9-10 m wide, which, coupled with the area for soil storage and drainage between the track and the fence line, would give a typical swathe of 21 m. There would be stone laid on geotextile

membrane. Other accesses may also be used comprising of interlocking panels, depending on ground conditions and the duration and type of use. Soil stabilisation techniques could be considered subject to local conditions.

- 4.8.18 The stone access tracks would be constructed using secondary or primary aggregates. The total amount of aggregate material that would be needed for the construction of the stone access tracks (including bellmouths) and tower working areas will be determined through the development of the Project and reported in the ES. On completion of construction, the access tracks would be removed, and aggregates taken to an appropriate facility which could include recycling, or onward use, for example as secondary aggregate in the construction industry or being reused by other construction projects.
- 4.8.19 Where possible existing field and site accesses will be used. However, where this is not possible and watercourses are present, temporary culvert installations would be required for temporary access tracks to cross ditches and smaller watercourses. The location, type, size and depth of the temporary culvert is dependent upon the dimensions of the crossing, sensitivity, and importance of the watercourse. The location and type of temporary culverts for crossings will be identified in the ES. As culverts would be installed online with the watercourses, a dry working area will be created by either over pumping or fluming the flow through the working area. Throughout all the stages of the Project, close engagement will be undertaken with the Environment Agency regarding Main Rivers, and relevant Lead Local Flood Authority and Internal Drainage Boards (IDBs) in relation to Ordinary Watercourses. Temporary culverts would be removed at the end of the works and the bed and banks of the watercourse reinstated.
- 4.8.20 Should culverts not be suitable for a particular crossing, due to either the sensitivity of the watercourse, its size or other engineering requirements, a temporary bridge would be installed. Temporary bridges may need to accommodate a mobile crane (approximately 250 t capacity, subject to detailed design) and the temporary bridge support requirements would be assessed on a site-by-site basis. Most bridge crossings would be of a short span and flat deck construction; however, portable, re-fabricated bridges supported by beams may also be used. All bridges would be clear span, with a sufficient soffit height, and the foundations would be placed clear of the main channel of the watercourse, where feasible.
- 4.8.21 Once the foundations are in place the temporary bridge would be fitted. Although the installation method is dependent on the type of bridge being installed, a typical bridge would be delivered in sections. Each bridge component would be assembled on site and lifted into position by crane. With the bridge in position, decking panels would be lifted and fixed into position. As with temporary culverts, the temporary bridges will be removed at the end of the works and the bed and banks of the watercourses reinstated.
- 4.8.22 Tower working areas would typically be 70 m x 70 m. They would either be stone laid on a geotextile, or formed of interlocking panels, depending on ground conditions and the duration and type of use. Soil stabilisation techniques could be considered subject to local conditions.

Installation of tower foundations (pad and column, mini pile or pile)

- 4.8.23 The foundations for the towers would either be pad and column, mini pile or tube pile (or bespoke if required). The selection of foundation type would depend upon the ground conditions encountered. Towers would be located at least 15 m from the top

of the bank, batter, edge of a culvert or landward toe of any flood defence around a watercourse, where possible. The ES will assess the foundation design to be used, or where this is still to be determined, a worst case scenario will be adopted to identify any likely significant effects.

Assembly and erection of steelwork²

- 4.8.24 The steelwork components would be brought to each tower working area. In some circumstances, construction may be undertaken using helicopters, although at this stage specific locations are not currently known.
- 4.8.25 The steelwork components would be bolted together on the ground. The tower would be assembled in sections beginning from ground upwards, using a mobile crane.
- 4.8.26 To lift the topmost sections of the towers, a crane with a capacity of up to 250 t may be required for the reach and weight of the sections to be positioned into place. A smaller capacity crane could be used to lift tower sections up to the limit of reach of the crane considering load to be lifted; though in this instance the larger capacity crane would still be required to complete the tower.

Crossing protection prior to stringing of conductors

- 4.8.27 Temporary scaffolding and nets would be installed during construction where required as a safety measure to protect assets such as roads, railways, and distribution network overhead lines (where not already relocated underground) and could include hedgerows which would be crossed by the proposed 400 kV overhead line. This is required to protect these features during conductor stringing from the accidental dropping of conductors and any of the associated equipment. Temporary closures of some affected assets, such as roads, may be required during these works in order to install the protective netting, or indeed may be used instead of installing scaffolding.
- 4.8.28 The scaffolding would be transported to site using a lorry or tractor and trailer and assembled either side of the feature being protected.
- 4.8.29 Alternative methods of protection may be utilised dependant on local site conditions/restrictions, such as aerial catenary support systems, where feasible.

Installation of insulators

- 4.8.30 The insulators would be fastened to the cross arms of the towers, with running wheels hung from the end of the insulators to carry the pilot wires in preparation for installing the conductors.

Establishment of machine sites for conductor stringing

- 4.8.31 The conductors are usually installed from tension tower to tension tower, often termed a 'section', with machine sites required at either end of the section.
- 4.8.32 The machine sites for conductor stringing would normally be located within the tower conductor pulling positions, sited on interlocking panels laid directly onto the ground surface reducing disturbance to the underlying soils.

²This is based on a steel lattice tower.

- 4.8.33 A conductor pulling position would be established at each end of the section with a winching machine ('winch') and empty steel reels to accept pilot wires. At the other end of the section the full conductor drums would be arranged in close proximity to the tensioning machine ('tensioner').

Conductor stringing

- 4.8.34 The conductors would be delivered to pulling positions, using lorries, or tractor and trailer on large cable drums and, depending on the conductor type, each completed drum could weigh up to 8 t, although larger and heavier drums are possible depending on the supplier and the length of conductor.
- 4.8.35 The drums containing the conductors would typically be delivered to the construction compound, or satellite compound, first, and would be distributed from there.
- 4.8.36 Light pilot wires would be laid at ground level (and over temporary scaffolding protecting assets such as roads and railway lines) along the length of the section between the pulling positions. Some vegetation management could be required. The pilot wires would be lifted and fed through running wheels on the cross arms of all the towers in the section, and then fed around the winch at the pulling position. The light pilot wires are used to pull through heavier, stronger pilot wires which are in turn used to pull conductors through from their drums. The tensioning machine would keep the wires off the ground and prevent the conductors running freely when the winch pulls the pilot wire. When the conductor is fully 'run out', it would be fastened at its finished tension and height above ground by a linesman working from platforms on the towers which are suspended beneath the conductors. Additional fittings, such as spacers, vibration dampers and arcing horns would be fitted.
- 4.8.37 To counterbalance the out of balance loading at the tension towers at the end of a conductor stringing section, it is normal to install temporary backstays with ground or concrete blocks for safety of installation. The temporary backstays, anchors and concrete blocks would be removed as the conductor stringing process starts on the next section. Temporary backstays might also be required at other locations such as connecting new conductor to existing conductor, temporary diversions, and temporary spans.

Removal of construction equipment, reinstatement of ground and restoration of soils

- 4.8.38 Once the 400 kV overhead line is constructed, the access tracks and working areas at the tower site would be removed and the ground reinstated to its previous condition. Other surfaces would be reinstated, and accesses would be restored to the condition they were in at the commencement of the works, unless agreed otherwise.

Reconductoring

- 4.8.39 Construction activities during reconductoring would exclude those activities listed above that relate to towers and steel works; therefore, reconductoring would only include:
- survey
 - ground investigation

- installation of bellmouths and creation of visibility splays at highway accesses (if required)
- installation of stock proof fencing and gates or equivalent
- topsoil stripping, temporary drainage installation where required
- installation of access tracks (including culverts and bridges)
- installation of protection prior to stringing of conductors, including scaffolding
- replacement of insulator assemblies on suspension towers
- establishment of machine sites for conductor stringing;
- conductor stringing
- temporary earthing
- replacement of insulator assemblies on tension and terminal towers
- removal of construction equipment and reinstatement of ground and restoration of soils
- removal of access tracks and bellmouths
- removal of construction compounds and reinstatement of ground.

Cable Installation

- 4.8.40 It is currently assumed that the new transmission line for this Project would be overhead line in accordance with national policy for electricity transmission networks (Section 2.9.20 in EN-5 (Ref 4.4)). Should underground cables be required, cables would normally be installed in excavated trenches. A cement-bound sand mix is used as backfill to protect the cables and help dissipate any heat generated by the cables in operation.
- 4.8.41 For a new 400 kV transmission circuit installed underground, the working width of the land required for construction is typically between 40 m and 120 m, subject to a range of factors such as the number of circuits being installed and the number and size of cables needed.
- 4.8.42 Due to the weight and size of underground cables needed to operate at 400 kV, the maximum single cable length that can be transported to a project location by road is typically between 800 m and 1,000 m. To achieve cable routes in excess of these lengths individual cables must be joined together on site. This necessitates joint bays at intervals along the route. Where joint bays are located the working width may need to be wider than 120 m.
- 4.8.43 Where specific environmental or infrastructure features preclude the installation of underground cables as described above, it may be practicable to install ducts using a trenchless installation technique such as horizontal directional drilling (HDD). In this instance cables are pulled into pre-installed ducts. The maximum length of HDD installed ducts is limited by the weight of the cables to be installed. Where trenchless techniques are required, the working width may need to be wider than 120 m.
- 4.8.44 Where HDD is not technically viable, then a tunnelled solution for underground cables can be considered. Tunnels can be constructed using a variety of techniques, but all involve major civil engineering activities, which result in substantial additional

costs, increased construction risks and extended programme durations. Typically, permanent buildings are required at either end of the tunnel section to support operation, including access to and potential ventilation of the tunnel and for cooling of the underground cables.

New Substations

- 4.8.45 Construction activity would begin with site preparation including setting up the temporary accommodation, parking and laydown area and will incorporate measures to address any associated flood risk. Temporary fencing would be installed early in the construction programme to secure the construction area. The permanent access road would be installed to connect the proposed substations to the nearest main road. On completion a permanent, appropriate level of security fence would remain in place to ensure 24 hour security for the site.
- 4.8.46 The initial preparatory works would comprise the temporary removal of the top layer of ground and laying a temporary stone capping to provide a clean and stable working area. Typically, the topsoil and a layer of subsoil would be excavated within the footprint, and this would be replaced with clean imported granular fill to form the surface of the compound. A series of copper earth tapes would be installed below the ground to create an earth mat to distribute any electrical charge transferred to the ground by earthed equipment and infrastructure in the proposed substations.
- 4.8.47 The permanent foul, oily water, including below ground oil separator, and surface water drainage systems would be installed once the preparatory works are complete. In addition, concrete foundations would be installed for the electrical equipment and control buildings. The majority of electrical equipment would be mounted on steel posts fixed to concrete foundations.
- 4.8.48 Reinforced concrete bunds would be installed for each supergrid transformer (SGT) and would comprise a perimeter concrete wall, a base slab continuous with the wall and a central plinth for supporting the SGT. The bunds act as a secondary oil containment measure. SGTs would be transported to site as Abnormal Indivisible Load (AIL) and installed within the bunds.
- 4.8.49 Logistics planning will be undertaken to ensure appropriate routes and mitigation strategies are adopted for abnormal load movements to ensure safe delivery of heavy substation equipment (e.g. supergrid transformers).
- 4.8.50 Concrete for the foundations and bunds would be ready-mixed, brought to site in lorries and placed using small plant such as cranes and excavators.
- 4.8.51 Once the electrical equipment is installed, commissioning tests would be undertaken to check that the individual items of plant and the system as a whole works as required.
- 4.8.52 Following successful testing, the substations would be connected to the electricity transmission system ready for operation.

4.9 Operation

Overhead Line

- 4.9.1 During operation, the Project would reinforce the electricity transmission network across the region. The Project would be operated remotely in the same way as National Grid operates the rest of the network.
- 4.9.2 The overhead line would be subject to annual inspection from the ground by foot patrol, small van, or by air using drone/helicopter to check for visible faults or signs of wear. The inspections would also indicate if plant/tree growth or third-party developments were at risk of affecting safety clearances. Inspections would provide input as to when refurbishment was required.
- 4.9.3 The overhead line could support telecommunication equipment such as small mobile telephone antennae and would contain optical fibres within the earthwire. If this were to be the case, independent companies would require access for maintenance purposes using pickup trucks and vans. Access for the optical fibres will usually be at the joint box positions located just above the anticlimbing devices on certain towers. Position and frequency of joint boxes is subject to further design work.
- 4.9.4 Access for vegetation management, telecommunications and fibre optic maintenance would be along routes agreed with the landowners and may require interlocking track mat panels.
- 4.9.5 The overhead line would be made up of a variety of materials, including concrete and steel for the foundations, steelwork for the tower and aluminium for the conductors. All these materials have an expected lifespan, which would vary depending on how the overhead line was used and where it is located. Typically, tower steelwork and foundations have a life expectancy of approximately 80 years, the conductors have a life expectancy of approximately 40 to 60 years and the insulators and fittings have a life expectancy of approximately 25 to 40 years. The lifespan of the overhead line may be longer than the anticipated 80 years, depending on its condition, the environment to which it is exposed, refurbishments and transmission network requirements.
- 4.9.6 Minor repairs or modifications may be required from time to time for local earthwire damage, addition of jumper weights, local conductor damage, broken insulator units, damaged or broken spacers, broken or damaged vibration dampers, damaged or broken anti climbing guards. Minor repairs would be programmed locally by a maintenance team using pickup trucks and vans to access site along routes agreed with landowners. Access may require interlocking track mat panels.
- 4.9.7 Refurbishment work would be undertaken typically on one side of the tower at a time, so that the other side could be kept 'live' or in use.
- 4.9.8 Refurbishment work could involve:
- the replacement of conductors and earth wires
 - conductor greasing
 - the replacement of insulators and steelwork that holds the conductors and insulators in place, insulator fittings, conductor fittings, tower signage
 - painting or replacement of the tower steelwork

- replacement of telecommunication equipment (by separate companies)
- foundation repairs/upgrades.

- 4.9.9 Refurbishment would usually be carried out in two stages because the overhead line has two circuits, one on each side of the tower. This means that work can be undertaken on one side only, so that the other side can be kept 'live'. Once all the work has been completed on the first side, the circuit would be re-energised, and the opposite side switched off, so that the work could be carried out on the other side.
- 4.9.10 The refurbishment works would require temporary access tracks, a small compound and potentially scaffolding to protect roads and other features during the work.
- 4.9.11 Vans are used to carry workers in and out of site and trucks are used to bring new materials and equipment to site and remove old equipment. Temporary works including installation of access routes and installation of scaffolding to protect roads, railways and footpaths would be required as necessary for the overhead line refurbishment (similar to the initial construction requirements).

New Substations

- 4.9.12 The substations would be typically unmanned during operation; however operational requirements may require sites to be manned permanently or temporarily. Routine site visits would be required to visually inspect the condition of equipment, structures, and buildings for signs of damage or wear. The routine maintenance would be carried out in line with maintenance policies and procedures.

4.10 Decommissioning

- 4.10.1 NPS EN-1 (Ref 4.4) paragraph 4.3.5 states that the ES should cover the decommissioning of a project, however decommissioning of electricity networks is not specifically covered in NPS EN-5 (paragraph 2.1.4) (Ref 4.5) which recognises that generally, nationally significant electricity networks are likely to have an ongoing function, but will be subject to maintenance, reinforcement works and for assets to be replaced when they come to the end of their lifespan.
- 4.10.2 The initial design life of the Project is around 40 years but with regular maintenance, such as changing out the conductors for new ones, is likely to extend further. It is expected that the transmission of electricity would continue for as long as there is a business case for doing so and that any decommissioning activity would occur decades into the future. To date, relatively few transmission projects have been decommissioned since the main expansion of such infrastructure in the 1950s and 1960s. It is assumed that decommissioning would only be undertaken if there were substantial changes to how electricity is transmitted around the country or significant changes to the sources of generation and areas of demand. At the time that decommissioning would take place, the regulatory framework, good industry practices and the future baseline are likely to have altered. At the point where the Project requires decommissioning, National Grid would consider and implement an appropriate decommissioning strategy taking account of good industry practice, its obligations to landowners under the relevant agreements and all relevant statutory requirements. The environmental effects associated with decommissioning are likely to be similar to those associated with construction, subject to any changes to the baseline environment in the intervening period.

- 4.10.3 As the regulatory framework, good working practices, and the future baseline are all likely to have altered at the time of decommissioning, it is not possible to assess the probable future effects at the present time. Therefore, decommissioning is **scoped out** and will not be assessed in the ES.

References

- Ref 4.1 National Electricity Transmission (February 2017). System Security and Quality of Supply Standard [online]. Available at <https://www.nationalgrid.com/sites/default/files/documents/NETS%20SQSS%20V2.3.pdf> [Accessed 17 June 2025].
- Ref 4.2 National Infrastructure Commission (February 2020). Design Principles for National Infrastructure. [online] Available at <https://nic.org.uk/app/uploads/NIC-Design-Challenges-Pamphlet-Print-Spread-Version.pdf>. [Accessed 17 June 2025].
- Ref 4.3 Planning Inspectorate, Nationally Significant Infrastructure Projects: Advice on Good Design, 16 April 2025 [Accessed: 18 September 2025]
- Ref 4.4 Department for Energy Security & Net Zero (January 2024). Overarching National Policy Statement for Energy (EN-1) [online]. Available at <https://assets.publishing.service.gov.uk/media/65bbfdbc709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed: 17 June 2025].
- Ref 4.5 Department of Energy Security & Net Zero (January 2024). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at https://assets.publishing.service.gov.uk/media/64252f852fa848000cec0f53/NPS_EN-5.pdf [Accessed 1 July 2025].
- Ref 4.6 National Grid. Holford Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 1 July 2025].
- Ref 4.7 National Grid. Horlock Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> [Accessed 1 July 2025].
- Ref 4.8 International Commission on Non-Ionizing Radiation Protection (2020). ICNIRP Guidelines for Limiting Exposure to Electromagnetic Fields (100 kHz to 300 GHz) [online]. Available at <https://www.icnirp.org/cms/upload/publications/ICNIRPrfgdl2020.pdf>. [Accessed 1 July 2025].
- Ref 4.9 Planning Inspectorate (July 2018). Nationally Significant Infrastructure Projects – Advice Note Nine: Rochdale Envelope [online]. Available at <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope> (Accessed 1 July 2025).
- Ref 4.10 IEMA (2020) IEMA guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a proportionate approach
- Ref 4.11 National Grid (June 2025). Weston Marsh to East Leicestershire Corridor Preliminary Routing and Siting Study

5. EIA Approach and Methodology

Contents

5.	EIA Approach and Methodology	5-1
5.1	Introduction	5-1
5.2	General Approach	5-2
	The 'Rochdale Envelope' Approach	5-3
5.3	Approach to Scoping	5-4
	Technical Scope	5-6
	Spatial Scope	5-6
	Temporal Scope	5-6
	Mitigation Measures Adopted as Part of The Project	5-8
5.4	Assessment of Effects and Determination of Significance	5-9
	Identification of Potential Effects	5-9
	Assessing Effects and Determining Residual Significance	5-9
5.5	Cumulative Effects	5-13
	Introduction	5-13
	Legislation, Planning Policy and Technical Guidance	5-14
	Approach to Cumulative Effects Assessment	5-15
5.6	Monitoring	5-24
5.7	Approach to the Environmental Statement	5-24
5.8	Other Assessments	5-25
	Flood Risk Assessment	5-25
	Water Framework Directive Assessment	5-26
	Habitats Regulations Assessment	5-26
	Arboricultural Impact Assessment	5-26
	Table 5.1 Impact magnitude criteria	5-10
	Table 5.2 Sensitivity criteria	5-11
	Table 5.3 Classification of effects	5-12
	Table 5.4 Pre-screening stage	5-17
	Table 5.5 Zol for environmental topics	5-20
	Table 5.6 'Other development' for inclusion in the inter-project cumulative effects assessment	5-21
	Table 5.7 Indicative structure of the ES	5-24
	References	5-27
	Image 5.1 EIA Process	
	Image 5.2 Approach to the identification of the proposed scope of assessment	
	Image 5.3 Basis of assigning significance	

5. EIA Approach and Methodology

5.1 Introduction

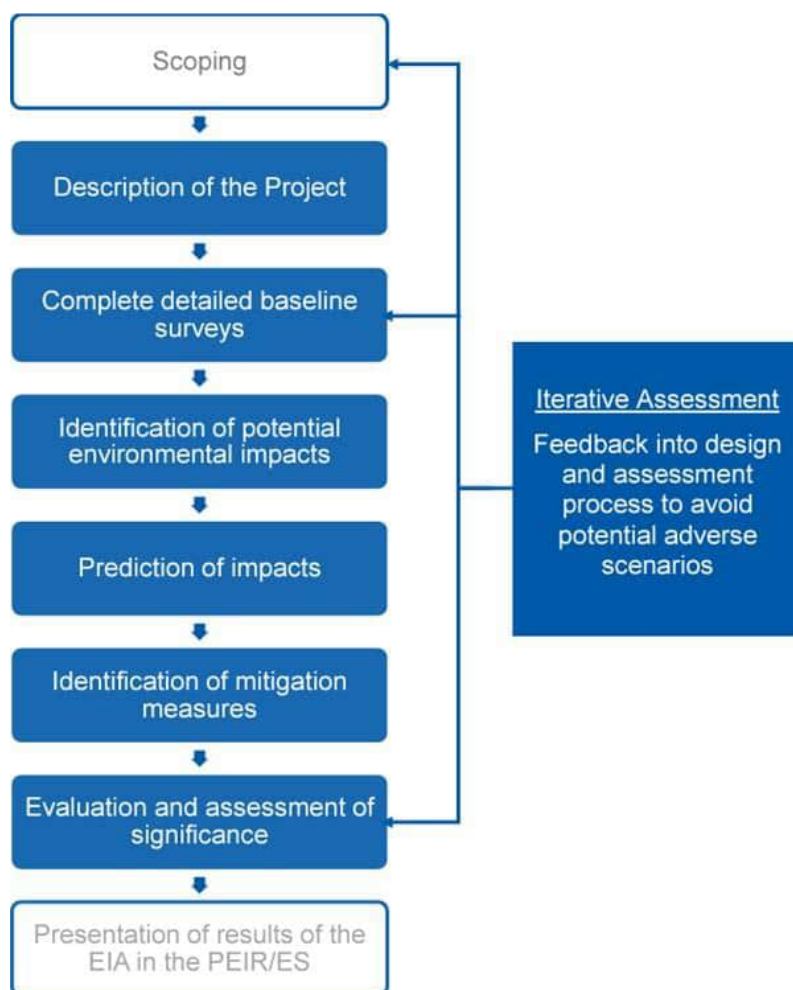
- 5.1.1 This Chapter outlines the overall methodology that will be used to undertake the Environmental Impact Assessment (EIA). The EIA will follow the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations) (Ref 5.1) and other relevant guidance, as specified in this Chapter.
- 5.1.2 EIA is a process of compiling, evaluating and presenting information about the likely significant environmental effects, both adverse and beneficial, that could occur as a result of a project. The assessment is designed to inform both environmentally led design and project delivery. The assessment is also designed to provide decision makers and statutory consultees with the environmental information they require during determination of an application for consent. The early detection of likely significant adverse environmental effects enables appropriate mitigation (i.e. measures to avoid, reduce or offset likely significant adverse effects) to be identified and incorporated into the design of a project, or commitments to be made, for example to environmentally sensitive construction methods and practices. The approach is iterative and involves close collaborative working across a multidisciplinary team.
- 5.1.3 Three main EIA documents are produced as part the Development Consent Order (DCO) pre-application process:
- **Scoping Report:** The Scoping Report (this report) identifies the likely significant effects from a project, and sets out those effects that will be considered in the ES and those which are proposed to be scoped out. It also presents the data collected, the proposed assessment methodology and approach that would be followed during the EIA. The Scoping Report is prepared by the Applicant and issued by the Planning Inspectorate to consultation bodies for comment on the scope and methodology proposed, to inform the scoping opinion to be adopted and published by the Planning Inspectorate (on behalf of the Secretary of State (SoS)).
 - **Preliminary Environmental Information Report (PEIR):** The PEIR sets out the information that *'is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development'* (Ref 5.1). The PEIR is used by consultees to inform their consultation responses during the Statutory Consultation.
 - **Environmental Statement (ES):** The ES presents the results of the EIA undertaken for the Project. It identifies the likely significant effects that would result if the Project was implemented, and any proposed mitigation to reduce those significant effects. The ES is submitted as part of the application for development consent and is taken into account during the decision-making process.

5.2 General Approach

- 5.2.1 This chapter describes the methodology which will be used to assess the potential effects on the natural, human and built environment as a result of the Project. In accordance with the EIA Regulations (Ref 5.1), the assessments undertaken will evaluate and identify the likely significant environmental effects arising from the proposed pre- construction, construction and operational phases of the Project. This information will be presented in the ES.
- 5.2.2 Each topic chapter within this Scoping Report includes a description of the methodology that is proposed for determining significant effects for that relevant topic. The Scoping Report, and ultimately the ES, would also be supported by professional judgement and discussion from the technical specialist author to justify the final judgements on significance.
- 5.2.3 In general, the assessment within the ES would follow a receptor-based assessment approach. Receptors are those components of the environment which are sensitive to change as a result of impacts such as dust, noise, and construction activities. When deciding on which receptors to include within the Scoping Report, consideration has been given to Regulation 5(2) and Schedule 4 paragraph 4 of the EIA Regulations and the Planning Inspectorate Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements (Ref 5.2). The ES will identify the likely significant effects of the Project on the environment and, if appropriate, propose project specific mitigation measures to avoid, reduce or offset adverse environmental effects or maximise environmental benefits.

5.2.4 The EIA process involves the main steps on **Image 5.1**.

Image 5.1 EIA Process



The 'Rochdale Envelope' Approach

- 5.2.5 Major infrastructure projects such as linear infrastructure projects for overhead lines, above ground installations and underground cables typically need some flexibility to be maintained for detailed design and construction, if conditions are found that would otherwise prevent or delay construction. Examples can include previously unknown archaeological assets which interact with the location of proposed towers. To mitigate such issues, a flexible approach to design parameters is used within the EIA process which is typically referred to as the 'Rochdale Envelope' (Ref 5.3). This approach allows for a realistic worst-case assessment to be undertaken and is the basis for the assessment in technical **Chapters 6-19** of this Scoping Report.
- 5.2.6 By developing a realistic worst-case scenario in response to critical technical and engineering parameters, as well as the emerging findings of the EIA and feedback from stakeholders, it is possible to strike a balance between the level of design information needed for the purpose of EIA and the application for development consent, while still retaining a level of design flexibility needed as the Project moves into detailed design and construction.
- 5.2.7 The EIA process will aid and inform the design process and support the identification of an application design that is flexible enough to accommodate change in future

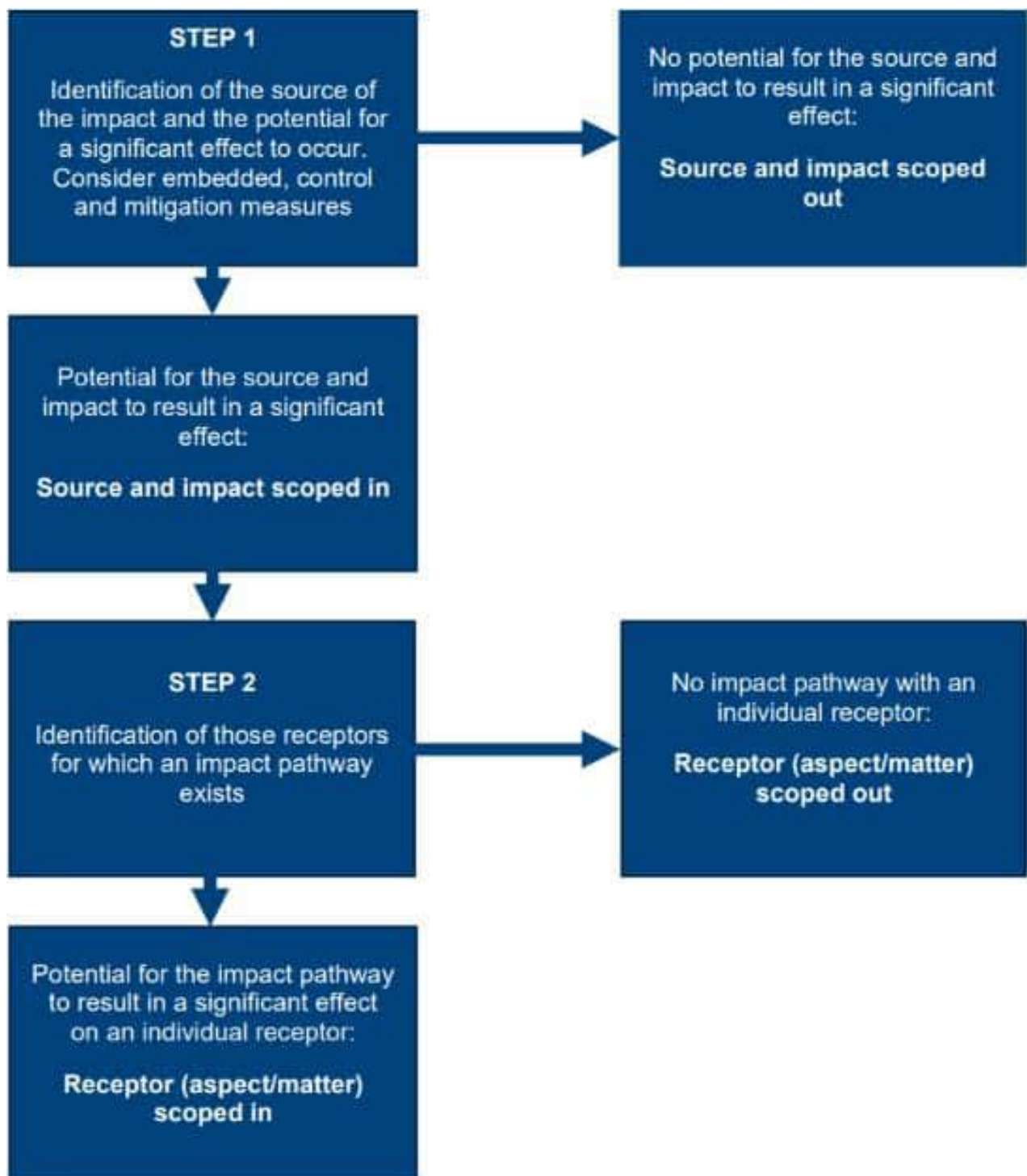
stages but not so flexible that it could over-state or unnecessarily amplify the potential environmental impacts of the Project.

5.3 Approach to Scoping

- 5.3.1 Scoping sets the proposed scope of the ES and, when done right, it makes the subsequent phases more straightforward. A robust scope, focussed on the potential for likely significant environmental effects is required in order to ensure the ES is focused and proportionate. The process of scoping helps to ensure that the topics covered, the baseline information used, and the methods of assessment are appropriate, and have considered the views of decision makers and consultees where appropriate.
- 5.3.2 The EIA scoping process establishes which aspects and matters of the environment are likely to be significantly affected by the Project and involves identifying:
- the people and environmental resources (collectively known as “receptors”) that could be significantly affected by the Project; and
 - the work required to take forward the assessment of potential likely significant effects.
- 5.3.3 The approach taken in preparation of this Scoping Report has also been informed by the Planning Inspectorate’s Advice Note Seven (Ref 5.2) and reflects that the EIA Regulations require an ES to focus on aspects of the environment likely to be subject to significant effects. In line with guidance and legislation, this Scoping Report seeks to, where appropriate, scope out aspects/matters from further assessment with suitable justification provided. This will streamline the assessment to focus on key likely significant effects and ensure the EIA for the Project is proportionate in accordance with the Institute of Sustainability and Environmental Professionals (formally Institute of Environmental Management and Assessment (IEMA)) (2017) Delivering Proportionate EIA guidance document (Ref 5.4).

- 5.3.4 The method used to determine the proposed scope of the ES has utilised a staged process, which assesses the probability of significant impacts through a source, pathway, and receptor-based approach. This is to ensure transparency and provide a clear justification as to why particular receptors and aspects/matters are either proposed to be scoped in or scoped out of the ES, with the aim of ensuring that the ES is proportionate. The approach taken to the identification of the proposed scope is presented in **Image 5.2**.

Image 5.2 Approach to the identification of the proposed scope of assessment



Technical Scope

- 5.3.5 The technical scope of assessment for each environmental aspect is detailed in technical **Chapters 6-19** and this includes proposals for scoping matters in or out of the EIA. The technical scope also details the approach to baseline data collection and assessment methodologies and is the basis for the assessment in technical **Chapters 6-19** of this Scoping Report.

Spatial Scope

- 5.3.6 The Project Scoping Boundary is described in **Chapter 4 Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. At the current stage of the design process, the land within the Scoping Boundary has been identified as potentially being required for temporary or permanent purposes for the construction or operation of the Project.
- 5.3.7 Each topic chapter applies a buffer to the Scoping Boundary, if required, to determine the extent of the Study Area. The extent of the Study Area is determined by the environmental topic and specific receptors under consideration and is described in each topic chapter. The Study Area proposed for each topic therefore comprises an area sufficient to encompass the spatial extent over which impacts relevant to that topic and the related receptors may result in significant effects. These Study Areas will be refined in relation to the Order Limits (the maximum area of land potentially required for the construction, operation and maintenance of the Project), once determined.
- 5.3.8 The spatial scope for each environmental aspect, the area over which changes to the environment are predicted to occur as a consequence of the Project, depends on the nature of the potential effects and the location of receptors that could be affected. The spatial scope takes account of:
- the physical area of the Project;
 - the nature of the baseline environment;
 - the manner and extent to which environmental effects may occur; and
 - relevant guidance, best practice and/or legislation.
- 5.3.9 The Study Areas are based on the distance over which an impact is likely to occur, and could potentially result in a significant effect. The spatial scope of each assessment may be refined for both the PEIR and the ES in response to comments from consultees or further assessment work.

Temporal Scope

- 5.3.10 The temporal scope refers to the time periods over which impacts and effects may be experienced by identified receptors.
- 5.3.11 Subject to gaining development consent, construction works would be expected to start in 2030 and be completed by 2034.
- 5.3.12 The EIA will predict the changes (impacts) to the current and future baseline during the construction and operation phases of the Project and the consequence (effect). The general approach is summarised below and any variations from this are discussed in the relevant topic chapters:

- **Baseline year:** the baseline is the reference level of the environmental conditions without implementation of the Project, against which the potential effects of the Project are assessed. The baseline year is 2026, when the majority of baseline surveys are to take place. For certain topics the baseline environment is expected to change over time, and for these topics this change has been predicted to enable robust identification of the effects of the Project against a ‘future baseline’.
- **Construction Phase:** these are effects that are likely to occur during the construction phase of the Project. This will include effects resulting from the activities associated with installation of the new overhead line, substations and works to facilitate the connection of the overhead line into the substations, and reconductoring of the existing overhead line. It also includes effects associated with the temporary works such as access tracks, haul roads, construction compound areas and work activities.
- **Operational Phase:** these are effects that will potentially occur as a result of the presence, operation and maintenance of the Project.

5.3.13 The EIA will use defined temporal scales to characterise the duration of potential effects. For the purposes of assessment, the following definitions are applied unless otherwise defined in the specific topic chapter:

- **Permanent** – these are effects that will remain even when the Project is complete, although these effects may be caused by environmental changes that are permanent or temporary.
- **Temporary** – these are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes.

5.3.14 The temporal nature of effects could be different to the phase in which the effects occur. For example, effects as a result of vegetation clearance during construction may be felt for a number of years after construction has been completed, before any replanted habitats have matured. For the purposes of the EIA, the effects are described under the phase within which the impact arises, (i.e. in the above example, vegetation loss assessed for the construction phase).

Future baseline

5.3.15 The future baseline is the theoretical situation that would exist in the absence of the Project. This is based upon extrapolating the current baseline using technical knowledge of likely changes to predict this (e.g. predictable changes such as climate change, changes that can be predicted based on reasonable assumptions and modelling calculations, information about other relevant developments).

5.3.16 Each technical chapter of the ES will define the baseline (current or future or both) against which the environmental effects of the Project will be assessed. The baseline conditions to be assessed for each environmental topic are outlined in technical chapters of this Scoping Report. Where relevant, topic chapters provide further information on the temporal elements within the Project programme that will be considered for their assessment.

Mitigation Measures Adopted as Part of The Project

- 5.3.17 A number of measures would be adopted as part of the Project to avoid and reduce the likely significant effects that would be experienced during implementation. These fall into one of three categories as detailed below.
- 5.3.18 **Design (or embedded) mitigation measures** are those that are intrinsic to and built into the design. Design measures may include, for example, working within the existing topography to reduce tower visibility and reducing habitat loss by minimising land take. They can also include the avoidance of designated sites through sensitive routeing, siting and design. Initial embedded measures are described within **Chapter 3 Main Alternatives Considered** and **Chapter 4 Description of the Project**.
- 5.3.19 The embedded mitigation measures which form an intrinsic part of the Project design would be described and considered in place when assessing effects within the ES.
- 5.3.20 **Control and management measures** comprise management activities, control measures and techniques, that would be implemented during construction of the Project to limit impacts. They include adherence to good site practices and achieving legal compliance that can be assumed to be in place in the assessment reported of the ES. These measures may include, for example, applying construction site dust suppression techniques within working areas, which the contractor(s) would be required to implement as part of their working practices under the terms of their contract. Control and management measures to address construction-related impacts are identified in each of the technical chapters and are detailed in **Appendix 4A Initial Outline Code of Construction Practice (CoCP)**. As the Project evolves these will be added to as appropriate and will be supplemented by other control and management documents such as the Construction Traffic Management Plan (CTMP).
- 5.3.21 In addition, licenses through separate regimes may also be required. For example, ecological licences and assents granted by Natural England and various permits relating to water and waste granted by the Environment Agency. On the presumption that the regulatory authorities would not permit the works unless the potential impacts have been appropriately managed, it is assumed that these licensable activities are considered measures adopted as part of the Project.
- 5.3.22 **Additional Mitigation Measures** comprise measures over and above any embedded and good practice standard mitigation measures, for which the EIA has identified a requirement to further reduce significant environmental effects, for example landscape planting.
- 5.3.23 All additional mitigation measures will be described within the ES and secured through the DCO or through other statutory agreements.
- 5.3.24 Environmental compensation is considered where mitigation at an affected location is not possible to avoid or reduce a significant effect. Where identified, compensation measures forming part of the Project would be described within the ES.
- 5.3.25 Mitigation measures are assumed to be in place or at least achievable prior to undertaking the scoping of likely significant effects, in accordance with guidance from the ISEP (formally IEMA) Guide to Shaping Quality Development (Ref 5.5).

5.4 Assessment of Effects and Determination of Significance

- 5.4.1 Regulation 5(2) of the EIA Regulations (Ref 5.1) states that “*the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors: (a) population and human health, (b) biodiversity..., (c) land, soil, water, air and climate, (d) material assets, cultural heritage and the landscape; e) the interaction between the factors referred to in sub-paragraphs (a) to (d).*”
- 5.4.2 Schedule 4 paragraph 5 of the EIA Regulations (Ref 5.1) requires a description of the likely significant effects of the development on the environment. The assessment of the significance of effects for the majority of topics will be based on the steps set out in the following paragraphs.

Identification of Potential Effects

- 5.4.3 The likely significant effects (beneficial and adverse) of the Project will be predicted and evaluated using appropriate evaluative techniques, many of which follow specific best practice guidelines for a particular topic. Potential effects will be identified first, usually in summary, as an indication of what effects could theoretically occur in the absence of mitigation (other than mitigation inherent in the design of the Project).

Assessing Effects and Determining Residual Significance

- 5.4.4 There is no statutory definition of what constitutes a “significant” effect within the EIA Regulations and whilst the determination of the significance of effects is important to informing the decision-making process, defining what is significant is not a simple task. The process typically involves consideration of two aspects of a potential effect, namely the sensitivity and/or value of the receptor or resource, and the magnitude of the impact on the receptor/resource.
- 5.4.5 The significance of the residual effects (those that are predicted to remain after the environmental mitigation measures have been implemented) will be determined by reference to criteria for each assessment topic. Specific significance criteria for each technical discipline will give due regard to the following:
- scale of the impact;
 - impact duration, and whether effects are temporary, revisable, or permanent;
 - effect nature (whether direct or indirect, reversible or irreversible, beneficial or adverse);
 - where the effect occurs in isolation, is cumulative, or will interact with other effects;
 - performance against any relevant environmental quality standards;
 - sensitivity of the receptor; and
 - compatibility with environmental policies.
- 5.4.6 Each technical chapter of this Scoping Report includes a description of the proposed approach to determining the significance of effects, including how professional judgement may be applied. The technical chapters use the terminology for magnitude, sensitivity and significance similar to that described in the following

sections as an example of the process, unless there is specific topic guidance available that should be employed as industry standard or preferred. Where there is a requirement to adopt other terminology or methods, it is described in that technical chapter with justification.

Magnitude of impact

5.4.7 General criteria for defining the magnitude of an impact, or change, are set out in **Table 5.1**. Key factors that influence this include:

- **Scale of change** – the scale of change refers to the degree of change to or from the baseline environment caused by the impact being described.
- **Spatial extent** – the spatial extent is the full area over which the impact occurs.
- **Duration and frequency** – the duration is a measure of how long the impact is expected to last. Frequency refers to how often the impact would occur; it may be continuous or periodic.

Table 5.1 Impact magnitude criteria

Magnitude	General criteria
Large	Adverse: Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features, or elements. Beneficial: Large scale or major improvement of resource, including extensive restoration or major improvement of attribute quality.
Medium	Adverse: Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements. Beneficial: Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Small	Adverse: Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements. Beneficial: Minor benefit to, or in addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk or negative impact occurring.
Negligible	Adverse: Very minor loss of detrimental alteration to one or more characteristics, features or elements. Beneficial: Very minor benefit to or positive addition of one or more characteristics, features or elements.

Sensitivity and value of the receptor

5.4.8 The sensitivity of a receptor or feature is characterised by its vulnerability to change and its ability to recover. The value of a receptor or feature reflects its overall importance and the value placed on it by society; this may be reflected by its level of statutory or policy protection or else a value may be attributed through consultation and the application of professional judgement. Criteria for defining the sensitivity and/or value of a receptor are set out in **Table 5.2**. Characterisation of the receptor is

achieved by balancing out these considerations to determine the receptors sensitivity:

- Vulnerability – the vulnerability of the receptor relates to its capacity to accommodate change i.e. the tolerance/intolerance of the receptor to change.
- Recoverability – the ability of the receptor to return to the baseline state.
- Importance – the importance of the receptor or feature is a measure of the value assigned to that receptor based on biodiversity and ecosystem services, social value and economic value. Importance of the receptor is also defined within a geographical context, whether it is important internationally, nationally or locally.

Table 5.2 **Sensitivity criteria**

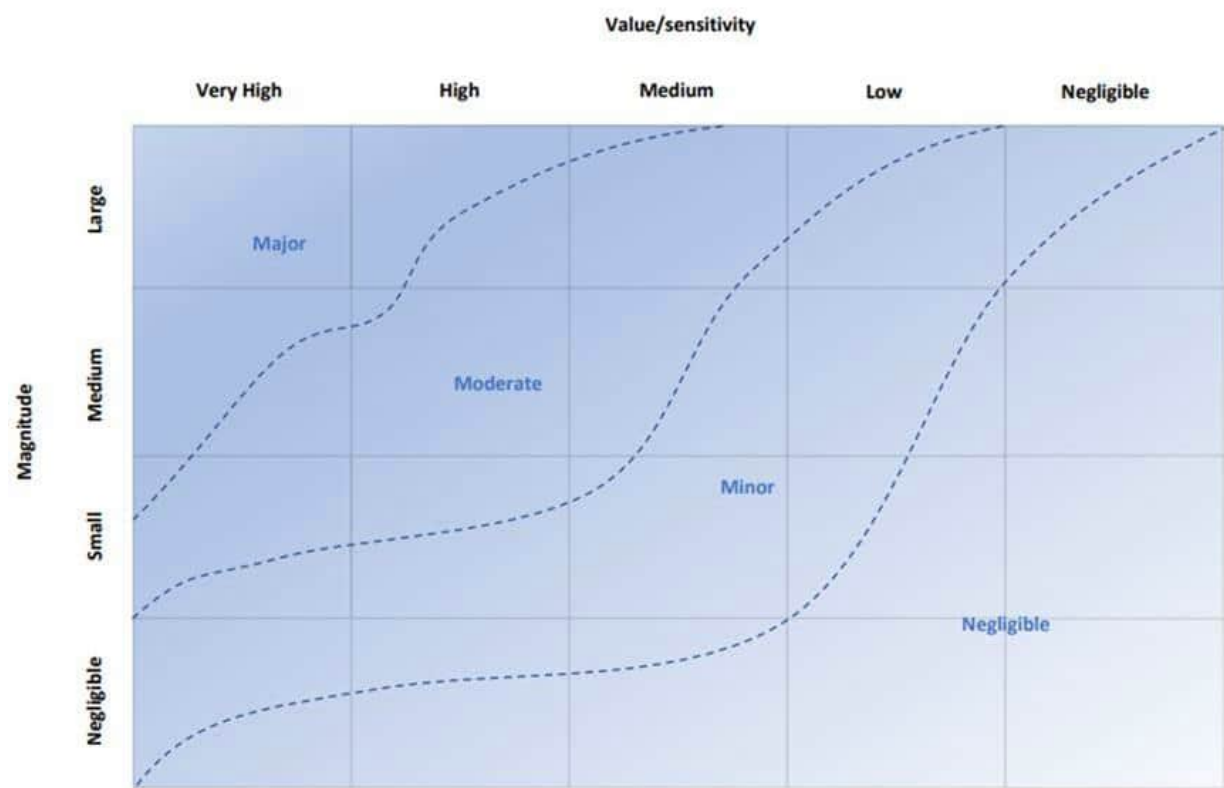
Value	General criteria
Very High	Very high importance and rarity, value at an international level and limited potential for recovery or substitution.
High	High importance and rarity, value at a national level and limited potential for recovery or substitution.
Medium	Medium importance and rarity, value at a regional level and limited potential for recovery or substitution.
Small	Low or medium importance and rarity, value at local level and limited potential for recovery or substitution.
Negligible	Not considered to be important, valued at a local level, easy to replace

Evaluating the significance of effects

- 5.4.9 Having established the magnitude of change and sensitivity of the receptor, the significance of an effect can be assessed. To aid transparency in the assessment process, the matrix shown in **Image 5.3** will be used as the basis for assigning significance to an effect; however, the identification of significance typically requires the application of professional judgement. As an illustration, a high sensitivity receptor subject to a large magnitude of change would experience a major or moderate effect, and a low sensitivity receptor subject to a small magnitude of change would experience a minor or negligible effect.

5.4.10 Each of the specialist disciplines will apply magnitude and sensitivity criteria that best suit the topic area, and for some topics these may be defined in industry guidelines.

Image 5.3 Basis of assigning significance



5.4.11 Following the classification of an effect using the methodology, a clear statement will then be made in the ES as to whether that effect is significant or not significant. Major and moderate effects are typically considered to be **significant**, whilst minor and negligible effects are considered to be **not significant**. However, professional judgement will also be applied in reaching conclusions as to the significance of effects. Typical definitions for the classification of effects are shown in **Table 5.3**.

Table 5.3 Classification of effects

Significance	General criteria	Significant effect
Major	A large and detrimental change to a valuable/sensitive receptor; likely exceeding an accepted (often legal) threshold. A large and beneficial change, resulting in improvements to the baseline or a major contribution being made to national targets. These effects may represent key factors in the decision-making process. Potentially associated with sites and features of international and national importance or likely to be important considerations at a regional or district scale.	Yes

Significance	General criteria	Significant effect
	Major effects may relate to resources or features that are unique and which, if lost, cannot be replaced or relocated.	
Moderate	A medium scale change that, although not beyond an accepted threshold, is still considered to be material, unless balanced out by other significant positive benefits of a project. Potentially in breach of planning policy, rather than legal statute. These effects, if adverse, are likely to be important at a regional scale and on their own could have a material influence on decision making. A positive moderate effect is a medium scale change that is significant in that the baseline conditions are improved to the extent that guideline targets (e.g. UK Biodiversity Action Plan targets) are contributed to.	Yes (typically)
Minor	A small change that, whilst adverse, does not exceed legal or planning policy thresholds. A small positive change, but not one that is likely to be a key factor in the overall balance of issues. These effects may be raised as local issues and may be of relevance in the detailed design of a project but are unlikely to be critical in the decision-making process.	No
Negligible	A very small change that is so small and unimportant that it is considered acceptable to disregard. Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision making, irrespective of other effects.	No

Residual effects

- 5.4.12 Residual effects are those that are predicted to remain after the proposed mitigation measures have been implemented. These will be described at the end of each topic chapter within the ES.

5.5 Cumulative Effects

Introduction

- 5.5.1 Cumulative effects are the result of multiple actions on environmental receptors or resources. The assessment of cumulative effects of the Project would consider the following types of effect:
- Intra-project cumulative effects (sometimes referred to as combined or interactive effects): these effects occur where a single receptor is affected by more than one source of effect from the Project.

- Inter-project cumulative effects: these effects occur as a result of a number of developments, including effects which individually might not be of significance, but when considered together could create a significant cumulative effect on a shared receptor when considered together with the Project.

- 5.5.2 The assessment of cumulative effects will form a key element of the EIA for this Project. As set out in **Chapter 4 Description of the Project** this Project connects to Weston Marsh substation infrastructure and the Grimsby to Walpole project also being developed by National Grid, as well as other transmission projects in the region. In addition, other proposed infrastructure projects are currently being developed within the region including various solar developments, housing, and the Lincolnshire Reservoir and pipeline project. The Applicant is currently working closely with a number of these projects to provide a co-ordinated approach to project development, where possible.
- 5.5.3 The assessment of cumulative effects will be based on publicly available data relating to proposed and committed developments as set out in the Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 5.6) which are in the public domain or have been provided to the Project team. As far as possible, the Project team will collaborate with customers, other developers and relevant statutory consultees, to identify information which may be pertinent to the assessment of cumulative effects.
- 5.5.4 Where there are specific limitations associated with available data, these would be highlighted within the assessment that would be presented in the ES.

Legislation, Planning Policy and Technical Guidance

- 5.5.5 Schedule 4 of the EIA Regulations (Ref 5.1) states that an ES is to include a description of the likely significant effects of a development on the environment, which should cover, amongst others, cumulative effects. Paragraph 5(e) describes cumulative as: *“the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”*.
- 5.5.6 There is currently no standard methodology for an in-combination or a Cumulative Effects Assessment (CEA), however, there is a range of public sector and industry led guidance available.
- 5.5.7 The Planning Inspectorate’s Advice Page: Nationally Significant Infrastructure Projects Advice on Cumulative Effects Assessment (Ref 5.6) provides advice regarding a staged approach for documenting the CEA within an ES, relevant to Nationally Significant Infrastructure Projects (NSIPs). The guidance highlights the need to consider the potential for cumulative effects arising due to the interactions between different components of the development, as well as with other existing development and/or approved development. This guidance defines ‘other existing and/or approved’ development as including those submitted into planning regimes but not yet determined and other plans and programmes, which goes beyond ‘existing or approved’, accepting that there is greater uncertainty that these development types will be delivered and less information on them and their potential effects available.
- 5.5.8 In addition, Regulation 5(2)(e) of the EIA Regulations requires that the EIA considers the interaction of environmental effects associated with the Project. The inter-related effects assessment considers likely significant effects from multiple impacts and

activities from the construction and operation of the Project on the same receptor, or group of receptors.

- 5.5.9 National Policy Statement (NPS) EN-1 (Ref 5.7) states at paragraph 4.3.3 that *“The Regulations require an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project.”*
- 5.5.10 NPS EN-5 (Ref 5.9) provides topic-specific guidance for electrical infrastructure including overhead line but makes only limited reference to cumulative considerations. Paragraph 2.9.10 states that *“Cumulative adverse landscape, seascape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, windfarms and/or other new sources of generation.”*
- 5.5.11 Paragraph 116 of the National Planning Policy Framework (NPPF) (Ref 5.10) states that *“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe, taking into account all reasonable future scenarios”*. Paragraph 198 states that *“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development”*. Paragraph 199 states that *“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas”*.
- 5.5.12 Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 5.6), sets out a staged approach to the assessment of cumulative effects for Nationally Significant Infrastructure Projects and provides template formats for documenting the assessment within an applicant’s ES.

Approach to Cumulative Effects Assessment

- 5.5.13 The Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 5.6) and professional judgement would be used to inform the scope of the assessment of cumulative effects , and to assist the identification and mitigation of likely significant effects.

Intra-project cumulative effects

- 5.5.14 Intra-project cumulative effects (sometimes referred to as combined or interactive effects) occur where a single receptor is affected by more than one source of impact or aspect of the Project. An example of an intra-project effect would be where a local community is affected by dust, noise, and traffic disruption during the construction of the Project, with the result being a greater level of nuisance than each individual effect alone.
- 5.5.15 A description of the likely significant intra-project cumulative effects will be provided within the ES.

- 5.5.16 There is no standard approach to the assessment of intra-project effects although it should be carried out with reference to guidance and to professional judgement. Some environmental topics consider receptors that are not considered by any other topics and so intra-project cumulative assessment is unlikely to be necessary. Other receptors may be considered by multiple topics, and as such intra-project cumulative effects are more likely to occur. Receptors considered in multiple chapters are likely to include local residents, communities, and businesses. It should be noted that some elements of the assessment inherently consider intra-related effects. For example, the terrestrial ecology and nature conservation assessment of effects considers the potential for multiple impacts affecting particular features such as disturbance effects on faunal receptors resulting from noise and vibration, visual disturbance and lighting. Where this is the case, this is described within the individual aspect chapter.
- 5.5.17 It is proposed to undertake the assessment of intra-project cumulative effects using a three-stage approach. The first stage consists of a pre-screening exercise to determine whether a receptor is exposed to more than one type of effect. Those receptors identified as experiencing more than one type of effect will be taken through to the second stage. The second stage will consist of a screening exercise to identify the significance each type of effect has on each receptor. Those receptors exposed to two or more types of effect, with a significance of effect greater than negligible, will be taken forward to the third stage. The third stage is the main intra-project assessment, which will consider if the combination of effects is likely to lead to overall effects of greater significance.
- 5.5.18 An initial pre-screening assessment is presented in **Table 5.4** showing how the receptor groups are likely to interact between chapters. This will be revisited as part of the ES to ensure all receptors considered within the ES are taken through this pre-screening assessment.

Table 5.4 Pre-screening stage

Receptors	Topic Chapters													
	Landscape	Visual	Ecology and Biodiversity	Historic Environment	Water Environment	Geology and Hydrogeology	Agriculture and Soils	Transport and Transport	Air Quality	Noise and Vibration	Socio-economics, Recreation and Tourism	Health and Wellbeing	Climate Change	Major Accidents and Disasters
Landscape Character and Designations	✓	✓	✓	✓										
Visual Receptors	✓	✓		✓					✓	✓	✓			
Commercial Receptors										✓	✓			
Ecological Receptors			✓						✓	✓				
Notable Habitats			✓		✓				✓					
Designated Heritage Assets	✓	✓		✓						✓				
Non-designated Heritage Assets				✓						✓				

Receptors	Topic Chapters													
	Landscape	Visual	Ecology and Biodiversity	Historic Environment	Water Environment	Geology and Hydrogeology	Agriculture and Soils	Transport and Transport	Air Quality	Noise and Vibration	Socio-economics, Recreation and Tourism	Health and Wellbeing	Climate Change	Major Accidents and Disasters
Water Resources					✓	✓								
Watercourses and Waterbodies					✓	✓								
Flood Risk Receptors					✓									
Best, Most Versatile Agricultural Land							✓							
Agricultural Holdings							✓				✓			
Soil							✓				✓			
Public Rights of Way	✓							✓			✓			
Cycle Routes	✓							✓			✓			
Roads								✓						
Communities		✓							✓	✓	✓	✓	✓	

Receptors	Topic Chapters													
	Landscape	Visual	Ecology and Biodiversity	Historic Environment	Water Environment	Geology and Hydrogeology	Agriculture and Soils	Transport and Transport	Air Quality	Noise and Vibration	Socio-economics, Recreation and Tourism	Health and Wellbeing	Climate Change	Major Accidents and Disasters
Geology						✓								
Mineral Reserves						✓					✓			
Groundwater						✓								
Human Health	✓	✓			✓			✓	✓	✓	✓	✓		✓
Climate			✓		✓								✓	

Inter-project cumulative effects

- 5.5.19 Inter-project cumulative effects occur where a receptor is affected by two or more projects at the same time, potentially amplifying the overall effect. Individually the effects may not be significant, but when considered together could create a significant cumulative effect.
- 5.5.20 In accordance with the approach contained within the Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 5.6), the approach to the assessment of inter-project cumulative effects would follow a staged approach.

Stage 1a: Identify Zone of Influence (Zol)

- 5.5.21 The Zone of Influence (Zol) is the geographic area within which a development is likely to affect environmental receptors. As such, the Zol would vary for different types of receptors. The Zol used for this Scoping Report is based on a distance extending from either side of the Scoping Boundary. As the Project develops, the Zol would be based on the relevant distances (according to the individual environmental topic) around the proposed Order Limits.
- 5.5.22 The Zol used for environmental topics are listed in **Table 5.5**. The rationales for the distances chosen are explained in the relevant topic chapters.

Table 5.5 Zol for environmental topics

Environmental Topic	Study Areas
Landscape and visual	3km from the Scoping Boundary
Ecology and biodiversity	10km from the Scoping Boundary ¹
Historic Environment	3km from the Scoping Boundary
Water environment	1km from the Scoping Boundary
Geology and hydrogeology	250m from the Scoping Boundary for geology and land contamination 500 m from the Scoping Boundary for hydrogeology
Agriculture and soils	the Scoping Boundary
Traffic and movement	the Scoping Boundary
Air quality	250m from the Scoping Boundary
Noise and vibration	300m from the Scoping Boundary

¹ the 10 km Study Area encompasses statutory designated sites of international, national and local nature conservation value, and non-designated sites. A wider 30 km Study Area is identified in **Chapter 8 Ecology and Biodiversity** for the identification of any Special Areas of Conservation or Special Protection Areas where (respectively) bats or bird species with large foraging ranges are noted as, or one of, the qualifying features.

Environmental Topic	Study Areas
Socio-economics, recreation and tourism	Harborough; Melton; North Northamptonshire; South Holland; South Kesteven; West Northamptonshire local authorities for population and deprivation, and economy and employment receptors. 5km from the Scoping Boundary for tourism and recreation and aviation and defence infrastructure. 500m from the Scoping Boundary for the remaining relevant receptors.
Health and wellbeing	500m from the Scoping Boundary for loss of land, access and amenity impacts
Climate change	Not applicable
Major accidents and disasters	Not applicable

Stage 1b: Identify long list of other development

- 5.5.23 The Study Area within which to search for other developments that have the potential to have cumulative effects with the Project is based on the Zol for environmental effects. This is illustrated on **Figure 5.1 Inter-Project Cumulative Effects Assessment Study Area**. This will be kept under review as the Project develops and the long list updated as required.
- 5.5.24 The long list will be categorised into three tiers as outlined in **Table 5.6**. Minor planning applications (those below the 'Major development' criteria as defined in The Town and Country Planning (Development Management Procedure) (England) Order 2015 (Ref 5.7)) will be excluded from the assessment, as these relate to projects of small scale and local significance. These projects are highly unlikely to give rise to significant cumulative environmental effects over and above the Project in isolation. All reasons for excluding any development from further consideration will be clearly recorded and presented in the ES to present a clear audit trail.

Table 5.6 'Other development' for inclusion in the inter-project cumulative effects assessment

Tier	Development
Tier 1	Under construction, where the project is classified as 'major development', whether under the Planning Act 2008 (PA 2008) (Ref 5.11) or other consent regimes.
	Permitted application(s), where the project is classified as 'major development,' whether under the PA 2008 (Ref 5.11) or other consent regimes, but not yet implemented.
	Submitted application(s), where the project is classified as 'major development,' whether under the PA 2008 (Ref 5.11) or other consent regimes, but not yet determined.

Tier	Development
Tier 2	Projects on the Planning Inspectorate's Programme of Projects (publicly available), and/or the relevant local planning authorities planning portal where the project is classified as 'major development' and a scoping or screening report has been submitted.
Tier 3	Projects on the Planning Inspectorate's Programme of Projects (publicly available), and/or the subject of pre-application discussion with a relevant local planning authority, where a scoping or screening report has not been submitted. Projects registered on the local planning authority's portal classed as major development but do not require EIA. Identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that the amount of information on any relevant proposals will be limited. Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

Stage 2: Establishing a shortlist of 'other existing development and/ or approved development'

- 5.5.25 Following Stage 1, the projects included on the long list will be screened as to the temporal scope, scale and nature of the development to identify whether they would be likely to result in potential for a significant cumulative effect with the Project. Professional judgement would be used during the assessment of threshold criteria to determine whether developments should be scoped in or out of the assessment. This would include developments that were below the threshold criteria, but with characteristics that were likely to give rise to a significant effect or could give rise to cumulative effects by virtue of its proximity to the Project.
- 5.5.26 The following inclusion/exclusion criteria will be used for the assessment:
- **Temporal Scope:** other projects with an overlapping construction phase (currently expected to be 2030-2034 and in some cases operational effects would be scoped into the assessment. Planning applications considered include those submitted five years prior to submission of the application for development consent, this is because planning permissions typically expire after a period of three to five years (unless an application for extension is permitted). The status of planning applications will be monitored to include committed projects and those applications that remain undetermined but could still provide forthcoming committed developments.
 - **Scale and nature of development:** development identified as Schedule 1 and 2 developments in the EIA Regulations (Ref 5.1) would be considered further. Development not identified as Schedule 1 or 2 developments would be scoped out of the assessment, except where professional judgement identifies specific scenarios where there is a high likelihood of significant environmental effects arising in combination with the Project.
 - **Sensitivity of the receiving environment:** where there are potential connections between the Project and other existing or planned developments, known as

source- pathway-receptor linkages, cumulative effects would be considered. Other developments with no clear source-pathway-receptor linkage would be scoped out of the assessment.

- **Consultation:** requests from relevant stakeholders for the inclusion of specific projects and/or plans within the cumulative effects assessment.

Stage 3: Information gathering

5.5.27 Further information on the short-listed developments will be gathered to inform the final cumulative effects assessment, where this is available. This will include:

- proposed design and location information;
- construction and operational timescales; and
- results of any environmental assessments completed for the other developments.

5.5.28 Project data will be gathered and obtained from local planning authority planning portals, the Planning Inspectorate's website, discussion with other developers and engagement with local planning authorities.

Stage 4: Assessment

5.5.29 An assessment of the cumulative effects of the Project with the 'other existing and/or approved development' identified in Stage 2 will be undertaken using the following methodology:

- Each of the 'other existing developments and/or approved development' will be assessed in turn with the Project to determine if both activities/proposals give rise to significant cumulative effects during either construction or operation.
- The assessment will consider the apportionment of effect between the Project and the 'other existing development' e.g. is the contribution to the effect demonstrably related to one development or is there an equal contribution from either development based on professional judgement.
- The assessment will consider whether certain assessments (e.g. transport and associated air quality/ noise vehicular emissions assessments) are inherently cumulative and have been undertaken on a worse-case basis. In such circumstances no additional cumulative assessment will be undertaken.
- Cumulative effects will be identified by considering whether:
 - there would be any change in the significant effects from the Project, as identified within the individual topic chapters of the PEIR and ES, taking into consideration any effects from the short listed 'other existing development and/or approved development':
 - for example, a moderate adverse significant effect on key receptors becoming a major adverse significant effect cumulatively from the effects of the Project and the short listed other developments; or
 - where the effects of the Project on key receptors potentially affected by the short listed other developments would trigger a significant effect where the effects of the Project in isolation would be non-significant, for example, a minor adverse **non-significant** effect becoming a moderate adverse **significant** effect;

- significant and non-significant effects of the Project will be taken from the environmental topic chapters to inform the significance of cumulative effects with other developments. Effects will be identified as direct, indirect, short-term or long-term, permanent or temporary; and
- all likely significant cumulative effects and a description of the proposed mitigation and monitoring measures that may be required will be documented and presented in an accessible format similar to that in Matrix 2 provided in Appendix 2 of Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 5.6) and tabulated within the ES.

5.6 Monitoring

- 5.6.1 Schedule 4, Paragraph 7 of the EIA Regulations (Ref 5.1) states that, where appropriate, the ES should include a description of any proposed monitoring arrangements where likely significant residual effects have been identified. The monitoring requirements will be detailed within the ES topic chapters to include clear and proportionate objectives for monitoring, the parameters to be monitored, the methodology for the monitoring, a timescale for implementation, identification of the party who will be responsible for the monitoring, and an outline of the remedial actions to be undertaken should results be adverse.

5.7 Approach to the Environmental Statement

- 5.7.1 The Planning Inspectorate Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements (Ref 5.1) requires that applicants provide an outline structure of what the ES will contain. The structure of the ES for the Project will broadly follow the same order of chapters that are presented in this Scoping Report, acknowledging that changes may need to be made within the ES to address the advice from the Scoping Opinion, both in terms of presentation of the Project to aid understanding and address the design requirements as they evolve.
- 5.7.2 An indicative outline structure of the ES is set out in **Table 5.7**, however, this may be revised following receipt of the Scoping Opinion or development of the design and assessment.

Table 5.7 Indicative structure of the ES

ES Volume	Title
Not applicable	Non-technical Summary (NTS)
Volume 1	Chapter 1 Introduction
	Chapter 2 Regulatory and Planning Policy Context
	Chapter 3 Main Alternatives Considered
	Chapter 4 Description of the Project
	Chapter 5 EIA Approach
	Chapter 6 Landscape

ES Volume	Title
	Chapter 7 Visual
	Chapter 8 Ecology and Biodiversity
	Chapter 9 Cultural Heritage
	Chapter 10 Water Environment
	Chapter 11 Geology and Hydrogeology
	Chapter 12 Agriculture and Soils
	Chapter 13 Traffic and Transport
	Chapter 14 Air Quality
	Chapter 15 Noise and Vibration
	Chapter 16 Socio-economics, Recreation and Tourism
	Chapter 17 Health and Wellbeing
	Chapter 18 Climate Change
	Chapter 19 Cumulative Effects
Volume 2	Will provide the Appendices which support Volume 1.
Volume 3	Will provide the Figures which support Volume 1.

5.8 Other Assessments

- 5.8.1 The application for development consent will be supported by several technical assessments and management plans undertaken in line with specific and relevant policy or legislation. These provide additional information to inform the design, the potential effects of the Project and any mitigation measures. An outline of these is provided below for information.

Flood Risk Assessment

- 5.8.2 A Flood Risk Assessment (FRA) will be undertaken in accordance with NPS EN-1 (Ref 5.8) and the NPPF (Ref 5.10).
- 5.8.3 The FRA will consider flood risk both to and from the Project. It will demonstrate how this risk is intended to be managed in the future, including with the influence of climate change. It will provide appropriate evidence of consideration of the Sequential Test during design development and assessment and, if required, the Exception Test. The FRA would be carried out in accordance with the latest applicable technical planning guidance, and data and modelling available from the Environmental Agency.

Water Framework Directive Assessment

- 5.8.4 A Water Framework Directive (WFD) Assessment will be undertaken in accordance with the Water Framework Directive (2000) (Ref 5.12), transposed into domestic law by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (the “WER Regulations”) (Ref 5.13). It provides a structure for the protection and enhancement of surface fresh water, estuaries, coastal waters and groundwater.
- 5.8.5 A WFD Screening and Scoping Assessment has been completed, and is provided as Appendix 10A of this Scoping Report.
- 5.8.6 Further assessment will be undertaken and reported in the WFD documentation and where relevant, in the ES. The assessments will be appropriately co-ordinated.

Habitats Regulations Assessment

- 5.8.7 A Habitats Regulations Assessment (HRA) Stage 1: test of Likely Significant Effects and, if required, Stage 2: Statement to Inform Appropriate Assessment will be undertaken in line with the Conservation of Habitats and Species Regulations 2017 (the “Habitats Regulations”) (Ref 5.14) and the Planning Inspectorate’s advice note on HRA (Ref 5.15). The assessment will be provided with the application for development consent.
- 5.8.8 Although the emerging preferred corridor for the new overhead line has avoided direct impacts on European sites, there is the potential for impacts on birds associated with European sites that are located in the region. Also, the Upper Nene Valley Gravel Pits Ramsar and Special Protection Area is adjacent to Grendon substation, which includes the tie in point of the reconductoring works proposed to the existing overhead line. Ecology surveys will progress to define the baseline and be considered in design development and assessment. Any requirement for Stage 2 assessment will be considered and discussed with Natural England.
- 5.8.9 Further assessment will be undertaken and reported in the HRA documentation and where relevant, in the ES. The assessments will be appropriately co-ordinated.

Arboricultural Impact Assessment

- 5.8.10 Trees are a material consideration when determining planning applications, whether or not they are afforded the statutory protection of a tree preservation order or conservation area.
- 5.8.11 British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction (Ref 5.16) sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and new developments.
- 5.8.12 An Arboricultural Impact Assessment (AIA) will be undertaken and provided with the application for development consent. The AIA will report on the direct and indirect impacts of the Project on trees in terms of both the buildability and the long-term impact of the Project, and where necessary present mitigation for these impacts.

References

- Ref 5.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
- Ref 5.2 Planning Inspectorate (2020). Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements. [online] Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advicenote-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/> [Accessed: 21 August 2025].
- Ref 5.3 Planning Inspectorate (2018). Advice Note Nine: Rochdale Envelope. [online] Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-nine-rochdale-envelope/> [Accessed: 21 August 2025].
- Ref 5.4 Institute for Environmental Management and Assessment (2017). Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice. [online] Available at: <https://www.iema.net/resources/reading-room/2017/07/18/delivering-proportionate-eia> [Accessed: 21 August 2025].
- Ref 5.5 Institute of Environmental Management and Assessment (2015). Environmental Impact Assessment Guide to Shaping Quality Development. [online] Available at: <https://www.iaia.org/pdf/wab/IEMA%20Guidance%20Documents%20EIA%20Guide%20to%20Shaping%20Quality%20Development%20V6.pdf> [Accessed: 21 August 2025].
- Ref 5.6 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. [online] Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/> [Accessed: 21 August 2025].
- Ref 5.7 HM Government (2015). The Town and Country Planning (Development Management Procedure) (England) Order 2015. [online] Available at: https://www.legislation.gov.uk/ukxi/2015/595/pdfs/ukxi_20150595_en.pdf [Accessed 21 August 2025]
- Ref 5.8 Department for Energy Security & Net Zero (January 2024). Overarching National Policy Statement for Energy (EN-1) [online]. Available at: Overarching National Policy Statement for energy (EN-1) - GOV.UK (www.gov.uk) (Accessed: 21 August 2025).
- Ref 5.9 Department of Energy Security & Net Zero (November 2023). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at: Electricity Networks National Policy Statement - EN-5 (publishing.service.gov.uk) (21 August 2025).
- Ref 5.10 Department for Levelling Up, Housing and Communities (2024). National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf [21 August 2025].

- Ref 5.11 Planning Act 2008 [online]. Available at:
<https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 21 August 2025]
- Ref 5.12 Water Framework Directive 2000 [online]. Available at: <https://eur-lex.europa.eu/eli/dir/2000/60/oj/> [Accessed 21 August 2025]
- Ref 5.13 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 [online]. Available at:
<https://www.legislation.gov.uk/uksi/2017/407/contents/made> [Accessed 08 July 2024]
- Ref 5.14 The Conservation of Habitats and Species Regulations 2017 [online]. Available at:
<https://www.legislation.gov.uk/uksi/2017/1012/contents/made> [Accessed 08 July 2024].
- Ref 5.15 H.M Government (2024) Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Online) Available at:
<https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments> [Accessed 31st July 2025]
- Ref 5.16 British Standards (2012). Trees in relation to design, demolition and construction [online]. <https://www.bathnes.gov.uk/sites/default/files/2020-01/BS5837%202012%20Trees.pdf> [Accessed 21 August 2025]

6. Landscape

Contents

6.	Landscape	6-1
6.1	Introduction	6-1
6.2	Legislation, Policy and Guidance	6-2
6.3	Consultation and Engagement	6-2
6.4	Study Area	6-5
6.5	Baseline Conditions	6-6
	Data Sources	6-6
	Baseline	6-6
	Future Baseline	6-12
6.6	Design and Control Measures	6-13
	Design Measures	6-13
	Control and Management Measures	6-13
6.7	Potential for Significant Effects	6-14
	Potential sources of impacts	6-14
	Potential impacts	6-15
6.8	Proposed Assessment Methodology	6-27
	Proposed Data Sources	6-27
	Proposed Assessment Methodology	6-27
6.9	Assumptions and limitations	6-33
6.10	Conclusion	6-34
	Table 6.1 Engagement with Stakeholders	6-3
	Table 6.2 Impacts, receptors and the potential for significant effect	6-17
	Table 6.3 Sensitivity of receptors	6-30
	Table 6.4 Magnitude of effect	6-31
	Table 6.5 Significance of landscape effect	6-32
	Image 6.1: Classification of Landscape Effects	6-32
	References	6-35

6. Landscape

6.1 Introduction

- 6.1.1 This chapter presents how the landscape assessment will consider the potential likely significant effects on landscape receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of an Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 6.1.2 Although closely related, potential effects on landscape receptors are considered and reported separately to potential effects on visual receptors in **Chapter 7 Visual**. Consideration will be given to minimising potential repetition between these assessments within the ES.
- 6.1.3 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 6.1.4 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 6.1.5 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 7 Visual** includes the identification and assessment of effects for visual receptors and considers the impact on views and the visual experience of observers. As above, landscape and visual effects are closely related;
 - **Chapter 8 Ecology and Biodiversity** includes the identification of ecological designations and existing habitats and vegetation cover which informs landscape character (and value);
 - **Chapter 9 Cultural Heritage** identifies heritage assets which are factors that can contribute towards landscape value; and
 - **Chapter 14 Air Quality** and **Chapter 15 Noise and Vibration** assess the potential impacts on receptors, recognising that changes in air quality and noise and vibration levels can influence how people perceive and experience the landscape.
- 6.1.6 This chapter is supported by the following figures:
- **Figure 6.1 Proposed Landscape Study Area;**

- **Figure 6.2 Landscape Constraints;**
- **Figure 6.3 National Landscape Character;**
- **Figure 6.4 Regional Landscape Character;** and
- **Figure 6.5 District and Local Landscape Character.**

6.2 Legislation, Policy and Guidance

6.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on landscape receptors associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context. Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

6.2.2 The relevant principle guidance and standards that have informed the scoping process are listed below. This, along with other relevant material, will be taken into account as part of the ES assessment:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA) (Ref 6.1);
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition, Technical Guidance Note - 2024-01 (Ref 6.2);
- Assessing Landscape Value Outside National Designations, Technical Guidance Note 02/21 (Ref 6.3); and
- Visual Representation of Development Proposals, Technical Guidance Note 06/19 (currently under review) (Ref 6.4);
- An Approach to Landscape Character Assessment (Ref 6.5);
- The Holford Rules, National Grid (Ref 6.6);
- The Horlock Rules, National Grid (Ref 6.7); and
- Planning Inspectorate Advice (updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 6.8).

6.3 Consultation and Engagement

6.3.1 The ES will be informed by consultation and engagement with stakeholders, including statutory consultees, such as Historic England and Natural England and host local authorities namely:

- Lincolnshire County Council, South Holland District Council and South Kesteven District Council;
- Leicestershire County Council, Melton District Council and Harborough District Council;
- North Northamptonshire Council; and
- West Northamptonshire Council.

- 6.3.2 In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 6.3.3 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 6.1**.

Table 6.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
South Holland District Council	Concerns that the new overhead line and 50-metre-high towers between Weston Marsh and South Forty Foot Drain will have a negative effect on areas known for their flat landscape and big skies, including the Fens. There are also concerns over the potential cumulative effects.	Potential landscape receptors have been identified through an initial review of the baseline environment and set out within Section 6.5. Table 6.2 sets out the proposed scope of assessment for landscape receptors. The proposed methodology for the assessment of landscape effects is set out in Section 6.8 and includes consideration of both physical and perceptual aspects of landscape character. A cumulative effects assessment will be undertaken and reported in the ES as described in Chapter 5 EIA Approach and Methodology, an overview of the approach for landscape effects is provided in Section 6.8.
South Kesteven District Council	Concerns on various issues and request their consideration, including: - Assessment of visual intrusion of pylons from Public Rights of Way, residential properties, and other sensitive land uses. - Mitigation measures such as alternative designs, reduced-height pylons,	Visual amenity will be assessed as described in Chapter 7 Visual, including lighting. The proposed assessment methodology and receptors to be considered and reported in the ES are described in Sections 6.5 to 6.8.

Stakeholder	Summary of response	Consideration in the Scoping Report
	strategic placement to minimise visibility, visual screening • Lighting • Visual amenity • Exploration of alternatives • Policy context, including South Kesteven Local Plan (2020), and neighbourhood plans	Alternative designs for towers may be considered in some locations where conditions dictate the requirement. Other mitigation will be considered as the design and assessment develop iteratively, as described in Section 6.6. Chapter 3 Main Alternatives Considered summarises the consideration of alternatives to date. The ES will report the further consideration of reasonable alternatives. Chapter 2 Regulatory and Planning Policy Context and associated appendices list the policy relevant to this report and the assessment it describes, including South Kesteven Local Plan and Neighbourhood Plans.
Campaign to Protect Rural England (CPRE) Lincolnshire	Concerns over the potential negative impacts on the significant landscape and the potential negative views from Corby Glen's Conservation Area from a 400kV outdoor substation with 50m high gantries. Concern that rural character will be eroded.	Potential landscape receptors have been identified through an initial review of the baseline environment and set out within Section 6.5. Table 6.2 sets out the proposed scope of assessment for landscape receptors. The proposed methodology for the assessment of landscape effects is set out in Section 6.8 and includes consideration of both physical and perceptual aspects of landscape character, and size and scale of development.

Stakeholder	Summary of response	Consideration in the Scoping Report
		A range of measures relevant to landscape and visual impacts are referenced in Section 6.6 and described in further detail in Appendix 4A Initial Outline CoCP .

6.4 Study Area

- 6.4.1 Identification of an initial Study Area has involved a desk-based review of mapping and landscape character information and the maximum parameters of each element of the Project, targeted field survey to gain an understanding of the existing baseline, and the application of professional judgement.
- 6.4.2 In accordance with good practice guidance set out in the Guideline for Landscape and Visual Impact Assessment (GLVIA) (Ref 6.1), the Study Area for the landscape assessment seeks to encompass all landscape receptors with the potential to be significantly affected by the Project.
- 6.4.3 An initial Study Area extending 3 km from the Scoping Boundary of the new overhead line and substations, including up to two substations at Weston Marsh and new substations near Corby Glen and west of Ab Kettleby, has been used to inform the Scoping Report, as illustrated on **Figure 6.1**. It is proposed that the Study Area for the landscape assessment in the ES is defined as 3 km from the outer boundary of the Order Limits.
- 6.4.4 It is acknowledged that elements of the Project may be visible beyond the Study Area extents. However, at locations beyond the Study Area, the separation distances will be such that potential indirect impacts resulting from the Project are unlikely to lead to a fundamental change to the perception or experience of the landscape and as such potential effects are unlikely to be significant.
- 6.4.5 The Study Area will be reviewed and further refined at the assessment stage, through the use of the Order Limits, Zone of Theoretical Visibility (ZTV) modelling and targeted field surveys to ensure a proportionate approach focused on potential for significant effects. ZTV modelling will give an indication of the theoretical extent of potential indirect change related to visibility of elements of the Project, and also allow identification of areas and landscape receptors where change is unlikely to occur and can therefore be excluded from the assessment.
- 6.4.6 For the purposes of this Scoping Report, a Study Area of 1 km from the Scoping Boundary of the existing ZA (Cottam – Sundon) 400 kV overhead line (reconductoring) between the new substation near Ab Kettleby and the existing Grendon substation has been used (refer to **Figure 6.1**). This has allowed for identification of potential receptors related to the proposed reconductoring. As detailed in Section 6.7, impacts from the reconductoring element of the Project are proposed to be **scoped out** of the landscape assessment.

6.5 Baseline Conditions

Data Sources

6.5.1 The known or predicted current and future baseline environment described in this section of the scoping chapter has been informed by the following data sources:

- Ordnance Survey (OS) mapping and aerial photography;
- Natural England National Character Area Profiles (Ref 6.9);
- East Midlands Regional Landscape Character Assessment (Ref 6.10); and
- Published local landscape character assessments (listed and referenced in paragraph 6.5.14, below).

Baseline

6.5.2 An initial review of the baseline environment has been undertaken through desk-based research and targeted field surveys.

6.5.3 Desk-based research has involved a review of mapping and aerial photography, planning and policy documents, landscape character assessments and other sources of information relevant to the baseline environment within the Study Area. An initial targeted field survey was undertaken in January 2025 as part of the optioneering stage and allowed ground truthing of desk-based research to confirm key landscape characteristics. An additional targeted field survey was undertaken in September 2025 to inform this Scoping Report and the design process.

6.5.4 Further detailed research and surveys will be undertaken as part of the assessment process to define the existing baseline conditions within the Study Area and inform detailed siting, routeing and assessment. The ES assessment will include a detailed baseline description for each of the identified landscape receptors within the Study Area. The baseline description will set out the key characteristics that define each area and provide information on the landscape value for each receptor.

6.5.5 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown on **Figure 1.2 Scoping Boundary**. Each of the five Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The paragraphs below identify potential landscape receptors within the Study Area.

Landscape Designations

6.5.6 No National Landscapes have been identified within the Study Area, the closest being the Norfolk Coast National Landscape, located over 30 km to the east of the Project.

6.5.7 The following locally designated Special Landscape Areas (SLA) have been identified within the Study Area for the reconductoring of the existing ZA overhead line, as shown on **Figure 6.2**:

- Welland Valley SLA, located to the south of Market Harborough along the western fringe of part of the Study Area; and

- Castle Ashby & Yardley Chase SLA, located at the southern extent of the Study Area, adjacent to the existing Grendon substation.

6.5.8 In addition to the above landscape designations, the following Registered Parks and Gardens (RPG) have been identified within the Study Area for the new overhead line and substations, as shown on **Figure 6.2**:

- Grimsthorpe Castle RPG, located approximately 4 km west of Bourne within the Study Area for Section 2; and

6.5.9 Stapleford Hall RPG, located approximately 4.5 km east of Melton Mowbray within the Study Area for Section 3. The following Registered Parks and Gardens (RPG) have been identified within the Study Area for the reconductoring of the existing ZA overhead line, as shown on **Figure 6.2**:

- Baggrave Hall RPG and Quenby Hall RPG, located approximately 5 km east of Leicester within the Study Area for Section 4;
- Lowesby Hall RPG, located approximately 7.5 km east of Leicester within the Study Area for Section 4;
- Langton Hall RPG, located on the western fringe of the Study Area, approximately 2.5 km east of Kibworth Beauchamp on the Study Area boundary for Section 4;
- Harrington RPG, located approximately 3.5 km west of Rothwell within the Study Area for Section 5;
- Great Harrowden Hall RPG, located on the northern fringe of Wellingborough within the Study Area for Section 5; and
- Castle Ashby RPG, located at the southern extent of the Study Area, adjacent to the existing Grendon substation within the Study Area for Section 5.

Landscape Character Units

6.5.10 Landscape character is a composite of physical and cultural elements. Landform, hydrology, vegetation, land cover, land use pattern, cultural and historic features and associations combine to create a common 'sense of place' and identity which can be used to categorise the landscape into definable units. The level of detail and size of unit can be varied to reflect the scale of definition required. It can be applied at a national, regional, and local level.

6.5.11 The hierarchy of landscape classification of the Study Area is set out below, initially highlighting the national and regional level characterisation before identifying the more detailed local landscape units. The national and regional scale units provide a useful context. However, it is anticipated that the local landscape units will be used to define the baseline against which potential effects will be assessed.

National Landscape Character

6.5.12 The following National Character Areas (NCA), as defined by Natural England (Ref 6.9), are partially located within the Study Area, as shown on **Figure 6.3**:

- NCA 46: The Fens;
- NCA 75: Kesteven Uplands;
- NCA 74: Leicestershire and Nottinghamshire Wolds;

- NCA 93: High Leicestershire;
- NCA 94: Leicestershire Vales;
- NCA 89 Northamptonshire Vales;
- NCA 95 Northamptonshire Uplands;
- NCA 92: Rockingham Forest; and
- NCA 91: Yardley-Whittlewood Ridge.

Regional Landscape Character

6.5.13 At a regional level, the landscape character of the Study Area is defined and described in The East Midlands Regional Landscape Character Assessment (Ref 6.10). The following Regional Landscape Character Types (RLCT) are located within the Study Area, as shown on **Figure 6.4**:

- RLCT 2a: Settled Fens and Marshes;
- RLCT 2b: Planned and Drained Fens and Carrlands;
- RLCT 2c: Fen and Marsh Margin Farmlands;
- RLCT 3a: Floodplain Valleys;
- RLCT 4a: Unwooded Vales;
- RLCT 5c: Undulating Mixed Farmlands;
- RLCT 8a: Clay Wolds; and
- RLCT 10a: Forest Hills and Ridges.

Local Landscape Character

6.5.14 At a local level, the following published landscape character assessments are relevant to the Study Area:

- South Holland District - Strategic Landscape Capacity Study for South Holland District Council (Ref 6.11);
- South Kesteven District - South Kesteven Landscape Character Assessment (Ref 6.12);
- Rutland District – Rutland Landscape Character Assessment (Ref 6.13);
- Melton District – Melton Landscape Character Assessment (Ref 6.14);
- Charnwood District –The Borough of Charnwood Landscape Character Assessment (Ref 6.15);
- Harborough District – Harborough District Landscape Character Assessment (Ref 6.16); and
- West and North Northamptonshire - Northamptonshire Current Landscape Character Assessment (Ref 6.17), with local updates provided by Daventry Landscape Character Assessment (Ref 6.18), Northampton Urban Fringe Landscape Character & Sensitivity Study (Ref 6.19), and South Northamptonshire Landscape Character Assessment (Ref 6.19).

- 6.5.15 The local landscape character units relevant to each of the Sections along the Scoping Boundary are set out in the respective paragraphs below and shown on **Figure 6.5**.
- 6.5.16 The local landscape character units will form the basis of the baseline description and subsequent assessment of potential effects within the landscape assessment.

Section 1

- 6.5.17 The landscape of Section 1 in South Holland is characterised by a relatively flat, low-lying topography and productive arable land use. It is a large scale and predominantly open landscape, divided by linear ditches and drains and occasional linear tree belts along field boundaries. This is a well settled landscape with a series of small settlements and dispersed individual properties.
- 6.5.18 The local landscape character of South Holland is defined within the Strategic Landscape Capacity Study for South Holland District Council (Ref 6.11), identifying three distinct Landscape Character Types (LCT). The following two LCTs are located within the Study Area related to Section 1:
- Settled Fens LCT; and
 - Peaty Fens LCT.

Section 2

- 6.5.19 The landscape of Section 2 in South Kesteven transitions from open flat fens to the east and more elevated rolling landform to the west. The fens are a low-lying and productive arable landscape, divided by a network of ditches and drains and occasional trees. Further west the topography is more variable consisting of a series of low, broadly north south ridges and valleys, creating a large-scale undulating agricultural landscape.
- 6.5.20 The local landscape character of the South Kesteven is defined within the South Kesteven Landscape Character Assessment (Ref 6.12). This document identifies a series of seven distinct Landscape Character Areas (LCA). The following three LCAs are located within the Study Area related to Section 2:
- The Fens LCA;
 - Fen Margins LCA; and
 - Kesteven Uplands LCA.
- 6.5.21 A small part of the Study Area related to Section 2 is also covered by the Rutland Landscape Character Assessment (Ref 6.13), and includes the fringes of the following two LCAs:
- Di - Cottesmore Plateau LCA; and
 - Dii - Clay Woodlands LCA.

Section 3

- 6.5.22 The landscape of Section 3 in Melton is broadly characterised by undulating agricultural land with a variable sense of scale, openness and enclosure, influenced by topography, tree cover and field pattern. This is a well settled landscape, including Melton Mowbray and a range of smaller villages and scattered rural properties.

- 6.5.23 The local landscape character of Melton District is defined within the Melton Landscape Character Assessment (Ref 6.14) which identifies a series of 21 LCAs, the following 18 of which are located within the Study Area related to Section 3:
- 1 - Vale of Belvoir LCA;
 - 3 - Wolds Scarp LCA;
 - 4 - Wolds Top LCA;
 - 6 - Ridge and Valley LCA;
 - 7 - Village Pastures LCA;
 - 8 - Limestone Edge LCA;
 - 9 - Parkland LCA;
 - 10 - Mixed Farmland LCA;
 - 11 - Pastoral Farmland LCA;
 - 12 - Wreake Valley LCA;
 - 13 - Eye Valley LCA;
 - 14 - Gaddesby Valley LCA;
 - 15 - High Leicestershire Hills LCA;
 - 16 - Farmland Patchwork LCA;
 - 17 - Open Arable LCA;
 - 19 - Asfordby Quarry LCA;
 - 20 - Melton Farmland Fringe LCA; and
 - 21 - Melton LCA.
- 6.5.24 Small parts of the Study Area related to Section 3 are also covered by the Rutland Landscape Character Assessment (Ref 6.13) and Borough of Charnwood Landscape Character Assessment (Ref 6.15). The fringes of the following three LCAs are located within the Study Area related to Section 3:
- B - Vale of Catmose LCA (Rutland);
 - Di - Cottesmore Plateau LCA (Rutland); and
 - High Leicestershire LCA (Charnwood).

Section 4

- 6.5.25 The landscape of Section 4 in Harborough is broadly characterised by rolling topography forming broad ridges and shallow valleys. This is a predominantly agricultural landscape with pasture on higher, sloping land and arable fields on lower, flatter areas. Tree cover is variable and largely confined to field boundaries and small woodlands. There is a variable sense of scale, largely related to the underlying field pattern.
- 6.5.26 The local landscape character of Harborough is defined within the Harborough District Landscape Character Assessment (Ref 6.16) which identifies a series of 26

distinct LCAs, the following 12 LCAs are located within the Study Area related to Section 4:

- 1a - Tilton on the Hill and Skeffington LCA;
- 2a - Marefield and Owston LCA;
- 2b - Hungarton and Lowesby Estates LCA;
- 2c - Houghton-on-the-Hill to Keyham LCA;
- 2d - Burton Overy to Billesdon LCA;
- 2e - Shangton to East Langton LCA;
- 3a - Loddington LCA;
- 3b - Rolleston to Allexton LCA;
- 5c – Market Harborough LCA
- 6a - Hallaton to Stoton Wyville LCA;
- 7a - Great Bowden to Welham LCA; and
- 7b - Medbourne to Great Easton LCA.

6.5.27 A small part of the Study Area related to this Section is also covered by the Borough of Charnwood Landscape Character Assessment (Ref 6.15), with the fringe of the High Leicestershire LCA located adjacent to the Scoping Boundary.

Section 5

6.5.28 The landscape of Section 5 in North Northamptonshire and West Northamptonshire is broadly characterised by a large scale and gently undulating landform and occasional steeper scarp slopes. It is an open and variable landscape of mixed agricultural land use, with arable fields on the broad, flat river terraces and pasture on more undulating land and slopes. It is a relatively well settled landscape including a series of small and medium sized villages and the fringes of large settlements such as Kettering, Wellingborough and Northampton.

6.5.29 The local landscape character of North Northamptonshire and West Northamptonshire is defined within the Northamptonshire Current Landscape Character Assessment (Ref 6.17), although with additional updated information for parts of West Northamptonshire provided within the Daventry Landscape Character Assessment (Ref 6.18), the Northampton Urban Fringe Landscape Character & Sensitivity Study (Ref 6.19), and the South Northamptonshire Landscape Character Assessment (Ref 6.20). These documents identify a series of 64 distinct LCAs and 15 urban areas, with the following 21 LCAs located within the Study Area related to Section 5:

- North Northamptonshire LCAs
- 4f - Kettering and Wellingborough Plateau LCA;
- 7a - Geddington Chase LCA;
- 12a – Wollaston to Irchester LCA;
- 13e Cottesbrook and Arthingworth LCA;

- 18d – The Nene – Billing Wharfe to Woodford Mill LCA;
- 18i - The Welland – Market Harborough to Cottingham LCA; and
- 19c - Welland Vale LCA.

Daventry LCAs

- 4e - Pitsford Water LCA;
- 5a - Naseby Plateau LCA;
- 5b - Sywell Plateau LCA;
- 13d - Cottesbrooke and Arthingworth LCA;
- 15a - Hothorpe Hills to Great Oxendon LCA; and
- 19c - Welland Vale LCA.

Northampton Urban Fringe LCAs

- 4e - Overstone Park;
- 4f - Ecton;
- 6a - Brafield-on-the-Green;
- 12b Cogenhoe; and
- 18d – Nene Valley – The Washlands.

South Northamptonshire LCAs

- 6b - Hackleton Claylands LCA;
- 12a – Little Houghton to Castle Ashby; and
- 18c – The Nene – Billing Wharf

Future Baseline

- 6.5.30 The future baseline relates to anticipated changes to the current baseline in the future which are predicted to occur in the absence of the Project. Landscapes change and evolve over time through both natural process and as a result of human influence through changes in land use, management or development and climate change.
- 6.5.31 The landscape assessment will make predictions relating to potential change to the baseline, informed by known development pressures, local development plan allocations, local policy and observations in the field. In addition, the future baseline will consider proposed and committed developments that will be completed before this Project commences, including renewable energy schemes and other National Grid infrastructure projects, that may influence the character and perception of the landscape. The future baseline will seek to highlight potential changes in the baseline that may influence the assessment outcomes.

6.6 Design and Control Measures

Design Measures

- 6.6.1 The Project has been carefully planned to avoid designated sites and sensitive landscape receptors as far as reasonably practicable through an initial siting and routeing process as described in **Chapter 3 Main Alternatives Considered** and **Chapter 4, Description of the Project**. This approach aligns with the principles outlined in the Holford Rules (Ref 6.6) and Horlock Rules (Ref 6.7). These principles will continue to guide the siting, routeing and design processes in order to avoid or minimise potential adverse landscape effects.
- 6.6.2 It is acknowledged within paragraphs 2.9.7 and 2.9.9 of National Policy Statement (NPS) EN-5 (Ref 6.21) that new overhead lines and new substations, sealing end compounds, and other associated above-ground installations can result in adverse landscape and visual impacts.
- 6.6.3 The landscape assessment will be an iterative process with progressive levels of survey and appraisal informing detailed siting and routeing, and refinement of the design of the Project. This will include evaluation of detailed alignment options and locations of individual overhead line towers, positioning and design of the substations, and the identification of appropriate mitigation measures to minimise potential residual effects.

Control and Management Measures

- 6.6.4 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect landscape are (refer to **Appendix 4A** for the full description of each measure):
- GG09 – on reinstatement of land used temporarily;
 - GG10 – on protection of retained sensitive features;
 - GG13 – on design of construction sites relative to residential properties;
 - GG20 and AS01 – on earthworks, soil storage and protection;
 - GG22 and LV04 – on design and position of construction lighting;
 - GG26 – on fencing of working areas;
 - LV01 – on retention and replacement of vegetation;
 - LV02 – on tree protection measures; and
 - LV03 – on aftercare and establishment period.
- 6.6.5 An Outline Landscape and Ecology Management Plan (LEMP) will be provided with the application for development consent and secured through appropriate Requirement of the DCO. This will set out the details of proposed landscape and habitat reinstatement, mitigation and/or enhancement measures and associated maintenance, management and monitoring requirements.

6.7 Potential for Significant Effects

- 6.7.1 The landscape assessment in the ES will consider the construction and operation of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the landscape ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 6.7.2 The anticipated embedded design, control and management measures described in Section 6.6 have been taken into account when determining the potential for the Project to result in significant effects.
- 6.7.3 Impacts on landscape receptors can be either direct or indirect. Direct impacts relate to physical changes to the landscape through loss or alteration of existing features and/or addition of new elements. Indirect impacts relate to changes to perceptual attributes of the landscape and its character, such as a sense of remoteness, naturalness or tranquillity.

Potential sources of impacts

Sources of construction impacts

- 6.7.4 Potential sources of temporary landscape impacts associated with construction of the Project, such as installation of new substations and new overhead line, are likely to include:
- direct and indirect change resulting from temporary clearance of vegetation and alteration of landform;
 - direct and indirect change resulting from introduction of temporary structures, fencing, lighting and/or other features such as at construction compounds, material storage and laydown areas, and introduction of temporary access tracks and car parks; and
 - indirect change resulting from movement, noise and lights associated with construction traffic, plant and machinery.

Sources of operation and maintenance impacts

- 6.7.5 Potential sources of landscape impacts associated with operation and maintenance of the Project are likely to include:
- direct change resulting from loss or alteration of vegetation not reinstated as part of construction and/or topography;
 - direct and indirect change resulting from introduction of a new 400 kV overhead line into the landscape;
 - direct and indirect change resulting from introduction of proposed substation structures and associated access roads, fencing and lighting into the landscape; and
 - direct and indirect change resulting from temporary movement, noise and lights associated with periodic maintenance traffic, plant and machinery for essential

repairs and maintenance. This may include cutting back of vegetation where required.

Potential impacts

- 6.7.6 **Table 6.2** describes the sources of potential impacts on landscape receptors identified in the initial Study Area. Where an impact could give rise to potentially significant effects these are then scoped into the ES. Impact pathways that are unlikely to give rise to significant effects are proposed to be scoped out of the ES.
- 6.7.7 A precautionary approach has been taken to the identification of potential for significant effects and where there is uncertainty the receptor is proposed to be included in the assessment at this stage. A further review of those aspects scoped in will be undertaken as part of the assessment process to ensure a targeted and proportional approach is taken, focused on potential significant effects.
- 6.7.8 As highlighted in Section 6.4, the Study Area will be refined as part of the assessment phase to be based on an offset from the Order Limits, rather than the Scoping Boundary. All landscape designations and landscape character areas which fall outside of the final Study Area and/or the extent of the ZTV (once ground-truthed by field work) will be **scoped out** of the ES due to no potential for significant effects as a result of the offset distance and/or lack of visibility.

Landscape Designations

- 6.7.9 It is anticipated that direct impacts (physical change) on landscape designations from the new 400 kV overhead line and new substations will be avoided through siting and design, as advocated in the Holford Rules (Ref 6.6) and Horlock Rules (Ref 6.7). However, there is potential for indirect impacts on perceptual attributes of some of the identified landscape designations as a result of change occurring in adjacent or nearby landscapes. **Table 6.2** below identifies landscape designations to be scoped in and those proposed to be scoped out of the assessment for each phase of the Project.

Landscape Character Units

- 6.7.10 There is potential for both direct and indirect impacts on landscape character within the Study Area as a result of construction and operation of the Project.
- 6.7.11 Construction compounds, access tracks, scaffolds and construction activities will introduce new features and increased movement into parts of the landscape and views. It is anticipated that construction compounds will be carefully sited to help minimise potential impacts by avoiding key landscape features and where possible making use of existing vegetation or topography for screening.
- 6.7.12 The proposed new substations and new overhead line will introduce new structures into the landscape, with potential for change to physical attributes of the landscape, including topography, vegetation and land use, and perceptual attributes, such as the sense of tranquillity, remoteness or naturalness. Careful siting and routeing will help to reduce potential impacts, with additional mitigation measures identified where required. However, the potential remains for significant effects on landscape character from the construction and operation of the new substations and new overhead line to occur and therefore these aspects have been **scoped in** to the ES.

Reconductoring

- 6.7.13 In relation to reconductoring of the existing ZA overhead line, potential impacts will be temporary in nature and of a short duration, and experienced in the context of the existing overhead line and movement of existing traffic on the well-developed road network. At operation, all areas disturbed by construction will be reinstated and the reconducted towers will appear the same as the existing overhead line, with no horizontal, and limited vertical realignment proposed, and therefore very little or no discernible change is anticipated to the landscape upon completion. Impacts from reconductoring would represent minimal change from existing landscape baseline conditions and is unlikely to result in significant effects on landscape receptors. As such, impacts from reconductoring are proposed to be **scoped out** of the ES.

Table 6.2 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Nationally designated or nationally important landscapes					
Construction	Introduction of temporary structures, access tracks, activity and lighting associated with construction of the new overhead line and substations.	Temporary alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	Norfolk Coast National Landscape	No – North Norfolk Coast is the National Landscape in closest proximity to the Project, there would be no discernible change due to separation distance of over 30 km.	Scoped out
			All RPGs.	No – no direct change anticipated through careful siting of construction works in line with the Initial Outline CoCP (refer to Appendix 4A Initial Outline Code of Construction Practice). Indirect change will be limited by screening from existing boundary vegetation and will be temporary and of short duration.	Scoped out
	Introduction of temporary structures, access tracks, activity and lights associated with reconductoring of the existing ZA overhead line.	Temporary localised alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or	All RPGs.	No – construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		indirect change.			
Locally designated landscapes					
Construction	Introduction of temporary structures, access tracks, activity and lighting associated with construction of the new overhead line and substations.	Temporary localised alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All locally designated landscapes (SLAs).	No – there are no SLAs located within the Study Area.	Scoped out.
Construction	Introduction of temporary structures, access tracks, activity and lights associated with reconductoring of the existing ZA overhead line.	Temporary localised alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All locally designated landscapes (SLAs).	No – construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
National Landscape Character Areas					
Construction	Introduction of temporary structures, access tracks, activity and lighting associated with construction of the new overhead line and substations.	Temporary alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	NLCA 46: The Fens, NLCA 75: Kesteven Uplands, and NLCA 74: Leicestershire and Nottinghamshire Wolds	Yes – potential for direct effects on landscape elements and features and indirect effects on perceptual attributes across wide area.	Scoped in (summary assessment based on local character units)
			All other NLCA	No – located greater than 3km from the new overhead line and substations, meaning there is limited potential for discernible change.	Scoped out
	Introduction of temporary structures, access tracks, activity and lights associated with reconductoring of the existing ZA overhead line.	Temporary localised alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All NLCA	No – construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	Scoped out
Local landscape character units					

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Introduction of temporary structures, access tracks, activity and lighting associated with construction of the new overhead line and substations.	Temporary alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	Rutland units: Vale of Catmose LCA; Cottesmore Plateau LCA; and Clay Woodlands LCA. Melton unit: Vale of Belvoir LCA.	No – these LCAs are located outside of the Scoping Boundary and therefore no direct change will occur. Only small parts are within the Study Area. Potential change to perceptual attributes will be limited in extent and duration and will not result in discernible change.	Scoped out
			Melton unit: Melton LCA.	No – this LCA covers the urban area of Melton Mowbray defined by settlement and development. Construction will not occur within this LCA and will not alter the existing perceptual attributes.	Scoped out
			All remaining local character units (LCTs and LCAs) within the assessment Study Area and ZTV.	Yes - potential for localised direct effects on landscape features and more widespread indirect effects on perceptual attributes and overall impression of character.	Scoped in
	Introduction of temporary structures, access tracks, activity and lights associated with reconductoring of	Temporary localised alteration to key characteristics and/or the	All local landscape units (LCTs and LCAs).	No – construction will occur along an existing overhead line and be undertaken in accordance with the Initial Outline CoCP (refer to Appendix 4A: Initial Outline CoCP). Any change will be	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	the existing ZA overhead line.	impression of the landscape, resulting from direct and/or indirect change.		temporary and of a short duration and will be localised, with only limited influence on landscape character.	
Nationally designated or nationally important landscapes					
Operation	Introduction of new 400 kV overhead line and substations.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	Norfolk Coast National Landscape.	No – North Norfolk Coast is the National Landscape in closest proximity to the Project, there would be no discernible change due to separation distance of over 30 km.	Scoped out
			Grimsthorpe Castle RPG.	Yes – in relation to the new overhead line, there is potential for long-term indirect change to perceptual aspects and in relation to designed vistas from the castle and grounds which may locally alter the impression of the landscape. No - in relation to the substations, as the nearest proposed substation is located approximately 4.5 km from the RPG.	Scoped in for new overhead line. Scoped out for substations.
			Stapleford Hall RPG.	No – this RPG is located approximately 2 km from Scoping Boundary. Potential indirect change	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				limited by distance, local topography and vegetation.	
	Reconductored existing ZA overhead line.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All RPGs.	No – reconductored overhead line will appear similar to existing with very little or no change from the baseline.	Scoped out
Locally designated landscapes					
Operation	Introduction of new 400kV overhead line and substations	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All locally designated landscapes (SLAs).	No – there are no SLAs located within the Study Area.	Scoped out
Operation	Reconductored existing ZA overhead line.	Alteration to key characteristics and/or the	All locally designated landscapes (SLAs).	No – reconductored overhead line will appear similar to existing with very little or no change from the baseline.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		impression of the landscape, resulting from direct and/or indirect change.			
National Landscape Character Areas					
Operation	Introduction of new 400 kV overhead line and new substations.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	NLCA 46: The Fens, NLCA 75: Kesteven Uplands, and NLCA 74: Leicestershire and Nottinghamshire Wolds	Yes – potential for direct effects on landscape elements and features and indirect effects on perceptual attributes across wide area.	Scoped in (summary assessment based on local character units)
			All other NLCA	No – located greater than 3km from the new overhead line and substations, limiting potential for discernible change.	Scoped out
	Reconductored existing ZA overhead line.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or	All NLCA	No – reconductored overhead line will appear similar to existing with very little or no change from the baseline.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		indirect change.			
Local landscape character units					
Operation	Introduction of new 400 kV overhead line and new substations.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	Rutland units: Vale of Catmose LCA; Cottesmore Plateau LCA; and Clay Woodlands LCA. Melton unit: Vale of Belvoir LCA.	No – only small parts of these LCAs are within the Study Area. No direct change will occur. Change to perceptual attributes limited and localised, very little or no alteration of baseline.	Scoped out
			Melton unit: Melton LCA.	No – this LCA is located outside the Scoping Boundary, therefore no direct change will occur. Existing character defined by settlement and development, which will not be influenced by the new overhead line located outside this LCA.	Scoped out
			All remaining local character units (LCTs and LCAs) within the assessment Study Area and ZTV.	Yes - potential for localised direct change and more widespread indirect change to perceptual attributes and overall impression of character.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	Reconductored existing ZA overhead line.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All local landscape units (LCTs and LCAs).	No – reconductored overhead line will appear largely the same as existing with very little or no change from the baseline.	Scoped out
All landscape designations and landscape character units					
All phases	Construction and operation of all components of the Project.	Alteration to key characteristics and/or the impression of the landscape, resulting from direct and/or indirect change.	All identified landscape designations and landscape character units outside the final Study Area (3 km from Order Limits) and/or outside the ZTV/ extent of potential visibility.	No – no potential for change on receptors outside the ZTV, and little potential for impacts on those greater than 3 km from the Project.	Scoped out
Maintenance	Periodic maintenance of new 400 kV overhead line, new substations and reconductored existing ZA overhead line.	Temporary localised alteration to key characteristics and/or the	All identified landscape receptors.	No – any change would be limited and localised and occur in the context of the overhead lines and substations, would be temporary and of a short duration.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		impression of the landscape, resulting from direct and/or indirect change.			

6.8 Proposed Assessment Methodology

Proposed Data Sources

- 6.8.1 The guidance listed in Section 6.2 and data sources listed in Section 6.5, will be used to inform the assessment.

Proposed Assessment Methodology

- 6.8.2 The following section summarises the methodology proposed to be used for the landscape assessment in the ES, which is based on the principles set out in GLVIA (Ref 6.1). Elements of the landscape assessment methodology therefore differ from the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**. For example, landscape sensitivity includes consideration of both the landscape value, identified as part of the baseline, and susceptibility, which is influenced by the specific nature of the Project. The landscape assessment also refers to '*magnitude of effect*' rather than '*magnitude of impact*' in accordance with GLVIA.
- 6.8.3 The assessment is part of an iterative process where, as potentially significant effects are identified, these inform the siting, routeing and design of the Project alongside consideration of other constraints. The assessment will be carried out based on the following key steps:
- Establishment of the baseline conditions, including identification and evaluation of key physical and perceptual attributes and receptor value. The landscape baseline will be based on local landscape character units defined within published district and local landscape character assessments.
 - Appreciation of the Project, including an understanding of the location, nature scale and maximum parameters of each element and any embedded mitigation measures. Consideration will also be given to any required tree removals identified within the arboriculture surveys and reports for the Project.
 - Assessment of effects on landscape receptors, with a focus on potential for significant effects.
- 6.8.4 Each of the above steps will be informed by a combination of desk-based research, evaluation and site-based survey. Surveys will be undertaken both during winter months and in the summer to gain an appreciation of how the landscape changes with the seasons.
- 6.8.5 GLVIA (Ref 6.1) places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape effects. The landscape assessment will be undertaken by experienced Chartered Landscape Architects and professional judgement will be used in combination with structured methods and criteria to determine the significance of effect.
- 6.8.6 The detailed assessment will be based on an evaluation of the sensitivity to change and the magnitude of effect for each of the identified landscape receptors with potential for significant effects.
- 6.8.7 The level and nature of effects can vary at different stages of the Project and can change over time, particularly where mitigation planting is proposed. The landscape

assessment will therefore include consideration of temporary effects associated with construction, and more permanent effects related to the operational phase. Where mitigation planting is proposed the assessment of operational stage effects will include consideration of impacts at Year 1 (after all construction activities are completed), to indicate the potential worst case, and at Year 15, to indicate the influence of mitigation planting on longer term effects.

Sensitivity

- 6.8.8 Landscape receptors are described as components of the landscape that are likely to be affected by the Project. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual attributes. It is the interaction between the different components of the Project and these landscape receptors which has potential to result in landscape effects (both adverse and beneficial).
- 6.8.9 The sensitivity of the landscape receptor will be derived by consideration of the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.

Value

- 6.8.10 Landscape value is frequently addressed by reference to international, national, regional and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The evaluation of landscape value will be informed by guidance provided in GLVIA (Ref 6.1) and Landscape Institute TGN 02/21 (Ref 6.3) which includes consideration of the following key factors:
- *Natural heritage* – extent to which a landscape has clear evidence of ecological, geological, geomorphological, or physiographic interest which contribute positively to the landscape.
 - *Cultural heritage* – extent to which a landscape has clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape.
 - *Landscape quality/condition* - the measure of the physical state of the landscape including the intactness of the landscape and the condition of individual elements.
 - *Association* - extent that connections with notable people, events and the arts contribute to the perception of the landscape receptor.
 - *Distinctiveness* – a measure of the strength of identity and expression of characteristics, presence of distinct, rare or unusual features and contribution to character or identity of a settlement.
 - *Recreation* - the extent of recreational opportunities and activities where appreciation of the landscape is important to the experience/enjoyment.
 - *Scenic quality* - the level of visual and sensory appeal of the landscape.
 - *Perceptual aspects* - the extent that the landscape receptor is recognised for its perceptual qualities or attributes (e.g. wildness, tranquillity and/or dark skies).

- *Functional* – extent to which the landscape performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape.

6.8.11 Many of the above factors overlap and/or are interrelated and judgements as to the overall landscape value will consider the relative importance and strength of each of the factors. Landscape value will be classified as very high, high, medium, low or very low, with explanation provided as to the basis of the evaluation.

Susceptibility

6.8.12 Landscape susceptibility relates to the ability of a particular landscape to accommodate the Project. It is assessed through consideration of the baseline characteristics of the landscape, including the following:

- *Scale* - a measure of how well the Project would relate to the overall scale of the landscape, landform and/or landscape features.
- *Landform* - the extent to which the Project would relate to and/or integrate with the existing landform and topographic features.
- *Pattern* - the extent to which the Project would relate to the existing landscape pattern.
- *Landcover* - a measure of how well the Project would relate to existing landcover.
- *Openness/enclosure* - the level of which the openness or enclosure of a landscape would influence the ability of a landscape to accommodate the Project.
- *Landmarks* - a measure of how well the Project would relate to existing landmark features.
- *Development context* - the level to which existing similar development within a landscape influences the ability to accommodate the Project.
- *Perceptual qualities (remoteness, tranquillity, dark skies etc.)* - extent to which existing perceptual qualities would influence the ability of the landscape to accommodate the Project.

6.8.13 There is a degree of overlap and interrelationship between the above factors, and this is taken into consideration when forming overall professional judgements. The landscape susceptibility for each receptor is classified as very high, high, medium, low or very low and is supported by explanation of the basis of the evaluation.

Overall Sensitivity

6.8.14 The overall sensitivity assessment of the landscape receptor will be made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall sensitivity will be rated as **very high, high, medium, low** or **very low**.

6.8.15 **Table 6.3** below outlines indicators and typical descriptors for each level of sensitivity, drawing on factors related to landscape value and susceptibility, and has been informed by good practice guidance, including GLVIA (Ref 6.1). The basis of the assessment will be made clear in the evaluation of each landscape receptor.

Table 6.3 Sensitivity of receptors

Sensitivity	Typical Descriptors
Very High	Landscape of national value with distinctive elements and characteristics, highly susceptible and unable to accommodate change of the type proposed without fundamentally altering the present character and baseline situation.
High	Landscape of national or regional value, with some distinctive elements and characteristics and others that may be more common place, which by nature of their character are unlikely to be able to accommodate change of the type proposed without undue consequences for the maintenance of the baseline situation.
Medium	Landscape of regional or local value, with mostly common elements and characteristics, which, by nature of their character, would be able to partly accommodate change of the type proposed without undue consequences for the maintenance of the baseline situation
Low	Landscape of local or limited value and relatively inconsequential elements and characteristics, the nature of which is potentially tolerant of considerable change of the type proposed.
Very Low	Landscape of very limited value that is damaged, degraded or with a substantially modified landscape pattern and few or no natural or original features remaining, such that it is tolerant of substantial change of the type proposed.

Magnitude

- 6.8.16 Landscape magnitude of effect refers to the extent to which the Project would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced, and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 (LITGN-2024-01) (Ref 6.2) sets out that the size/scale of effect is likely to be the most important factor with geographical extent and duration/reversibility considered as 'modifiers'. The variables involved are:
- The extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape.
 - The extent to which aesthetic or perceptual attributes of the landscape are altered either by removal of existing components of the landscape or by the addition of new components.
 - Whether the change alters the key characteristics of the landscape that are integral to its distinctive character.
 - The geographic area over which the change will be experienced (for example within the application boundary, the immediate setting around that boundary, at the local landscape character area scale, or on a larger scale influencing broader areas of landscape character).
 - The duration of the change (i.e., short term, medium term, or long term) and its reversibility (i.e., whether it is permanent, temporary, or partially reversible).

- 6.8.17 Landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual attributes of character and how it is experienced.
- 6.8.18 ZTV mapping will be produced to support the landscape assessment and give an indication of the theoretical extent of potential indirect change related to visibility of elements of the Project during operation (e.g. overhead line towers and substation structures). A 'bare earth' ZTV will be produced using Ordnance Survey Terrain 5 digital terrain data and/or Lidar data and based on the maximum parameters of the Project. Additional ZTVs indicating the influence of existing features such as buildings and vegetation on the extent of potential visibility will be prepared if suitable data is available. The ZTV will be used as a tool, alongside professional judgement, to identify areas of potential influence for further targeted survey and assessment.
- 6.8.19 An overall assessment of the magnitude of landscape effect resulting from the Project on landscape receptors will be made by combining the above judgements using evidence and professional judgement. The levels of landscape magnitude of effect will be described as being **very high**, **high**, **medium**, **low**, **very low** or **none** as outlined in **Table 6.4** below which has been informed by good practice guidance, including the GLVIA (Ref 6.1).

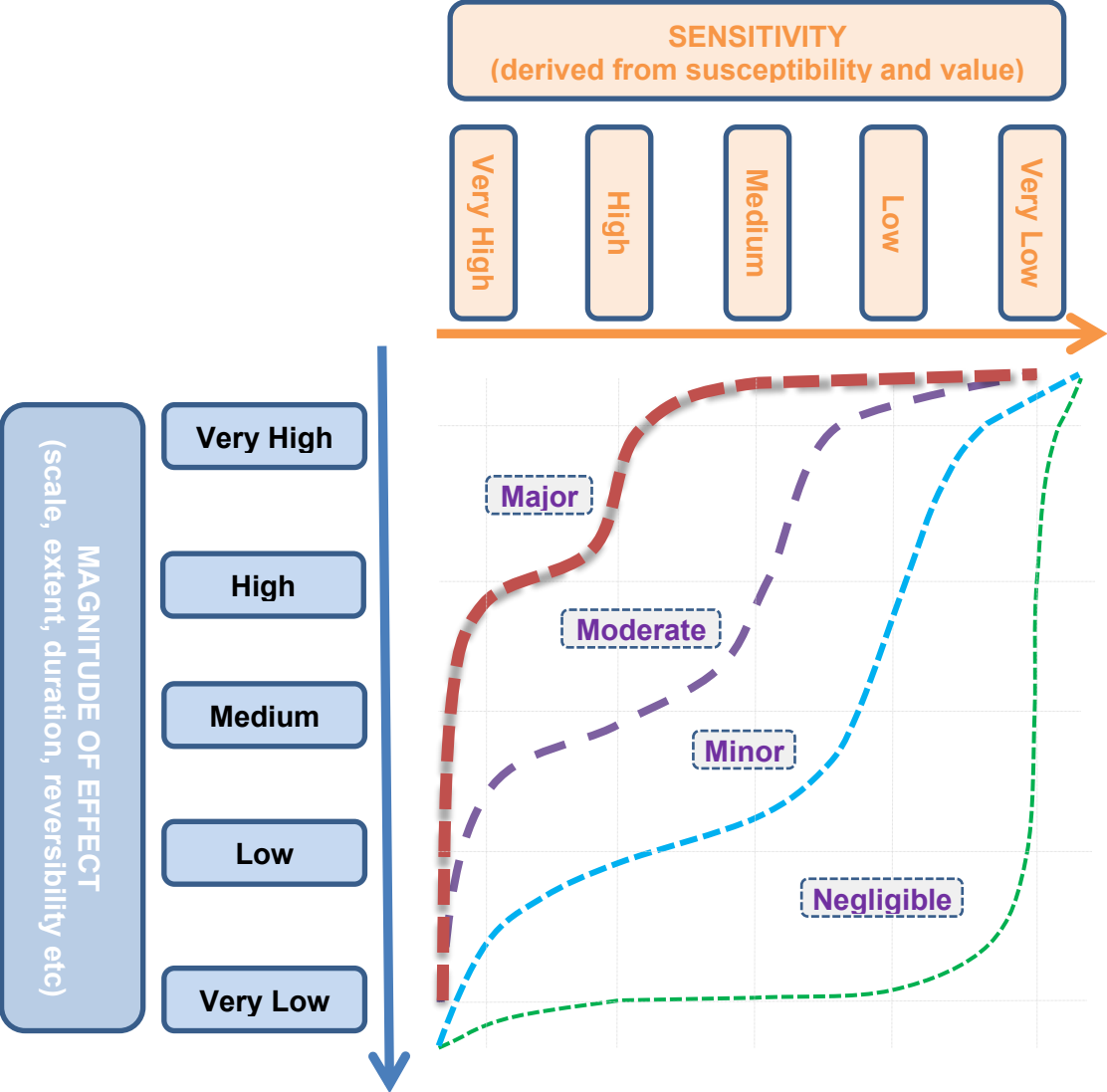
Table 6.4 Magnitude of effect

Magnitude	Typical Descriptors
Very High	Substantial alteration to the landscape receptor or may impact an extensive area or unique and important characteristics. May be longer term, permanent or reversible.
High	Large alteration to the landscape receptor or may impact an extensive area or unique and important characteristics. May be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short-term, permanent or reversible.
None	No change to the landscape receptor.

Significance of effects

- 6.8.20 Determination of the significance of landscape effects will be undertaken by employing professional judgement and experience to combine and analyse the magnitude of effect against the identified sensitivity of landscape receptors. **Image 6.1**, below, draws upon good practice guidance, including the GLVIA (Ref 6.1) and illustrates how sensitivity and magnitude will be considered together to identify the significance of effect.

Image 6.1: Classification of Landscape Effects



- 6.8.21 The landscape assessment will take account of direct and indirect changes to existing landscape elements, features and key characteristics and will evaluate the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character
- 6.8.22 The significance of landscape effects will be described with reference to the criteria presented in **Table 6.5** below which has been informed by good practice guidance, including the GLVIA (Ref 6.1). For the purposes of the assessment, effects rated as being of **moderate** or **major** will be considered to be significant, and **negligible** and **minor** effects will be considered not significant.

Table 6.5 Significance of landscape effect

Significance	Typical Descriptors
Major	Highly noticeable change affecting key characteristics of a very highly sensitive landscape, resulting in a fundamental change to its character.

Significance	Typical Descriptors
Moderate	Noticeable change affecting some key characteristics in a highly sensitive landscape or very noticeable change in a medium sensitivity landscape, resulting in a change to the overall impression of its character.
Minor	Small change affecting few characteristics in a medium to highly sensitive landscape or noticeable change to a less sensitive landscape, resulting in a limited or localised change to the impression of its character.
Negligible	Very little change from baseline conditions, resulting in a barely distinguishable or indistinguishable change.
No change	No alteration to any of the components that contribute to the existing landscape resource

Cumulative Effects

- 6.8.23 The ES will include consideration of potential cumulative effects of the Project in relation to proposed and committed developments, including renewable energy schemes and other National Grid infrastructure projects. As outlined in **Chapter 5 EIA Approach and Methodology** and in line with Planning Inspectorate Advice (Ref 6.8), an initial evaluation process will be undertaken to first identify a long list followed by a refined short list of other developments to be considered within the cumulative assessment.
- 6.8.24 The assessment of cumulative effects will follow a similar process to that described above, first identifying and describing the cumulative baseline, followed by an assessment of the magnitude of effect and significance of effect.
- 6.8.25 The cumulative baseline will be based on a theoretical scenario in which other developments identified and shortlisted as described in **Chapter 5 EIA Approach and Methodology** are present or under construction, in addition to existing schemes. The assessment of cumulative magnitude of effect and significance of effects involves consideration of the additional change resulting from the Project to the defined cumulative baseline scenario.

6.9 Assumptions and limitations

- 6.9.1 The landscape assessment in the ES will be undertaken based on the data and updated design details available at that time. At this scoping stage, some details of the new overhead line routeing and substation layout and design remain uncertain or under development.
- 6.9.2 As highlighted above, the landscape assessment will be supported by ZTV mapping, where relevant. It is important to understand the limitations of ZTVs and how they are used in the assessment process. Key limitations include:
- ZTVs are limited by the detail of the digital terrain model data used and generally do not take account of localised topographic variations.

- Some areas of theoretical visibility may comprise woodland or other vegetation or may cover areas with no public access and the likelihood of views being experienced is consequently low.
- ZTV do not take account of the influence of distance, weather or light on the nature of visibility.
- Bare earth ZTVs do not take account of features such as buildings or vegetation which may provide screening. Where screening features are included, these are limited by the detail included within available datasets.
- ZTVs tend to overstate the extent of visibility and should therefore be considered as a tool to guide targeted survey and assessment and should not be used as a measure of effects.

6.9.3 Due to these limitations, ZTVs tend to overestimate the extent of the visibility, therefore, ZTVs should be used as a tool to identify areas of potential visibility, which are then verified and refined through targeted survey and further assessment.

6.9.4 Field surveys to inform establishment of the baseline, capture photography and inform the assessment of effects will be undertaken from publicly accessible locations, such as from the road network and PRoW, in line with standard practice for landscape assessment.

6.10 Conclusion

6.10.1 This Scoping Report chapter has outlined the proposed scope for further assessment in relation to the landscape effects of the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact control and management measures that will be implemented highlighted. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 6.2**.

6.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 6.1 Landscape Institute and Institute for Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment – 3rd Edition.
- Ref 6.2 Landscape Institute (2024). Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3). Technical Guidance Note LITGN-2024-01.
- Ref 6.3 Landscape Institute (2021). Assessing Landscape Value Outside National Designations, Technical Guidance Note 02/21.
- Ref 6.4 Landscape Institute (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19.
- Ref 6.5 Natural England (2014). An Approach to Landscape Character Assessment.
- Ref 6.6 National Grid. Holford Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 25 July 2025].
- Ref 6.7 National Grid. Horlock Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> [Accessed 25 July 2025].
- Ref 6.8 Planning Inspectorate (published September 2024, updated March 2025). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment.
- Ref 6.9 Natural England. National Character Area Profiles. [online] Available at: <https://nationalcharacterareas.co.uk/> [Accessed 25 July 2025].
- Ref 6.10 Natural England (2010). East Midlands Region Landscape Character Assessment. [online]. Available at: <https://publications.naturalengland.org.uk/publication/5635681403535360> [Accessed 25 July 2025].
- Ref 6.11 South Holland District Council (2003). Strategic Landscape Capacity Study for South Holland District Council.
- Ref 6.12 South Kesteven District Council (2007). South Kesteven Landscape Character Assessment.
- Ref 6.13 Rutland County Council (2003). Rutland Landscape Character Assessment.
- Ref 6.14 Melton Borough Council (2006). Melton Landscape Character Assessment.
- Ref 6.15 Charnwood Borough Council (2012). Borough of Charnwood Landscape Character Assessment.
- Ref 6.16 Harborough District Council (2024). Harborough District Landscape Character Assessment.
- Ref 6.17 Northamptonshire County Council (2003). Current Landscape Character Assessment.

- Ref 6.18 Daventry District Council (2018). Daventry Landscape Character Assessment.
- Ref 6.19 Northampton Borough Council (2018). Northampton Urban Fringe Landscape Character & Sensitivity Study.
- Ref 6.20 South Northamptonshire Council (2020). South Northamptonshire Landscape Character Assessment.
- Ref 6.21 Department of Energy Security & Net Zero (January 2024). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at https://assets.publishing.service.gov.uk/media/64252f852fa848000cec0f53/NPS_EN-5.pdf [Accessed 25 July 2025].

7. Visual

Contents

7.	Visual	7-1
7.1	Introduction	7-1
7.2	Legislation, Policy and Guidance	7-2
7.3	Consultation and Engagement	7-2
7.4	Study Area	7-4
7.5	Baseline Conditions	7-5
	Data Sources	7-5
	Baseline	7-5
	Future Baseline	7-9
7.6	Design and Control Measures	7-9
	Design Measures	7-9
	Control and Management Measures	7-10
7.7	Potential for Significant Effects	7-10
	Potential sources of impacts	7-11
	Potential impacts	7-11
7.8	Proposed Assessment Methodology	7-18
	Proposed Data Sources	7-18
	Proposed Assessment Methodology	7-18
7.9	Assumptions and limitations	7-24
7.10	Conclusion	7-24
	Table 7.1 Engagement with Stakeholders	7-3
	Table 7.2 Impacts, receptors and the potential for significant effect	7-13
	Table 7.3 Sensitivity of receptors	7-19
	Table 7.4 Magnitude of effect	7-21
	Table 7.5 Significance of visual effects	7-22
	References	7-26

7. Visual

7.1 Introduction

- 7.1.1 This chapter presents how the visual assessment will consider the potential likely significant effects on visual receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 7.1.2 Although closely related, potential effects on visual receptors are considered and reported separately to potential effects on landscape receptors. Consideration will be given to minimising potential repetition between these assessments within the ES.
- 7.1.3 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 7.1.4 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 7.1.5 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 6 Landscape** includes the identification and assessment of effects for landscape receptors and considers the impact on physical and perceptual aspects of the landscape character. Landscape and visual effects are closely related;
 - **Chapter 9 Cultural Heritage** identifies heritage assets which are factors that can contribute towards an understanding of value of views;
 - **Chapter 13 Traffic and Transport** includes the assessment of effects arising from increased vehicle movements, traffic volumes, and abnormal loads during construction, and increased traffic volumes during operation and maintenance; and
 - **Chapter 16 Socio-Economics, Recreation and Tourism** includes consideration of recreational routes and visitor destinations that can contribute to an understanding of value of views and susceptibility of receptors.
- 7.1.6 This chapter is supported by the following figures and appendices:
- **Figure 7.1 Proposed Visual Study Area;** and

- **Figure 7.2 Potential Visual Receptors.**

7.2 Legislation, Policy and Guidance

- 7.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on views and visual amenity associated with the construction, operation and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context, Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**
- 7.2.2 The relevant principle guidance and standards that have informed the scoping process are listed below. This, along with other relevant material, will be taken into account as part of the ES assessment:
- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA) (Ref 7.1);
 - Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition, Technical Guidance Note - 2024-01 (Ref 7.2);
 - Visual Representation of Development Proposals, Technical Guidance Note 06/19 (Ref 7.3); and
 - Residential Visual Amenity Assessment (RVAA), Technical Guidance Note 2/19 (Ref 7.4);
 - The Holford Rules, National Grid (Ref 7.5);
 - The Horlock Rules, National Grid (Ref 7.6);
 - Planning Inspectorate Advice (updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 7.7); and
 - Neighbourhood Plans, which often include key or locally valued views, for Colsterworth (Ref 7.8), Corby Glen (Ref 7.9), Rippingale (Ref 7.10), Skillington (Ref 7.11), Ab Kettleby (Ref 7.12), Asfordby (Ref 7.13), Clawson, Hose & Harby (Ref 7.14), Broughton and Old Dalby (Ref 7.15), Scalford (Ref 7.16), Waltham on the Wolds and Thorpe Arnold (Ref 7.17) and Wymondham and Edmondthorpe (Ref 7.18).

7.3 Consultation and Engagement

- 7.3.1 The ES will be informed by consultation and engagement with stakeholders, including statutory consultees, such as Historic England and Natural England and the host local authorities:
- Lincolnshire County Council, South Holland District Council and South Kesteven District Council;
 - Leicestershire County Council, Melton District Council and Harborough District Council;
 - North Northamptonshire Council; and
 - West Northamptonshire Council.

- 7.3.2 In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 7.3.3 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 7.1**.

Table 7.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
South Kesteven District Council	Concerns on various issues and request their consideration, including: • Assessment of visual intrusion of pylons from Public Rights of Way, residential properties, and other sensitive land uses. • Mitigation measures such as alternative designs, reduced-height pylons, strategic placement to minimise visibility, visual screening • Lighting • Visual amenity • Exploration of alternatives • Policy context, including South Kesteven Local Plan (2020), and neighbourhood plans	The proposed assessment methodology and receptors to be considered and reported in the ES are described in Sections 7.5 to 7.8. Alternative designs for towers may be considered in some locations where conditions dictate the requirement. Other mitigation will be considered as the design and assessment develop iteratively, as described in Section 7.6. Chapter 3 Main Alternatives Considered summarises the consideration of alternatives to date. The ES will report the further consideration of reasonable alternatives. Chapter 2 Regulatory and Planning Policy Context and associated appendices list the policy relevant to this report and the assessment it describes, including South Kesteven Local Plan and Neighbourhood Plans.
South Holland District Council	Concerns that the new overhead line and towers between Weston Marsh and west of the South Forty Foot Drain will visually litter an area known for its flat landscape and big skies.	Potential visual receptors, including South Forty Foot Drain and the surrounding areas, have been identified through an initial review of the baseline environment and are set out within Section 7.5.

Stakeholder	Summary of response	Consideration in the Scoping Report
	There are also concerns over the potential cumulative effects.	Table 7.2 sets out the proposed scope of assessment for these visual receptors. A cumulative effects assessment will be undertaken and reported in the ES as described in Chapter 5 EIA Approach and Methodology. An overview of the approach to assessment of cumulative visual effects is provided in Section 7.8.
CPRE Lincolnshire	Concern that a 400kV outdoor substation with 50m high gantries will dominate views from Corby Glen's Conservation Area.	Potential visual receptors including Corby Glen have been identified through an initial review of the baseline environment and are set out within Section 7.5. Table 7.2 sets out the proposed scope of assessment for these visual receptors. The potential impact on the setting of heritage assets will be assessed and reported in the ES, as described in Chapter 9 Cultural Heritage.

7.4 Study Area

- 7.4.1 Identification of an initial Study Area has involved desk-based review of mapping and imagery and the maximum parameters of each element of the Project, targeted field survey to gain an understanding of types and locations of potential receptors and the existing baseline, and the application of professional judgement.
- 7.4.2 In accordance with good practice guidance set out in the Guideline for Landscape and Visual Impact Assessment (GLVIA) (Ref 7.1), the Study Area for the visual assessment seeks to encompass all visual receptors with the potential to be significantly affected by the Project.
- 7.4.3 An initial Study Area extending 3 km from the Scoping Boundary of the new overhead line and substations, including up to two substations at Weston Marsh and the WMEL-A and WMEL-B substations near Corby Glen and west of Ab Kettleby respectively, has been used to inform the Scoping Report, as illustrated on **Figure 7.1**. The initial Study Area will be reviewed and refined as necessary, however, it is

proposed that the Study Area for the visual assessment in the ES will be defined as 3 km from the outer boundary of the Order Limits.

- 7.4.4 It is acknowledged that elements of the Project may be visible beyond the Study Area. However, at locations beyond the Study Area, the separation distances will be such that potential impacts resulting from the Project are unlikely to lead to a fundamental change to nature or overall impression of the view or visual amenity and as such potential effects are unlikely to be significant.
- 7.4.5 The Study Area will be reviewed and further refined at the assessment stage, through the use of the Order Limits, Zone of Theoretical Visibility (ZTV) modelling and targeted field survey, to ensure a proportionate approach, focused on potential for significant effects. ZTV modelling will give an indication of the theoretical extent of potential visibility of elements of the Project, and help inform the identification of potential visual receptors.
- 7.4.6 A Study Area of 150 m from the new overhead line and substation structures will be used to help inform the need for and/or scope of RVAA. All residential dwellings within the 150 m Study Area will be evaluated and any that meet the threshold for residential visual amenity impacts taken forward to detailed assessment. This is consistent with the approach set out in Landscape Institute TGN 2/19 (Ref 7.4) which recommends a residential visual amenity Study Area of 100 – 150 m for new overhead lines.
- 7.4.7 For the purposes of this Scoping Report, a Study Area of 1 km from the Scoping Boundary of the existing ZA (Cottam – Sundon) 400 kV overhead line (reconductoring) between WMEL-B substation and the existing Grendon substation has been used (refer to **Figure 7.1**). This has allowed for identification of potential receptors related to the proposed reconductoring. As detailed in Section 7.7, impacts from the reconductoring element of the Project are proposed to be **scoped out** of the visual assessment.

7.5 Baseline Conditions

Data Sources

- 7.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:
- Ordnance Survey (OS) and other available mapping;
 - open source aerial photography and imagery;
 - open source Geographic Information System (GIS) data; and
 - observations made as part of initial site survey.

Baseline

- 7.5.2 An initial review of the baseline environment has been completed through desk-based research and targeted field surveys, undertaken between January and September 2025.
- 7.5.3 Visual receptors are the people at locations within the Study Area who will potentially be affected by changes to views or visual amenity as a result of the Project. Visual

receptors can be static or dynamic and include people in their home, users of recognised long distance recreational routes or defined Public Rights of Way (PRoW), visitors to places of interest (e.g. tourist attractions, or specific viewpoints), and users of the road and transport network.

7.5.4 The visual assessment in the ES will be based on a series of groups or clusters of receptors representing different communities within the Study Area, focused on those with the potential for significant effects. The assessment will be supported by representative viewpoints which will be selected to provide a cross-section of receptor types and locations within the Study Area. The number and location of receptor groups and associated viewpoints, as well as the locations for wireframes and photomontages, will be agreed with relevant consultees including local authorities, Historic England and Natural England and will be in line with relevant guidance, where possible.

7.5.5 Adopting this approach, the Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown on **Figure 1.2 Scoping Boundary**. Each of the five Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. Potential visual receptors representing different communities relevant to each Section along the Scoping Boundary are set out in the respective paragraphs below.

Section 1

7.5.6 The landscape in this area of South Holland is generally flat, with low or sparse vegetation cover, and fields are generally large-scale and bound by ditches or drains allowing for long-distance and open views. The following potential visual receptor locations have been identified within the Study Area of Section 1:

- Settlements – receptors at Surfleet and Surfleet Seas End (located directly to the north of the Scoping Boundary) and at Pinchbeck (located directly to the south of the Scoping Boundary). There are receptors with potential open views on the edge of the settlements of Wykeham (Spalding), Pinchbeck, Pinchbeck West, Wargate, Gosberton Clough, and Northgate.
- Scattered residential dwellings – a number of residential dwellings are dispersed along the B1356 between Surfleet and Pinchbeck and between the B1356 and the A16 within the Scoping Boundary. There is also a concentration of scattered dwellings along the minor roads between Gosberton Clough (located to the north of the Scoping Boundary) and Northgate (adjacent to the south of the Scoping Boundary).
- Recreational routes and facilities – recreational routes within Section 1 include part of the Macmillan Way, a long distance walking route between Boston and Abbotsbury and a small number of PRoWs, including alongside the River Welland, River Glen, South Forty Foot Drain, and on the edge of Surfleet. Other potential recreational receptors include those in watercraft on short sections of the River Welland and River Glen and users of Spalding Golf Club.
- Transport routes – Several roads, including the A16, A151 and A152, and the Peterborough-Lincoln rail line are located within the Study Area for Section 1, with a combination of restricted and more open views across the adjacent landscape.

Section 2

7.5.7 The landscape in the east of this area of South Kesteven is generally flat, with low or sparse vegetation cover, and fields are generally large-scale and bound by ditches or drains allowing for long-distance and open views. The landscape in the west of this section is gently undulating with blocks of woodland and trees along field margins which often limit the extent of distant or long-range views. The following potential visual receptor locations have been identified within the Study Area of Section 2:

- Settlements – there are several settlements within the Scoping Boundary including but not limited to Haconby, Stainfield, Corby Glen, and Swayfield from which there are a mix of open and more restricted views. Other settlements within Section 2 near or adjacent to the Scoping Boundary include, but are not limited to Rippingale, Dunsby, Kirkby Underwood, Morton, Hanthorpe, Grimsthorpe, Irnham, Swinstead, Burton-Le-Coggles, Castle Bytham, Colsterworth, North Witham, Gunby, Stainby, Thistleton, and South Witham.
- Scattered residential dwellings – a number of isolated dwellings are present throughout Section 2, including along minor roads within the fens in the east and between the numerous small settlements in the undulating farmland to the west.
- Recreational routes and facilities – no long-distance recreational routes have been identified within Section 2. However, there is a relatively well developed network of local PRow, often concentrated around or acting as connections between settlements. Several small-scale recreational areas have also been identified and are generally also closely associated with the settlements within the Study Area of Section 2.
- Transport routes – principal transport routes within the Study Area in relation to Section 2 include the A1, A15 and A151, and the East Coast Mainline railway.

Section 3

7.5.8 The landscape in this area of Melton is undulating with some blocks of woodland and vegetated field boundaries. The extent of views varies with potential long-distance views from higher elevations and more limited views where there is intervening landform and vegetation. The following potential visual receptor locations have been identified within the Study Area of Section 3:

- Settlements – a number of settlements are located within the Scoping Boundary including, but not limited to Coston, Garthorpe, Holwell, Ab Kettleby, Wartnaby, Saxelbye, Asfordby, Ashby Folville, Thorpe Satchville and Twyfold. Other settlements within the Study Area of Section 3 include, but are not limited to Melton Mowbray, Buckminster, Sewstern, Market Overton, Wymondham, Sproxton, Saltby, Saxby, Waltham on The Wolds, Scalford, Gadderby, and Great Dalby.
- Scattered residential dwellings – isolated residential dwellings are located along local roads within Section 3 with higher concentrations along roads to the north, west and southwest of Melton Mowbray.
- Recreational routes and facilities – sections of a number of long distance routes are located within Section 3, including the Viking Way, Rutland Round and Mowbray Way towards the east, and the Leicestershire Jubilee Way, Midshires Way, Leicestershire Round, and National Cycle Network (NCN) routes 64 and 48, towards the west and south. There is a relatively well developed network of local

PRoW within the Study Area for Section 3, connecting between settlements and with a greater concentration to the north of Melton Mowbray. A range of other outdoor recreation and visitor locations are also present, including Melton Country Park, Melton Mowbray Golf Club and playing fields at Wartnaby and Asfordby.

- Transport routes – principal transport routes within the Study Area in relation to Section 3 include the A606, A607 and the A6006, and short sections of the railway lines to the west of Melton Mowbray connecting towards Nottingham and Leicester.

Section 4

7.5.9 The landscape in this area of Harborough contains rolling topography forming broad ridges and shallow valleys. Tree cover is variable and largely confined to field boundaries. The extent of views varies with potential long-distance views from higher elevations and within the broad valleys and more limited views where there is intervening landform and vegetation. The existing ZA 400 kV overhead line is a feature of the visual baseline (refer to **Figure 1.1** for the locations of existing 400 kV overhead lines). The following potential visual receptor locations have been identified within the Study Area of Section 4:

- Settlements – a number of settlements are located within the Scoping Boundary including, but not limited to Tilton on The Hill, Skeffington, Tugby, Goadby, Glooston, Welham, Rolleston, and Great Bowden. Other settlements within Section 4 include South Croxton, Billesdon, Slawston, Church Langton, and Thorpe Langton.
- Scattered residential dwellings – individual and clustered residential dwellings, including farms and farmsteads, are located along local roads within rural areas between settlements throughout Section 4.
- Recreational routes and facilities – sections of a number of long distance routes are located within Section 4, including the Midshires Way, Leicestershire Round, and Macmillan Way, and NCN routes 6, 63 and 64. A network of local PRoW are also found concentrated around and connecting between settlements within Section 4. Other outdoor recreation facilities include playing fields, which are generally located within settlements.
- Transport routes – principal transport routes within Section 4 of the Study Area include the A6, A47 and A4304, and a short section of the railway line at Market Harborough, connecting towards Leicester in the north and Kettering to the south east.

Section 5

7.5.10 The landscape in this area (North Northamptonshire and West Northamptonshire) is informed by large-scale gently undulating landform and occasional steeper scarp slopes. The extent of views varies with potential longer-distance views from higher elevations and across open arable land with more limited views where the landscape is undulating and has higher tree cover. The existing ZA 400 kV overhead line is a feature of the visual baseline (refer to Figure 1.1). The following potential visual receptor locations have been identified within the Study Area of Section 5:

- Settlements – a number of small settlements are located within the Scoping Boundary including, but not limited to Weston By Welland, Braybrooke,

Arthingworth, Loddington, Mawsley Village, Broughton, Pytchley, Orlingbury, Little Harrowden, Hardwick, Mears Ashby, Earls Barton, Great Doddington, and Grendon. The larger settlement of Wellingborough is partly located within the Study Area of Section 5, with the western edge within the Scoping Boundary. Other settlements within Section 5 include Desborough, Rothwell and Great Oxendon.

- Scattered residential dwellings – individual and clustered residential dwellings, including farms and farmsteads, are located along the road network within rural areas between settlements throughout Section 5.
- Recreational routes and facilities – sections of a number of long distance routes are located within Section 5, including the Midshires Way, Macmillan Way, Jurassic Way, Northamptonshire Round and the Nene Way, and NCN route 6. A number of PRoW are also present, often connecting between more rural settlements. Other outdoor recreational facilities within the Study Area of Section 5 include, Market Harborough, Kettering and Wellingborough golf clubs, Sywell Country Park and local playing fields and sports grounds.
- Transport routes – principal transport routes within the Study Area in relation to Section 5 include the A6, A427, A14, A43, A509, A45 and A4500, and a short section of the railway line between Market Harborough and Kettering.

Future Baseline

- 7.5.11 The future baseline relates to anticipated changes to the current baseline in the future which are predicted to occur in the absence of the Project. Landscapes, and therefore views, change and evolve over time through both natural process and as a result of human influence through changes in land use, management or development and climate change.
- 7.5.12 The visual assessment will make predictions relating to potential change to the baseline, informed by known development pressures, local development plan allocations, local policy and observations in the field. In addition, the future baseline will consider proposed and committed developments that would be complete before this Project commences, including renewable energy schemes and other National Grid infrastructure projects, that may influence visual amenity and views. The future baseline will seek to highlight potential changes in the baseline that may influence the assessment outcomes.

7.6 Design and Control Measures

Design Measures

- 7.6.1 The project has been carefully planned to avoid sensitive visual receptors as far as reasonably practicable through an initial siting and routeing process as described in **Chapter 3 Main Alternatives Considered** and **Chapter 4, Description of the Project**. This approach aligns with the principles outlined in the Holford Rules (Ref 7.5) and Horlock Rules (Ref 7.6). These principles will continue to guide the routeing, siting, and design processes in order to avoid or minimise potential adverse visual effects.
- 7.6.2 It is acknowledged within paragraphs 2.9.7 and 2.9.9 of National Policy Statement (NPS) EN-5 (Ref 7.19) that new overhead lines and new substations, sealing end

compounds, and other associated above-ground installations can result in adverse landscape and visual impacts.

- 7.6.3 The visual assessment will be an iterative process with progressive levels of survey and appraisal informing detailed siting and routeing, and refinement of the design of the Project. This will include evaluation of detailed alignment options and locations of individual overhead line towers, positioning and design of the substations, and the identification of appropriate mitigation measures to minimise potential residual effects.

Control and Management Measures

- 7.6.4 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect visual receptors (refer to **Appendix 4A** for the full description of each measure) are:

- GG09 – on reinstatement of land used temporarily;
- GG10 – on protection of retained sensitive features;
- GG12 – on siting of activity and equipment relative to residential properties;
- GG13 – on design of construction sites relative to residential properties;
- GG20 and AS01 – on earthworks and soil storage and protection;
- GG22 and LV04 – on design and position of construction lighting;
- GG26 – on fencing of working areas;
- LV01 – on retention and replacement of vegetation;
- LV02 – on tree protection measures; and
- LV03 – on aftercare and establishment period.

- 7.6.5 An Outline Landscape and Ecology Management Plan (LEMP) will be provided with the application for development consent and secured through the draft DCO. This will set out the details of proposed landscape and habitat reinstatement, mitigation and/or enhancement measures and associated maintenance, management and monitoring requirements.

7.7 Potential for Significant Effects

- 7.7.1 The visual assessment in the ES will consider the construction and operation of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the visual ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 7.7.2 The anticipated embedded design, and control and management measures described in Section 7.7.6 have been taken into account when determining the potential for the Project to result in significant effects.

Potential sources of impacts

Sources of construction impacts

7.7.3 Potential sources of temporary visual impacts associated with construction of the Project, including the installation of new substations and new overhead line, are likely to include:

- temporary clearance of vegetation and alteration of landform;
- introduction of temporary structures, fencing, lighting and/or other features such as at construction compounds, material storage and laydown areas, and introduction of temporary access tracks and car parks; and
- movement and lights associated with construction traffic, plant and machinery.

Sources of operation and maintenance impacts

7.7.4 Potential sources of visual impacts associated with operation and maintenance of the Project are likely to include:

- change to composition of views resulting from loss or alteration of vegetation and/or topography;
- introduction of a new 400 kV overhead line and substation structures and associated access tracks, fencing and lighting into views; and
- views of maintenance activities including movement and lights associated with maintenance traffic, plant and machinery.

Potential impacts

7.7.5 There is potential for views and visual impacts of construction, operation and maintenance of the Project to be experienced by a range of receptor types and locations.

7.7.6 Construction compounds, access tracks, scaffolds and construction activities will introduce new features and increased movement into views from nearby receptor locations. It is anticipated that construction compounds will be carefully sited away from residential properties and where possible, use will be made of existing vegetation and/or topography for screening to help minimise potential impacts.

7.7.7 The proposed new substations and new overhead line have the potential to alter the composition of views and associated visual amenity through removal of existing features and/or introduction of new structures. Careful siting and routeing will help to reduce potential impacts, with additional mitigation measures identified where required. However, the potential remains for significant effects on visual amenity to occur as a result of the construction and/ or operation of the new substations and new overhead line and therefore these aspects have been **scoped in** to the ES.

7.7.8 In relation to reconductoring of the existing ZA overhead line, potential impacts will be temporary in nature and of a short duration, and experienced in the context of the existing overhead line and movement of existing traffic on the well-developed road network. All areas disturbed by construction will be reinstated, with very little or no discernible change anticipated to views and visual amenity upon completion. At operation and maintenance, the reconducted towers will appear visually the same

as the existing overhead line, with no horizontal, and limited vertical realignment proposed. Reconductoring would represent minimal change relative to the existing baseline and is unlikely to result in significant effects on visual receptors and as such is proposed to be **scoped out** of the ES.

- 7.7.9 **Table 7.2** describes the sources of potential impacts on visual receptors identified in initial Study Area. Where an impact could give rise to potentially significant effects these are then scoped into the assessment. Impact pathways that are unlikely to give rise to significant effects are proposed to be scoped out of the ES.
- 7.7.10 A precautionary approach has been taken to the identification of potential for significant effects and where there is uncertainty the receptor is proposed to be included in the assessment at this stage. A further review of those receptors scoped in will be undertaken as part of the assessment process to ensure a targeted and proportional approach is taken, focused on potential significant effects.
- 7.7.11 As highlighted in Section 7.4, the Study Area will be refined as part of the assessment phase to be based on an offset from the Order Limits, rather than the Scoping Boundary. All visual receptors which fall outside of the final Study Area and/or the extent of the ZTV (once ground-truthed by field work) will be **scoped out** of the ES due to no potential for significant effects as a result of the offset distance and/or lack of visibility.

Table 7.2 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Introduction of temporary structures, access tracks, activity and lights associated with construction of the new overhead line and substations.	Temporary change to the composition of views including introduction of new features and/or the temporary removal of vegetation or other features.	Residential receptors and users of outdoor recreational facilities, including PRoW, in and around settlement areas within the assessment Study Area (3 km from Order Limits) and with potential visibility of construction.	Yes – potential for temporary alteration to views and visual amenity, particularly for receptors in close proximity to construction activity.	Scoped In
			Users of nationally or regionally promoted long distance recreational routes and users of recreational watercraft within the assessment Study Area and with potential visibility of construction.	Yes - potential for temporary alteration to views and visual amenity, including at night, particularly from sections of routes in close proximity to construction activity.	Scoped In

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
			Users travelling on roads and railway lines.	No – road and rail users generally travelling at speed, largely limiting visibility to glimpsed views of temporary activity, with significant effects unlikely.	Scoped out
			All potential visual receptors outside the assessment Study Area and/or with no potential visibility of construction.	No – While there is potential for localised views of aspects of construction, the separation distance is such that effects will not be significant.	Scoped out
Construction	Introduction of temporary structures, access tracks, activity and lights associated with reconductoring of the existing ZA overhead line.	Temporary change to the composition of views including introduction of new features and/or the temporary removal of vegetation or other features.	All potential visual receptors.	No - reconductoring works will occur along an existing overhead line and will be temporary and of short duration with limited and localised influence on views and visual amenity. Application of measures set out in the Initial Outline CoCP (refer to Appendix 4A Initial Outline (CoCP)) will help ensure change is minimised.	Scoped out
Operation	The introduction of a new 400 kV overhead line and/or new	Alteration to the composition of views through introduction of overhead line towers and/or substation	Residential receptors and users of outdoor recreational facilities, including	Yes – potential for alteration to views and visual amenity, particularly where new structures are visible in the	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	substations and associated lighting into the view.	structures or through changes to existing elements such as topography or vegetation.	PRoW, in and around settlement areas within the 3 km assessment Study Area and with potential visibility of the Project.	foreground or across a wide extent.	
			Users of nationally or regionally promoted long distance recreational routes and users of recreational watercraft within the 3 km assessment Study Area and with potential visibility of the Project.	Yes - potential for alteration to views and visual amenity, particularly where new structures are visible in the foreground or running parallel to sections of the routes.	Scoped in
			Users travelling on roads and railway lines.	No – road and rail users generally of lower sensitivity and often travelling at speed limiting visibility to glimpsed views.	Scoped out
			All potential visual receptors outside the assessment Study Area and/or with no potential	No – No potential change for receptors with no visibility of the Project. While there is potential for localised views of the Project from beyond 3 km, the separation distance is such	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
			visibility of the Project.	that effects will not be significant.	
Operation	The introduction of a new 400 kV overhead line and/or new substation structures and associated lighting into close range views.	Alteration to residential visual amenity through introduction of overhead line towers and/or substation structures.	Residents in individual properties within 150m RVAA Study Area.	Yes – potential for alteration to residential visual amenity, particularly where new structures are visible in the foreground of principal views.	Scoped in
			Residents in individual properties outside 150m RVAA Study Area.	No – no potential for alteration to residential visual amenity due to offset distance. Visual effects from residential receptors covered above under settlement areas.	Scoped out
Operation	Reconductored existing ZA overhead line.	Generally little or no change to appearance of existing overhead line towers. Potential for very limited and localised change to views if vegetation removal required to facilitate access.	All potential visual receptors.	No – reconductored overhead line will appear largely the same as existing with very little or no change from the baseline.	Scoped out
Maintenance	Periodic maintenance of new overhead line, substations, and reconductored	Temporary localised change to the composition of views including introduction of new features and/or the temporary removal of	All potential visual receptors.	No – any change would be limited and localised and occur in context of overhead lines and substations and would be temporary and of a short duration.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	existing ZA overhead line.	vegetation or other features.			

7.8 Proposed Assessment Methodology

Proposed Data Sources

- 7.8.1 The guidance listed in Section 7.2 and data sources listed in Section 7.5, will be used to inform the visual assessment.

Proposed Assessment Methodology

- 7.8.2 The following section summarises the methodology proposed to be used for the visual assessment in the ES, which is based on the principles set out in GLVIA (Ref 7.1). Elements of the visual assessment methodology therefore differ from the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**. For example, visual sensitivity includes consideration of both the value of the view, identified as part of the baseline, and susceptibility, which is influenced by the specific nature of the Project. The visual assessment also refers to '*magnitude of effect*' rather than '*magnitude of impact*', in accordance with GLVIA.
- 7.8.3 The assessment is part of an iterative process where, as potentially significant effects are identified, these inform the siting, routeing and design of the Project alongside consideration of other constraints. The assessment will be carried out based on the following key steps:
- Establishment of the baseline conditions, including identification and evaluation of the existing nature of views and their value.
 - Appreciation of the Project, including an understanding of the location, nature scale and maximum parameters of each element and any embedded mitigation measures.
 - Assessment of effects on views and visual amenity, with a focus on potential for significant effects.
- 7.8.4 Each of the above steps will be informed by a combination of desk-based research, evaluation and site-based survey. Surveys will be undertaken both during winter months and in the summer to gain an appreciation of how the landscape and views change with the seasons.
- 7.8.5 GLVIA (Ref 7.1) places a strong emphasis on the importance of professional judgement in identifying and defining the significance of visual effects. The visual assessment will be undertaken by experienced Chartered Landscape Architects and professional judgement will be used in combination with structured methods and criteria to determine the significance of effect.
- 7.8.6 The detailed assessment will be based on an evaluation of the sensitivity to change and the magnitude of effect for each of the identified visual receptors with potential for significant effects.
- 7.8.7 The level and nature of effects can vary at different stages of the Project and can change over time, particularly where mitigation planting is proposed. The visual assessment will therefore include consideration of temporary effects associated with construction, and more permanent effects related to the operational phase. Where mitigation planting is proposed the assessment of operational stage effects will include consideration of impacts at Year 1 (after all construction activities are

completed), to indicate the potential worst case, and at Year 15, to indicate the influence of mitigation planting on longer term effects.

Sensitivity

- 7.8.8 Sensitivity of visual receptors will be defined through an appraisal of the viewing expectation, or value placed on the view (undertaken as part of the baseline study), and the susceptibility of the receptor to change.

Value

- 7.8.9 Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature and art, or identified in policy. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of the view will be determined through evaluation of the above factors and application of professional judgement and will be classified as very high, high, medium, low or very low. Explanation as to the basis of the judgements will be provided within the assessment.

Susceptibility

- 7.8.10 The susceptibility of visual receptors to change is a function of the occupation or activity of those people experiencing the view, and the extent to which their attention or interest is focused on the view and the visual amenity they experience. For example, residents in their homes or people engaged in outdoor recreation whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, generally indicate a higher level of susceptibility. Conversely people engaged in outdoor sport where views are not important, people at their place of work, or users of roads and railways not recognised as scenic routes are generally considered less susceptible to change. Susceptibility will be determined by consideration of the above factors and application of professional judgement and will be classified as very high, high, medium, low or very low. Explanation as to the basis of the judgements will be provided within the assessment.

Overall Sensitivity

- 7.8.11 The overall sensitivity assessment of the visual receptor will be made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall visual sensitivity will be rated as **very high, high, medium, low or very low**.
- 7.8.12 **Table 7.3**, below, outlines indicators and typical descriptors for each level of sensitivity, drawing on factors related to both value of the view and susceptibility, and has been informed by good practice guidance, including GLVIA (Ref 7.1). The basis of the assessment will be made clear in the evaluation of each visual receptor.

Table 7.3 Sensitivity of receptors

Sensitivity	Typical Descriptors
Very High	Receptors experiencing an iconic or highly valued view with very high scenic qualities, and for which appreciation of the view is of primary

Sensitivity	Typical Descriptors
	importance (e.g. residents or people engaged in outdoor recreation whose attention is focused on the landscape). Locations where people might visit purely to experience the view (such as promoted viewpoints, protected by designation, or recorded on maps/guidebooks or with important cultural associations).
High	Receptors experiencing a highly valued and well composed view with high scenic qualities, and for which appreciation of the view is an important part of the experience (e.g. residents at home or people engaged in outdoor recreation whose attention is focused on the landscape). Locations where people may visit to experience a locally important view (e.g. designated or identified within a local development plan or neighbourhood plan) or where people might be passing through the landscape on defined scenic routes.
Medium	Receptors experiencing a view of local value and with some scenic qualities (e.g. typical agricultural landscape, potentially with some detracting features) and for which appreciation of the view is of general interest (e.g. residents at home or people engaged in outdoor recreation whose attention is not generally focused on the landscape).
Low	Receptors experiencing a view of limited value and with low scenic qualities (e.g. featureless or degraded agricultural landscape, poor quality urban fringe) and for which interest or appreciation of the view is secondary and/or the period of exposure to the view is limited (e.g. people engaged in outdoor activity that does not focus on the landscape, people at work, or motorists travelling through the area).
Very Low	Receptors experiencing a view of very low value and scenic qualities (e.g. industrial areas or derelict and degraded land) and for which the view is incidental or inconsequential (e.g. people at work).

Magnitude

- 7.8.13 Visual magnitude of effect refers to the extent to which the Project would alter the existing views and is an expression of the size or scale of change in the view, the geographical extent of the area influenced, and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 (LITGN-2024-01) (Ref 7.2) sets out that the size/scale of change and degree of contrast are likely to be the most important factors, with the nature of the view, angle of the view and duration/reversibility considered as 'modifiers'. The variables involved are:
- The scale of change to the view (with respect to the loss or addition of features and alteration of its composition), including the proportion of the view occupied by the Project.
 - The degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view.
 - The nature of the view of the Project in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed.

- The angle of view in relation to the main activity of the receptor, the distance from the Project and the extent of the area over which the changes would be visible.
- The duration of the change (i.e. short-term, medium-term, or long-term) and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).

- 7.8.14 ZTV mapping will be produced to support the visual assessment and give an indication of the theoretical visibility of elements of the Project during operation (e.g. overhead line towers and substation structures). A 'bare earth' ZTV will be produced using Ordnance Survey Terrain 5 digital terrain data and/or Lidar data and based on the maximum parameters of the Project. Additional ZTVs indicating the influence of existing features such as buildings and vegetation on the extent of potential visibility will be prepared if suitable data is available. The ZTV will be used as a tool, alongside professional judgement, to identify areas of potential visibility for further targeted survey and assessment.
- 7.8.15 An overall assessment of the magnitude of visual effects resulting from the Project on the visual receptor will be made combining the above factors and with application of professional judgement. The levels of visual magnitude of effect will be described as being very high, high, medium, low, very low and none as outlined in **Table 7.4**, below, which has been informed by good practice guidance, including GLVIA (Ref 7.1).

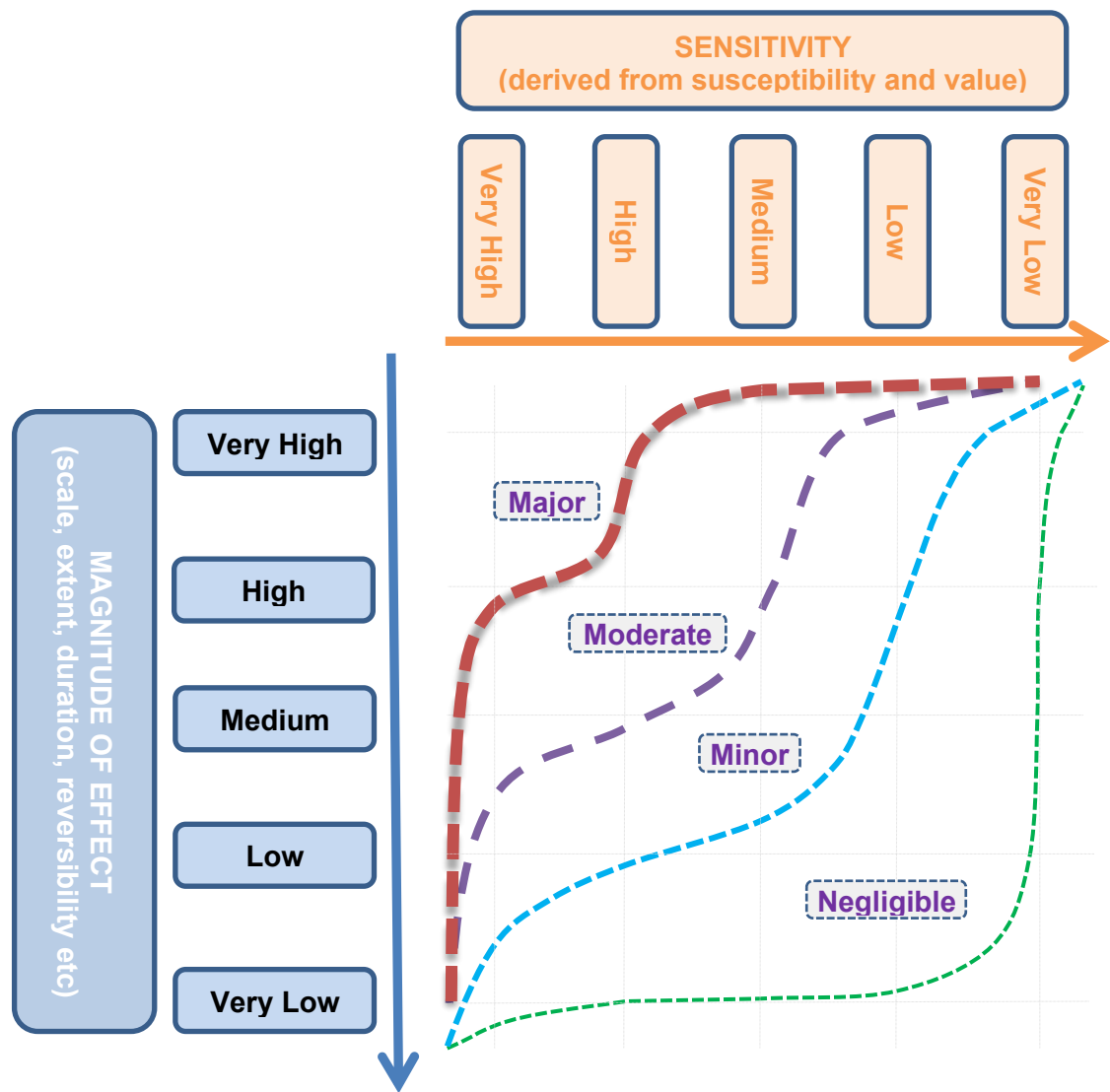
Table 7.4 Magnitude of effect

Magnitude	Typical Descriptors
Very High	A substantial change to the composition of the view or change that may be in the foreground or central to the main view. May be longer term, permanent or reversible.
High	A pronounced change to the composition of the view or change that may be in the foreground or central to the main view. May be longer term, permanent or reversible.
Medium	A notable change to the composition of the view or change that may be in the middle ground or not central to the main view. May be medium term, permanent or reversible.
Low	An unobtrusive change in the composition of the view or change that may be in the background or at an angle to the main view. May be short to medium term, permanent or reversible.
Very Low	A barely perceptible change in the composition of the view or change that may be in the background and/or side on or opposite to the main view. May be short-term, permanent or reversible.
None	No change to the view.

Significance of effects

- 7.8.16 Determination of the significance of visual effects will be undertaken by employing professional judgement and experience to combine and analyse the magnitude of effect against the identified sensitivity of visual receptors. **Image 7.1**, draws upon good practice guidance, including GLVIA (Ref 7.1) and illustrates how sensitivity and magnitude will be considered together to identify the significance of effect.

Image 7.1 Classification of Visual Effects



- 7.8.17 The visual assessment will take account of the likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.
- 7.8.18 The significance of visual effects will be described with reference to the criteria presented in **Table 7.5**, below which has been informed by good practice guidance, including GLVIA (Ref 7.1). For the purposes of the assessment, effects rated as being of **moderate** or **major** will be considered to be **significant**, and **negligible** and **minor** effects will be considered **not significant**.

Table 7.5 Significance of visual effects

Significance	Typical Descriptors
Major	Considerable change affecting a large extent of a very highly sensitive view and becoming a dominant feature.
Moderate	Notable change affecting an important part of a highly sensitive view or a wider extent of a medium sensitivity view, becoming prominent or detracting from the existing focus.

Significance	Typical Descriptors
Minor	Small change affecting a limited and/or unimportant part of a medium to highly sensitive view or an important part of a less sensitive view, unlikely to distract from the existing focus.
Negligible	Where there is no discernible improvement or deterioration in the existing view.
None	No change to the existing view.

Cumulative Effects

- 7.8.19 The ES will include consideration of potential cumulative effects of the Project in relation to other similar existing, consented and proposed developments. As outlined in **Chapter 5 EIA Approach and Methodology** and in line with Planning Inspectorate Advice (Ref 7.7), an initial evaluation process will be undertaken to first identify a long list followed by a refined short list of other developments to be considered within the cumulative assessment.
- 7.8.20 The assessment of cumulative effects will follow a similar process to that described above, first identifying and describing the cumulative baseline, followed by an assessment of the magnitude of effect and significance of effect.
- 7.8.21 The cumulative baseline will be based on a theoretical scenario in which other developments identified and shortlisted as described in **Chapter 5 EIA Approach and Methodology** are present or under construction in addition to existing schemes. The assessment of cumulative magnitude of effect and significance of effects involves consideration of the additional change resulting from the Project to the defined cumulative baseline scenario.

Residential Visual Amenity

- 7.8.22 Residential visual amenity relates to the overall nature, quality and experience of views experienced by occupants of residential properties. While related to visual impacts, residential visual amenity goes a step further to consider the potential of a development to be overbearing or overly intrusive such that it affects living conditions.
- 7.8.23 It is anticipated that potential impacts on residential visual amenity will largely be avoided through careful siting and routeing of the Project. However, if the visual assessment indicates the potential for residential visual amenity impacts, a targeted RVAA will be included in the ES.
- 7.8.24 If an RVAA is required, it will be undertaken in accordance with the principles set out in Landscape Institute Technical Guidance Note (TGN) 2/19: Residential Visual Amenity Assessment (Ref 7.4). This will involve the following four key steps:
- Define scope of RVAA, including identification of a suitable study area (as described in Section 7.4 above) and the properties to be considered. TGN 2/19 suggests a study area of 100 – 150 m from the finalised route when assessing effects of overhead lines.
 - Evaluation of the baseline visual amenity and sensitivity, largely undertaken using the same approach to identifying visual sensitivity as set out above.

- Assessment of likely change to visual amenity, largely undertaken using the same approach as identification of magnitude and significance of visual effects, described above. Only those properties where the magnitude of effect is within the upper category (i.e. very high) are taken forward to the final step.
- Forming the RVAA judgement and conclusions, involving more detailed evaluation of anticipated visual effects to establish where the residential visual amenity threshold has been reached (i.e. the Project would be overbearing or overly intrusive such that it would affect living conditions).

7.8.25 The requirement for RVAA will be determined at the ES stage, once final details of the new overhead line alignment and position of substation structures is defined.

7.9 Assumptions and limitations

7.9.1 The visual assessment in the ES will be undertaken based on the data and updated design details available at that time. At this scoping stage, some details of the new overhead line routing and substation layout and design remain uncertain or under development.

7.9.2 As highlighted above, the visual assessment will be supported by ZTV mapping. It is important to understand the limitations of ZTVs and how they are used in the assessment process. Key limitations include:

- ZTVs are limited by the detail of the digital terrain model data used and generally do not take account of localised topographic variations.
- Some areas of theoretical visibility may comprise woodland or other vegetation or may cover areas with no public access and the likelihood of views being experienced is consequently low.
- ZTV do not take account of the influence of distance, weather or light on the nature of visibility.
- Bare earth ZTVs do not take account of features such as buildings or vegetation which may provide screening. Where screening features are included, these are limited by the detail included within available datasets.
- ZTVs tend to overstate the extent of visibility and should therefore be considered as a tool to guide targeted survey and assessment and should not be used as a measure of effects.

7.9.3 Due to these limitations, ZTVs tend to overestimate the extent of the visibility, therefore, ZTVs should be used as a tool to identify areas of potential visibility, which are then verified and refined through targeted survey and further assessment.

7.9.4 Field surveys to inform establishment of the baseline, capture photography and inform the assessment of effects will be undertaken from publicly accessible locations, such as from the road network and PRoW, in line with standard practice for visual assessment.

7.10 Conclusion

7.10.1 This Scoping Report chapter has outlined the proposed scope for further assessment in relation to the visual impacts of the Project. The data sources that will be used to

define the current and future baselines have been presented, and the impact control and management measures that will be implemented highlighted. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 7.2**.

- 7.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 7.1 Landscape Institute and Institute for Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment – 3rd Edition.
- Ref 7.2 Landscape Institute (2024). Notes and Clarifications on Aspects of the Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3) Technical Guidance Note LITGN-2024-01.
- Ref 7.3 Landscape Institute (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19.
- Ref 7.4 Landscape Institute (2019). Residential Visual Amenity Assessment (RVAA), Technical Guidance Note 02/19.
- Ref 7.5 National Grid. Holford Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 30 July 2025].
- Ref 7.6 National Grid. Horlock Rules. [online] Available at <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> [Accessed 30 July 2025].
- Ref 7.7 Planning Inspectorate (published September 2024, updated March 2025). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment.
- Ref 7.8 Colsterworth & District Parish Council (2017). Colsterworth & District Neighbourhood Plan.
- Ref 7.9 Corby Glen Parish Council (2024). Corby Glen Neighbourhood Plan 2023 – 2036, Made Version (February, 2024).
- Ref 7.10 Rippingale Parish Council (2023). Rippingale Neighbourhood Plan 2023 – 2036.
- Ref 7.11 Skillington Parish Council (2017). Skillington Neighbourhood Plan 2017 – 2031, as submitted to South Kesteven District Council (February 2017).
- Ref 7.12 Ab Kettleby Parish Council (2018). Ab Kettleby Neighbourhood Plan 2018 - 2036.
- Ref 7.13 Asfordby Parish Council (2023). Asfordby Parish Neighbourhood Plan 2011-2036.
- Ref 7.14 Clawson, Hose & Harby Parish Council (2017). Clawson, Hose & Harby Neighbourhood Plan 2017 to 2036.
- Ref 7.15 Broughton and Old Dalby Parish Council (2018). Broughton and Old Dalby Parish Neighbourhood Plan 2017 – 2036.
- Ref 7.16 Scalford Parish Council (2021). Scalford Parish Neighbourhood Plan 2019 – 2036.
- Ref 7.17 Waltham on the Wolds and Thorpe Arnold Parish Council (2018). Waltham on the Wolds and Thorpe Arnold Neighbourhood Plan 2017 - 2036.
- Ref 7.18 Wymondham and Edmondthorpe Parish Council (2017). Wymondham and Edmondthorpe Neighbourhood Plan.

Ref 7.19 Department of Energy Security & Net Zero (January 2024). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at https://assets.publishing.service.gov.uk/media/64252f852fa848000cec0f53/NPS_EN-5.pdf [Accessed 30 July 2025].

8. Ecology and Biodiversity

Contents

8.	Ecology and Biodiversity	8-1
8.1	Introduction	8-1
8.2	Legislation, Policy and Guidance	8-2
	Biodiversity Net Gain	8-2
	Guidance	8-2
8.3	Consultation and Engagement	8-3
8.4	Study Area	8-7
8.5	Data Sources	8-8
8.6	Baseline Conditions	8-9
	Statutory Sites	8-9
	Habitats	8-20
	Species	8-25
	Scoping Surveys for Birds	8-27
	Future Baseline	8-28
8.7	Design and Control Measures	8-28
	Design Measures	8-28
	Control and Management Measures	8-29
8.8	Potential for Significant Effects	8-30
8.9	Proposed Assessment Methodology	8-46
	Proposed Data Sources	8-46
	Technical Guidance	8-46
	Expected Survey Requirements	8-48
	Proposed Assessment Methodology	8-49
8.10	Supporting Assessments	8-54
8.11	Assumptions and Limitations	8-54
8.12	Conclusion	8-55
8.13	References	8-56

Table 8.1 Engagement with Stakeholders	8-3
Table 8.2 Study Areas for Different Ecological Features	8-8
Table 8.3 Internationally Designated Nature Conservation Sites	8-10
Table 8.4 National Designated Nature Conservation Sites	8-14
Table 8.5 Impacts, features and the potential for significant effect	8-32
Table 8.6 Importance of features	8-50
Table 8.7 Characterisation of impact	8-52
Table 8.8 Relating CIEEM assessment terms to those used in Chapter 5 EIA Approach and Methodology	8-54

No table of figures entries found.

References	8-56
------------	------

8. Ecology and Biodiversity

8.1 Introduction

- 8.1.1 This chapter presents how the ecology and biodiversity assessment will consider the potential likely significant effects on ecological features that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methods and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential significant effects to be considered within the assessment, and how the potential for significant effects will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 8.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 8.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and design, and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 8.1.4 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 6 Landscape** and **Chapter 7 Visual** provides detail of essential mitigation that includes habitat creation, such as woodland planting, that are also of benefit to ecological features.
 - **Chapter 9 Cultural Heritage** provides details of the potential impacts, and mitigation required on cultural heritage receptors such as listed buildings and scheduled monuments or ancient woodland or trees that may provide suitable habitat for protected species such as bats.
 - **Chapter 10 Water Environment** provides details of the location of sensitive surface water features, including Water Framework Directive (WFD) waterbodies, and the associated mitigation that will also be required to address potential impacts upon important ecological features, such as wetland Habitats of Principal Importance (HPI) and aquatic fauna.
 - **Chapter 14 Air Quality** provides detail of the changes to air quality which would inform the assessment of impacts on sensitive ecological features presented in this chapter, such as designated sites and ancient woodland.
 - **Chapter 15 Noise and Vibration** provides detail of the potential impacts of noise upon sensitive ecological features.

8.1.5 This chapter is supported by the following figures and appendices:

- **Figure 8.1 Statutory Internationally Designated Sites for Nature Conservation within 10 km and 30 km for sites designated for birds and bats.**
- **Figure 8.2 Statutory Nationally Designated Sites for Nature Conservation within 5 km.**
- **Figure 8.3 Non-Statutory Designated Sites for Nature Conservation within 2 km.**
- **Figure 8.4 Habitats of Principal Importance within the Scoping Boundary.**
- **Appendix 8A Ecology Survey Strategy.**

8.2 Legislation, Policy and Guidance

8.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on ecology and biodiversity associated with the construction, operation and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context**, **Appendix 2A Key Legislation**, **Appendix 2B National and Regional Planning Policy** and **Appendix 2C Local Policy**.

Biodiversity Net Gain

8.2.2 The Environment Act 2021 (Ref 8.1) includes provisions to make Biodiversity Net Gain (BNG) a mandatory requirement within the planning system in England requiring all relevant developments to achieve a minimum 10% net gain in biodiversity units relative to the site baseline biodiversity value. It is anticipated the secondary legislation mandating the need for 10% net gain for Nationally Significant Infrastructure Projects which require Development Consent Order (DCO) will be in place from May 2026.

8.2.3 As detailed in **Chapter 1 Introduction**, National Grid has voluntarily committed to 10 per cent net gain in environmental value including, as a minimum, 10% BNG across all its construction projects, in line with the Environment Act 2021 (Ref 8.1). This commitment is underpinned by the delivery of quantifiable enhancements for biodiversity measures from a baseline using the Department of Environment, Food and Rural Affairs (DEFRA) Statutory Biodiversity Metric (Ref 8.2) with actions formalised and secured by long term management arrangements with external organisations and partners. National Grid will update its commitment on BNG to acknowledge any new legislation when it is in force.

Guidance

8.2.4 This EIA Scoping chapter has been based on CIEEM guidance for Ecological Impact Assessment in the UK (Ref 8.21). Further technical guidance used in this chapter is listed in paragraph 8.9.2.

8.3 Consultation and Engagement

- 8.3.1 The ES will be informed by consultation and engagement with stakeholders, including local planning authorities, the Environment Agency, Natural England, Royal Society for the Protection of Birds (RSPB), Wildlife Trusts, Woodland Trust, National Trust (if appropriate), Protected Trust for Endangered Species (PTES) and local groups. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 8.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 8.1**.

Table 8.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Forestry Commission	Emerging preferred corridor for the new overhead line indicates that several ancient woodlands may be affected.	There will be no loss of ancient woodland as a result of the Project and appropriate buffer zones (of at least 15 m) will be maintained.
The Environment Agency	It is unclear whether the Project will involve any of the following activities: • Culverting • Flow regulation activities • Channel widening/deepening/straightening/realignment • Impoundment • Bed/bank reinforcement • Sediment management • Construction of an/alterations to an existing embankment/set-back embankment • Construction of bypass channel • Reopening of historic channels • Bank reprofiling • Riparian vegetation/instream vegetation/woody debris management • Construction of a bridge/crossing	To be considered as the design progresses and once the Project route is finalised in the ES. The Environment Agency will be contacted to obtain data on fish, invertebrates and macrophytes. National Grid has voluntarily committed to 10% net gain in environmental value including, as a minimum, 10% BNG across all its construction projects, in line with the Environment Act 2021 (Ref 8.1).

Stakeholder	Summary of response	Consideration in the Scoping Report
	Outfall into the main river If any of these activities are required, the Environment Agency should be consulted. The Environment Agency holds data of fish, invertebrates and macrophytes. It is advised that at least 10% BNG is achieved.	
Lincolnshire County Council and South Kesteven District Council	Concern over a reduction in biodiversity from migrating birds hitting electricity lines.	Bird scoping surveys have been undertaken to identify potential impacts on migration routes for any species of bird that may lead to mortality or population decline during construction and operation of the Project as stated in paragraph 8.6.51. Survey strategies for birds to inform the assessment are described in Appendix 8A Ecological Survey Strategy. The proposed methodology for the ES assessment of impacts on birds is described in Section 8.9.
South Kesteven District Council	South Kesteven District Council requests an assessment of impacts on local habitats, especially trees and hedgerows that may serve as nesting and foraging habitats and wildlife corridors that could be disrupted by development. They state there is a need to consider the impacts on protected species including bats, birds and badgers. South Kesteven District Council expects the project to deliver a mandatory minimum of 10% biodiversity net gain in line with national policy. Direct impacts on ancient woodland and veteran trees must be avoided. Woodlands that need to be considered for protection include:	Survey strategies for local habitats and protected species to inform the assessment are described in Appendix 8A Ecology Survey Strategy. The proposed methodology for the ES assessment of impacts on local habitats and protected species is described in Section 8.9. Appendix 4A Code of Construction Practice outlines a measure requiring pre-construction species surveys and compliance with relevant

Stakeholder	Summary of response	Consideration in the Scoping Report
	• Grimsthorpe Castle Woodland • Mickley Wood • Beaumont Wood • Elliott's Wood • Tortoiseshell Wood Registered Nature Reserve There is concern regarding the cumulative ecological impacts from related infrastructure such as substations and feeder routes. There is concern about pressure on land use from additional renewable energy and battery storage sites.	protected species licences. There will be no loss of ancient woodland as a result of the Project and appropriate buffer zones (of at least 15 m) will be maintained. Cumulative measures have been considered in this Scoping Report in Chapter 5 EIA Approach and Methodology which outlines how cumulative effects will be assessed in the ES.
South Holland District Council	There are Local Wildlife Sites that are noted as important for wildlife use (particularly birds) that could be affected by the proposed OHL including • River Wellend • River Glen • South Forty Food Drain The Wash SPA/SSSI which is an internationally wildfowl site is in near proximity to the Project. There is concern that waterfowl, including swans, use adjacent fields and may be affected by the overhead line. It is recommended that bird flight paths and collision risks be assessed and mitigated. It is suggested that markers are placed on overhead cables to reduce bird collisions. The cables may also influence migratory flight paths which needs investigation. It should be taken into consideration that the Project is in close proximity to Spalding Tree Preservation Order No.60 (2002) and the route may pass over Sites of Nature Conservation Interest. Policy 28 of the South East Lincolnshire Local Plan requires the protection,	Survey strategies for habitats and birds are described in Appendix 8A Ecology Survey Strategy. The proposed methodology for the ES assessment of impacts on ecological features is described in Section 8.9. Bird scoping surveys have been undertaken to identify potential impacts on migration routes for any species of bird that may lead to mortality or population decline during construction and operation of the Project as stated in paragraph 8.6.51. National Grid has voluntarily committed to 10% net gain in environmental value including, as a minimum, 10% BNG across all its construction projects, in line with the Environment Act 2021 (Ref 8.1).

Stakeholder	Summary of response	Consideration in the Scoping Report
	enhancement, and management of natural assets and overall net gain in biodiversity for all development proposals. Construction management plans are necessary to minimise the impacts on ecological receptors.	Impacts to ecological receptors from construction have been considered in this Scoping Report and initial measures to reduce and manage impacts are outlined in Appendix 4A Code of Construction Practice. This includes requirements for other management plans to be prepared,
Lincolnshire County Council	Lincolnshire County Council welcomes the best practice in environmental impact assessment and the recognition of the importance of protecting and enhancing the natural environment. The Council highlights the presence of important sites for breeding and wintering birds in the vicinity of the proposed development. There is a need for appropriate effort to understand and mitigate potential impacts on these sites and associated bird populations. Lincolnshire County Council encourages National Grid to - Engage with other developers and organisations in the area - Identify strategic opportunities to deliver environmental mitigation and enhancement - Go beyond the mandatory 10% BNG, given the scale of the proposal. Concern over how the project could impact areas of ecological importance including: • The East Atlantic Flyway • Greater Wash SPA • Gibraltar Point National Nature Reserve • Humber Estuary	Survey strategies for habitats and protected species, including birds, are described in Appendix 8A Ecology Survey Strategy. The proposed methodology for the ES assessment of impacts on designated sites, protected species and birds is described in Section 8.9, the receptors considered are described in Section 8.6. Bird scoping surveys have been undertaken to identify potential impacts on migration routes for any species of bird that may lead to mortality or population decline during construction and operation of the Project as stated in paragraph 8.6.51.

Stakeholder	Summary of response	Consideration in the Scoping Report
	These areas support internationally significant birds and rare species like the natterjack toad. Lincolnshire County Council stresses the need to consider impacts on: • Salt marshes • Sand dunes • Coastal grazing marshes • Breeding and migratory bird species Statutory wildlife designations must be considered.	

8.4 Study Area

8.4.1 For the purpose of this Scoping Report, the Study Area for the ecological assessment includes the land within the Scoping Boundary and appropriate buffer zones, as described in **Table 8.2** and illustrated in:

- **Figure 8.1 Statutory Internationally Designated Sites for Nature Conservation within 10 km and 30 km for International sites designated for birds and bats;**
- **Figure 8.2 Statutory Nationally Designated Sites for Nature Conservation within 5 km;**
- **Figure 8.3 Non-Statutory Designated Sites for Nature Conservation within 2 km; and**
- **Figure 8.4 Habitats of Principal Importance within the Scoping Boundary.**

8.4.2 The boundaries and zones for the ecological Study Area as set out in **Table 8.2** reflect standard industry good practice and the scoping distances that statutory consultees would typically expect to be considered for identification of features external to the Project that could be affected. These have been informed by published guidance and professional judgement. A “zone of potential influence” representing the areas within which effects could occur from the Project and associated activities, will be refined for the assessment. The Study Areas presented in **Table 8.2** below will be reviewed and refined as appropriate for the assessment presented in the ES, but it is anticipated that they will remain similar distances from the Order Limits once they are defined.

Table 8.2 Study Areas for Different Ecological Features

Study Area (distance from Scoping Boundary)	Feature
30 km	Special Areas of Conservation (SAC), Ramsar sites and Special Protection Areas (SPA) where (respectively) bat or bird species with large foraging ranges are noted as, or one of, the qualifying features. Proposed and potential SAC, SPA and Ramsar sites are also considered.
10 km	Statutory designated sites of international nature conservation importance e.g. SAC, SPA and Ramsar sites (as well as proposed or potential sites).
5 km (extended to 10 km for SSSIs with ornithological qualifying features ¹)	Statutory designated sites of national and local nature conservation importance e.g. Sites of Special Scientific Interest (SSSI) (also referencing Natural England Impact Risk Zones for SSSI on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref 8.3), National Nature Reserves (NNR) and Local Nature Reserves (LNR)).
2 km	Non-statutory designated sites of nature conservation value e.g. Local Wildlife Sites (LWS), Sites of Nature Conservation Importance (SNCI), Potential Wildlife Sites, Roadside Nature Reserves (RNR) and ancient woodlands. Records of protected and notable species received from Local Environmental Records Centres (LERC). ¹

Note 1: There is often spatial overlap between SSSI/SPA, Ramsar sites and qualifying ornithological features of SSSI in some cases might forage over relatively large distances outside of the designated site. Therefore, the Study Area for SSSI with ornithological qualifying features is extended to 10 km.

8.5 Data Sources

8.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:

- the Natural England website (Ref 8.4) for information on statutory designated sites of nature conservation interest and to confirm reasons for designation and their condition;
- the MAGIC website (Ref 8.3) to identify the location (and details) of statutory designated sites, HPis (including River HPis) within the Study Areas defined in **Table 8.2**.
- granted European Protected Species² Mitigation Licence (EPSML) applications within the Scoping Boundary;

¹ Non-statutory designated sites such as LWS and protected and notable species data is not included in this Scoping Chapter, once the data has been obtained it will be reviewed prior to commencement of ecological survey work and will be included in the ES Chapter.

² European protected species (EPS) have full protection under The Conservation of Habitats and Species Regulations 2017. It's an offence to deliberately capture, injure or kill, or deliberately disturb EPS.

- the Joint Nature Conservation Committee (JNCC) website (Ref 8.5) for site information and designation details of SAC, SPA and Ramsar Sites; and
- aerial imagery of habitats and ecological features of interest (Ref 8.6).

8.6 Baseline Conditions

- 8.6.1 This section summarises the known or predicted ecological baseline conditions that have been established during the scoping stage. The section includes a summary of the designated sites present across the Study Area and a high-level description of the habitats present in each section within the Scoping Boundary.

Statutory Sites

Internationally Designated Sites

- 8.6.2 The locations of statutory internationally designated sites for nature conservation within the Study Area are presented in **Figure 8.1**. There are no internationally designated sites within the area of the Scoping Boundary where new overhead lines are proposed. However, the Upper Nene Valley Gravel Pits SPA and Ramsar site are within the Scoping Boundary where the reconductoring works are proposed.
- 8.6.3 There are no internationally designated nature conservation sites with bats listed as a qualifying feature located within the 30 km Study Area. There are four internationally designated nature conservation sites within the 30 km Study Area with birds that are listed as qualifying features. Rutland Water SPA and Ramsar site is just over 10 km away from the Scoping Boundary and Nene Washes SPA and Ramsar site is located 26.5 km from the Scoping Boundary. The Study Area applied covers the area that may be used by long-flying bird species and has been considered in both the potential for significant effects in Section 8.7 and the design of field surveys detailed in Section 8.8.
- 8.6.4 The Project has been divided into Sections as described in **Chapter 4 Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment for designated sites is reported for the Scoping Boundary and relevant Zone of Influence below noting the nearest Section to each feature. Sensitive features within each Section are summarised in paragraphs 8.6.17 to 8.6.21.
- 8.6.5 There are six other statutory internationally designated sites within 10 km of the Scoping Boundary that are illustrated in **Figure 8.1 Statutory Internationally Designated Sites for Nature Conservation within 10 km and 30 km for sites designated for birds and bats** and summarised in **Table 8.3**. The Wash SPA and Ramsar site are hydrologically connected to the Scoping Boundary via the River Welland.

Table 8.3 Internationally Designated Nature Conservation Sites

Site name [site code] and size (ha)	Designation	Qualifying features	Distance and direction from the closest point of Scoping Boundary
Upper Nene Valley Gravel Pits [UK9020296] 1,358 ha	SPA	Annex I/II and/or wintering species: - Northern shoveler (<i>Anas clypeata</i>) - Wigeon (<i>Anas penelope</i>) - Mallard (<i>Anas platyrhynchos</i>) - Gadwall (<i>Anas strepera</i>) - Common pochard (<i>Aythya ferina</i>) - Tufted duck (<i>Aythya fuligula</i>) - Eurasian bittern (<i>Botaurus stellaris</i>) - Eurasian coot (<i>Fulica atra</i>) - Cormorant (<i>Phalacrocorax carbo</i>) - Golden plover (<i>Pluvialis apricaria</i>) - Great crested grebe (<i>Podiceps cristatus</i>) - Northern lapwing (<i>Vanellus vanellus</i>)	Within Section 5
Upper Nene Valley Gravel Pits [UK9020296] 1,358 ha	Ramsar	- Criterion 5: Regularly supports 20,000 or more waterbirds - Criterion 6: Regularly supports 1% of individuals in populations of following species in any season: - Mute swan (<i>Cygnus olor</i>) - Gadwall - Annex I and/or wintering species: - Eurasian bittern - Golden plover	Within Section 5

Site name [site code] and size (ha)	Designation	Qualifying features	Distance and direction from the closest point of Scoping Boundary
		— Wigeon — Northern shoveler — Pochard (<i>Aythya ferina</i>) — Tufted duck — Great crested grebe — Cormorant — Eurasian coot	
Grimsthorpe [UK0030043] 0.36 ha	SAC	Annex I habitat: • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) Annex II species: • Early gentian (<i>Gentianella anglica</i>)	2.40 km south of Section 2
The Wash [UK9008021] 62,044 ha	SPA	Annex I and/or migratory species: • Bewick's swan • (non-breeding) • Pink-footed goose (non-breeding) • Dark-bellied brent goose (<i>Branta bernicla</i>) (non-breeding) • Common shelduck (<i>Tadorna tadorna</i>) (non-breeding) • Eurasian wigeon (non-breeding) • Gadwall (non-breeding) • Northern pintail (<i>Anas acuta</i>) (non-breeding) • Black (common) scoter (<i>Melanitta nigra</i>) (non-breeding)	7.22 km east of Section 1

Site name [site code] and size (ha)	Designation	Qualifying features	Distance and direction from the closest point of Scoping Boundary
		• Common goldeneye (<i>Bucephala clangula</i>) (non-breeding) • Eurasian oystercatcher (<i>Haematopus ostralegus</i>) (non-breeding) • Grey plover (<i>Pluvialis squatarola</i>) (non-breeding) • Red knot (<i>Calidris canutus</i>) (non-breeding) • Sanderling (<i>Calidris alba</i>) (non-breeding) • Dunlin (<i>Calidris alpina</i>) (non-breeding) • Black-tailed godwit (<i>Limosa islandica</i>) (non-breeding) • Bar-tailed godwit (<i>Limosa lapponica</i>) (non-breeding) • Eurasian curlew (<i>Numenius Arquata</i>) (non-breeding) • Common redshank (<i>Tringa tetanus</i>) (non-breeding) • Ruddy turnstone (<i>Arenaria interpres</i>) (non-breeding) • Common tern (<i>Sterna hirundo</i>) (breeding) • Little tern (<i>Sterna albifrons</i>) (breeding) • Waterbird assemblage	
The Wash [UK9008021] 62,044 ha	Ramsar	• Criterion 1 – Extensive saltmarshes, major intertidal banks of sand and mud, shallow water and deep channels.	7.22 km east of Section 1

Site name [site code] and size (ha)	Designation	Qualifying features	Distance and direction from the closest point of Scoping Boundary
		• Criterion 3 – Interrelationship of component habitats • Criterion 5 – Waterfowl assemblage • Criterion 6 – Internationally important population of: • Pink-footed goose • Dark-bellied brent goose • Common shelduck • Northern pintail • Eurasian oystercatcher • Grey plover • Red knot • Sanderling • Dunlin • Bar-tailed godwit • Eurasian curlew • Common redshank • Ruddy turnstone	
Baston Fen [UK0030085] 2.12 ha	SAC	Annex II species: • Spined loach (<i>Cobitis taenia</i>)	7.32 km south of Section 2
Rutland Water [UK9008051] 1,555 ha	SPA	Annex II and/or wintering species: • Northern shoveler • Common teal (<i>Anas crecca</i>) • Wigeon • Gadwall • Tufted duck • Goldeneye • Mute swan • Eurasian coot • Goosander (<i>Mergus merganser</i>) • Great crested grebe	10.20 km south of Section 2

Site name [site code] and size (ha)	Designation	Qualifying features	Distance and direction from the closest point of Scoping Boundary
		Internationally important assemblage of wintering birds	
Rutland Water [UK9008051] 1,555 ha	Ramsar	• Criterion 5: International assemblage of wintering waterfowl • Criterion 6: International important population of: – Gadwall – Northern shoveler	10.20 km south of Sections 2 and 3
Nene Washes [UK9008031] 1,520 ha	SPA	Annex II / wintering species: • Northern pintail • Northern shoveler • Common teal • Wigeon • Garganey (<i>Anas querquedula</i>) • Gadwall • Bewick's swan • Black-tailed godwit	26.5 km south of Section 1
Nene Washes [UK11046] 1,517 ha	Ramsar	• Criterion 6: International important population of: – Bewick's swan	26.5 km south of Section 1

Nationally Designated Sites

- 8.6.6 Nationally designated sites include SSSI, NNR and LNR, those identified in the Study Area are listed in **Table 8.4**. There are 33 ecologically designated SSSI within or up to 5 km from the Scoping Boundary. Of these, seven SSSI are within, or partially within the Scoping Boundary. Only the Upper Nene Gravel Pits SSSI overlaps with an internationally designated site, the Upper Nene Gravel Pit SPA and Ramsar site.

Table 8.4 National Designated Nature Conservation Sites

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
Frisby Marsh	SSSI	Some of the best remaining areas of marsh in Leicestershire. Contains a	Wholly within Section 3

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
		complex of wetland habitats, grassland and woodland.	
Great Bowden Borrowpit	SSSI	An unusual Leicestershire example of a tall fen plant community characteristic of base-poor soils. SSSI is a regular feeding ground for snipe (<i>Gallinago gallinago</i>).	Wholly within Section 4
Birch Spinney and Mawsley Marsh	SSSI	Unusual woodland type partly developed on peat with unimproved and botanically rich grasslands adjoined to one of the finest remaining Northamptonshire marshes. Mixed habitat types support invertebrates and birds, with the SSSI supporting one of the few farmland localities of breeding snipe in Northamptonshire.	Wholly within Section 5
Badsaddle, Withmale Park and Bush Walk Woods	SSSI	An important example of wet ash / maple type woodland with indications of ancient woodland ground flora. Woodland / rides support good numbers of typical birds and invertebrates.	Wholly within Section 5
Holwell Mouth	SSSI	Some of the best examples of neutral marsh in Leicestershire and is representative of marsh developed on somewhat base-poor clay soils in the English Midlands. The mix of habitats present provide suitable breeding areas for a range of birds and insects.	Partially within Section 3 on the northern boundary of the Scoping Boundary.
Leighfield Forest	SSSI	Some of the best remaining examples of ash-maple (<i>Fraxinus / Acer</i>) woodland in Leicestershire and is representative of ancient semi-natural woodland developed on heavy clays in eastern central England. Supports diverse breeding bird and moth / beetle communities.	Partially within Section 4
Upper Nene Valley Gravel Pits	SSSI	Nationally important site for breeding bird assemblage of lowland open waters and their margins, wintering waterbird species and an assemblage	Partially within and to the east, and 4.55 km west of Section 5

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
		of over 2,000 waterbirds in the non-breeding season. SSSI includes a rare example wet floodplain woodland.	
Tortoiseshell Wood	SSSI	A good representation example of oak-ash-maple (<i>Quercus</i> / <i>Fraxinus</i> / <i>Acer</i>) woodland developed on a plateau of poorly drained boulder clay overlying Eastern Jurassic limestone. The SSSI is also important for number of breeding bird species.	0.02 km south of Section 2
The Hermitage	SSSI	An example of rare and threatened grassland types including calcareous clay and loam pasture and base-rich marsh developed on underlying alluvium and glacial boulder clay.	0.03 km north of Section 2
Dunsby Wood	SSSI	One of a group of ancient semi-natural woodland lying on Kesteven Plateau. The SSSI is an example of wet ash-maple (woodland with over 120 species of fungi recorded).	0.05 km north of Section 2
Swinstead Valley	SSSI	A fine example of calcareous grassland developed on soils derived from Eastern Jurassic Limestone.	0.18 km south of Section 2
Porter's Lodge Meadows	SSSI	A fine example of a traditionally managed grassland, supporting plant communities typical of calcareous clay and loam soils.	0.2 km south of Section 2
Hardwick Lodge Meadow	SSSI	Extensive, species rich-agriculturally-unimproved permanent pasture supporting a fine example of crested dog's tail (<i>Cynosurus cristatus</i>) – common knapweed (<i>Centaurea nigra</i>) community. Mosaic structure of tussocks and shorter grass support diverse invertebrate populations.	0.35 km west of Section 5
Cribbs Lodge Meadows	SSSI	The SSSI includes some of the best examples of species-rich neutral grassland in Leicestershire and is representative of grassland on clay soils in the English Midlands.	0.5 km south of Section 3

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
Surfleet Lows	SSSI	One of the few remaining wet alluvial meadows in Lincolnshire that have not be agriculturally improved. Habitats include wet alluvial meadows, wet fen woodland, pools and tall fen vegetation. Over 50 species of birds have been recorded using the SSSI.	0.62 km north of Section 1
Launde Big Wood	SSSI	Some of the best remaining examples of ash-maple and ash-elm woodland in Leicestershire and is representative of ancient semi-natural woodland developed on heavy clay soils in eastern central England.	1.5 km east of Section 4
Bozeat Meadow	SSSI	Area of species-rich and agriculturally unimproved neutral grassland lying over well-drained calcareous clay and loam soils.	1.78 km east of Section 5
Stoke & Bowd Lane Woods	SSSI	The SSSI supports a complex of ancient semi-natural broad-leaved woodland with underlying soils of calcareous clay nature and vegetation representative of wet ash-maple woodland.	1.85 km east of the Section 5
Southfield Farm Marsh	SSSI	SSSI supports the largest known area of long-established tall grass washland in Northamptonshire. Side includes base-rich and floristically diverse mire developed on silty peats and watered by calcareous spring-flows. SSSI supports specialised and uncommon invertebrate fauna.	2.2 km east of Section 5
River Eye	SSSI	An exceptional example of a semi-natural lowland river and is representative of clay streams in central and southern England.	2.30 km south of Section 3
Wymondham Rough	SSSI	Some of the best remaining examples of neutral clay grassland in Leicestershire and is representative of grassland developed on clay and alluvial soils in English Midlands.	2.36 km south of Section 3.
Grimsthorpe Park	SSSI	Likely the best remaining example of ancient parkland in Lincolnshire.	2.38 km south of Section 2

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
		Ancient and mature trees support more than 250 species of beetles including a nationally rare species. Hollow trees provide roost for a number of species of bat.	
Owston Woods	SSSI	Largest continuous area of semi-natural woodland in Leicestershire containing an unusually high diversity of woodland types representative of ancient woods on clay soils in central eastern Europe. Diverse invertebrate, breeding bird and small-mammal communities.	2.5 km east of Section 4
Yardley Chase	SSSI	SSSI supports a variety of semi-natural habitats including woodland, unimproved neutral grassland and biologically rich pools. SSSI supports a range of invertebrate species, breeding birds and breeding great crested newt (<i>Triturus cristatus</i>).	3.42 km south west of Section 5
Chater Valley	SSSI	Some of the best remaining examples of neutral grassland and spring-fed marsh in Leicestershire. Diverse plant communities support varied breed bird and invertebrate populations.	3.52 km east of Section 4
Pitsford Reservoir	SSSI	One of the major reservoirs for passage and wintering waterfowl in East Midlands and largest waterbody in Northamptonshire. Site has previously held nationally important numbers of several wildfowl species. SSSI also supports small colony of locally uncommon Essex skipper butterfly (<i>Thymelicus lineola</i>).	3.63 km west of Section 5
Twenty Acre Piece	SSSI	Some of the best remaining examples of acidic clay grassland in Leicestershire and is representative of such habitats in the English Midlands. Mixed habitat types support a diverse breeding population of birds and invertebrates.	3.8 km west of Section 3

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
Dungee Corner Meadow	SSSI	A traditionally managed hay meadow on well-drained calcareous boulder clay. SSSI supports a strong population of county rarity green-winged orchid (<i>Orchis morio</i>).	3.83 km east of Section 5
Greetham Meadows	SSSI	One of the best remaining “ridge and furrow” hay meadows in region. Only known locality for the frog orchid (<i>Coeloglossum viride</i>) in Leicestershire.	4.06 km south of Section 2.
Kilby-Foxton Canal	SSSI	Excellent example of fauna and flora communities characteristically associated with slow-flowing lowland rivers in easter and central England. Supports a long-established colony of Daubenton’s (<i>Myotis daubentonii</i>) bat and diverse communities of aquatic and terrestrial invertebrates.	4.47 km west of Section 4
Pipewell Woods	SSSI	Several small contiguous woodlands which comprise one of the largest remaining remnants of the ancient Royal Forest of Rockingham. Woods are a good example of wet ash-maple woodland in both a typical and nationally rare form. Rides / open grassland areas provide habitats for plants, invertebrates and birds.	4.5 km east of Section 5
Alder Wood and Meadow	SSSI	Site supports an unusual combination of ancient semi-natural broadleaved woodland and unimproved hay meadow. Juxtaposition of habitat types support diverse fauna and flora populations.	4.83 km east of Section 5
Clipsham Old Quarry and Pickworth Great Wood	SSSI	Clipsham Old Quarry contains some of the best areas of species-rich limestone grassland in the County. It is one of the few sites in Leicestershire where slow worm (<i>Anguis fragilis</i>) breed with scrub habitats suitable for breeding birds. Pickworth Great Wood is one of the largest remaining blocks of deciduous woodland in Leicestershire and	4.9 km south of Section 2

Site name and size	Designation	Description	Distance and direction from the closest point of Scoping Boundary
		contains stands of ancient, semi natural woodland on clay soils. The wood has a rich invertebrate fauna with over 150 species of moths and supports a diverse breeding bird community.	

- 8.6.7 There are no SSSIs within the Scoping Boundary in Section 1 Area. The nearest is Surfleet Lows SSSI, which is 0.62 km north.
- 8.6.8 There are no SSSIs within the Scoping Boundary in Section 2, but several are adjacent to the Scoping Boundary.
- 8.6.9 There are two SSSIs, Frisby Marsh and Holwell Mouth within the Scoping Boundary in Section 3 and several adjacent to or within 5 km.
- 8.6.10 There are two SSSIs, Great Bowden Borrow Pit and Leighfield Forest wholly and partially within the Scoping Boundary in Section 4 and several others within 5 km of this section.
- 8.6.11 There are two SSSIs wholly within the Scoping Boundary in Section 5, Birch Spinney and Mawsley Marsh and Badsaddle, Withmale Park and Bush Walk Woods. The Upper Nene Valley Gravel Pits SSSI is also designated as Upper Nene Valley Gravel Pits SPA and Ramsar site and is situated partially within the Scoping Boundary.
- 8.6.12 There are no NNR within the Scoping Boundary, however Cribbs Meadow NNR is located 0.55 km south of Section 3. There is one LNR, Summer Leys, that falls partially within the Scoping Boundary in Section 5. Five others fall within 5 km of the Scoping Boundary.

Habitats

Habitats of Principal Importance

- 8.6.13 A review of the MAGIC website (Ref 8.3) indicates that the following HPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Ref 8.7) are present, or likely to be present (meaning determination by further botanical survey is required), on land within the Scoping Boundary. These are shown on **Figure 8.4 Habitats of Principal Importance within the Scoping Boundary:**
- Deciduous woodland;
 - Traditional orchard;
 - Ponds;
 - Reedbeds;
 - Lowland fens;
 - Lowland heathland;

- Purple moor grass and rush pastures;
- Lowland meadows;
- Lowland calcareous grassland;
- Coastal and floodplain grazing marsh; and
- Mudflats.

Ancient Woodland and Veteran Trees

8.6.14 There are 31 sites of ancient woodland present within the Scoping Boundary identified on the Ancient Woodland Inventory (29 are named and two are unnamed). A further 23 ancient woodland sites are noted as within 2 km of the Scoping boundary. These may be Ancient Semi-Natural Woodland (ASNW) or sites of Plantations on Ancient Woodland Sites (PAWS), or a combination of both. These are:

Section 2 – within Scoping Boundary

- Battlebourn Head (ASNW);
- Beaumont Wood (PAWS);
- Bitchneaves Wood (PAWS);
- Breaches Wood (PAWS);
- Callans Lane Woods (ASNW/ PAWS);
- Catbury Wood (PAWS);
- Dodsey Wood (ASNW);
- Elliotts Wood (ASNW);
- Herricho Wood (ASNW);
- Mickley Wood (ASNW);
- Norwood / West Woods (ASNW/ PAWS); and
- South Wood (ASNW);

Section 2 – within 2 km of Scoping Boundary

- Bourne/ Fox/ Pillow Woods (ASNW)
- Bulby Hall Wood (ASNW/PAWS);
- Cabbagehill Wood (PAWS);
- Colley Wood (ASNW/ PAWS);
- Dunsby Wood (ASNW/ PAWS);
- Easton Wood (ASNW/ PAWS);
- Great Osgrove Wood (ASNW/ PAWS);
- High Wood (ASNW);
- Little Osgrove Wood (ASNW);

- Lownd Wood (ASNW/ PAWS);
- Nab Wood (PAWS);
- Sleights Wood (ASNW/ PAWS);
- Spring Wood (PAWS);
- Temple Wood (ASNW/ PAWS);
- Thorny Wood (PAWS);
- Tortoiseshell Wood (ASNW);
- Twyford Forest (ASNW/ PAWS);
- Old Park Wood (ASNW);
- Osgodby Coppice (ASNW);
- Unnamed woodland, (TF 00840 27547) (ASNW/ PAWS); and
- West/ East Morkery Wood (ASNW).

Section 3 – within Scoping Boundary

- Freeby Wood (ASNW);
- Stonepit Spinney (ASNW);and
- Old Dalby Wood (ASNW).

Section 4 – within Scoping Boundary

- Brook Spinney (ASNW);
- Browns / Hoothill Woods (ASNW);
- Crow Wood / Priest Hill (ASNW);
- Glooston Wood (ASNW);
- Hardwick Wood (ASNW);
- Loddington Reddish (ASNW);
- Norseley Wood (ASNW) (Section 4);
- Rolleston Wood (ASNW) (Section 4);
- Skeffington / Tilton Woods (ASNW/ PAWS);
- Stonton Wood (ASNW); and
- Unnamed woodland, (SP 76081 98531) (ASNW).

Section 4 – within 2 km of Scoping Boundary

- Hallaton Wood (ASNW);
- Launde Big Wood (ASNW);
- Shangton Holt (ASNW); and

- Unnamed woodland (SK 76051 02978) (ASNW).

Section 5 – within Scoping Boundary

- Badsaddle Wood (ASNW);
- Brampton/ Stoke Wood (PAWS);
- Cransley Wood (ASNW/ PAWS);
- Faxton Corner (PAWS) (Section 5);
- Withmale Park Wood (ASNW/ PAWS); and
- Unnamed woodland, (SP 79851 76345) (ASNW).

Section 5 – within 2km of Scoping Boundary

- Cold Oak Copse (ASNW/ PAWS);
- Blue Covert (ASNW);
- Hardwick Wood (ASNW/ PAWS);
- Sywell Wood (ASNW/ PAWS);
- Unnamed woodland, (SP 78912 85891) (ASNW)
- Unnamed woodland, (SP 78477 85779) (ASNW); and
- Unnamed woodland, (SP 77409 76223) (ASNW).

8.6.15 There are 16 veteran trees and one ancient tree identified within the Scoping Boundary according to the Woodland Trust Ancient Tree inventory. Further veteran or ancient trees may be identified during further arboricultural surveys which will be undertaken to inform the ES assessment.

8.6.16 The following sections provide a high-level description of the habitats located in the separate Sections and associated Study Area.

Section 1

8.6.17 Section 1 is the most eastern extent of the Scoping Boundary falling entirely within the County of Lincolnshire. This area is characterised by low lying ground that is managed intensively as arable agriculture, with straight hedgerows and largely man-made ditches forming field boundaries. There is very little woodland within this section with approximately five parcels, three of which are HPIs: deciduous woodland, but these are not well connected to the rest of the landscape. There are three other parcels of Habitat of Principal Importance within this area. Two are listed as coastal floodplain grazing marsh, one of which is located at the eastern extent of the Scoping Boundary between the River Welland and Vernatt's drain. Another parcel is listed with no defined habitat.

8.6.18 In addition to the many ditches providing aquatic habitat, there are two statutory main rivers, the River Glen and the River Welland. There are no statutory designated sites or ancient woodlands/veteran trees mapped within this section.

Section 2

- 8.6.19 Section 2 covers a larger area of the Scoping Boundary also within the County of Lincolnshire. The eastern extent is a continuation of the habitats and land management present within Section 2, comprising flat agricultural land with field drains and hedgerows, with only three small areas of HPI: deciduous woodland and one small area of coastal floodplain grazing marsh. West of Haconby, the habitats and topography become more varied. It is still largely arable agriculture but with fewer field drains and the fields and boundary hedgerows with standard trees are more irregular in shape and therefore likely to be older. There are eleven large areas of ancient woodland within this section and many other woodland areas that whilst not ancient, are deciduous woodland. There are many areas of woodland listed on the National Forest Inventory which may be deciduous or coniferous and may in some cases overlap with the deciduous woodland. Other Priority Habitats within this section are coastal floodplain grazing marsh, traditional orchard and lowland meadow.
- 8.6.20 There are six main rivers within this section, namely the South Forty Foot Drain, the Rippingdale Running Dike, the Car Dyke, the East Glen River, West Glen River and the River Witham.

Section 3

- 8.6.21 Section 3 is located in Leicestershire and is largely arable farmland or pastures with hedgerows and standard trees. There are only two small parcels of ancient semi-natural woodland in this section, but many small areas of Habitat of Principal Importance deciduous woodland and National Forest Inventory woodland scattered throughout Section 3. Other Habitat of Principal Importance present are small areas of, lowland meadow, coastal floodplain grazing marsh, purple moor grass and rush pasture with lowland fen. Lowland Fen is also considered an irreplaceable habitat.
- 8.6.22 There are two main rivers within Section 3, the River Wreake and the Gaddesby Brook.

Section 4

- 8.6.23 Similarly to the above, Section 4 comprises arable farmland and pasture with hedgerows and standard trees throughout. There are eleven distinct areas of ancient semi-natural or replanted woodland within Section 4 and many smaller areas of HPI deciduous woodland habitat which, may also be part of the National Forest Inventory. There are six small and fragmented areas of HPI; lowland heathland, two areas of lowland meadow and one small area of lowland fen.
- 8.6.24 An unnamed main river flows north to south through much of Section 4, as well as the Langton Brook, the River Welland and River Jordon which bisect this section towards the south.

Section 5

- 8.6.25 Section 5 is the southernmost area of the Scoping Boundary and is also largely arable and pastureland. There are five small blocks of ancient semi-natural or replanted woodland and many other parcels of HPI deciduous woodland. There are many areas of woodland listed on the National Forest Inventory which may be deciduous or coniferous and may in some cases overlap with the woodland (HPI). Other HPI present within this section are large areas of coastal floodplain grazing

marsh as part of the Upper Nene Valley Gravel Pits SSSI, and two small areas of lowland fen habitat.

- 8.6.26 River Welland, River Jordon, River Isle, Slade Brook, Swanspool Brook, River Nene and four un-named tributaries fall within this section as well as a large complex of lakes south of the River Nene that comprise the Upper Nene Valley Gravel Pits SSSI.

Species

- 8.6.27 Protected and notable species comprise those listed under Schedule 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended) (Ref 8.8); Schedule 2, 4 and 5 of the Habitats Regulations (Ref 8.9); and species and Habitat of Principal Importance for nature conservation in England listed pursuant to Section 41 of the (NERC) Act 2006 (as amended) (Ref 8.7). Records of other species have been considered e.g. those included in national, regional or local Red Data Books and Lists but not protected by legislation.
- 8.6.28 Invasive non-native species (INNS) include those which are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (Ref 8.8) and the Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended) (Ref 8.10).
- 8.6.29 A high-level appraisal of habitat suitability and records from the relevant record centres, from the last 10 years is summarised below.

Amphibians

- 8.6.30 Great crested newt are known to be present in waterbodies within the Scoping Boundary.
- 8.6.31 There are 46 granted great crested newt Natural England EPSMLs within the 2 km Study Area, of which 22 fall within the Scoping Boundary.
- 8.6.32 There are also records of priority species including common toad (*Bufo Bufo*) within the 2 km Study Area.

Badger

- 8.6.33 Arable and woodland habitat within the Study Area provides excellent habitat for badgers (foraging and sett building), and it is expected that they are present within the Scoping Boundary.

Bats

- 8.6.34 Habitats within the Scoping Boundary include mature trees, woodland and buildings that likely provide suitable roosting habitat for bats. Woodland, hedgerows, fields and watercourses provide excellent commuting and foraging habitat for a wide range of bat species.
- 8.6.35 There are 42 granted Natural England European Protected Species Mitigation Licences (EPSML) for bats within the 2 km Study Area, of which 18 fall within the Scoping Boundary and cover the following species; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle (*Barbastella barbastellus*).

Beaver

- 8.6.36 Beaver (*Castor fiber*) have been reintroduced into Lincolnshire within 30 km of the Scoping Boundary to the north and at the Nene Washes within the Scoping Boundary to the south. These populations are likely within enclosures but there are also reports of wild beaver within Northamptonshire.

Birds

- 8.6.37 Habitats within the Scoping Boundary comprising large areas of arable land, woodlands, hedgerows and watercourses provide excellent habitat for breeding and wintering birds and provide functionally linked land for birds associated with internationally designated sites.

Hazel Dormouse

- 8.6.38 Hazel dormice were considered to be extinct in Lincolnshire and a population was reintroduced into the county by the Protected Trust for Endangered Species (PTES) in 2002 to Chambers Farm in Lincolnshire. Since then dormice have dispersed into the landscape with further reintroductions taking place or planned.
- 8.6.39 Further consultation is required with PTES to ascertain whether it is likely that dormice are present within the Scoping Boundary.
- 8.6.40 There are no previous granted Natural England EPSML for hazel dormice within the Scoping Boundary or the 2 km Study Area.

Invertebrates (Terrestrial and Aquatic)

- 8.6.41 Terrestrial habitats and aquatic habitat within the Scoping Boundary provide suitable habitat for a wide range of invertebrates.

Otter

- 8.6.42 Otter (*Lutra lutra*) records are located across the Scoping Boundary in association with watercourses present in the Study Area.
- 8.6.43 There are no previous granted Natural England EPSML for otter within the Scoping Boundary or 2 km Study Area.

Reptiles

- 8.6.44 The habitats within the Scoping Boundary such as field margins, hedgerows, rough grassland provide suitable habitat for common reptile species; slow worm, common lizard, grass snake and adder for foraging, breeding and hibernation.

Water Vole

- 8.6.45 Water vole (*Arvicola amphibius*) are expected to be present throughout the Scoping Boundary due to the number of watercourses present which provide suitable habitat.

Fish

- 8.6.46 There are several main rivers and other watercourses within the Scoping Boundary and 2 km Study Area that may provide suitable habitat for fish.

Invasive and Non-Native Species

- 8.6.47 Invasive and non-native species (INNS) are expected to be present throughout the Scoping Boundary. These include species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (Ref 8.8).

Other Notable Mammals

- 8.6.48 Other notable mammals such as hedgehog and brown hare are expected to be present throughout the Scoping Boundary.

Scoping Surveys for Birds

- 8.6.49 Bird scoping surveys have been undertaken within the proposed new overhead line part of the Scoping Boundary in April and May 2025 to identify Vantage Point (VP) survey locations, so that wintering bird surveys can commence in 2025. An initial 58 locations were identified through the use of desk study resources and aerial photography, identifying areas of Functionally Linked Land (FLL) for species that are identified within the SPA and Ramsar sites listings in **Table 8.3** above. FLL refers to areas of land outside a statutory site that are important to the conservation objectives of the statutory site, especially for those species for which the statutory site is designated.
- 8.6.50 From the initial 58 locations visited, these have been narrowed down to 16 suitable VP locations with suitable viewsheds³ and access requirements to undertake VP surveys. Each VP viewshed will be observed for a minimum of 6 hours per month over a minimum of a single year survey period (October to September) using a team of two surveyors (to ensure no lone working and to optimise recording efficiency), ensuring minimum survey effort of 72 hours for a full year at all VPs. This method is recommended in the NatureScot guidance on the assessment of the impacts of powerlines on birds (Ref 8.11), adapted from the recommended bird survey methods to inform impact assessment of onshore windfarms (Ref 8.12).
- 8.6.51 The surveys have been designed to cover a much wider range of potential impacts on designated sites over a wider area, plus more general ornithological constraints and potential impacts across the Scoping Boundary. These include:
- Indirect impacts on The Wash Ramsar site, SPA and SSSI and Rutland Water Ramsar site, SPA and SSSI through potential effects on habitat that is outside of the designated sites but that nevertheless provides a supporting function to the designations (FLL) by providing habitat that is regularly used by qualifying bird species in some capacity.
 - Potential impacts on key sites or habitats that are notable for their capacity to support notable bird populations regardless of any designation (for instance as a significant habitat resource for breeding birds; or as a significant feeding and roosting area regularly used by non-breeding birds).
 - Potential impacts on key flyways or migration routes for any species of bird which may lead to mortality or population decline during construction and operation of the Project.

³ Viewshed is the visible area from the Vantage Point location.

- Potential impacts of collision with transmission overhead lines by bird species that are known to be vulnerable.

8.6.52 The requirement for breeding bird surveys, passage bird surveys and more targeted surveys for birds is still being reviewed but will comprise breeding bird transect surveys following the Bird Survey and Assessment Steering Group guidelines (Ref 8.13), and birds listed on Schedule 1 of the Wildlife and Countryside Act (1981) (Ref 8.8).

Future Baseline

8.6.53 Relevant to the current baseline, the value of ecological features present is not expected to change significantly by the end of the construction period. Management of the habitats is similarly unlikely to change significantly over this period, and consequently no significant degradation or improvement of habitat condition is expected. Due to development pressure year on year within the wider landscape, protected and notable species and habitats are likely to remain priorities for conservation within future baseline scenarios. Large parts of land within the Scoping Boundary are located on agricultural land and current agricultural practices are likely to be maintained.

8.7 Design and Control Measures

Design Measures

8.7.1 The emerging preferred route corridor on which the Scoping Boundary is based has been routed to avoid designated sites and sensitive features as far as reasonably practicable. This is in accordance with the Planning Inspectorate's Advice: Nationally Significant Infrastructure Projects- Advice on Habitats Regulations Assessment (Ref 8.14) the Habitats Regulations 2017 (Ref 8.9), the Holford Rules (Ref 8.15) and relevant legislation and policies outlined in **Appendices 2A to 2C**.

8.7.2 **Chapter 3 Main Alternatives Considered** and the Corridor and Preliminary Routing and Siting Study (CPRSS) (Ref 8.16) detail the evolution of the Project to avoid some of the known major constraints, including proximity to the statutory internationally designated sites, areas of ancient woodland and areas of HPI such as deciduous woodland and watercourses that lie within the Scoping Boundary. The design development will progress with a view to avoid these areas as far as reasonably practicable as the route corridor and Order Limits are defined.

8.7.3 Further design measures will be developed as the Project design evolves, such as micro-siting of individual towers, substation locations and access routes to avoid direct and indirect impacts on features including designated sites, protected habitats and species where possible. Other measures may include applying appropriate buffers to designated sites and HPI and also ancient woodland, ancient and veteran trees to avoid direct effects, combined with standard best practice control measures to avoid indirect effects on such sites and habitats.

8.7.4 At sensitive crossing locations (e.g. watercourses), existing access routes would be used as far as possible and the width of any required working area reduced as far as practicable. If access upgrades are required, temporary bridges will be used in preference to culverts. Where culverts are unavoidable, these will either be arch culverts, leaving the natural bed undisturbed, or they would be installed with the

invert set below the natural bed level for a semi-natural bed to establish within the culvert.

- 8.7.5 Micro-siting of towers would take into account the swing of the overhead line to avoid or minimise loss from notable habitats, including woodland and trees.
- 8.7.6 Vegetation would be retained where possible. In order to avoid destruction of active bird nests, vegetation clearance works would be undertaken outside the core breeding bird season, taken to be 1 March to 31 August, unless clear reasons to take an alternative approach have been identified. Such reasons may be where there are risks to sensitive or ecologically important roosting or feeding birds during the non-breeding season at locations where breeding birds are unlikely to occur. Where avoidance of the breeding bird season is not possible, vegetation removal would be undertaken following a check for active nests by an appropriately experienced ecologist not more than 24 hours prior to the works commencing. The clearance will be undertaken in the presence of an ecological watching brief and appropriately managed to remove the risk of damaging or destroying active nests, young birds, chicks or eggs or disturbing nests of birds listed on Schedule 1 of the Wildlife and Countryside Act (1981)(Ref 8.8). Suitable methods would also be used to ensure vegetation with potential to support other legally protected species (for e.g. reptiles) is removed sensitively and in compliance with legal requirements.
- 8.7.7 A BNG equivalent to a minimum 10 per cent uplift above the current baseline situation will be built into the Project through the design process, which may include offsite solutions if it is not possible to deliver onsite, in line with the Environment Act 2021 (Ref 8.1).
- 8.7.8 Areas of temporary habitat loss would be reinstated, wherever practicable, following the completion of construction in each section. Wherever possible, reinstatement would be back to the type of habitat affected or improved/enhanced. Areas of permanent habitat loss would be considered during the siting of environmental gain from BNG, as described above.

Control and Management Measures

- 8.7.9 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice (OCoCP) is provided in **Appendix 4A Initial Outline Code of Construction Practice**.
- 8.7.10 Measures relevant to the control and management of impacts that could affect the ecology and biodiversity assessment are summarised below (refer to **Appendix 4A** for the full description of each measure):
- GG03 - on the development of a final CoCP secured through a Requirement of the DCO.
 - GG04 - on the appointment of Environmental Managers and Environmental Clerks of Works to monitor implementation of requirements and ensure good practice is employed.
 - GG05 - on environmental training of construction workers.
 - GG07 - requiring a Construction Environmental Management Plan (CEMP) and a Landscape and Ecological Management Plan (LEMP) prior to construction.
 - GG09 - on reinstatement of land, hedgerows, fences, and walls.

- GG10 - on retention and protection of sensitive features such as ancient woodland and protected habitats.
- GG12 - on the location of activities that may cause nuisance away from sensitive features such as ecological sites where practicable.
- GG16 - on the storage of hazardous materials away from sensitive water receptors.
- GG17 - on the control of surface water run-off.
- GG18 - on the wash down of vehicles and equipment.
- GG20 - on avoiding dust from earthworks and stockpiled soil.
- GG22 and LV04 - on construction lighting.
- B01 - requiring pre-construction species surveys and compliance with relevant protected species licences.
- B02 - on the protection of breeding birds and seasonal requirements.
- B03 - on reducing risk of animal entrapment in works.
- B04 - on control of the spread of invasive weeds.
- B05 – on staged vegetation clearance and protection of reptiles.
- B06 – on provision of alternative bat roost structures (bat boxes).
- B07 - on provision of alternative barn owl breeding sites (barn owl boxes).
- B08 - on requirements when crossing or removing hedgerows.
- B09 - on habitat or species translocation (if required).

8.7.11 The CEMP will include other standard measures relating to ecology such as:

- Pre-construction surveys to validate and, where necessary, update the baseline survey findings. The purpose of these pre-construction surveys would be to ensure mitigation during the construction phase is based on the latest protected species information. This would also be required for any protected species licensing.
- Reasonable avoidance measures, including appropriate buffers around identified active badger setts (if present), or trees with bat roost suitability where possible throughout the area.
- Timing of works such as daytime works only where practicable where there are sensitive nocturnal features, taken to be 30 minutes before dusk and 30 minutes after sunrise. Seasonal restrictions may also apply in some areas.

8.8 Potential for Significant Effects

8.8.1 The ecology and biodiversity assessment will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the ecology and biodiversity ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.

- 8.8.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 8.7.
- 8.8.3 The CIEEM guidelines (Ref 8.21) make clear that there is no need to “*carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*”. Therefore, it is not necessary for the assessment to address all habitats and species with potential to occur in the relevant Study Area and instead the focus is on those that are “relevant” i.e. ecological features that are considered to be important and potentially affected by the Project. This does not mean that efforts will not be made to safeguard wider biodiversity.
- 8.8.4 **Table 8.5** identifies the sources of potential impacts on ecological features identified in the baseline that could result in a significant effect and will be considered in the ES. Where an impact could give rise to potentially significant effects on ecological features identified in the Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give risk to significant effects on features identified in the Study Area are proposed to be scoped out of the ES.
- 8.8.5 The potential sources of impact that have been considered in this scoping exercise are as follows:
- Habitat loss (permanent and temporary);
 - Habitat deterioration through alterations in air quality, hydrology and pollution;
 - Habitat fragmentation through severing of ecological connections;
 - Disturbance of ecological features through increased noise, dust, vibration, light, pollution, electromotive force and increased human presence; and
 - Mortality and injury of species during construction phases or due to collision into overhead line during operation.
- 8.8.6 Operational impacts relate to the new overhead line section of the Project, with limited operational impacts associated with the substations. The operational phase of the reconductoring section will be the same as the current baseline and therefore no significant effects are expected.
- 8.8.7 A precautionary approach has been taken and where there is no strong evidence base, insufficient baseline or the significance is uncertain at this stage the impact has been scoped into the ES. Where there is a clear evidence base that the effect from the impact will not be significant, either alone or cumulatively with other developments, the impact is proposed to be scoped out of the ES.

Table 8.5 Impacts, features and the potential for significant effect

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
Construction (new overhead line, reconductoring and substations)	Site clearance. Construction activities (increased human presence, dust, noise, lighting, water pollution).	Permanent habitat loss. Temporary habitat loss, disturbance, degradation and fragmentation. Indirect impacts (increased human presence, dust, noise, lighting, water pollution).	Statutory and non-statutory designated sites (without mobile qualifying criteria) located greater than 2 km from Scoping Boundary.	Yes - during construction, there is a risk of habitat degradation resulting from water pollution for sites that are hydrologically connected to the Project. There will be no direct loss of habitat from statutory and non-statutory sites greater than 2 km away and there is no risk of the other identified impacts leading to significant effects, given the separation distance.	Scoped in (habitat degradation from water pollution only) during construction.
Maintenance (new overhead line and substations)	Maintenance activities (site clearance, increased noise, lighting, pollution).	Temporary habitat loss, disturbance, degradation and fragmentation. Indirect impacts (increased human presence, dust,	Statutory and non-statutory designated sites (without mobile qualifying criteria) located greater than 2 km from Scoping Boundary.	No – during maintenance, any impacts would be limited and localised, temporary and of a short duration. There is no risk of significant effects, given the separation distance. No permanent habitat loss or fragmentation is anticipated during maintenance works.	Scoped out (all impacts) during maintenance.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
		noise, lighting, pollution).			
Construction (new overhead line, reconductoring and substations)	Site clearance. Construction activities (increased human presence, noise, dust, lighting, airborne and aquatic pollution).	Permanent habitat loss. Temporary habitat loss, disturbance and fragmentation or degradation.	Statutory designated sites within 10 km and up to 30 km from Scoping Boundary for those sites used by birds or bats associated with Internationally designated sites.	Yes – there will be no direct loss of habitat from statutory designated sites. However, it is possible that habitats utilised by birds or other species associated with nearby designated sites (i.e. FLL) could be lost. Surveys will investigate use of these habitats by such species and inform any requirement for mitigation or necessity for design adjustments. In addition, sites that are designated for habitats sensitive to pollution will be assessed.	Scoped in (all impacts) during construction.
Maintenance (new overhead line and substations)	Maintenance activities (site clearance, increased noise and lighting).	Temporary habitat loss, disturbance and fragmentation or degradation.	Statutory designated sites within 10 km and up to 30 km from Scoping Boundary for those sites used by birds or bats associated with	Yes – there will be no direct loss of habitat from statutory designated sites. However, it is possible that habitats utilised by birds or other species associated with nearby designated sites (i.e. FLL) could be lost. Surveys will investigate use of these habitats by such	Scoped in (all impacts) during maintenance.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
			Internationally designated sites.	species and inform any requirement for mitigation or necessity for design adjustments. No permanent habitat loss or fragmentation is anticipated during maintenance works.	
Construction (new overhead line, reconductoring and substations)	Site clearance. Construction activities (increased human presence, noise, lighting and pollution).	Permanent habitat loss. Temporary habitat loss, disturbance and fragmentation.	Non-statutory designated sites up to 2 km from Scoping Boundary.	Yes – the construction of overhead line infrastructure, supporting structures, and associated tracks have the potential for direct habitat loss within non-statutory designated sites. Until the route corridor and working methods are confirmed this impact pathway will be included on a precautionary basis. Permanent habitat loss of a non- statutory designated site could occur as a result of the construction of the overhead line infrastructure such as the siting of a tower, or the required clearance below the overhead line/conductors.	Scoped in (all impacts) during construction.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
Maintenance (new overhead line and substations)	Maintenance activities (site clearance, increased noise and lighting).	Temporary habitat loss, disturbance and fragmentation.	Non-statutory designated sites up to 2 km from Scoping Boundary.	Yes - in view of the proximity of the non-statutory designated sites to the Scoping Boundary, there is potential for temporary habitat loss, disturbance and fragmentation during necessary maintenance works. No permanent habitat loss or fragmentation is anticipated during maintenance works.	Scoped in (all impacts) during maintenance.
Construction (new overhead line, reconductoring and substations)	Site clearance. Construction activities (increased human presence, noise, lighting and pollution).	Permanent habitat loss. Temporary habitat loss disturbance and fragmentation.	Priority and notable habitats within Scoping Boundary. Ancient woodland and ancient and veteran trees up to 2 km from Scoping Boundary.	Yes – semi-natural woodland (if present), hedgerows, lowland meadow, coastal and floodplain grazing marsh, arable field margins, and other notable habitats could be impacted by tower locations, supporting structures and access routes. Permanent habitat loss of notable habitats could occur as a result of the construction of overhead line infrastructure such as the siting of a tower, or the required clearance below the overhead line/conductors. However, a combination of	Scoped in (all impacts) during construction.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
				routeing, micro-siting, and habitat re-instatement and replacement will be employed as mitigation and reduce these impacts, where possible..	
Maintenance (new overhead line and substations)	Maintenance activities (site clearance, increased noise and lighting).	Temporary habitat loss disturbance and fragmentation.	Priority and notable habitats within Scoping Boundary. Ancient woodland and ancient and veteran trees up to 2 km from Scoping Boundary.	Yes - there is potential for temporary habitat loss, disturbance and fragmentation during necessary maintenance works to impact on these features. No permanent habitat loss or fragmentation is anticipated during maintenance works.	Scoped in (all impacts) during maintenance
Construction (new overhead line, reconductoring and substations)	Site clearance	Permanent habitat loss. Temporary habitat loss, disturbance and fragmentation or degradation.	Protected and notable species (all listed within Section 8.6) up to 2 km from Scoping Boundary.	Yes - habitats with potential to support protected and notable species to be potentially impacted by overhead line infrastructure, supporting structures, and associated access tracks. Permanent habitat losses may reduce the extent of habitat available to protected or notable species. Mitigation measures will include habitat	Scoped in (all impacts) during construction

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
				avoidance, reinstatement and compensation.	
				Habitat connectivity may be impacted in the short term but will be minimised where possible to avoid key habitats. Where unavoidable fragmentation or habitat degradation is unavoidable this will be a temporary effect until habitat re-instatement is established.	
Maintenance (new overhead line and substations)	Maintenance activities (site clearance, increased noise and lighting).	Temporary habitat loss, disturbance and fragmentation or degradation.	Protected and notable species (all listed within Section 8.6) up to 2 km from Scoping Boundary.	Yes – habitats with potential to support protected and notable species to be potentially impacted by maintenance activities. Habitat connectivity may be impacted in the short term but will be minimised where possible to avoid key habitats. Where unavoidable fragmentation or habitat degradation is unavoidable this will be a temporary effect until habitat re-instatement is established.	Scoped in (all impacts) during maintenance

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
				No permanent habitat loss or fragmentation is anticipated during maintenance works.	
Construction (new overhead line, reconductoring and substations)	Site clearance	Incidental mortality of protected or notable species.	Great crested newt, Non-breeding birds, Breeding birds, Bats, Badger, Hazel dormouse, Terrestrial invertebrates, Reptiles, and Other mammals (including only brown hare, hedgehog, polecat) up to 2 km from Scoping Boundary.	Yes - potential exists for works to impact protected and notable species which may be relatively isolated along the route corridor depending on the access routes (haul road) and result in direct mortalities. If the route corridor cannot avoid suitable habitat, mitigation options include a works Ecological Method Statement and or Natural England mitigation licence to avoid direct mortalities.	Scoped in (all impacts) during construction
Maintenance (new overhead line and substations)	Maintenance activities (any site clearance works)	Incidental mortality of protected or notable species.	Great crested newt, Non-breeding birds, Breeding birds, Bats,	Yes - potential exists for works to impact protected and notable species which may be relatively isolated along the route corridor depending on the access routes (haul road) and result	Scoped in (all impacts) during maintenance.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
			Badger, Hazel dormouse, Terrestrial invertebrates, Reptiles, and Other mammals (including only brown hare, hedgehog, polecat) up to 2 km from Scoping Boundary.	in direct mortalities. If the route corridor cannot avoid suitable habitat, mitigation options include a works Ecological Method Statement and or Natural England mitigation licence to avoid direct mortalities.	
Construction (new overhead line, reconductoring and substations). Maintenance (new overhead line and substations).	Site clearance Maintenance activities (any clearance works)	Incidental mortality of protected or notable species.	Riparian mammals (otter, beaver and water vole) and other aquatic species. Aquatic invertebrates up to 2 km from Scoping Boundary.	Yes - increased levels of incidental mortality may undermine the conservation status of protected or notable species. It is expected that direct impacts on watercourses (and therefore water vole, otter and other aquatic species) can be avoided through appropriate design and routing of access requirements. However, until routing and design can be confirmed, there is a potential requirement for mitigation and/or licensing and these features are scoped in.	Scoped in (all impacts) during construction and maintenance

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
Construction (new overhead line, reconductoring and substations). Maintenance (new overhead line and substations).	Construction activities (increased human presence, noise, lighting, pollution). Maintenance activities (increased noise and lighting).	Disturbance to protected or notable species (noise/vibration, visual, lighting).	Great crested newt, Non-breeding birds (intertidal), Non-breeding birds (terrestrial), Breeding birds, Bats, Badger, Otter, Beaver, Water vole, Hazel dormouse, Terrestrial and aquatic invertebrates, and Reptiles. Other mammals (including only brown hare, hedgehog, polecat) up to 2 km from Scoping Boundary.	Yes - trees, hedgerows and other habitats within the Scoping Boundary may be suitable for protected or notable species. Disturbance above a tolerable threshold may affect the extent of habitat that is available to protected or notable species. If the route corridor cannot avoid disturbance impacts, then mitigation (i.e. works under an Ecological Method Statement or Natural England EPSML/development licence) could be required.	Scoped in (all impacts) during construction and maintenance.
Construction (new overhead line,	Construction activities (altered traffic and	Changes in air quality, negatively	Designated sites and notable habitats (ancient	Yes – should screening of construction traffic flows show vehicle trips exceed	Scoped in (all impacts) during construction.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
reconductoring and substations). Maintenance (new overhead line and substations).	associated changes in air quality). Maintenance activities (changes in air quality)	impacting protected or otherwise notable habitats or designated sites within 200 m of the affected road network.	woodland and ancient and veteran trees) within 200 m of roads that may be affected by the Project.	the Institute of Air Quality Management (IAQM) criteria then habitat degradation can occur. Changes in air quality during maintenance are not predicted to lead to significant effects upon ecological features (for the reasons presented in Chapter 14 Air Quality, Table 14.5 , where it is proposed to scope this matter out.)	Scoped out (all impacts) during maintenance.
Construction (new overhead line, reconductoring and substations). Maintenance (new overhead line and substations).	Construction and maintenance activities (pollution).	Pollution impacts (dust deposition, water).	Designated sites up to 10 km and protected and notable habitats and species up to 2 km from Scoping Boundary.	Yes - potential for pollution or other indirect impacts during construction resulting in degradation of habitats, including those used by protected and notable species. This will be mitigated through implementation of the CEMP. Changes in water quality (Chapter 10 Water Environment) and dust (Chapter 14 Air Quality) during maintenance are not predicted to lead to significant effects upon	Scoped in (all impacts) during construction. Scoped out (all impacts) during maintenance.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
				ecological features due to the reasons presented within Chapter 10 Water Environment) and (Chapter 14 Air Quality and therefore are scoped out.	
Construction (new overhead line, reconductoring and substations). Maintenance (new overhead line and substations).	Site clearance Construction and maintenance activities (increased human presence).	Introduction of invasive non-native species leading to degradation of existing habitat quality and reduction in native species due to being outcompeted.	Designated sites up to 10 km and protected and notable habitats and species up to 2 km from Scoping Boundary.	Yes – potential for spread of invasive non-native species during works and movement around the site. Introduction of INNS can be detrimental to native habitats and species present.	Scoped in (all impacts) during construction and maintenance.
Construction (new overhead line, reconductoring and substations). Maintenance (new overhead line and substations).	Construction and maintenance activities (altered water quantity and quality).	Loss/reduction in habitat quality for protected and notable species due to changes in ground water levels or altered water quality.	Statutory and non-statutory designated sites within 2 km and protected and notable habitats and species.	Yes - potential for degradation of existing habitat quality, which could impact designated or otherwise notable habitat and protected and notable species.	Scoped in (all impacts) during construction and maintenance.
Operation (new overhead line section)	Birds colliding with infrastructure.	Collision mortality due to permanent	Breeding and non-breeding birds.	Yes – there is potential for a bird to fly into the new overhead line and be killed	Scoped in for new overhead line

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
Operation (new overhead line section)		structures/barriers.		either from the impact with the line, from hitting the ground, or from injuries sustained in the process. Birds that perch or nest on towers can be electrocuted by causing a short circuit, either by touching two live wires, or a live and an earthed component.	section during operational phase.
	Placement of permanent infrastructure.	Habitat fragmentation through the development creating a barrier to species dispersal.	Protected and notable species.	Yes – the new overhead line infrastructure could result in a degree of habitat fragmentation to terrestrial and potentially aquatic habitat.	Scoped in for new overhead line section during operational phase.
	Creation of permanent infrastructure.	Habitat gains for nesting birds, created by proposed towers.	Nesting birds (kestrel, hobby and peregrine)	No – the new overhead line towers would be most likely to benefit nesting corvids and certain birds of prey (principally kestrel, hobby and peregrine) and may contribute to regional or local population gains for these species. While some beneficial effects may occur these would be localised and are unlikely to be significant.	Scoped out for new overhead line section (all impacts) during operational phase.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
Operation (new overhead line section)	Creation of permanent infrastructure.	Increased predation of birds arising from potential increased population of predatory bird species nesting and roosting on proposed towers.	Statutory designated sites: Upper Nene Valley Gravel Pits SPA / Ramsar, The Wash SPA / Ramsar, Rutland Water SPA / Ramsar, and Nene Washes SPA / Ramsar. Non-breeding birds ⁴	Yes - where this occurs due to the new overhead line, there may be local depletions of prey species, particularly other birds. Any local or regional population decreases arising from this impact might adversely affect the conservation objectives of sites designated for qualifying ornithological interest features, although impacts on bird populations more generally are unlikely to be significant. Where this occurs near designated sites, there may be an impact on the populations of qualifying features, adversely affecting the integrity and function of the site.	Scoped in for new overhead line section during operational phase (for designated sites only).
	Increased electromagnetic fields (EMFs)	Impacts to navigation, behaviour and	Breeding and non-breeding birds.	Yes – effects of EMF on wildlife (especially birds, bats and insects) from new	Scoped in for new overhead line

⁴ This potential for effect is listed for “non-breeding” birds, because the duration and timing of breeding seasons varies for each species. Therefore, the breeding season of one species might overlap the non-breeding period of another.

Project phase	Source	Impact	Feature	Potential for significant effect	Proposed to be scoped in/out
		reproductive success.		overhead lines can lead to negative impacts relating to navigation and migration, reduced reproduction and survival rates and behavioural changes such as altered foraging habits. .	section during operation.
Operation and maintenance (reconductoring)	All potential sources	All potential impacts	All identified features	No - scoped out for reconductoring as the operational and maintenance phase for the reconductoring section will be the same as the current baseline and therefore, no significant effects are anticipated.	Scoped out (all impacts) during operation and maintenance.
Operation (substations)	Artificial lighting permanent infrastructure.	Light pollution spilling onto surrounding habitats, resulting in disturbance impacts to protected or notable species.	Protected and notable species.	Yes - there is potential for operational lighting at the substation locations to result in the accidental disturbance of protected or notable species. This potential impact is therefore scoped in until further details on lighting requirements for the substations are known.	Scoped in (all impacts) during operation.

8.9 Proposed Assessment Methodology

Proposed Data Sources

8.9.1 In addition to the data sources listed in Section 8.4, the following data sources will be used to inform the ecology and biodiversity assessment:

- Local Environmental Records Centre (LERC) to gain information on pre-existing ecological data (i.e. locations of non-statutory sites designated for nature conservation, existing records of protected, notable and invasive non-native species (INNS) within 2 km of the Scoping Boundary. The following LERC will be contacted:
 - Leicestershire and Rutland Environmental Records Centre (LRERC);
 - Greater Lincolnshire Nature Partnership (GLNP);
 - Northamptonshire Biodiversity Records Centre (NBRC); and
 - Nottinghamshire Biological and Geological Record Centre (NBGRC).
- Woodland Trust Ancient Tree Inventory (Ref 8.18) for records of veteran and ancient trees.
- Environment Agency Ecology and Fish Data for species records of fish, macroinvertebrate and macrophyte species (Ref 8.19).
- Environment Agency Catchment Data Explorer for data on WFD water bodies and water catchments (Ref 8.20).
- Data held by the relevant councils, and local groups and organisations, where not already accessed through the LERCs for example existing bat species records from local bat groups.
- The British Trust for Ornithology (BTO) Wetland Birds Survey (WeBS).
- The BTO data report (all species).
- Consultation is required with PTES to ascertain whether it is likely that dormice are present within the draft Order Limits when defined
- Avifauna and bird reports at a regional, county or local level, collected by regional volunteer wildlife conservation and recording groups.
- Data held by the RSPB.
- Data held by adjoining or overlapping National Grid Schemes such as Grimsby to Walpole.

Technical Guidance

8.9.2 The ecology and biodiversity assessment in the ES will be undertaken in accordance with the following good practice and guidance documents. Please refer to chapters such as **Chapter 7 Landscape** and **Chapter 7 Visual**, **Chapter 9 Cultural Heritage**, **Chapter 10 Water Environment**, **Chapter 14 Air Quality** and **Chapter 15 Noise and Vibration** for relevant guidance that this chapter may use to inform the ecology and biodiversity assessment:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater, Coastal and Marine (Ref 8.21);
- Natural England and Department for Environment, Food and Rural Affairs (Defra) Standing Advice (protected species) Ref 8.22);
- Birds of Conservation Concern (BoCC) Ref 8.23);
- The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Ref 8.24);
- The Statutory Biodiversity Metric including Calculation Tool, User Guide, and Technical Annex 1: Condition Assessment Sheets and Methodology (Ref 8.2);
- Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide Ref 8.25);
- The UK Habitat Classification System (Ref 8.27);
- The Modular River Survey (MoRPh) Technical Reference Manual (2022) (Ref 8.28);
- Bat Surveys for Professional Ecologists: Good Practice Guidelines (Ref 8.29);
- Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*) (Ref 8.30);
- The Great Crested Newt Mitigation Guidelines (Ref 8.31);
- Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation (Ref 8.32);
- The Mammal Society Surveying Badgers (Ref 8.33);
- The Water Vole Mitigation Handbook (Ref 8.34);
- The Water Vole Conservation Handbook (Ref 8.35);
- Ecology of the European Otter (Ref 8.36) and Monitoring the Otter *Lutra lutra* (Ref 8.37);
- British Standards Institution (2006) BS EN 149622006, BS 6068-5.402006: Water quality – Guidance and selection of fish sampling methods. London BSI. (Ref 8.38);
- Freshwater macro-invertebrate analysis of riverine samples (Ref 8.38);
- Freshwater macro-invertebrate sampling in rivers (Ref 8.40);
- UKTAG River Assessment Method Macrophytes and Phytobenthos: Macrophytes (River LEAFPACS2) (Ref 8.41);
- Bird Survey and Assessment Steering Group. (2022). Bird Survey Guidelines for assessing ecological impacts (Ref 8.13);
- RSPB Bird Monitoring Methods (1998) (Ref 8.43);
- BTO Common Birds Census Instructions (1983) (Ref 8.44);

- BTO WeBS methods⁵ (Ref 8.45);
- Species – specific methods for raptors (Hardey *et al.*, 2013) (Ref 8.46) and barn owl (Shawyer, 2012) (Ref 8.47);
- JNCC NVC Users' Handbook (Ref 8.48);
- Hazel Dormouse Mitigation Handbook (2025) (Ref 8.49);
- White clawed-crayfish Standing Advice (Ref 8.50);
- Beavers, Advice for making planning decisions (Ref 8.51);
- Terrestrial Invertebrates – Surveying Terrestrial and freshwater invertebrates for conservation evaluation (Ref 8.52); and
- Bibby, C.J., Hill, D.A., Burgess, N.D. and Mustoe, S. (2000) Bird Census Techniques. 2nd Edition. Academic Press: London (Ref 8.53).

Expected Survey Requirements

8.9.3

Review of the baseline detailed in Section 8.5 identified the requirements for the following surveys and assessments to support the ecology and biodiversity assessment where they are appropriate. Survey methods and timings are given in more detail in **Appendix 8A Survey Strategy**:

- Preliminary Ecological Walkover to further inform scope of UKHab (Ref 8.27) and protected species surveys (from PRoW only);
- UKHab habitat survey of Order Limits and 50 m buffer including habitat condition surveys to inform BNG;
- aquatic features/habitats – MoRPh River or Lake Naturalness surveys required to inform BNG;
- detailed habitat/vegetation surveys where required as determined following UKHab survey; National Vegetation Classification (NVC) surveys and hedgerow surveys within the Order Limits;
- arboriculture surveys including presence of Ancient, Veteran and Notable trees (this would be undertaken by an arboricultural surveyor);
- amphibian - great crested newt Habitat Suitability Index (HSI) surveys up to 250 m from Order Limits;
- amphibian - great crested newt environmental DNA (eDNA) surveys up to 250 m from Order Limits;
- badger surveys within and up to 30 m from the Order Limits;
- preliminary bat roost appraisal surveys of trees and woodland, which identify requirements for bat emergence and/or detailed aerial inspection within and up to 50 m from the Order Limits;
- bat activity surveys at selected locations along the route;

⁵ Published on the BTO WeBS webpage: <https://www.bto.org/our-science/projects/wetland-bird-survey/taking-part/counter-resources>

- birds – breeding bird surveys– vantage point and transect surveys;
- birds – wintering bird surveys – vantage point surveys;
- birds – Schedule 1 of Wildlife and Countryside Act (1981) (Ref 8.8), species (e.g. barn owl);
- invertebrate surveys (terrestrial and aquatic, including white-clawed crayfish) within the Order Limits;
- riparian mammal surveys:
 - otter targeted survey of watercourses/ditches and associated areas of terrestrial habitat up to 500 m from the point of impact;
 - water vole - targeted survey would be undertaken of sections of watercourses/ditches that cross the Order Limits and up to 500 m adjacent
 - beaver - targeted survey would be undertaken of sections of watercourses/ditches that cross the Order Limits and up to 500 m adjacent
- reptile presence/absence surveys within the Order Limits; and
- invasive non-native plant species (INNPS) within the Order Limits.

8.9.4 The surveys will be undertaken to inform any protected species mitigation licences (where required) prepared in draft for advisory comment from Natural England, or mitigation strategies for non-licensed protected species such as reptiles, all of which will form part of the application for development consent.

8.9.5 A habitat condition assessment will also be undertaken on affected land within the Order Limits, where required, to inform the BNG assessment. The baseline information gathered from this, and other surveys, will be used to develop an appropriate habitat mitigation strategy.

8.9.6 All ecological surveys will be targeted to be undertaken within the appropriate seasons, where possible, and will follow best-practice methods. Any limitations to this will be documented accordingly. Due to the variability of species, the distance at which the Project could affect each species can be different. Therefore the Study Areas used for specific ecological surveys will differ dependent on the species and these will be assessed and updated using appropriate guidelines. Further details are presented within **Appendix 8A Ecology Survey Strategy**.

Proposed Assessment Methodology

8.9.7 The impact assessment will be undertaken in accordance with best practice guidance for Ecological Impact Assessment (EclA), issued by CIEEM entitled “Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater, Coastal Marine” (Ref 8.21) as summarised below.

8.9.8 The principal steps involved in the CIEEM approach can be summarised as:

- Ecological features that are both present and might be affected by the Project are identified (both those likely to be present at the time works begin and those predicted to be present at a set time in the future) through a combination of targeted desk-based study and field survey work to determine the relevant baseline conditions;

- The importance of the identified ecological features is evaluated, placing their relative biodiversity and nature conservation value into geographic context, which is then used to define the relevant ecological features that need to be considered further;
- The changes or perturbations predicted to result as a consequence of the Project (i.e. the potential impacts) and which could potentially affect relevant ecological features are identified and their nature described. Established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;
- The likely significant effects (beneficial or adverse) on relevant ecological features are then assessed, and where possible quantified;
- Measures to avoid or reduce any likely significant effects, if possible, are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines) and if necessary, measures to compensate for likely significant effects on features of nature conservation importance are also included;
- The residual effects of the Project are reported; and
- Scope for ecological enhancement is considered.

Sensitivity / nature conservation value of ecological features

- 8.9.9 To support a focussed assessment, as designed in section 8.8, there is a need to determine the scale of importance of the relevant ecological features identified through the desk studies and field surveys undertaken for the Project. The importance of each relevant ecological feature has been defined with reference to the geographical level at which it matters.
- 8.9.10 The frames of reference that will be used for the assessment, based on Section 4.7 of the CIEEM guidelines (Ref 8.21) are shown below in **Table 8.6**.

Table 8.6 Importance of features

Importance	Description
International	Ramsar Sites, SACs and SPAs (normally within the geographic area of Europe)
UK or National	Great Britain, but considering the potential for certain ecological features to be more notable (of higher value) in England, with context relative to Great Britain as a whole)
Regional	East Midlands and East Anglia
County	Lincolnshire, Leicestershire, West and North Northamptonshire and Nottinghamshire
District	Town or parish area e.g. South Holland, South Kesteven, Melton, Harborough

Importance	Description
Local	Ecological features that do not meet the criteria for valuation at a District or higher level, but that have sufficient value to merit retention or mitigation
Negligible	Common and widespread ecological features of low priority such that they do not require retention or mitigation at the relevant location to otherwise maintain a favourable nature conservation status

- 8.9.11 The importance of species populations is determined on the basis of their size, recognised status (such as recognised through published lists of species of conservation concern and designation of local Biodiversity Action Plan (BAP) status or within Local Nature Recovery Strategies (LRNS) and legal protection. For example, bird populations exceeding 1 per cent of published information on biogeographic populations are considered to be of international importance, those exceeding 1 per cent of published data for national populations are considered to be of national importance.
- 8.9.12 In assigning importance to species populations, while the status of the species in terms of any legal protection is considered, it is also important to consider other factors such as its distribution, rarity, population trends and the size of the population which would be affected. For example, whilst great crested newt are afforded protection under the relevant legislation and therefore conservation of the species is of significance at the international level, this does not mean that every great crested newt population is internationally important. It is important to consider the particular population in its context. The assessments of importance rely on the professional opinion and judgment of suitably experienced ecologists.
- 8.9.13 Plant communities will be assessed both in terms of their intrinsic importance and for their importance as a resource for protected species whose habitat is also specifically protected. Also, species of nature conservation concern which may be associated with a particular habitat will be considered.
- 8.9.14 Due regard will also be given to the legal protection afforded to species during the development of mitigation and compensation measures to be implemented for the Project. For European Protected Species there is a requirement that the Project should not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 8.9.15 Assessing the value of features will include consideration of both existing and future predicted baseline conditions. Therefore, the description and valuation of ecological features will take account of any likely changes, such as trends in the population size or distribution of species, likely changes to the extent of habitats and the effects of other proposed developments or land use changes.
- 8.9.16 All ecological features of local importance and above, where there is the potential for the Project to impact them directly or indirectly, will be taken forward to impact assessment and will be the “relevant ecological features” for the purposes of assessment.

Characterisation of Impact

- 8.9.17 In line with Section 1.21 of the CIEEM guidelines (Ref 8.21) the terminology used within the EclA draws a clear distinction between the terms “impact” and “effect”. For the purposes of this EclA these terms are defined as follows:
- Impact – actions resulting in changes to an ecological feature. For example, construction activities of a development removing a tree or hedgerow; and
 - Effect – outcome resulting from impact acting upon the conservation status or structure and function of an ecological feature, e.g. the effects on a population of bats as a result of the loss of a bat roost.
- 8.9.18 When characterising potential impacts (and where relevant the resultant effects), consideration is given to the following characteristics likely to influence this as shown in **Table 8.7**.

Table 8.7 Characterisation of impact

Character of Impact	Description
Beneficial (positive) /Adverse (negative)	The change is likely to be in accordance with the nature conservation objectives and policy and is that change: • Positive (beneficial) - change that improves the quality of the environment or halts or slows an existing decline in quality e.g. increasing extent of a habitat or conservation value; or • Negative (adverse) – a change that reduces the quality of the environment e.g. destruction of habitat.
Spatial extent	The spatial or geographical area or distance over which the impact or effect may occur under a suitably representative range of conditions.
Magnitude	The ‘size’, ‘amount’ or ‘intensity’ and ‘volume’ of an impact – this is described on a quantitative basis where possible.
Duration	The time over which an impact is expected to last prior to recovery or replacement of the resource or feature. Consideration has been given to how this duration relates to relevant ecological characteristics such as a species’ lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact.
Timing and frequency	Consideration of the point at which the impact occurs in relation to critical life-stages or seasons.
Reversibility	Whether the impact is temporary or permanent. A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. A permanent impact is one from which recovery is either not possible or cannot be achieved within a reasonable timescale (in the context of the feature being assessed).

- 8.9.19 Cumulative effects result from the combined impacts of multiple developments on a feature, as well as intra-project cumulative impacts and effects (for example, where a single receptor is affected by more than one source of impact from the Project such as combined noise and lighting impacts on the same sensitive feature).

Significance of effects

- 8.9.20 For each ecological feature only those characteristics relevant to understanding the ecological effect of the Project and determining the significance are described. The determination of the significance of effects will be made based on the predicted effect on the structure and function, or conservation status, of relevant ecological features, as follows:
- Not significant – no effect on structure and function, or conservation status; and
 - Significant – structure and function, or conservation status is affected.
- 8.9.21 Sections 5.24 to 5.28 of the CIEEM guidelines (Ref 8.21) state that effects should be determined as being significant when *“an effect either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)”*.
- 8.9.22 Using this information and judgment, it is determined whether the effects will be significant or not on the structure and integrity (of site or ecosystems) or conservation status (of habitats and or species) of each important ecological feature and the effect significance is determined at the appropriate geographical scale.
- 8.9.23 The general approach proposed to be used in the ES for evaluating the significance of effects considering the sensitivity of the feature and the characterisation of impacts is outlined in **Table 8.8**.
- 8.9.24 There are a number of approaches for determining the significance of effects on ecological features. Whilst the CIEEM guidelines (Ref 8.21) recommends the avoidance of the use of the matrix approach for categorisation (major, moderate and minor), in order to provide consistency of terminology within the ES, as presented in **Chapter 5 EIA Approach and Methodology**, the CIEEM assessment will be translated into the classification of effects scale, as outlined in **Table 8.8**, but still remain consistent with the CIEEM guidelines. As a rule, major and moderate effects are considered to be significant, whilst minor and neutral/negligible effects are considered to be not significant. However, professional judgement will also be applied when concluding whether an effect is significant or not, including taking account of whether the effect is permanent or temporary, its duration and frequency, whether it is reversible, and/or its likelihood of occurrence.

Table 8.8 Relating CIEEM assessment terms to those used in Chapter 5 EIA Approach and Methodology

Effect classification terminology used in Chapter 5 EIA Approach and Methodology	Equivalent CIEEM Assessment
Major beneficial	Beneficial effect on structure/function or conservation status at regional, national or international level.
Moderate beneficial	Beneficial effect on structure/function or conservation status at county and district level.
Minor beneficial	Beneficial effect on structure/function or conservation status at local level.
Neutral/negligible	No effect on structure/function or conservation status.
Minor adverse	Adverse effect on structure/function or conservation status at a local level.
Moderate adverse	Adverse effect on structure/function or conservation status at a county and district level.
Major adverse	Adverse effect on structure/function or conservation status at a regional, national or international level.

8.10 Supporting Assessments

- 8.10.1 The Ecology and Biodiversity Chapter of the ES will be supported by the following assessments, the scope of which will be consulted on with relevant stakeholders to seek agreement.

Habitats Regulations Assessment (HRA)

- 8.10.2 A HRA, commencing with a Stage 1: Test of Likely Significant Effects and including, if required, a Stage 2: Statement to Inform Appropriate Assessment will also be produced in line with Planning Inspectorate Advice (Ref 8.14). An Evidence Plan will be produced, if required, to document the evidence requirements for the Appropriate Assessment.

Biodiversity Net Gain (BNG)

- 8.10.3 A BNG assessment will be undertaken using the Statutory Biodiversity Metric (Ref 8.25) in accordance with the accompanying guidance and best practice principles. The UKHab classification (Ref 8.27) and habitat condition scoring, including the results of watercourse condition surveys, will inform the assessment of the BNG baseline within the Metric.

8.11 Assumptions and Limitations

- 8.11.1 Assumptions and limitations used and acknowledged in defining the scope for further assessment at this early stage of the Project are listed below.

- 8.11.2 In the absence of protected species and non-statutory site desk study and survey data at this stage, a precautionary approach has been taken and professional judgement, based on experience of similar linear schemes, has been used where required to inform the scope of the assessment.
- 8.11.3 Where possible, nationally recognised standard survey methodologies will be used to reduce limitations for ecological evaluation and impact assessment.
- 8.11.4 Land access for baseline surveys may be limited, in which case a precautionary approach will be taken to predicting the most likely habitats to be present and any protected/notable species they support, on the basis of existing desk study data and aerial imagery. Specific limitations for each survey type will be detailed in the relevant baseline report.
- 8.11.5 Bird scoping surveys currently concentrate only on Section 1, 2 and part of Section 3 as these areas are subject to new overhead line and substations. Works Section 4, 5 and part of Section 3 include reconductoring existing towers and therefore no additional operational impact is anticipated., however surveys will still be undertaken and the extent and survey methods are currently being developed.
- 8.11.6 An assumption has been made that the following habitats will be retained with appropriate buffers as part of the Project where possible:
- designated sites;
 - ancient woodland and ancient or veteran trees;
 - woodlands;
 - buildings and structures;
 - aquatic environments such as ponds, watercourses (assuming watercourses are not lost as a whole and that overhead line will cross over watercourses); and
 - hedgerows (assuming hedgerows are not lost as a whole, but some individual hedgerows could require either a temporary or permanent gap through to facilitate the haul road, which would be minimised to smallest necessary).
- 8.11.7 It is currently assumed that should there be the requirement for the potential mitigation of ecological features, suitable on-site areas will be made available to deliver the required outcomes as a preference over off-site solutions.

8.12 Conclusion

- 8.12.1 This Scoping Report chapter has outlined relevant legislation, policy and guidance in relation to the ecology and biodiversity assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, and the best practice impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and features in **Table 8.5**.
- 8.12.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

8.13 References

- Ref 8.1 H.M. Government (2021) Environment Act 2021 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted> [Accessed 27 July 2025]
- Ref 8.2 Department for the Environment, Food and Rural Affairs (February 2024). Statutory Biodiversity Metric tools and guides [online]. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> [Accessed 24 July 2025]
- Ref 8.3 Multi-Agency Geographic Information for the Countryside (MAGIC) website [online]. Available at: <https://magic.defra.gov.uk/> [Accessed 24 July 2025]
- Ref 8.4 Natural England Designated Sites View [online]. Available at: <https://designatedsites.naturalengland.org.uk/> [Accessed July 2025].
- Ref 8.5 Joint Nature Conservation Committee (JNCC) website [online]. Available at: <https://jncc.gov.uk/> [Accessed July 2025].
- Ref 8.6 Google Maps: Map data ©2025 [online] Available at: <https://www.google.com> [Accessed 1st August 2025]
- Ref 8.7 H.M. Government (2006). Natural Environment and Rural Communities Act 2006. HMSO, London [online]. Available at: <https://www.legislation.gov.uk/ukpga/2006/16/contents> [Accessed 31st July 2025].
- Ref 8.8 H.M. Government (1981). Wildlife & Countryside Act 1981. HMSO, London [online] Available at: <https://www.legislation.gov.uk/ukpga/1981/69> [Accessed 31st July 2025].
- Ref 8.9 H.M. Government (2018). The Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London [online]. Available at: <https://www.legislation.gov.uk/uksi/2017/1012/contents/made> [Accessed 31st July 2025].
- Ref 8.10 H.M. Government (2019) The Invasive Alien Species (Enforcement and Permitting) Order 2019 [online]. Available at: <https://www.legislation.gov.uk/uksi/2019/527/article/1/made> [Accessed 31st July 2025].
- Ref 8.11 NatureScot, (2025). Publications and Documents [online] Available at: <https://www.nature.scot/doc/guidance-assessment-and-mitigation-impacts-power-lines-and-guyed-meteorological-masts-birds> [Accessed 1st August 2025].
- Ref 8.12 NatureScot, (2025). Publications and Documents [online] Available at: <https://www.nature.scot/doc/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms> [Accessed 1st August 2025].
- Ref 8.13 Bird Survey & Assessment Steering Group. (2025). Bird Survey Guidelines for assessing ecological impacts, <https://birdsurveyguidelines.org> [1st August 2025]

- Ref 8.14 H.M Government (2024) Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Online) Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments> [Accessed 31st July 2025]
- Ref 8.15 National Grid; Holford Rules [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 31st July 2025].
- Ref 8.16 National Grid (2025) The Great Grid Upgrade. Western Marsh to East Leicestershire. Corridor Preliminary Routing and Siting Study. Available online at Website: <https://www.nationalgrid.com/document/561431/download> [Accessed August 2025]
- Ref 8.17 H.M. Government (1990) Environmental Protection Act 1990 [online]. Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed 31st July 2025].
- Ref 8.18 Woodland Trust Ancient Tree Inventory [online]. Available at: <https://ati.woodlandtrust.org.uk/> [Accessed 31st July 2025].
- Ref 8.19 Environment Agency Ecology and Fish Data online]. Available at: <https://environment.data.gov.uk/ecology/explorer/> [Accessed 31st July 2025].
- Ref 8.20 Environment Agency Catchment Data Explorer for data [online]. Available at: <https://environment.data.gov.uk/catchment-planning/> [Accessed 21st July 2025].
- Ref 8.21 Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2019). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. Second Edition v1.1. CIEEM, Winchester.
- Ref 8.22 Natural England and Department for Environment, Food & Rural Affairs (2022). Protected species and development: advice for local planning authorities [online]. Available at: <https://www.gov.uk/guidance/protected-species-how-to-review-planningapplications> [Accessed 31st July 2025].
- Ref 8.23 Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747.
- Ref 8.24 IUCN. 2022. The IUCN Red List of Threatened Species. Version 2022-2 [online]. Available at: <https://www.iucnredlist.org> [Accessed 3 June 2024].
- Ref 8.25 H.M. Government (2025) Statutory biodiversity metric tools and guides [online]. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> [Accessed 31st July 2025].
- Ref 8.26 CIEEM, IEMA & CIRIA (2019). Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide [online]. Available at: <https://cieem.net/wpcontent/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf> [Accessed 3 June 2024].
- Ref 8.27 UKHab (2018.2022). The UK Habitat Classification System [online]. Available at: <https://ukhab.org/> [Accessed 31st July 2025].

- Ref 8.28 Modular River Survey (2018) The MoRPH Survey [online]. Available at https://modularriversurvey.org/wp-content/uploads/MoRPh-Manual-ver-14_Oct22.pdf
- Ref 8.29 Collins (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. Fourth Edition. London: The Bat Conservation Trust.
- Ref 8.30 Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M, (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155 The Great Crested Newt Mitigation Guidelines.
- Ref 8.31 English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature.
- Ref 8.32 Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- Ref 8.33 Harris. S., Cresswell, P. & Jefferies, D. (1989) Surveying Badgers. The Mammal Society.
- Ref 8.34 Dean, M., Strachan, R. Gow, D., Andrews, R., (2024) The Water Vole Mitigation Handbook. Mammal Society Mitigation Guidance Series. Mammal Society.
- Ref 8.35 Dean, M. (2021) Water Vole Field Signs and Habitat Assessment. A Practical Guide to Water Vole Surveys. Pelagic Publishing.
- Ref 8.36 Ecology of European Otter, Conserving Natura 2000 Rivers Ecology Series No.10 English Nature.
- Ref 8.37 Chanin, P. (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.
- Ref 8.38 British Standards Institution (2006) BS EN 14962:2006, BS 6068-5.40:2006: Water quality - Guidance on the scope and selection of fish sampling methods, London BSI.
- Ref 8.39 Environment Agency (2014). Freshwater macro-invertebrate analysis of riverine samples Operational Instruction 024_08. Environment Agency, Bristol, UK.
- Ref 8.40 Environment Agency (2017). Freshwater macro-invertebrate sampling in rivers Operational Instruction 018_08. Environment Agency, Bristol, UK.
- Ref 8.41 WFD-UKTAG (Water Framework Directive – United Kingdom Advisory Group) (2014). UKTAG River Assessment Method Macrophytes and Phytobenthos: Macrophytes (River LEAFACS2).
- Ref 8.42 NatureScot (2017) Recommended bird survey methods to inform impact assessment of onshore windfarms. Version 2.
- Ref 8.43 Gilbert, G., Gibbons D.W., and Evans, J. (1998). Bird Monitoring Methods. RSPB, Sandy.
- Ref 8.44 Marchant, J.H. (1983). Common Birds Census Instructions. British trust for Ornithology, Tring.
- Ref 8.45 British Trust for Ornithology (2018). Wetland Bird Survey Counter Resources [online]. Available at: <https://www.bto.org/our-science/projects/wetland-bird-survey/takingpart/counter-resources> [Accessed 31st July 2025].

- Ref 8.46 Hardey, J., Crick, H., Wenham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). Raptors: a field guide to survey and monitoring (3rd Edition). The Stationery Office, Edinburgh.
- Ref 8.47 Shawyer, C. R. (2011). Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester.
- Ref 8.48 Rodwell, J.S. (2006) NVC Users' Handbook, JNCC, Peterborough
- Ref 8.49 Wells, D., Chanin, P. & Gubert, L. (2025) Hazel Dormouse Mitigation Handbook. The Mammal Society
- Ref 8.50 Peay S (2003). Monitoring the White-clawed Crayfish *Austropotamobius pallipes*. Conserving Natura 2000 Rivers Monitoring Series No. 1, English Nature, Peterborough.
- Ref 8.51 H.M. Government (2025) Guidance, Beavers Advice for making planning decisions (online) Available at: <https://www.gov.uk/guidance/beavers-advice-for-making-planning-decisions> [Accessed 31st July 2025].
- Ref 8.52 Drake.C.M., Lott. D.A., Alexander.K., Web.J. (2007) Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005.
- Ref 8.53 And Bibby, C.J., Hill, D.A., Burgess, N.D. and Mustoe, S. (2000) Bird Census Techniques. 2nd Edition. Academic Press: London.

9. Cultural Heritage

Contents

9.	Cultural Heritage	9-1
9.1	Introduction	9-1
9.2	Legislation, Policy and Guidance	9-2
9.3	Consultation and Engagement	9-2
9.4	Study Area	9-5
9.5	Baseline Conditions	9-5
	Data Sources	9-5
	Baseline	9-6
	Future Baseline	9-10
9.6	Design and Control Measures	9-10
	Design Measures	9-10
	Control and Management Measures	9-11
9.7	Potential for Significant Effects	9-12
9.8	Proposed Assessment Methodology	9-17
	Study Area	9-17
	Proposed Data Sources	9-17
	Proposed Assessment Methodology	9-18
9.9	Assumptions and limitations	9-22
9.10	Conclusion	9-22
	Table 9.1 Engagement with Stakeholders	9-3
	Table 9.2 Impacts, receptors and the potential for significant effect	9-14
	Table 9.3 Criteria for assessing the value of heritage assets	9-19
	Table 9.4 Factors influencing the assessment of magnitude of impact	9-20
	Table 9.5 Determination of significance matrix	9-21
	References	9-24

9. Cultural Heritage

9.1 Introduction

- 9.1.1 This chapter presents how the cultural heritage assessment will consider the potential likely significant effects on cultural heritage receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed in the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 9.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 9.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 9.1.4 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 6 Landscape** – changes to the landscape resulting in adverse effects from the Project changing the setting and value of heritage assets.
 - **Chapter 7 Visual** – the visual imposition and visibility of the Project within the landscape may result in changes to the setting and value of heritage assets resulting in significant effects.
 - **Chapter 8 Ecology and Biodiversity** – loss or creation of habitats related to the Project may result in changes to the setting and value of heritage assets and/ or the historic landscape, resulting in significant effects.
 - **Chapter 11 Geology and Hydrogeology** – changes in hydrogeology can affect the survival of organic archaeological remains, such as wooden artefacts, textiles and plant remains, particularly in areas with historically high-water tables such as the Fens, this can result in significant effects.
 - **Chapter 15 Noise and Vibration** – noise and vibration impacts arising from the Project may result in changes to the setting and value of heritage assets resulting in significant effects.
- 9.1.5 This chapter is supported by the following figures and appendices:
- **Figure 9.1 Designated Heritage Assets;**

- **Appendix 9A Designated Heritage Assets;** and
- **Appendix 9B Cultural Heritage Survey Strategy.**

9.2 Legislation, Policy and Guidance

- 9.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on the cultural heritage associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context. Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**
- 9.2.2 The principle relevant guidance and standards that have informed the scoping process are listed below and will also be taken into account as part of the ES assessment, along with other relevant material:
- National Planning Practice Guidance: Historic Environment (Ref 9.1).
 - Historic Environment Good Practice Advice in Planning Note 2. Managing Decision Taking in the Historic Environment (Ref 9.2).
 - Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets (Ref 9.3).
 - Historic Environment Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12 (Ref 9.4).
 - Chartered Institute for Archaeologists (CIfA) Standard and guidance for historic environment desk-based assessment (Ref 9.5).
 - CIfA Code of conduct: professional ethics in archaeology (Ref 9.6).
 - Institute of Sustainability and Environmental Professionals (ISEP), the Institute of Historic Building Conservation (IHBC) and CIfA Principles of Cultural Heritage Impact Assessment in the UK (Ref 9.7).

9.3 Consultation and Engagement

- 9.3.1 The ES will be informed by consultation and engagement with stakeholders, including Historic England, historic environment officers from Lincolnshire and Leicestershire County Councils, and West Northamptonshire and North Northamptonshire Councils, and local authority conservation officers. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that local views and specialist expertise can be considered as part of the ES.
- 9.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 9.1** below.

Table 9.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Historic England	The Applicant should consult the local authority archaeological advisors to identify potential non-designated heritage assets which could be substantial constraints. A geoarchaeological desk-based assessment should be undertaken before the geophysical survey strategy is agreed so alternatives to magnetometry can be used if needed (specifically in the fens). Are construction impacts being considered for the reconductoring – noted that, on another scheme, a haul road has followed the entire length of the overhead line.	Detailed baseline assessment is being undertaken to inform option development and assessment, which will draw on the local authority Historic Environment Records (HER) and engagement with the archaeological officers will be undertaken as part of this. Geoarchaeological assessment will be included as part of the baseline prepared to support the ES and will also inform the development of geophysical survey methods. Construction impacts are scoped in for assessment which will include reconductoring.
Lincolnshire County Council	In summary, in relation to built heritage and historic landscape: 1. All heritage receptors should remain in scope until tower positions and substation envelopes are fixed. Premature scoping-out of potentially affected assets should be avoided. 2. Produce detailed ZTV and Zol studies for all designated heritage assets (listed buildings, RPGs, scheduled monuments and conservation areas). 3. Apply the Holford Rules – including avoiding wirescape in flat fenland areas and	1. The heritage receptors proposed for assessment are included in this chapter and Appendix 9A Designated Heritage Assets. 2. A Zone of Theoretical Visibility (ZTV) will be prepared and used to inform the assessment reported in the ES, as described in Section 9.8. 3. The routing and siting of the Project has been informed by the Horlock Rules and Holford Rules as described in Chapter 3 Main Alternatives Considered. 4. and 6. A summary of the options identification and

Stakeholder	Summary of response	Consideration in the Scoping Report
	using natural landform and vegetation to reduce setting impacts. 4. Share draft route refinement and design iterations at each stage. Early, iterative engagement will help streamline the process at later stages. 5. Provide a draft outline heritage mitigation strategy (including historic landscape restoration and design measures) at the statutory consultation stage. 6. Provide a summary of the design evolution, setting out how mitigation and route adjustments have been used to avoid or reduce harm to sensitive heritage sites. In summary in relation to archaeology: 1. The EIA will require the full suite of comprehensive desk-based research, non-intrusive surveys, and intrusive field evaluation for the full extent of proposed impact. 2. sufficient baseline information should be provided to identify and assess the impact on known and potential heritage assets.	selection, and development of the graduated swathe and Scoping Boundary is included in Chapter 3 Main Alternatives Considered. Further engagement with statutory consultees will be undertaken during the pre-application stage of the Project. 5. Where significant impacts to heritage assets are determined through the assessment, mitigation will be explored. This will be available for review at statutory consultation. 1. & 2. The Cultural Heritage assessment will be undertaken as described Section 9.8 of this report and the findings reported in the ES.
CPRE Rutland and Lincolnshire	CPRE expressed concerns regarding the setting of the Scheduled motte and bailey at New Hall Grange and requested relocating infrastructure away to a less sensitive area. They considered that a heritage centred mitigation strategy should be proposed if relocation is not feasible.	Impacts from the Project on the moated site of Newhall Grange scheduled monument (NHLE 1009981) will be considered within the assessment and the findings reported in the ES. This will be undertaken using the methodology described in Section 9.8, including consideration of the setting of heritage assets.

Stakeholder	Summary of response	Consideration in the Scoping Report
	CPRE also noted that neither a heritage-setting impact assessment nor an alternatives assessment had been undertaken in line with NPS EN-5.	Chapter 3 Main Alternatives Considered summarises the consideration of alternatives to date, further consideration will be reported in the ES.

9.4 Study Area

- 9.4.1 The Study Area is the geographical extent within which heritage assets may experience effects as a result of the Project. Effects to heritage assets may arise during construction or operation. Effects to heritage assets may arise as a result of physical impacts to their fabric or through changes to their setting.
- 9.4.2 For the purpose of this Scoping Report, the Study Area includes the land within the Scoping Boundary and a buffer of 1 km from the Scoping Boundary for all designated heritage assets. For higher graded assets (i.e. World Heritage Sites, scheduled monuments, grade I and II* listed buildings, grade I and II* registered parks and gardens (RPG) and registered battlefields) the Study Area has been extended to 3 km from the Scoping Boundary, in recognition that high value assets may have a greater potential for their setting to positively contribute to their significance, as well as for the influence of that setting to extend over a larger area. It should be noted that only World Heritage Sites designated under the ‘cultural criteria’ are considered as heritage assets. Natural sites, if applicable, would be considered as part of **Chapter 8 Ecology and Biodiversity** and/or **Chapter 11 Geology and Hydrogeology**.
- 9.4.3 For the ES, which requires a more granular study area to adequately assess all potential impacts, the Study Area will be defined according to the significance of the asset and the potential impacts of the Project, following further assessment and design work to identify a proposed alignment. Effort will be made to agree the study area with relevant consultation bodies. The Study Area for the ES is set out in Section 9.8 and will be refined as necessary based on the final Order Limits.
- 9.4.4 Specific non-designated heritage assets have not been identified as part of this scoping exercise. They will be identified and assessed in the ES using the methodology defined in this Scoping Report and appended Survey Strategy (**Appendix 9B Cultural Heritage Survey Strategy**). An overarching assumption has been made that there will be extensive non-designated heritage assets present across the Study Area, so the inclusion of specific assets would not alter the proposed methodology or scope at this stage. A buffer of 1km from the Order Limits will be used to identify non-designated heritage assets for the ES.

9.5 Baseline Conditions

Data Sources

- 9.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:

- Historic England’s National Heritage List for England (NHLE) (Ref 9.8);
- British Geological Survey geology viewer (Ref 9.9);
- Natural England’s National Character Area (NCA) Profiles (Ref 9.10); and
- other readily available online sources.

Baseline

Overview

- 9.5.2 The locations of heritage assets within the Scoping Boundary and surrounding Study Areas are shown in **Figure 9.1 Designated Heritage Assets**.
- 9.5.3 The designated heritage assets discussed within this chapter are identified by their unique identification number assigned by the NHLE (e.g. NHLE 1003669).
- 9.5.4 Full lists of the designated heritage assets are provided in the gazetteers in **Appendix 9A Designated Heritage Assets**, with key heritage assets highlighted in the Section summaries below.
- 9.5.5 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the Sections along the Scoping Boundary in the respective text below.
- 9.5.6 Across the whole of the Scoping Boundary there will be a wide range of non-designated heritage assets, including historic buildings, earthworks and below ground archaeological remains. A combination of baseline desk-based assessment and archaeological surveys will be undertaken to inform the ES as described in Section 9.8 of this report and **Appendix 9B Cultural Heritage Survey Strategy**.

Section 1

- 9.5.7 There are three designated assets within Section 1. Two of these relate to the same heritage asset, and comprise one scheduled monument (Pinchbeck engine, NHLE 1004966) and one grade II listed building (Pinchbeck Engine Draining Pump, NHLE 1146782). The third heritage asset is a Grade II listed building: 41 Church Street Pinchbeck (NHLE 1064472).
- 9.5.8 A total of three scheduled monuments, two grade I listed buildings and 32 grade II listed buildings are located within 1 km of Section 1. Of these, three scheduled monuments and two listed buildings are less than 100 m from Section 1. This includes the scheduled monuments of:
- Moated site of monastic grange with adjacent earthworks at Rigbolt House (NHLE 1009979);
 - Moated site of Newhall Grange (NHLE 1009981);
 - Churchyard Cross, St Mary’s Churchyard NHLE 1013529); and
 - Wykeham Chapel: a moated monastic grange and retreat house (NHLE 1019096).

- 9.5.9 Beyond 1 km, but within 3 km of Section 1, there is one additional scheduled monument, two grade I listed buildings, and nine grade II* listed buildings.
- 9.5.10 There are no World Heritage Sites (Cultural), RPGs, registered battlefields, or protected wrecks within Section 1 or within 3 km of it.
- 9.5.11 Section 1 is within the Fens NCA, an expansive and low-lying wetland landscape, mostly now drained and turned over to intensive arable farming (Ref 9.11). Non-designated heritage assets within the Scoping Boundary will include archaeological remains and paleoenvironmental deposits, some of which may be waterlogged which would potentially have allowed the preservation of organic remains, particularly within peaty soils. Evidence of settlement and agriculture is likely to be predominantly found on islands of higher ground or along the edges of historic fens. Historic but undesignated buildings may also be non-designated heritage assets.

Section 2

- 9.5.12 There are eight designated assets within Section 2. These comprise one scheduled monument (Corby moated mound, NHLE 1005001), six grade II listed buildings, and one conservation area (Corby Glen), which is almost entirely excluded from Section 2.
- 9.5.13 A total of 10 scheduled monuments, one grade I RPG (Grimsthorpe Castle: 1000978), 13 grade I listed buildings, five grade II* listed buildings, 195 grade II listed buildings, and six conservation areas are located within 1 km of Section 2. Of these, three scheduled monuments, three Grade I listed buildings, three Grade II* listed buildings, 47 Grade II listed buildings, and Grimsthorpe Castle's grade I RPG are less than 100 m from Section 2. This includes the scheduled monuments of:
- Settlement between Rippingale Running Dike and Long Drove (NHLE 1004976);
 - Remains of Knights Templar preceptory, watermill and fishponds (NHLE 1007688); and
 - The Hermitage moated site, 400m north east of Corby Pasture Farm (NHLE 1016969).
- 9.5.14 Beyond 1 km, but within 3 km of Section 2, there are another five scheduled monuments, 10 grade I listed buildings, and six grade II* listed buildings.
- 9.5.15 There are no World Heritage Sites (Cultural), registered battlefields, or protected wrecks within Section 2 or within 3 km of it.
- 9.5.16 The eastern part of Section 2 is within the Fens NCA but the majority of it is within the Kesteven Uplands NCA (Ref 9.12). This is an area of higher limestone hills which rise above the low-lying fenland fields. Many of the villages are built in the local limestone, giving them a distinctive character, and there are a number of historic estates. This landscape has archaeological remains of all periods.

Section 3

- 9.5.17 There are 109 designated assets within Section 3. These comprise:
- Six scheduled monuments: Kirby Bellars Priory (NHLE 1009285); Garden, moat and five fishponds at Kirby Bellars (NHLE 1010304); Moated site at Ab Kettleby (NHLE 1010705); Moated grange at Spinney Farm, Melton Mowbray (NHLE 101431); Stump Cross, approximately 700m south of Main Street, Frisby on the

Wreake (NHLE 1014513); and Village cross at the western end of Main Street (NHLE 1015209).

- Five Grade I listed buildings: Church of St Thomas of Canterbury (NHLE 1360878); Church of All Saints (NHLE 1360866); Church of St Andrews (NHLE 1307264); Church of St Peter (NHLE 1261717); and Church of St Mary (NHLE 1061267).
- Eight Grade II* listed buildings: Church of St James the Greater (NHLE 1295154); The Old Rectory (NHLE 1295102); Church of St John the Baptist (NHLE 1188442); Saxelby Manor House (NHLE 1188434); The Old Hall (NHLE 1178375); Church of St Michael (NHLE 1075141); Manor House (NHLE 1075107); and Church of St Peter (NHLE 1075032).
- 81 Grade II listed buildings.
- Nine conservation areas: Holwell; Ab Kettleby; Wartnaby; Grimston; Saxelby; Ashfordby; Frisby on the Wreake; Ashby Folville; and Barsby.

9.5.18 A total of five scheduled monuments, four grade I listed buildings, seven grade II* listed buildings, 87 grade II listed buildings, and ten conservation areas are located within 1 km of Section 3. Of these, two grade I listed buildings, one grade II* listed building and 12 grade II listed buildings are less than 100 m from Section 3.

9.5.19 Beyond 1 km, but within 3 km of Section 3, there are another 13 scheduled monuments, nine grade I listed buildings, and 21 grade II* listed buildings.

9.5.20 There are no World Heritage Sites (Cultural), registered battlefields, or protected wrecks within Section 3 or within 3 km of it. There are no Grade I or II* RPGs within 3km or Grade II RPGs within 1 km.

9.5.21 Section 3 is within the Leicestershire and Nottinghamshire Wolds NCA (Ref 9.13), transitioning into the High Leicestershire NCA as it turns south (Ref 9.14). Both have a long history of rural settlement, supported by a mixture of arable and pastoral farming. Traces of the changing settlement pattern can be seen in deserted medieval villages and well-preserved ridge and furrow.

Section 4

9.5.22 There are 185 designated assets within Section 4. These comprise:

- 10 scheduled monuments: St Mary in Arden Church (NHLE: 1003607); Mound 220yds (200m) NNW of church (NHLE: 1005071); Cold Newton shrunken medieval village and moated site (NHLE: 1009197); North Marefield deserted medieval village and moated site (NHLE: 1010306); Moated site at Tilton (NHLE: 1010704); Lowesby deserted medieval village with three fishponds (NHLE: 1012438); Churchyard Cross, St Peter's churchyard (NHLE: 1014517); Churchyard cross in St John the Baptist's churchyard (NHLE: 1017493); Medieval village earthworks, fishponds and mill leat at Stonton Wyville (NHLE: 1017616); and Roman villa 200m south of Station Cottages (NHLE: 1018352).
- Three Grade I listed buildings: Church of St Peter and St Paul (NHLE: 1061277); Church of St Peter (NHLE: 1074839); and Noseley Chapel (NHLE: 1360652).
- 14 Grade II* listed buildings: The Old Rectory (NHLE: 1061278); Church of St Denis (NHLE: 1061650); Church of St Michael (NHLE: 1061695); The Old House (NHLE: 1074437); Skeffington Hall (NHLE: 1074875); Church of St John (NHLE:

1086988); Church of St Andrew (NHLE: 1104871); Church of St John the Baptist (NHLE: 1115490); Lowesby Hall (NHLE: 1178050); The Rectory (NHLE: 1216631); Church of All Saints (NHLE: 1295216); Church of St Thomas A Becket (NHLE: 1326673); Noseley Hall (NHLE: 1360651); and Church of St Thomas a Beckett (NHLE: 1360995).

- 150 Grade II listed buildings.
- One Grade II RPG: Lowesby Hall (NHLE: 1000962).
- Seven conservation areas: Great Bowden; Slawston; Tilton on the Hill; Tugby; Lowesby; Skeffington; and Rolleston including New Inn.

- 9.5.23 A total of three scheduled monuments, two grade I listed buildings, 13 grade II* listed buildings, 155 grade II listed buildings, and eight conservation areas are located within 1 km of Section 4. Of these, one scheduled monument (North Marefield deserted medieval village and moated site, NHLE 1010306) and 11 grade II listed buildings are less than 100 m from Section 4.
- 9.5.24 Beyond 1 km, but within 3 km of Section 4, there are another 16 scheduled monuments, three grade I listed buildings, and 13 grade II* listed buildings.
- 9.5.25 There are no World Heritage Sites (Cultural), registered battlefields, or protected wrecks within Section 4 or within 3 km of it.
- 9.5.26 Section 4 is mostly within the High Leicestershire NCA, an upland landscape with archaeological sites including Iron Age hillforts and many deserted medieval villages (Ref 9.14). It has a long history of mostly pastoral farming interspersed with ancient woodland and large post-medieval estate landscapes.

Section 5

- 9.5.27 There are 306 designated assets within the Section 5. These comprise:
- Seven scheduled monuments: Site of manor house (NHLE: 1003875); Braybrooke Bridge (NHLE: 1003891); Roman villa 200m W of Doddington Mill (NHLE: 1006637); Earls Barton motte castle (NHLE: 1009510); Place House moat and fishpond (NHLE: 1009513); Braybrooke Castle: the remains of a medieval moated manor and medieval settlement remains (NHLE: 1016318); and Medieval cross 170m south west of Hall Farm (NHLE: 1016320).
 - One grade I RPG: Castle Ashby (NHLE: 1000385).
 - One grade II* RPG: Harrington (NHLE: 1001034).
 - Six grade I listed buildings: Church of St Mary the Virgin (NHLE: 1190018); Church of St Andrew (NHLE: 1213539); Church of All Saints (NHLE: 1288885); Flats 1,2,3, Porch House, Bell Tower, Cloisters, South Wing, Pediment, Corner House and Tower House at Dingley Hall (NHLE: 1294135); Church of All Saints (NHLE: 1294226); and The Old Vicarage (NHLE: 1371672).
 - 27 grade II* listed buildings: Church of St Mary (NHLE 1040666); Orlingbury Hall and attached wall and outbuildings to north east (NHLE 1040668); Church of St Mary the Virgin (NHLE 1040680); Church of All Saints (NHLE 1040692); Mears Ashby Hall (NHLE 1040699); Grendon Hall (NHLE 1040746); Church of St Leonard (NHLE 1040750); Church of All Saints (NHLE: 1040771); Church of St Andrew (NHLE 1067030); The Menagerie (NHLE 1189885); Church of St Nicholas (NHLE 1189920); Gates, gatepiers and railings approximately 90 metres

west of Harrowden Hall (NHLE 1190526); Church of St Mary (NHLE 1190552); The Old Rectory (NHLE 1191565); Wilby House (NHLE 1192006); Church of St Peter and Paul (NHLE 1213602); Loddington Hall (NHLE 1213737); The Orton Trust Workshop (NHLE 1213823); Church of St Leonard (NHLE 1288918); Church of St Andrew (NHLE 1289054); Cransley Hall (NHLE 1289058); Church of All Saints (NHLE 1289123); Manor Farmhouse (NHLE 1293700); The Manor House (NHLE 1371674); Church of St Mary (NHLE 1371694); Gatepier approximately 45 metres north east of The Old Rectory (NHLE 1371724); and Church of all Saints (NHLE: 1372349).

- 250 grade II listed buildings.
- 14 conservation areas: Braybrooke; Cransley; Harrington; Loddington; Pytchley; Weston by Welland; Broughton; Castle Ashby; Hardwick; Earls Barton; Mears Ashby; Orlingbury; Grendon; and Great Doddington.

- 9.5.28 A total of two scheduled monuments, seven grade I listed buildings, six grade II* listed buildings, one grade II* RPG, 118 grade II listed buildings, and five conservation areas are located within 1 km of Section 5. Of these, one scheduled monument (Place House Moat and Fishpond, NHLE 1009513), one grade II* RPG (Great Harrowden Hall, NHLE 1000392), three grade I listed buildings, one grade II* listed building and 15 grade II listed buildings are less than 100 m from Section 5.
- 9.5.29 Beyond 1 km, but within 3 km of Section 5, there are another 14 scheduled monuments, 13 grade I listed buildings, 26 grade II* listed buildings, and two grade II* RPG).
- 9.5.30 There are no World Heritage Sites (Cultural), registered battlefields, or protected wrecks within Section 5 or within 3 km of it.
- 9.5.31 Section 5 is within the Northamptonshire Vales NCA, a more lowland landscape which includes the Welland and Nene valleys (Ref 9.15). It is an area which has seen considerable historic settlement and its archaeology reflects this with evidence of Iron Age settlement and agriculture, Roman towns and villas and medieval castles.

Future Baseline

- 9.5.32 The future baseline relates to known or anticipated changes to the current baseline in the future in the absence of the Project.
- 9.5.33 The cultural heritage chapter within the ES will include an outline of the likely evolution of the baseline environment without the implementation of the Project as far as natural changes from the baseline scenario can be assessed.

9.6 Design and Control Measures

Design Measures

- 9.6.1 The Project design will avoid physical impacts to designated assets. As this design develops further and is better refined, additional mitigation measures will endeavour to include further design intervention to avoid direct and indirect impacts on both designated and non-designated heritage assets, including archaeological remains.

- 9.6.2 Potentially significant impacts on the setting of assets brought about by the Project may be lessened or avoided through consideration of the detailed design and micro-siting of the individual towers.

Control and Management Measures

- 9.6.3 Where the Project will bring about physical impacts to non-designated heritage assets, these effects will be mitigated through measures to include (but not be limited to) detailed landscape/topographic survey, archaeological excavation and recording and archaeological monitoring/watching brief.
- 9.6.4 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An **Initial Outline Code of Construction Practice** (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect cultural heritage are (refer to **Appendix 4A** for the full description of each measure):
- GG04 – on the appointment of Environmental Managers and Environmental Clerks of Works during construction.
 - GG05 – on environmental training provision for construction workers, including the location and protection of sensitive environmental sites and features.
 - GG07 – on the Environmental Control Plans which will be prepared, including Construction Environmental Management Plan (CEMP), Landscape and Ecological Management Plan (LEMP), and Overarching Written Scheme of Investigation (WSI).
 - GG09 – on reinstatement of land to pre-construction condition following temporary works, where practicable.
 - GG010 – on appropriate protective areas to be established where retaining sensitive features such as ancient woodland within or immediately adjacent to the Order Limits. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP.
 - GG25 – on the use of temporary work pads of suitable materials (stone, wooden, bog mats or similar) where heavy equipment is to be used.
- 9.6.5 In addition, measures that relate to cultural heritage either directly or through measures applied for landscape and visual, and noise and vibration include (refer to **Appendix 4A: Initial Outline Code of Construction Practice** for the full description of each measure):
- H01 - on the avoidance of known heritage assets and locations of known archaeological interest in the Project design and the implementation of mitigation where this is not possible. Areas of archaeological preservation or investigation will be identified on plans within the Outline WSI and CEMP.
 - H02 – on the procedure if there is discovery of previously unknown or known heritage assets of greater significance than that anticipated at the time of the submission of the application for development consent.
 - H03 – on the retention of historic landscape elements where practicable within the Project.
 - B08 – on crossing and removing hedgerows.

- LV01 – on the requirement for pre-condition surveys and the retention of vegetation and the nature of replacement vegetation if it is required.
- LV04 - on construction lighting, which will be directional and minimised where possible.
- NV01 – on use of Best Practicable Means (BPM) to minimise noise (including vibration).

9.7 Potential for Significant Effects

- 9.7.1 The cultural heritage assessment will consider the construction, and operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the cultural heritage ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 9.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 9.6.
- 9.7.3 **Table 9.2** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to potentially significant effects on receptors identified in the Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give rise to significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.
- 9.7.4 A precautionary approach has been taken and where there is no strong evidence base, insufficient baseline or the significance is uncertain at this stage, the impact has been scoped into the ES. Where there is a clear evidence base that the effect from the impact will not be significant, either alone or in combination with other plans and projects, the impact has been scoped out of the ES.

Potential sources of impacts

Sources of construction impacts

- Activities relating to the construction of the Project (detailed in **Chapter 4 Description of the Project**), such as the installation of new substations and infrastructure, topsoil stripping and excavations for tower foundations and where required underground cable trenches, the establishment of construction compounds, spoil storage areas, access tracks, bell mouths and temporary drainage, resulting in damage and/or removal to heritage assets from compaction or truncation.
- The presence and use of temporary construction and satellite compounds, access tracks and fencing resulting in temporary changes to the setting of heritage assets.
- The presence of machinery and traffic as well as noise, dust, and light, resulting in temporary changes to the setting of heritage assets.

Sources of operational and maintenance impacts

- Presence of the new overhead line in the landscape resulting in permanent changes to the historic landscape and to the setting of heritage assets.
- Changes in the appearance of existing overhead line as a result of the reconductoring part of the Project. There would be no horizontal and only limited vertical realignment required meaning that the changes to the historic landscape and setting of heritage assets would be minimal.
- Presence of new infrastructure resulting in permanent changes to the viability of heritage assets.
- The presence of temporary maintenance compounds, access tracks and scaffolds resulting in temporary changes to the setting of heritage assets.
- The presence of machinery and traffic, as well as noise, dust, and light from maintenance activities, resulting in temporary changes to the setting of heritage assets.

Potential impacts

- 9.7.5 There will be no physical impacts on the designated heritage assets within the Scoping Boundary as these will be avoided by the construction works and maintenance works requiring temporary structures and access. There is, however, the potential for impacts to the value (heritage significance) of designated assets as a result of changes to their setting through construction, operation and maintenance of the Project.
- 9.7.6 There is the potential for physical impacts on non-designated heritage assets where they are within the limits of the area required to construct the Project, or within areas where temporary structures and access are required as part of the maintenance of the Project. This would result from the compaction, truncation or complete removal of non-designated heritage assets such as archaeological remains during site clearance and groundworks. There is also the potential for physical impacts resulting from changes in groundwater that could affect below ground preservation conditions.
- 9.7.7 There is the potential for physical impacts on the historic landscape where aspects of it are within the limits of the area required to construct the Project, or for temporary structures and access required for maintenance. This would result from the truncation or complete removal of attributes of the historic landscape such as field boundaries.
- 9.7.8 There is also the potential for the Project to give rise to significant effects on those non-designated assets that remain extant within the Scoping Boundary through change to their setting.
- 9.7.9 The presence of the Project in the landscape could also lead to significant effects through changes to the understanding and appreciation of the historic landscape.

Table 9.2 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Intrusive construction activities	Physical impacts on heritage assets	Non-designated heritage assets Historic landscapes	Yes – the Project has the potential to result in a physical impact on heritage assets through their truncation, removal or alteration.	Scoped In
Construction	Intrusive construction activities	Physical impacts on heritage assets	Designated heritage assets	No – the project will be designed to avoid all direct impacts upon designated assets. On this basis, significant effects would not occur.	Scoped out
Construction	Presence of construction facilities within the landscape	Temporary impacts to heritage assets as a result of changes to their setting	Designated heritage assets Non-designated heritage assets Historic landscapes	Yes – the Project has the potential to result in significant effects on designated and non-designated heritage assets and historic landscapes.	Scoped In
Construction	Machinery, noise, vibration, dust, and light	Temporary impacts to heritage assets as a result of changes to their setting	Designated heritage assets Non-designated heritage assets	Yes – the Project has the potential to result in significant effects on designated and non-designated	Scoped In

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
			Historic landscapes	heritage assets and historic landscapes.	
Operation and maintenance	Presence of the Project in the landscape (new overhead line)	Impacts to heritage assets as a result of changes to their setting	Designated heritage assets	Yes – the Project has the potential to result in significant effects on designated, non-designated heritage assets and historic landscapes.	Scoped In
			Non-designated heritage assets		
			Historic landscape		
Operation and maintenance	Presence of the Project in the landscape (reconductoring of existing overhead line)	Impacts to heritage assets as a result of changes to their setting	Designated heritage assets	No – the change in the appearance of the existing overhead line would be minimal and would be unlikely to result in significant effects.	Scoped Out
			Non-designated heritage assets		
			Historic landscape		
Operation and maintenance	New infrastructure altering access and viable use	Impacts to the access of heritage assets	Designated heritage assets	No – given the scale and size of the footprint of individual towers, significant effects arising from changes to/limitation of access and use of heritage assets are unlikely to occur.	Scoped Out
			Non-designated heritage assets		
			Historic landscapes		
Operation and Maintenance	Presence of maintenance	Temporary impacts to heritage assets as	Designated heritage assets	Yes – the Project has the potential to result in significant effects	Scoped In

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	structures within the landscape	a result of changes to their setting	Non-designated heritage assets Historic landscapes	on designated and non-designated heritage assets and historic landscapes.	
Operation and Maintenance	Vehicular traffic and maintenance activities	Physical impacts to heritage assets or impacts to heritage assets as a result of changes to their setting	Designated heritage assets Non-designated heritage assets Historic landscapes	No – maintenance visits required for the Project would not constitute an impact of sufficient magnitude to cause significant effects to either designated or non-designated heritage assets, or historic landscapes.	Scoped Out

9.8 Proposed Assessment Methodology

- 9.8.1 The assessment methodology presented below builds upon, and takes into account, the Cultural Heritage Survey Strategy prepared for the Project (**Appendix 9B Cultural Heritage Survey Strategy**), and the response to the strategy received from Historic England during pre-scoping engagement.

Study Area

- 9.8.2 The Historic Environment ES assessment will use a core Study Area extending 1 km from the Order Limits of the Project for non-designated heritage assets. This is considered sufficient to provide a contextual baseline of known heritage assets and to inform on the likelihood of encountering previously unknown archaeology within the Order limits. It also considers the likelihood of impacts to the setting of heritage assets, considering the character of the surrounding landscape and the asset types.
- 9.8.3 An extended Study Area of up to 3 km from the Order Limits will be used in the ES for designated heritage assets due to the greater potential for their setting to extend over a larger area and for which the wider landscape may form a key contributing factor to their significance. This will be used alongside a wider 5 km Study Area to identify any assets of the highest significance (scheduled monuments, grade I and II* listed buildings and grade I and II* RPG) where setting is a key factor in their significance and where this setting extends over a large area and there may be potentially significant visual effects identified by the visual impacts assessment. This would be done on a case by case basis based on professional judgement and stakeholder engagement.
- 9.8.4 The Study Area would be extended up to 5 km in locations where designated heritage assets may be affected by the Project as identified by the Zone of Theoretical Visibility (ZTV), which will be developed in conjunction with the assessments undertaken for **Chapter 6 Landscape** and **Chapter 7 Visual**. This ZTV will define the theoretical visibility of the Project and present a theoretical zone of visual influence. This may not reflect what is visible on the ground nor can it be used to define the extent of setting of heritage assets, as visibility is only one aspect of setting.
- 9.8.5 Designated heritage assets within the extended 3 km and 5 km Study Areas will be identified and assessed for their potential to be affected by the Project. Those assets that are identified to be potentially impacted will then be assessed further in the ES. Assessment will consider the significance of the asset, its setting and sensitivity to change. Through such an assessment, assets having a greater influence over the wider landscape may be taken through to assessment, whilst those having a lesser influence may be omitted. This staged approach is consistent with current Historic England guidance (Ref 9.3).
- 9.8.6 The core and extended Study Areas are proportionate to identify heritage assets that may be affected by the Project.

Proposed Data Sources

- 9.8.7 In addition to the data sources listed in Section 9.5, which include the NHLE, the following data sources are proposed to be used to inform the cultural heritage assessment:

- NHLE data held by Historic England, for designated assets.
- Historic Environment Record (HER) data held by the Lincolnshire, Leicestershire and Rutland, and Northamptonshire HERs.
- Local authority conservation area appraisal and management documents and their mapping.
- Historic landscape characterisation mapping undertaken by local planning authorities.
- Aerial photographs held by Historic England, local authorities and other appropriate repositories and other readily available remote sensing results such as LiDAR data.
- Geological mapping and borehole information as held by the British Geological Survey.
- Documentary, cartographic and other resources as deposited within local studies libraries, county libraries and archives, including historic OS maps, tithe, estate and other maps, and other relevant primary sources held at the Lincolnshire Archives, the Record Office for Leicestershire, Leicester and Rutland, and the Northamptonshire Archives, together with local studies library information.
- The results, where relevant and available, of heritage assessments and archaeological evaluations undertaken for other projects that cross or fall within the Scoping Boundary and surrounding Study Area.
- Published regional studies and character assessments e.g. Historic England's Fenland Survey, the Fenland Project published in East Anglian Archaeology, and the Nene Valley: Archaeological and Environmental Synthesis, published by Northamptonshire Archaeology and the University of Exeter.
- Historic OS maps held by the National Library of Scotland.

9.8.8 A walkover survey will also be undertaken to assess known heritage assets/sites and their setting and to determine the potential for previously unrecorded heritage assets. This survey will focus on the emerging draft Order Limits, including any associated compounds, laydown areas, and above ground infrastructure.

9.8.9 In addition to the desk-based assessment it is proposed that the cultural heritage ES chapter is also informed by the results of:

- an aerial photographic and LiDAR (Light Detection And Ranging) assessment;
- geophysical surveys;
- geoarchaeological deposit modelling and monitoring (during ground investigation or trial trenching); and
- where appropriate, trial trench evaluation.

Proposed Assessment Methodology

9.8.10 The following section summarises the methodology proposed to be used for the cultural heritage ES assessment. The methodology builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**, adapted from the Standards for Highways Design Manual for Roads and Bridges (DMRB),

and incorporates DMRB LA 104 Environmental assessment and monitoring (Ref 9.19), DMRB LA 106 – Cultural heritage assessment (Ref 9.20), and the cultural heritage policy and guidance presented in Section 9.2.

Sensitivity

- 9.8.11 The value of a heritage asset (its heritage significance) is guided by its designated status but is derived also from its heritage interest which may be archaeological, architectural, artistic, or historic (Ref 9.16). Each identified heritage asset would be assigned a value in accordance with the criteria set out in **Table 9.3**.
- 9.8.12 Using professional judgement and the results of consultation, heritage assets will also be assessed on an individual basis, and regional variations and individual qualities will be considered where applicable.

Table 9.3 Criteria for assessing the value of heritage assets

Value/Sensitivity	Description
High	• World Heritage Sites (Cultural) • Scheduled monuments • Grade I and II* listed buildings • Registered battlefields • Grade I and II* RPG • Conservation areas of demonstrable high value • Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens, or landscapes), or Grade II listed buildings, that can be shown to have demonstrable national or international importance • Well preserved historic landscape character areas, exhibiting considerable coherence, time-depth, or other critical factor(s)
Medium	• Grade II listed buildings • Grade II RPG • Conservation areas • Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens, or landscapes), or locally listed buildings, that can be shown to have demonstrable regional importance. • Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth, or other critical factor(s) • Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible
Low	• Locally listed buildings • Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens,

Value/Sensitivity	Description
	- or landscapes) that can be shown to have demonstrable local importance - Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade - Historic landscape character areas whose value is limited by poor preservation and/or poor survival of contextual associations
Negligible	- Assets identified on national or regional databases, but which have no archaeological, architectural, artistic, or historic value - Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade - Landscape with no or little significant historical merit

Magnitude

- 9.8.13 Having identified the value of the heritage asset, the next stage in the assessment is to identify the level and degree of impact to a heritage asset arising from the Project. Impacts may arise during construction, operation or maintenance and can be temporary or permanent. Impacts can affect the physical fabric of the asset or affect its setting.
- 9.8.14 The level and degree of impact (impact rating) is assigned with reference to a four-point scale as set out in **Table 9.4**. In respect of the historic environment an assessment of the level and degree of impact is made in consideration of any design mitigation (embedded mitigation). If no impact on value is identified, no impact rating is given and no resulting effect reported.

Table 9.4 Factors influencing the assessment of magnitude of impact

Magnitude	Description
Large	- Changes such that the heritage value of the asset is totally altered or destroyed - Comprehensive change to elements of setting that would result in harm to the asset and an individual's ability to understand and appreciate its heritage significance
Medium	- Change such that the heritage value of the asset is significantly altered or modified - Changes such that the setting of the asset is noticeably different, affecting significance and resulting in changes in our ability to understand and appreciate the heritage value of the asset
Small	Changes such that the heritage value of the asset is slightly affected

Magnitude	Description
	Changes to the setting that have a slight impact on significance resulting in changes in our ability to understand and appreciate the heritage value of the asset
Negligible	- Changes to the asset that hardly affect heritage value. - Changes to the setting of an asset that have little effect on significance and no real change in an individual's ability to understand and appreciate the heritage value of the asset

Significance of effects

- 9.8.15 The ES will report on the significance of effect in accordance with EIA methodology. An assessment to classify the effect, having taken into consideration any embedded mitigation, will be determined using the matrix at **Table 9.5**, which takes account of the value of the asset (**Table 9.3**) and the magnitude of impact (**Table 9.4**). Effects can be neutral, adverse, or beneficial. The matrix in **Table 9.5** is adapted from Environmental assessment and monitoring (Ref 9.19).
- 9.8.16 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of impacts is outlined in **Table 9.5**. Where two levels of significance are proposed (e.g. Major OR moderate), professional judgement will be used.

Table 9.5 Determination of significance matrix

		Magnitude of Impact			
Value/Sensitivity		Large	Medium	Small	Negligible
	High	Major /or moderate	Major	Moderate	Minor /or negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Negligible	Minor /or negligible	Negligible	Negligible	Negligible

- 9.8.17 Major and moderate effects are typically considered to be significant, whilst minor and negligible effects are considered to be not significant. Professional judgement will be applied in reaching conclusions as to the significance of effects.
- 9.8.18 The National Planning Policy Framework (NPPF) (Ref 9.17) establishes the principle that impacts affecting the value of heritage assets are considered in terms of harm and there is a requirement for the decision maker to determine whether the level of harm amounts to 'substantial harm' or 'less than substantial harm'.
- 9.8.19 The Overarching NPS for Energy (EN-1) (Ref 9.16) maintains the concept of harm to the value of heritage assets within paragraph 5.9.28 directing the Secretary of State to give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of value (heritage significance) of a designated

heritage asset (including as a result of development within its setting) should require clear and convincing justification. Paragraph 5.9.36 states that, “*the Secretary of State should give appropriate weight to the desirability of preserving the setting of heritage assets and should treat favourably applications that preserve those elements of the setting that make a positive contribution to a heritage asset, or better reveal the significance of, the asset*”. The Infrastructure Planning (Decisions) Regulations 2010 (Ref 9.18) Regulation 3 also states that the decision maker “*must have regard to the desirability of preserving*” listed buildings, conservation areas and scheduled monuments, including their setting.

- 9.8.20 Whether a proposal would result in harm, be it substantial harm or less than substantial harm, is determined by the decision maker who, in this case, is the Secretary of State. Although not specifically stated in the NPS, this approach is established in the Planning Practice Guidance, which accompanies the NPPF(Ref 9.1 paragraph: 018 Reference ID: 18a-018-20190723).
- 9.8.21 There is no direct correlation between the significance of effect in EIA terms as reported in the final ES, and the level of harm caused to heritage significance. A major (significant) effect on a heritage asset would, however, more often be the basis by which a decision maker would determine that the level of harm to the significance of the asset would be substantial. A moderate (significant) effect, or lower, is unlikely to meet the test of substantial harm and would therefore more often be the basis by which a decision maker would determine that the level of harm to the significance of the asset would be less than substantial.
- 9.8.22 NPS EN-1 provides the tests that substantial harm to heritage assets of the highest significance should require wholly exceptional justification (paragraph 5.9.30) and exceptional justification is needed for substantial harm to or loss of a grade II listed building or grade II RPG (paragraph 5.9.29). However, EN-1 (paragraph 4.2.17) also states that the Secretary of State will take as a starting point that schemes such as the Project, which are considered to be Critical National Priority (CNP) for low carbon infrastructure (see **Chapter 2 Regulatory and Planning Policy Context**), will meet the test of exceptional or wholly exceptional justification.
- 9.8.23 In all cases determining the level of harm to the significance of the asset arising from development impact is one of professional judgement.

9.9 Assumptions and limitations

- 9.9.1 This Scoping Report includes a high-level review of available data and presents a brief overview of the historic environment baseline. Given the scale of the Project, this chapter is only intended to identify potential pathways to significant effects, for the purpose of defining a scope for the historic environment assessment, as part of the ES. It does not present all known or previously unrecorded heritage receptors which will be presented in subsequent assessments.
- 9.9.2 Data supporting this report was obtained from third party sources and may include errors or omissions. All efforts were made to identify and rectify any such issues.

9.10 Conclusion

- 9.10.1 This Scoping Report chapter has outlined the proposed scope for further assessment in relation to cultural heritage for the Project. The data sources that will be used to

define the current and future baselines have been presented, assessment methodology, and the impact control and management measures that will be implemented have been described. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 9.2**.

- 9.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 9.1 Ministry of Housing, Communities and Local Government (2019) *Planning Practice Guidance: Historic Environment* [online] <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment> Accessed 6 August 2025.
- Ref 9.2 Historic England (2015) *Historic Environment Good Practice Advice in Planning Note 2. Managing Decision Taking in the Historic Environment*. Historic England [online] <https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/gpa2/> Accessed 6 August 2025.
- Ref 9.3 Historic England (2017) *The Setting of Heritage Assets. Historic Environment Good Practice Advice Note in Planning Note 3* (Second Edition) [online] <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/> Accessed 21 July 2025.
- Ref 9.4 Historic England (2019) *Historic Environment Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12* [online] <https://historicengland.org.uk/images-books/publications/statements-heritage-significance-advice-note-12/heag279-statements-heritage-significance/> Accessed 6 August 2025.
- Ref 9.5 ClfA (2020) *Standard and guidance for historic environment desk-based assessment* [online] <https://archaeologists.net/sites/default/files/2023-11/ClfA-SandG-DBA-2020.pdf> Accessed 6 August 2025.
- Ref 9.6 ClfA (2022) *Code of conduct: professional ethics in archaeology* [online] <https://archaeologists.net/sites/default/files/2023-11/ClfA-Code-of-Conduct-2022.pdf> Accessed 6 August 2025.
- Ref 9.7 ISEP, IHBC and ClfA (2021) *Principles of Cultural Heritage Impact Assessment in the UK* [online] <https://www.ihbc.org.uk/brighton2021/resources/Principles-of-CHIA-V2%5B4%5D.pdf> Accessed 6 August 2025.
- Ref 9.8 Historic England (no date) *National Heritage List for England* [online] <https://historicengland.org.uk/listing/the-list> Accessed 6 August 2025.
- Ref 9.9 British Geological Society (2025) *Geology Viewer* [online]. Available at: https://geologyviewer.bgs.ac.uk/?_ga=2.138898100.646682979.1753096666-2028227139.1753096666 Accessed 21 July 2025
- Ref 9.10 Natural England (2025) *National Character Area Profiles* [online]. Available at: <https://nationalcharacterareas.co.uk/> Accessed 21 July 2025.
- Ref 9.11 Ledger, B. and Natural England (2025) *NCA 46 Fens* [online]. Available at: <https://nationalcharacterareas.co.uk/the-fens/> Accessed 21 July 2025.
- Ref 9.12 Banham, M. and Natural England (2025) *NCA 75 Kesteven Uplands* [online]. Available at: <https://nationalcharacterareas.co.uk/kesteven-uplands/> Accessed 21 July 2025.

- Ref 9.13 Jewell, K. and Natural England (2025) *NCA 74 Leicestershire and Nottinghamshire Wolds* [online]. Available at: <https://nationalcharacterareas.co.uk/leicestershire-and-nottinghamshire-wolds/> Accessed 21 July 2025.
- Ref 9.14 Banham, M. and Natural England (2025) *NCA 93 High Leicestershire* [online]. Available at: <https://nationalcharacterareas.co.uk/high-leicestershire/> Accessed 21 July 2025.
- Ref 9.15 Kwolek, A. and Natural England (2025) *NCA 89 Northamptonshire Vales* [online]. Available at: <https://nationalcharacterareas.co.uk/northamptonshire-vales/> Accessed 21 July 2025.
- Ref 9.16 Department for Energy Security and Net Zero (2024) *Overarching National Policy Statement for energy (EN-1)* [online]. Available at: <https://assets.publishing.service.gov.uk/media/65bbfdbc709fe1000f637052/overarching-nps-for-energy-en1.pdf> Accessed 21 July 2025.
- Ref 9.17 Ministry of Housing, Communities and Local Government (2025) *National Planning Policy Framework* [online]. Available at: https://assets.publishing.service.gov.uk/media/67aaf8f3b41f783cca46251/NPPF_December_2024.pdf Accessed 21 July 2025.
- Ref 9.18 Her Majesty's Stationery Office (2010) *The Infrastructure Planning (Decisions) Regulations 2010* [online]. Available at: <https://www.legislation.gov.uk/ukxi/2010/305/contents/made> Accessed 21 July 2025.
- Ref 9.19 Standards for Highways (2020) Design Manual for Roads and Bridges: LA 104 Environmental assessment and monitoring [online]. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/by-attachment-id/c326ef05-0bda-4e02-9903-de8d02640cea?inline=true> Accessed 9 October 2025
- Ref 9.20 Standards for Highways (2020) Design Manual for Roads and Bridges: LA 106 Cultural heritage assessment [online]. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/by-attachment-id/deb532b0-86a4-4eea-b40c-6cf6638430f9?inline=true> Accessed 9 October 2025

10. Water Environment

Contents

10.	Water Environment	10-1
10.1	Introduction	10-1
10.2	Legislation, Policy and Guidance	10-2
	Guidance	10-2
10.3	Consultation and Engagement	10-2
10.4	Study Area	10-3
10.5	Baseline Conditions	10-3
	Data Sources	10-3
	Baseline	10-5
	Future Baseline	10-24
10.6	Design and Control Measures	10-24
	Design Measures	10-24
	Control and Management Measures	10-26
10.7	Potential for Significant Effects	10-27
	Potential impacts	10-28
10.8	Proposed Assessment Methodology	10-36
	Proposed Data Sources	10-36
	Proposed Assessment Methodology	10-36
10.9	Assumptions and Limitations	10-44
10.10	Conclusion	10-45

Table 10.1	Engagement with stakeholders	10-1
Table 10.2	Water environment – sources of information	10-4
Table 10.3	Surface water features in the Study Area by each Section	10-8
Table 10.4	Summary of river flows (Ref 10.30)	10-14
Table 10.5	Environment Agency water quality archive sites within the Study Area	10-17
Table 10.6	Summary of all statutory and non-statutory designated ecological sites in and downstream of the Study Area	10-18
Table 10.7	Impacts, receptors and the potential for significant effect	10-31
Table 10.8	Criteria to Determine Receptor Importance (adapted from DMRB LA 113 (Ref 10.39))	10-41
Table 10.9	Magnitude of impact criteria (adapted from DMRB LA 113 (Ref 10.39))	10-43
Table 10.10	Determination of significance matrix (Ref 10.40)	10-44

References	10-47
------------	-------

10. Water Environment

10.1 Introduction

- 10.1.1 This chapter presents how the water environment assessment will consider the potential likely significant effects on water environment receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 10.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 10.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 10.1.4 There are interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 8 Ecology and Biodiversity**, particularly aquatic ecology and assessment of ponds; and
 - **Chapter 11 Geology and Hydrogeology.**
- 10.1.5 This chapter is supported by the following figures and appendices:
- **Figure 10.1 Surface water receptors and their attributes;**
 - **Figure 10.2 Fluvial flood risk;**
 - **Figure 10.3 Surface water flood risk;**
 - **Figure 10.4 WFD¹ River Water Body Catchments;** and
 - **Appendix 10A Water Framework Directive Screening and Scoping Assessment.**
- 10.1.6 In addition to the above, **Figure 11.2 Superficial Geology**, **Figure 11.3 Bedrock Geology**, and **Figure 11.4 Groundwater Features** that were prepared as part of the geology and hydrogeological scoping assessment are also relevant and are referred to where necessary in this chapter.

¹ Water Framework Directive

10.2 Legislation, Policy and Guidance

- 10.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. A summary of relevant legislation, policy, and planning guidance relevant to the assessment of potential effects on the water environment associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context. Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

Guidance

- 10.2.2 The National Planning Policy Guidance (NPPG) (Ref 10.2), updated in 2024, provides guidance for local planning authorities on assessing the significance of water environment effects of projects. The NPPG for Flood Risk advises on how to take account of and address the risks associated with flooding and coastal change in the planning process.
- 10.2.3 It outlines a number of main steps to be followed which are designed to ensure that if there are better sites in terms of flood risk, or if a project cannot be made safe, it should not be permitted. These steps include: assess flood risk; avoid flood risk; and manage and mitigate flood risk. The guidance states that developers and applicants need to consider flood risk to and from the development site and it is likely to be in their own best interests to do this as early as possible. In addition, the guidance provides detail on the application of the Sequential Test and the Exception Test.
- 10.2.4 The national guidance for the implementation of sustainable drainage measures (SuDS) was recently updated 'National Standards for SuDs Guidance' (Ref 10.1)
- 10.2.5 The Environment Agency provides their current guidance/ position statements on the approach to protection of groundwater (Ref 10.3). This includes:
- Regulatory Position Statement (RPS) A (Risk Based Approach);
 - RPS B (Protection of Water Intended for Human Consumption);
 - RPS G (Discharge of Liquid Effluents into the Ground); and
 - RPS N (Groundwater Resources and Abstraction).
- 10.2.6 The Environment Agency provides their current guidance/position statements on environmental permits (Ref 10.4). This includes:
- RPS 261: Temporary dewatering from excavations to surface water.

10.3 Consultation and Engagement

- 10.3.1 The ES will be informed by consultation and engagement with stakeholders, including the Environment Agency, Anglian Water, Lead Local Flood Authorities (LLFA) and Internal Drainage Boards (IDB). In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 10.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 10.1.**

Table 10.1 Engagement with stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
South Holland Internal Drainage Board	The Board intends to widen most Board maintained watercourses over the next 50 years. This could impact your proposals for any infrastructure within 9 metres of any Board maintained watercourse.	To be covered once the Project route is finalised in the ES. Position of towers will take possible future widening of watercourses into account, where possible.
	The Board will require a strict minimum safety distance to be established between overhead cables (sails) and the brinks of watercourses. This will need to account for fully extended working machinery plus a worker's height, as well as the minimum recommended electrical arc safety buffer.	Refer to Section 10.6 Design Measures – Overhead Line (Chapter 10: Water Environment) . The Board will be consulted further as the assessment is progressed to fully understand their operational requirements.
	In line with best practice, the Board is unlikely to grant consent for any infilling or culverting of the watercourses within this area.	To be considered as the design progresses and once the Project route is finalised in the ES.
	Byelaw 3 (surface water) • All new surface water discharge (including temporary discharge during the construction phase) into a watercourse within the IDD requires consent from the Board under Byelaw 3. • We recommend that any discharge is in line with SuDS. Therefore the Board is unlikely to grant consent for discharges in excess of greenfield rate; however we assess each proposal on a case-by-case basis.	To be considered as the design progresses and once the Project route is finalised in the ES. A water quality risk assessment of surface water runoff from the proposed Weston Marsh substation infrastructure will need to be undertaken at a later stage and although SuDS may form part of the drainage system, proprietary measures may also be required to adequately address the pollution risk.
	Byelaw 10 • Consent is required for all works within 9 metres of the edge of drainage and flood risk management infrastructure. • Any temporary works within 9 metres of the flood risk management infrastructure will also require temporary Byelaw 10 consent. • If the flood risk management infrastructure is also owned by the Board, then an easement or wayleave may also be required.	Refer to Section 10.6 Design Measures – Overhead Line (Chapter 10: Water Environment) .

Stakeholder	Summary of response	Consideration in the Scoping Report
	Section 23, Land Drainage Act and Byelaw 4 • If any works are proposed to alter a watercourse (culverting, infilling etc.), then consent would be required under Section 23 of the Land Drainage Act 1991 (and Byelaw 4). • Any temporary haul road, culverts or works during the construction phase of the project which may alter a watercourse will require temporary Section 23 (and Byelaw 4) consent.	To be considered as the design progresses and once the Project route is finalised in the ES.
Environment Agency	Parts of the proposals are located within Flood Zones 2 and 3. The project should take a sequential approach where it can, if there are any opportunities for development to be located outside of Flood Zones 2 and 3 and into Flood Zone 1, this should be prioritised. If required, essential infrastructure (such as power stations and substations etc) should evidence the Exception test. The applicant should scope in flood risk when reviewing operation to ensure the proposed development is functional in time of flood and remains safe. The FRA should comply with the NPPF. The Environment Agency recommend early engagement with review of any hydrological assessment or hydraulic model development so appropriate data and advice can be provided.	To be considered as the design progresses and once the Project route is finalised in the ES stage. A FRA will be undertaken and flood risk scoped in to the ES.
	The updated Environment Agency guidance on climate change allowance must be used when assessing floodplain compensation.	To be considered as the design progresses and once the Project route is finalised in the ES stage, and as part of the FRA.
	The applicant should consider early on whether Environmental Permit(s) are required or the disapplication of these matters be considered as Protective Provisions under the DCO.	To be considered as the design progresses and once the Project route is finalised in the ES.
	Environment Agency to be consulted regarding impacts to relevant watercourses.	The Environment Agency will be consulted as the design and assessment progress.
	Environment Agency would highly recommend the applicant complete a WFD assessment, to	An initial WFD Screening and Scoping has been

Stakeholder	Summary of response	Consideration in the Scoping Report
	determine any impacts to the WFD status of the waterbodies.	prepared at this stage and is presented in Appendix 10A .
South Holland District Council	South Holland is in a designated Flood Zone 3 area. The dykes and pumping are essential to drain the land. Construction work and traffic compacting the land along with filling in dykes will increase the possibility of homes and businesses in the area being flooded.	A FRA will be carried out in compliance with relevant policy as described in Section 10.8. The Appendix 4A Initial Outline Code of Construction Practice sets out initial measures relevant to the control and management of flooding throughout the duration of the construction phase, and this will be updated during the assessment described in this report and submitted with the application for development consent. The implementation of measures will be required by the Development Consent Order.

10.4 Study Area

- 10.4.1 The core Study Area for the Water Environment Impact Assessment, WFD Assessment, and FRA is proposed to include all land within the Order Limits, and in addition, a buffer of 500 m from the Order Limits. The Study Area employed for this scoping exercise, as shown in **Figures 10.1 to 10.3**, is 500 m from the Scoping Boundary and has been used to identify water features that may be impacted by the Project. It is considered appropriate based on technical knowledge of similar projects and has been set following consideration of the distance over which likely significant effects can reasonably be expected to occur. However, as pollution risks can propagate downstream, it is important to also consider any additional attributes of a watercourse downstream of the Project, and sometimes beyond the Study Area, to ensure that the most appropriate and precautionary importance value has been awarded to it for the assessment of potential water quality impacts. Generally, a distance of a few kilometres is used for this purpose, and this will be defined as part of the ES. It should also be noted that the Study Area for the FRA may cover a wider area than 500m beyond the Order Limits, in order to also include reaches of the watercourse upstream/downstream of the Project that may impact or be impacted by the Project. This will be defined at later stages of assessment and within the ES.

10.5 Baseline Conditions

Data Sources

- 10.5.1 This Chapter has been prepared through a desk study undertaken during July and August 2025 based on readily available online data.

- 10.5.2 The known or predicted current and future baseline environment described in this section has been informed by the data sources as listed in **Table 10.2**. This also highlighted some sources of information that are not currently available but will be included in later stages of the assessment and the ES.

Table 10.2 Water environment – sources of information

Data Topic	Sources of Information
Climate	Met Office UK Climate averages at Wittering (Ref 10.10).
Topography	Ordnance Survey Mapping (Ref 10.11).
Geology	British Geological Survey (BGS) GeoIndex Viewer (Ref 10.12).
Soils and land use	- Department for Environment, Food and Rural Affairs (DEFRA) 'Magic Map' online GIS portal (Ref 10.13); and - National Soil Research Institute Soilscales map viewer (Ref 10.16).
Hydrology	- DEFRA Hydrology Data Explorer (Ref 10.17); - Environment Agency Statutory Main River Map for England (Ref 10.18); - Flood Estimation Handbook Web Service (Ref 10.19); and - National River Flow Archive (NRFA) (Ref 10.30).
Flood risk	- Environment Agency Flood Map for Planning (Ref 10.20); - Environment Agency Risk of Flooding from Surface Water (RoFSW) (Ref 10.21); - National Flood Risk Assessment (NAFRA) Dataset (Ref 10.22); - Environment Agency Risk of Flooding from Reservoirs (Ref 10.23); and - Environment Agency Flood Defence Asset database (Ref 10.24). In addition to the above data requests will be made to the Environment Agency, LLFAs and IDBs to provide information on the following to support the water environment assessment: - Baseline flood risk data, including available modelled flood data for main rivers, and local flood risk data from commissioned studies. - Data on consented discharges to surface waters and licensed and exempted (private) abstractions from surface waters. - Specific watercourse characteristics (e.g. flow, control measures, maintenance regimes, Environment Agency flood defence assets) will be requested from IDBs for their districts. - Information on local flood risk from LLFAs (e.g. specific watercourse characteristics, local flood history, Section 19 flood investigation reports, flow, control measures, maintenance regimes, Environment Agency flood defence assets).
Water quality and Water Framework Directive status	- Catchment Data Explorer database (Ref 10.25) River Basin Management Plan (RBMP) Cycle 3 WFD information. - Environment Agency Water Quality Archive (Ref 10.26).

Data Topic	Sources of Information
Water resources	• Data request to be made to the Environment Agency for all licenced abstractions within the Study Area – to be presented and mapped for the ES. • Data request to be made to the Environmental Health Departments of all local Councils for information on any known surface water PWS within the Study Area – to be presented and mapped for the ES. • Data request to be made to the Environment Agency for all consented and permanent discharges to Controlled Waters covered by an active Water Activity Permit within the Study Area – to be presented and mapped for the ES. • Data request to be made to the Environment Agency for all category 3 (minor) or worse water pollution incidents within the Study Area as recorded on the National Incident Recording Database within the past 5 years – to be presented and mapped for the ES.

Baseline

- 10.5.3 This section describes the baseline environment providing details of the data sources that have been used and any other data gathering methods. This section also explains the future baseline including how that has been predicted and how it will be taken into account within the ES.
- 10.5.4 The Project has been divided into Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported below for the whole Scoping Boundary area for climate, topography and land use, and geology, which are contextual elements of the surface water environment baseline only. Surface water features and their attributes, as well as flood risk, are reported by Section in **Table 10.3** below.

Study Area Overview

Climate

- 10.5.5 The most recent available data for average annual rainfall estimates was taken from the Met Office website for the period 1991 to 2020 (Ref 10.10). This suggests that the average annual total rainfall in the locality of the Project is around 614 mm, based on the Wittering station record (National Grid Reference (NGR) TF044025) located approximately 19.5 km from the Scoping Boundary, south east of Melton Mowbray. This is lower than the Midlands regional average (1991-2020) of approximately 810 mm (Ref 10.10). The Wittering station is located centrally for the L-shaped Scoping Boundary and as such is the most appropriate for this report.
- 10.5.6 The distribution of rainfall throughout the year varied for the Study Area based on the Wittering 1991-2020 record. The highest monthly average precipitation is likely to occur during August (c. 60 mm) and October (c. 63 mm). The driest months are expected to be on average March (c. 39 mm) and February (c. 39 mm).

Topography and Land Use

- 10.5.7 Ordnance Survey Mapping (Ref 10.11) indicates that the topography in the north east of the Scoping Boundary, near Spalding is below 50 m above sea level. Travelling west along the Project the altitude increases to approximately 100 m above sea level just north of Melton Mowbray. The Project would cross the River Wreake at approximately 70 m above sea level to the west of Melton Mowbray. Topography within Sections 4 and 5 remains at approximately 100 m, with slight undulations between 90 to 145 m. The Project would cross the Eye Brook in Section 4 at approximately 150 m above sea level. The highest points are to the east of Leicester at approximately 190 m, near Skeffington.
- 10.5.8 The general land use is typical for lowland areas in England, consisting predominantly of arable farmland, pockets of pastureland, some urban areas, and clusters of small woodlands. Main towns and villages either within or near the Study Area include Pinchbeck, Melton Mowbray, Market Harborough, Wellingborough, Earl's Barton, Asfordby, and South Witham.

Geology

- 10.5.9 **Chapter 11 Geology and Hydrogeology** provides full details of the geology and hydrogeology baseline for the Study Area. The following is a brief overview to provide context for the surface water and flood risk baseline.
- 10.5.10 The Study Area mainly covers three rock formations, the Kellaways Formation and Oxford Clay Formation, the Great Oolite Group, and the Lias Group. The far west point of the Scoping Boundary near Melton Mowbray covers a small section of undifferentiated Triassic rocks. These four groups consist mainly of mudstone, siltstone, sandstone and limestone, with some argillaceous rock in the Great Oolite Group (Ref 10.12).
- 10.5.11 The Scoping Boundary covers Principal, Secondary A, Secondary B and Secondary (Undifferentiated) and Unproductive aquifers. The most prevalent designations within the Scoping Boundary are Secondary (Undifferentiated) and Unproductive. Principal aquifer status appears in small areas around South Witham, Harrington, south of Broughton and Wellingborough (Ref 10.13). Each type of aquifer is defined as follows:
- **Principal aquifers:** aquifers provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes and wetlands.
 - **Secondary A Aquifers:** aquifers comprise permeable layers that can support local water supplies and may form an important source of base flow to rivers.
 - **Secondary B Aquifers:** are mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers.
 - **Secondary Undifferentiated Aquifers:** are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value.
 - **Unproductive:** negligible significance for water supply or baseflow to rivers, lakes and wetlands. They consist of bedrock or superficial deposits with low permeability that naturally offer protection to any aquifers that may be present beneath.

Surface Water Features

- 10.5.12 The Scoping Boundary is located within the Anglian and Humber River Basin Districts (RBDs) (Ref 10.5 and Ref 10.6) and within the Management Catchments of Welland, Witham, Nene, and Soar, with a very small area in the Trent Lower and Erewash Management Catchment and Anglian Transitional and Coastal (TraC) Management Catchment.
- 10.5.13 There are a large number of watercourses within the Study Area for which it is impractical to identify and name at this stage of the assessment. Therefore, at this scoping stage a catchment approach has been adopted based on WFD designated water bodies, within which there will be numerous smaller tributaries. During subsequent stages of the assessment, these tributaries will also be identified as discrete receptors noting that their importance may be less than the main stem watercourse for the WFD catchment. Ponds are not considered as surface water bodies, but as a specific habitat type and considered in **Chapter 8 Ecology and Biodiversity**.
- 10.5.14 **Table 10.3** lists and summarises pertinent information on the WFD surface water bodies present within the Study Area and any notable non-WFD designated watercourses or lakes, as shown in **Figure 10.1 Surface water receptors and their attributes**, **Figure 10.2 Fluvial flood risk**, **Figure 10.3 Surface water flood risk**, and **Figure 10.3 WFD River Water Body Catchments**. In addition to WFD status, whether a watercourse is designated as a Main River or as an Ordinary Watercourse is also included. Main Rivers are typically larger rivers and streams where the Environment Agency is responsible for maintenance, improvement or construction work to manage flood risk (Ref 10.14). All other watercourses are considered to be Ordinary Watercourses where the LLFA and IDBs carry out flood risk management work. This distinction has relevance for whom is responsible for granting certain secondary consents as may be required when there are works close to, in, over or under watercourses.

Table 10.3 Surface water features in the Study Area by each Section

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Section 1						
Welland Lower	Whaplode River	GB205031055495	Artificial	Flows north approx. 3.7 km east of Study Area. Although the channel is not within the Study Area part of its catchment is and thus flow paths and drainage to this watercourse cannot be ruled out at this stage.	Ordinary	Moderate Ecological Potential
Welland Lower	Moulton River	GB205031050755	Artificial	Passes through Study Area flowing north.	Ordinary	Moderate Ecological Potential
Welland Lower	Vernatt's Drain	GB205031050705	Artificial	Passes through the Study Area flowing north	Ordinary	Moderate Ecological Potential
The Wash TRaC	Welland (estuary)	GB530503100400	Heavily modified	Passes through the Study Area flowing north	Main	Moderate Ecological Potential
Glens	Glen	GB105031050720	Artificial	Passes through the Study Area flowing north	Main	Moderate Ecological Potential
Section 2						
South Forty Foot Drain	Black Sluice IDB draining to the South Forty Foot Drain	GB205030051515	Heavily modified	Passes through the Study Area flowing north	Main	Poor Ecological Potential
South Forty Foot Drain	Old Beck	GB105030051540	Artificial	Passes through Study Area flowing east	Ordinary into Main	Moderate Ecological Potential
South Forty Foot Drain	Car Dyke	N/A	N/A	Passes through the Study Area flowing north	Main	N/A
Glens	East Glen River	GB105031055480	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Main	Poor Ecological Status

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Glens	West Glen - Upper	GB105031055510	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Main	Poor Ecological Status
Glens	The Tham	GB105031050650	Not designated artificial or heavily modified	Passes through the Study Area flowing south east	Ordinary	Moderate Ecological Status
Witham Upper	Witham - headwaters to conf Cringle Bk	GB105030051570	Not designated artificial or heavily modified	Passes through the Study Area flowing east then north	Main	Poor Ecological Status
Section 3						
Witham Upper	Cringle Brook - Upper	GB105030051560	Not designated artificial or heavily modified	Flows north and does not interact with Study Area (approx. 2.4 m north). However, part of the catchment may be within the Study Area and flow paths to the channel cannot be ruled out at this stage.	Ordinary	Moderate Ecological Status
Wreake River	Wyndham Brook Catchment (trib of Langham Brook)	GB104028047540	Not designated artificial or heavily modified	Flows south and does not interact with Study Area (approx. 180 m south of Study Area). However, part of the catchment may be within the Study Area and flow paths to the channel cannot be ruled out at this stage.	Ordinary	Moderate Ecological Status
Wreake River	Eye from Source to Langham Brook	GB104028047610	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Ordinary	Moderate Ecological Status
Wreake River	Freeby Brook Catchment (trib of Eye)	GB104028047580	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Ordinary	Moderate Ecological Status
Wreake River	Eye / Wreake from Langham Brook to Soar	GB104028047550	Not designated artificial or heavily modified	Passes through the Study Area flowing west	Main	Poor Ecological Status

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Wreake River	Thorpe Brook Catchment (trib of Eye)	GB104028047590	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Ordinary	Moderate Ecological Status
Wreake River	Scalford Brook Catchment (trib of Wreake)	GB104028047600	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Ordinary	Poor Ecological Status
Wreake River	Welby Brook Catchment (trib of Wreake)	GB104028047570	Not designated artificial or heavily modified	Passes through the Study Area flowing south west	Ordinary into Main	Poor Ecological Status
Nottinghamshire South B	Smite from Source to Dalby Brook	GB104028047240	Not designated artificial or heavily modified	Passes through the Study Area flowing north west	Ordinary	Poor Ecological Status
Nottinghamshire South B	Dalby Brook Catchment (trib of Smite)	GB104028047230	Not designated artificial or heavily modified	Flows north, does not interact with Study Area. Approx. 390 m west of Study Area.	Ordinary	Moderate Ecological Status
Wreake River	Austen Dyke Catchment (trib of Wreake)	GB104028047560	Not designated artificial or heavily modified	Passes through the Study Area flowing south	Ordinary	Moderate Ecological Status
Wreake River	Great Dalby Brook Catchment (trib of Wreake)	GB104028047510	Not designated artificial or heavily modified	Passes through the Study Area flowing north	Ordinary	Moderate Ecological Status
Wreake River	Queniborough Brook Catchment (trib of Wreake)	GB104028047450	Not designated artificial or heavily modified	Passes through Study Area flowing north west.	Main	Moderate Ecological Status
	Priory Water	N/A	N/A	In Study Area.	N/A	N/A
	Kirby Lake	N/A	N/A	In Study Area.	N/A	N/A
	Frisby Lakes	N/A	N/A	In Study Area.	N/A	N/A
Section 4						
Wreake River	Syston Brook Catchment (trib of Wreake)	GB104028047440	Not designated artificial or heavily modified	Flows north west, does not interact with Study Area. Approx. 320 m west of Study Area.	Ordinary	Moderate Ecological Status

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Soar River	Sence from Source to Burton Brook	GB104028046650	Not designated artificial or heavily modified	Flows south west, does not interact with Study Area. Approx. 350 m west of Study Area.	Ordinary	Moderate Ecological Status
Welland Upper	Eye Brook	GB105031050550	Not designated artificial or heavily modified	Passes through Study Area, flows south east.	Ordinary	Poor Ecological Status
Welland Upper	Stonton Brook	GB105031050460	Not designated artificial or heavily modified	Passes through Study Area, flows south	Main	Bad Ecological Status
Welland Upper	Medbourne Brook	GB105031050520	Not designated artificial or heavily modified	Flows south, does not interact with Study Area. Approx. 900 m east of Study Area.	Main	Poor Ecological Status
Welland Upper	Welland - conf Langton Bk to conf Gwash	GB105031050580	Not designated artificial or heavily modified	Passes through Study Area, flows east	Main	Moderate Ecological Status
Welland Upper	Unnamed	N/A	N/A	Passes through Study Area flowing east. Tributary of Welland	Main	N/A
Welland Upper	Langton Brook	GB105031045620	Not designated artificial or heavily modified	Passes through Study Area, flows east.	Main	Moderate Ecological Status
Welland Upper	Welland - conf Jordan to conf Langton Bk	GB105031045610	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Main	Moderate Ecological Status
Welland Upper	Welland - headwaters to conf Jordan	GB105031045630	Not designated artificial or heavily modified	Passes through Study Area, flows east	Main	Poor Ecological Status
Welland Upper	Stoke Albany Brook	GB105031045640	Not designated artificial or heavily modified	Flows north east, does not interact with Study Area. Approx. 2,100 m east of Study Area.	Ordinary	Poor Ecological Status
Welland Upper	Jordan (Welland)	GB105031045600	Not designated artificial or heavily modified	Passes through Study Area, flows north west	Main	Bad Ecological Status

Section 5

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Ise	Ise - Upper	GB105032045200	Not designated artificial or heavily modified	Passes through Study Area, flows east	Main	Moderate Ecological Status
Brampton Branch	Brampton Branch - Upper	GB105032045540	Not designated artificial or heavily modified	Passes through Study Area, flows west	Ordinary	Bad Ecological Status
Ise	Slade Brook	GB105032045170	Not designated artificial or heavily modified	Passes through Study Area, flows east	Ordinary into Main	Moderate Ecological Status
Ise	Loddington Arms (Ise)	GB105032045150	Heavily modified	Passes through Study Area, flows east	Ordinary	Moderate Ecological Potential
Brampton Branch	Pitsford Arm of the Brampton Branch	GB105032045470	Heavily modified	Passes through Study Area, flows south west	Main	Good Ecological Potential
Ise	Pytchley Brook	GB105032045110	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Ordinary	Moderate Ecological Status
Ise	Hardwick Brook	GB105032045100	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Ordinary	Poor Ecological Status
Ise	Ise - Lower	GB105032045140	Not designated artificial or heavily modified	Flows south, does not interact with Study Area. Approx. 1,300 m east of Study Area.	Main	Poor Ecological Status
Ise	Harrowden Brook (Nene)	GB105032045080	Not designated artificial or heavily modified	Passes through Study Area, flows east	Ordinary into Main	Bad Ecological Status
Ise	Swanspool Brook	GB105032045070	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Main	Moderate Ecological Status
Nene Middle	Sywell Brook	GB105032045430	Not designated artificial or heavily modified	Passes through Study Area, flows south	Main	Poor Ecological Status
Nene Middle	Nene - conf Brampton Branch to conf Ise	GB105032045050	Heavily modified	Passes through Study Area, flows north east	Main	Moderate Ecological Potential

Operational Catchment	Water Body	ID (Only for WFD Waterbodies)	Hydromorphological Designation (WFD)	Relevance	Main River or Ordinary Watercourse	Ecological Status or Potential (WFD)
Nene Middle	Grendon Brook	GB105032045330	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Main	Moderate Ecological Status
Nene Middle	Castle Ashby Arm (Grendon Brook)	GB105032045030	Not designated artificial or heavily modified	Passes through Study Area, flows north east	Main	Poor Ecological Status
Nene Middle	Grendon Brook	GB105032045040	Not designated artificial or heavily modified	Passes through Study Area, flows north west	Main	Moderate Ecological Status
	Mary's Lake	N/A	N/A	In Study Area.	N/A	N/A
	Grendon Lakes	N/A	N/A	In Study Area.	N/A	N/A

10.5.15 There are two flow gauging stations within the Scoping Boundary, one in Section 2 and one in Section 4. There are a further three flow gauging stations within the Study Area, and a further eight in relatively close vicinity of the Scoping Boundary, mostly north of Section 2 and east of Section 5, that may provide useful information. **Table 10.4** summarises the 13 flow gauges upstream or downstream of watercourses in the Scoping Boundary. See also **Figure 10.1 Surface water receptors and their attributes**.

Table 10.4 Summary of river flows (Ref 10.30)

Gauge Ref, Name and NGR	Watercourse	Catchment Area (km ²)	Mean Flow (m ³ /s)	Q10* (m ³ /s)	Q95^ (m ³ /s)	BFI+	Record Period
31013, East Glen at Irnham, TF038273	East Glen	71.5	0.13	0.339	0.002	0.32	1969-2023
31011, West Glen at Burton Coggles, SK986261	West Glen	31.6	0.116	0.329	0.00	0.28	1969-2023
31023, West Glen at Easton Wood, SK965258	West Glen	4.4	0.02	0.048	0.00	0.12	1972-2022
30015, Cringle Brook at Stoke Rochford, SK924296	Cringle Brook	50.5	0.28	0.577	0.061	0.89	1976-2023
30017, Witham at Colsterworth, SK928246	Witham	51.3	0.219	0.512	0.019	0.5	1978-2023
28024, Wreake at Syston Mill, SK615124	Wreake	413.8	2.823	6.964	0.296	0.4	1967-2023
28028, Soar at Wanlip, SK603109	Soar	480	2.705	6.158	0.296	0.35	1972-1981
31001, Eye Brook at Eye Brook Reservoir, SP853941	Eye Brook	60.1	0.231	0.605	0.035	0.41	1937-1999
31021, Welland at Ashley, SP818915	Welland	250.7	1.514	3.81	0.134	0.36	1970-2023
31022, Jordan at Market Harborough, SP740866	Jordan	20.8	0.091	0.271	0.003	0.35	1970-2023
32007, Nene/Brampton at St Andrews Total, SP749613	Nene/Brampton	232.8	1.147	2.373	0.224	0.57	1939-2023
32019, Slade Brook at Kettering, SP872763	Slade Brook	58.3	0.357	0.75	0.058	0.58	1970-2023

Gauge Ref, Name and NGR	Watercourse	Catchment Area (km ²)	Mean Flow (m ³ /s)	Q10* (m ³ /s)	Q95^ (m ³ /s)	BFI ⁺	Record Period
32004, Ise Brook at Harrowden, SP899712	Ise Brook	194	1.362	3.02	0.178	0.52	1943-2023

*Q10: the flow that is equalled or exceeded 10% of the time – an index of high flow.

^Q95: the flow that is equalled or exceeded 95% of the time – an index of low flow.

⁺BFI: the Base Flow Index (BFI) is a measure of the proportion of the river runoff that is derived from stored sources; the more permeable the rock, superficial deposits and soils in a catchment, the higher the baseflow and the more sustained the river's flow during periods of dry weather. Thus, the BFI is an effective means of indexing catchment geology.

- 10.5.16 Based on the summary of the flow gauging stations in **Table 10.4**, noting that some of these are a distance upstream or downstream of the Scoping Boundary, the majority of the catchments are considered to have a relatively low baseflow index, meaning that baseflow is less important to sustaining flow indicating less permeable bedrock, superficial deposits and soils. These watercourses are more dependent on surface water runoff and are likely to be susceptible to periods of dry weather. The exception is Cringle Brook, located at Stoke Rochford to the north west of the Scoping Boundary, which has a much higher baseflow index. Nene/Brampton, Slade Brook and Ise Brook, which are all in the south of the Scoping Boundary between Kettering and Northampton have a moderate baseflow index.
- 10.5.17 The water features have several attributes that could be affected, including water quality and flow conveyance. They also support several services, including water supply, receipt and dilution of wastewater discharges, navigation and amenity.

Hydromorphology

- 10.5.18 Most of the WFD water bodies in the Study Area are not designated as artificial or as heavily modified water bodies. As identified in **Table 10.3**, there are multiple Main Rivers within the Study Area. Of these, the East Glen River, West Glen River, River Wreake and River Nene show high levels of sinuosity in aerial imagery potentially indicating high hydromorphological quality (which will be investigated further during site surveys during the EIA). It is likely that many of the Ordinary Watercourses in the Study Area, particularly those within IDB districts, also serve a land drainage function and have a relatively low hydromorphological diversity. Walkover surveys will be undertaken to inform subsequent stages of the assessment and the ES and will allow a more detailed classification of the physical form and function of watercourses that may be impacted by the Project.

Water Resources, Abstractions and Discharges

- 10.5.19 There is one Drinking Water Protected Areas (DrWPA) in the Study Area. DrWPA are locations identified by the WFD where raw water is abstracted for human consumption (Ref 10.31). The DrWPA is Welland - conf Langton Bk to conf Gwash (SWSGZ1005) and is at risk from pesticides, its location is shown in **Figure 10.1 Surface water receptors and their attributes**. Due to the nature of the Project, pesticide levels are unlikely to be affected.
- 10.5.20 There are four surface water Drinking Water safeguard Zones in the Study Area through which the Scoping Boundary passes, these are shown on **Figure 10.1 Surface water receptors and their attributes** and include:

- Cringle Brook (SWSGZ1003);
 - River Welland upstream of Tinwell (SWSGZ1005);
 - River Nene upstream of Wansford (SWSGZ1006); and
 - Pitsford Natural Catchment (SWSGZ1008).
- 10.5.21 The main risk facing the four zones is from pesticides (Ref 10.28). Due to the nature of the Project, pesticide levels are unlikely to be affected.
- 10.5.22 Nearly the whole of the Study Area lies within a Nitrate Vulnerable Zone (NVZ), which are areas designated as being at risk from agricultural nitrate pollution.
- 10.5.23 There are 10 NVZs in total, which cover large spatial areas and often encroach within more than one Section of the Scoping Boundary. The NVZs are shown on **Figure 10.1 Surface water receptors and their attributes** and include:
- NVZ 824 Whaplode River;
 - NVZ 378 Glen;
 - NVZ 669 Black Sluice IDB draining to the South Forty Foot Drain;
 - NVZ 69 Lincolnshire Limestone;
 - NVZ 375 Lower Witham;
 - NVZ 309 Soar R;
 - NVZ 832 River Welland;
 - NVZ 382 River Nene;
 - NVZ 165 Northampton Sands; and
 - NVZ 148 Thrapstone Lake Eutrophic Lake.
- 10.5.24 Due to the nature of the Project, it is unlikely to affect nitrate concentrations in local watercourses therefore no further consideration of NVZ is proposed.
- 10.5.25 Within the Study Area there are several Abstraction Licensing Strategies including the following:
- The Nene Catchment Abstraction Licensing Strategy (Ref 10.32) shows the water resource available at least 30% of the time;
 - The Welland Catchment Abstraction Licensing Strategy (Ref 10.33) shows the water resource available at least 30% of the time;
 - The Witham Abstraction Licensing Strategy (Ref 10.34) shows the water resource available at least 30% of the time; and
 - The Soar Abstraction Licensing Strategy (Ref 10.35) shows the water resource available at least 95% of the time.
- 10.5.26 No information is available at this scoping stage regarding specific licensed abstractions and consented discharges to/from the surface water environment. However, this will be requested from the Environment Agency and included in the baseline for the ES.

Water Quality

- 10.5.27 Within the Study Area there are 38 water quality archive monitoring stations (Ref 10.26). **Table 10.5** summarises the locations of these stations, broken down by Sections of the Scoping Boundary. Relevant data will be used to inform the baseline at subsequent stages of assessment.

Table 10.5 Environment Agency water quality archive sites within the Study Area

Section	Number of Water Quality Monitoring Stations
Section 1	2
Section 2	7
Section 3	5
Section 4	12
Section 5	12
Total	38

Water Framework Directive

- 10.5.28 A full summary of WFD classifications for relevant water bodies in the Study Area is provided in **Appendix 10A WFD Screening Assessment**, with a short summary provided here.
- 10.5.29 Within the Humber and Anglian RBDs the Scoping Boundary passes through several management and operational catchments. Water bodies within these operational catchments are generally not heavily modified but tend to only be at Moderate Ecological Status, due to biological quality elements and physico-chemical quality not being at good status.
- 10.5.30 The reasons for not achieving good ecological status are shared by many of the water bodies and include the risk of pollution from rural areas and from wastewater discharges. All water bodies share a chemical status of 'fail' due to exceedance of priority hazardous substances, in particular mercury and its compounds, as well as polybrominated diphenyl ethers (PBDE). However, these are chemical substances that are unlikely to be introduced by any phases of the Project.

Ecological Potential of Water Features

- 10.5.31 There are 23 statutory and non-statutory designated ecological sites in or within a few kilometres downstream of the Study Area, and the relevance of these to identified water features is summarised in **Table 10.6** (Ref 10.27). Those identified include Ramsar sites, Special Protection Areas (SPA), and Special Areas of Conservation (SAC), which are internationally designated, and Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR), which are nationally designated.
- 10.5.32 Within or downstream of the Study Area there are no known chalk rivers (Ref 10.15).

Table 10.6 Summary of all statutory and non-statutory designated ecological sites in and downstream of the Study Area

Site Name, SSSI ID	Designation type	Approx. NGR and Location relative to Project	Main Habitat and/or Reason for Designation	Hydrological Importance or flow path between site and Scoping Boundary
Surfleet Lows, 1002976	SSSI	TF 251 286, within Study Area	Neutral grassland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
Dunsby Wood, 1002945	SSSI	TF 087 259, within Study Area	Broadleaved, mixed and yew woodland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
The Hermitage, 1002948	SSSI	TF 009 265, within Study Area	Neutral grassland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
Swinstead Valley, 1002830	SSSI	TF 006 222, within Study Area	Calcareous grassland	No, although this SSSI is adjacent to the West Glen River is not considered to be dependent on flows and quality of water in the brook.
Tortoiseshell Wood, 1003142	SSSI	SK 962 199, within Study Area	Broadleaved, mixed and yew woodland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
Porter's Lodge Meadows, 1002875	SSSI	SK 961 196, within Study Area	Neutral grassland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
Cribb's Lodge Meadows SSSI, Cribb's Meadow NNR 1003020	SSSI, NNR	SK 899 188, within Study Area	Neutral grassland	No, although this SSSI is adjacent to the River Witham it is not considered to be dependent on flows and quality of water in the brook.
Stonesby Quarry, 1003065	SSSI	SK 812 251, within Study Area	Calcareous grassland	No, as not considered to be dependent on the quality and flow of water in any watercourse.
Holwell Mouth, 1003038	SSSI	SK 725 245, within Study Area	Neutral grassland, mixed deciduous woodland, lowland fens, including basin, flood-plain, open water transition and valley fens	Yes , River Smite flows through the Scoping Boundary.

Site Name, SSSI ID	Designation type	Approx. NGR and Location relative to Project	Main Habitat and/or Reason for Designation	Hydrological Importance or flow path between site and Scoping Boundary
Frisby Marsh, 1003031	SSSI	SK 686 173, within Study Area	Lowland fens, including basin, flood-plain, open water transition and valley fens	Yes , SSSI is alongside River Wreake which flows through the Scoping Boundary.
Tilton Cutting, 1003067	SSSI	SK 763 052, within Study Area	Earth heritage	No as not relevant given the SSSI is a geological site.
Leighfield Forest, 1003042	SSSI	SK 765 028, within Study Area	Broadleaved, mixed and yew woodland and neutral grassland	No, although Eye Brook flows through Scoping Boundary, this SSSI is not considered to be water dependent on the brook.
Great Bowden Borrowpit, 1003035	SSSI	SP 743 898, within Study Area	Fen, marsh and swamp, and neutral grassland	No, although the habitat on the Site is dependent on local hydrology and the site is within the Scoping Boundary, it is isolated from any watercourse and surrounded on all sides by major roads, railway lines or areas of urban development.
Birch Spinney and Mawsley Marsh, 1002749	SSSI	SP 809 766, within Study Area	Lowland wetland including basin fen, valley fen, floodplain fen, waterfringe fen, spring/flush fen and raised bog lagg, lowland mixed deciduous woodland, and lowland neutral grassland	Yes , Unnamed watercourse flows through SSSI into Cransley Reservoir, both of which lie in the Scoping Boundary.
Badsaddle, Withmale Park and Bush Walk Woods, 1002748	SSSI	SP 832 720, within Study Area	Broadleaved, mixed and yew woodland	No, as this SSSI is not considered to be water dependent.
Hardwick Lodge Meadow, 1003134	SSSI	SP 834 702, within Study Area	Neutral grassland	No, although this SSSI is adjacent to Swanspool Brook it is not considered to be dependent on flows and quality of water in the brook.
Upper Nene Valley Gravel Pits SSSI, 1082789	SSSI, SPA, Ramsar	SP 928 693, within Scoping Boundary and Study Area	Standing open water and canals, and >20,000 non-breeding waterbirds	Yes , SSSI contains a series of lakes within the Scoping Boundary and Study Area and the downstream area of the River Nene corridor.

Site Name, SSSI ID	Designation type	Approx. NGR and Location relative to Project	Main Habitat and/or Reason for Designation	Hydrological Importance or flow path between site and Scoping Boundary
Wollaston Meadows, 1003075	SSSI	SP 897 648, within Study Area	Neutral grassland	No, as this SSSI is not considered to be water dependent.
Rutland Water, 1003058	SSSI, SPA, Ramsar	SK 906 071, south and east of the Study Area	Standing open water and canals, and >20,000 non-breeding waterbirds	No, although a large and important water body it is not believed to be downstream of any watercourses in Scoping Boundary that maybe affected by the Project.
The Wash, 1002998	SSSI, SAC, SPA, Ramsar, NNR	TF 537 402, north east of Study Area, approximately 6.5 km downstream	43 reasons, including, reefs, non-breeding and breeding birds, common seal, saline coastal lagoons, and sheltered muddy shores	No, coastal water designation 6.5 km downstream of River Welland. There will be significant dilution and dissipation of any chemical pollutants as conveyed along the River Welland and then by the tidal cycle.
Pitsford Reservoir, 1002766	SSSI	SP 773 701, west of Study Area	Standing open water and canals	No, water body not believed to be downstream of watercourses in Scoping Boundary that may be impacted by the Project.
Eye Brook Reservoir, 1003027	SSSI	SP 852 955, east of Study Area, approximately 9.5 km downstream	Standing open water and canals	No, water body at too great a distance to likely be impacted.
Wymondham Rough, 1003070	SSSI	South of Study Area, approximately 2.6 km downstream	Neutral grassland	No, as this SSSI is not considered to be water dependent despite being downstream along unnamed watercourses.

- 10.5.33 Ecological survey data will be used to further inform the determination of importance classification for each surface water receptor for the ES. Different types and levels of fish population, or the presence of relevant aquatic / semi-aquatic (e.g. water vole, otter) protected species, are relevant to the overall importance of a surface water feature.

Flood Risk

Flood Risk from Tidal and Fluvial Sources

- 10.5.34 The Environment Agency's Flood Map for Planning (Ref 10.20) and Long Term Flood Risk Map (Ref 10.21) were examined to assess the flood risk from fluvial, tidal and

surface water sources along the Scoping Boundary. This assessment was based on the updated flood maps published by the Environment Agency in 2025.

- 10.5.35 The Environment Agency's Flood Map for Planning provides an indication of the likelihood of flooding from fluvial and tidal sources. Flood Zone extents are shown on **Figure 10.2 Fluvial flood risk** and are defined as follows:
- Flood Zone 1 (low probability) is assessed as having a less than 0.1% annual probability of fluvial or tidal flooding (shown as clear on the Flood Map for Planning – all land outside of Flood Zones 2, 3a and 3b).
 - Flood Zone 2 (medium probability) is assessed as having between a 0.1% and 1% annual probability of fluvial flooding, or between a 0.1% and 0.5% annual probability of tidal flooding (land shown in light blue on the Flood Map for Planning).
 - Flood Zone 3a (high probability) is assessed as having a 1% or greater annual probability of fluvial flooding, or a 0.5% or greater annual probability of tidal flooding (land shown in dark blue on the Flood Map for Planning).
- 10.5.36 Flood Zone 3b ('functional floodplain') is not distinguished separately from Flood Zone 3a on the Flood Map for Planning (and therefore, not distinguished separately on **Figure 10.2 Fluvial flood risk**) but is a sub-part of Flood Zone 3. Flood Zone 3b comprises land where water from rivers or the sea has to flow or be stored in times of flood. It normally comprises land having greater than a 3.3% or greater annual probability of flooding, with existing flood risk management features and structures operating effectively, or land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).
- 10.5.37 It should be noted that the Flood Zones shown on the Environment Agency's Flood Map for Planning (Ref 10.20) do not take account of the possible impacts of climate change and consequent changes in the future probability of flooding.
- 10.5.38 The River Welland, which is tidally influenced, flows north-east through the eastern edge of the proposed new overhead line section of the Project, just north of Spalding. There are large areas of Flood Zones 2 and 3 between Haconby and the eastern edge of the Scoping Boundary associated with this watercourse and its tributaries, including the River Glen, Vernatt's Drain and Blue Gowt Drain, as shown of **Figure 10.2 Fluvial flood risk**. There are also a large number of other drains contributing to flood risk east of Haconby, including the South Forty Foot Drain which discharges to the Haven to the north east of the Scoping Boundary. New infrastructure is proposed within this area of Flood Zone 2 and 3.
- 10.5.39 West of Haconby, the majority of the Scoping Boundary is within Flood Zone 1. There are small areas of Flood Zones 2 and 3 where tributaries of the River Glen, including the East Glen River, West Glen River, and other watercourses, including the River Witham, River Eye, Freeby Brook, Thorpe Brook, Scalford Brook and other unnamed Ordinary Watercourses cross the Scoping Boundary.
- 10.5.40 There are large areas of Flood Zones 2 and 3 along the reconductoring section of the Scoping Boundary from the new WMEL-B substation to the existing Grendon substation. These areas of Flood Zones 2 and 3 are located just west of Melton Mowbray (River Wreake), north east of Market Harborough (River Welland and River Jordan), and east of Northampton (River Nene). Along this section of the Scoping Boundary, there are also smaller areas of Flood Zones 2 and 3 associated with the Gaddesby Brook, Stonton Brook and River Isle.

- 10.5.41 The WMEL-A and WMEL-B substations are both proposed within Flood Zones 1, however the Siting Zone for the Weston Marsh substation infrastructure is located entirely within an extensive area of Flood Zone 3.
- 10.5.42 There are various flood defences located within the Scoping Boundary between Spalding and Melton Mowbray in the form of embankments and natural high ground. The locations of existing flood defences are presented in **Figure 10-2 Fluvial flood risk**. The impact of flood defences is not included within the Flood Zone extents. However, the Environment Agency have published a defended flood extents map which shows the potential impact of flood defences on flood risk, assuming the defences are operating in the way they were intended (or designed) to function. The defended flood extents data is noted to show inconsistent results in some areas. However, following a review of the watercourse and defence locations, they look accurate within the Scoping Boundary. Where the Flood Zones showed the greatest flood risk between Haconby and the eastern edge of the Scoping Boundary, the defended flood extents are significantly reduced, suggesting the flood defences are effective at reducing flood risk (if operating appropriately). The defended flood extents also show reduced flood risk within the Siting Zone for the Weston Marsh substation infrastructure. There are however some large areas of flooding around the watercourses which proposed towers may not be able to avoid.

Flood Risk from Surface water

- 10.5.43 Surface water flooding, also known as pluvial flooding, occurs when heavy rainfall overwhelms drainage systems or the rate of infiltration, causing water to accumulate on the surface and flow over land.
- 10.5.44 The Environment Agency's Surface Water Flood Map for Planning (Ref 10.21) presents the surface water flood risk across the Scoping Boundary. The Environment Agency describes the surface water flood risk levels as follows:
- Very Low Risk: Less than 0.1% chance of flooding each year;
 - Low Risk: Between 0.1% and 1% chance of flooding each year;
 - Medium Risk: Between 1% and 3.3% chance of flooding each year; and,
 - High Risk: Greater than 3.3% chance of flooding each year.
- 10.5.45 The flood risk from surface water varies across the Scoping Boundary with a similar trend to the flood risk from rivers and the sea. Along the section where the new overhead line is proposed, there are areas of high, medium and low surface water flood risk, which are associated with Ordinary Watercourses and low spots in topography. Within the reconductoring section of the Project, there is particularly high surface water flood risk just west of Melton Mowbray, north east of Market Harborough, and east of Northampton. This corresponds to the areas also at high risk of flooding from rivers.
- 10.5.46 When considering surface water flood risk to the proposed substation locations, there are several small Ordinary Watercourses (field drains) located within and around the proposed location of Substation WMEL-B. In particular, there is a narrow flow path with a high surface water flood risk through the centre of the WMEL-B Siting Area, which may be associated with a small field drain. For WMEL-A, there is a large surface water flow path directly through the proposed location, near to the southern boundary. The location of the Weston Marsh substation infrastructure is yet to be defined within the Siting Zone, but it is possible that there may be surface water flow paths near or within the location that will need to be considered. The surface water

flood risk, including at the substation locations, is presented in **Figure 10.3 Surface water flood risk**.

Flood Risk from Groundwater

- 10.5.47 Groundwater flooding occurs when water levels below the ground rise to the surface, often after prolonged rainfall or seasonal changes. This can happen in areas where the ground contains permeable rock or porous substrate that allows water to soak in and travel through, like chalk or sand and gravel.
- 10.5.48 The groundwater flood risk across the Study Area is represented in the Lincolnshire Preliminary Flood Risk Assessments (PFRA) (Ref 10.7) for the east of the Project, and in the Leicestershire Strategic Flood Risk Assessments (SFRA) (Ref 10.8) for the west of the Project. These maps show that there is low susceptibility (<25% chance) of groundwater flooding across the majority of the Study Area, including in the vicinity of the proposed substations. There are some small areas of greater susceptibility ($\geq 50\%$ <75% chance) of groundwater flooding distributed across the Study Area, as well as an area of high susceptibility ($\geq 75\%$) around Buckminster. As the Project proposes an overhead line, there should be limited interaction with groundwater and any associated flooding. Ground investigations will be undertaken at the proposed substation locations and other relevant locations (e.g. access routes) which will confirm groundwater levels within these locations.

Flood Risk from Artificial Sources

- 10.5.49 The Environment Agency's Long Term Flood Risk Map (Ref 10.23) shows the majority of the Scoping Boundary is not located in an area expected to be impacted by reservoir flooding. This includes the locations of the two proposed WMEL substations, and the Weston Marsh substation infrastructure Siting Zone. There is however a small area around Spalding on the overhead line route, which is expected to flood if a dam or reservoir fails when river levels are considered normal (dry day scenario). There are also some small areas around Melton Mowbray, Market Harborough and Northampton along the reconductoring route, which are expected to flood in the dry day scenario (i.e. breach not connected to other rainfall or flooding), or when there is also flooding from rivers (i.e. the wet day scenario). However, the Environment Agency maintain reservoirs to very high standard and hence breaches are highly unlikely.

Flood Risk from Drainage Assets

- 10.5.50 The majority of the Scoping Boundary, including the locations of the two proposed WMEL substations, as well as the Weston Marsh substation infrastructure Siting Zone, is located within rural areas where there are likely to be limited sewer connections. Hence, the risk of flooding from sewers is not considered as a significant source of flooding. This is reflected within the South Kesteven SFRA (Ref 10.9) (Section 2) which shows no sewer flood records at the location of the WMEL-A substation, and within the Leicester and Leicester City SFRA (Ref 10.8) which shows only 2 sewer records at the postcode location of WMEL-B substation.

Future Baseline

- 10.5.51 The future baseline relates to known or anticipated changes to the current baseline in the future which would develop in the absence of the Project and should be considered in the ES.
- 10.5.52 Climate change is likely to lead to significant changes in hydrological conditions within the Study Area over the lifetime of the Project. Outputs from UKCP18 (Ref 10.36) and the Future Flows and Groundwater Levels Project (Ref 10.37) will be used to assess likely changes in ambient conditions for the purposes of the future baseline. For the FRA, the impacts of climate change on future flood risk would be assessed in line with current Environment Agency guidance (Ref 10.20). Appropriate climate change allowances from this guidance would be incorporated into assessments of future baseline flood risk. This would be factored into the design of flood resilience and mitigation measures and drainage systems for the proposed lifetime of the Project.
- 10.5.53 Changes in environmental legislation or the introduction of new standards under the Environment Act 2021 (Ref. 10.1) may drive future improvements in the ecological and chemical quality of water features, building on the implementation of future cycles of RBMPs. However, while the general water quality and health of aquatic ecosystems had been improving due to stricter planning policies and regulations, in recent years this positive trend is facing challenges. Climate change, population growth, a lack of recent investment in foul sewage treatment and sewer capacity, and the emergence of new chemicals and pollutants are all working against these improvements.
- 10.5.54 Despite these countering factors, it is not expected that the future baseline will significantly alter the overall importance of water features. Their significance is largely determined by attributes like their size, specific designations or presence of important fish populations or relevant protected species, or third party uses, and not water quality at any given time. The approach is therefore less sensitive to more subtle longer-term changes in water quality per se driven by climate change or stricter environmental regulation and standards.
- 10.5.55 The effects of known future development that share the same hydrological catchments as the Study Area would also be considered, in terms of the potential for these developments to impact on the status of water receptors as part of the cumulative effects assessment that will be reported in the ES. **Chapter 5 EIA Approach and Methodology** sets out the approach to the cumulative effects assessment.

10.6 Design and Control Measures

Design Measures

Overhead Line

- 10.6.1 Principal routing and siting for the Project has sought to avoid designated sites and sensitive receptors as far as possible, as set out in the Corridor Preliminary Routing and Siting Study (CPRSS) (Ref 10.30). As the Project progresses, further work will be done to identify and evaluate water environment receptors to avoid and minimise adverse impacts through design. This will include:

- As far as practicable lakes, reservoirs and large ponds will be avoided and disruption to watercourses and ditches minimised.
- Where possible crossing rivers and their floodplains at a narrow location.
- The horizontal clearance of any towers from watercourses and other water features is at least 15 m measured from the top of the bank, batter, edge of a culvert or landward toe of any existing flood defence to avoid hydromorphological impacts, where practicable.
- Overflight of watercourses by the overhead line will be as perpendicular as possible.
- Vertical clearance of the overhead line above the bank or flood bank crest level will be at a minimum height above the watercourse in line with National Grid standards and guidance (Ref 10.41).
- Consent will be sought for any works within 9m of drainage and floor risk infrastructure from the relevant IDB, in line with South Holland Drainage Board Byelaw 10.

Substations

- 10.6.2 The substation Siting Zones provided opportunity for siting a substation in areas of lowest flood risk as far as possible, considering the distribution of flood risk along the preferred route corridor, and taking into account other environmental and engineering constraints as described in the CPRSS (Ref 10-30). The sequential approach has been taken to identify potential locations for the new substation infrastructure. This has resulted in these being proposed within Flood Zone 1. This is in line with the NPPF (Ref. 10.21) and Section 5.8 of the National Policy Statement for Energy (EN-1) (Ref. 10.19). Therefore, the WMEL-A and WMEL-B substations are to be positioned in the lowest flood risk area as possible.
- 10.6.3 For the Weston Marsh substation infrastructure, the entire Siting Zone is located within an extensive area of Flood Zone 3 which poses a challenge with regards to location, design and mitigation, noting that the substation infrastructure will need to remain operational at times of flood. It should be noted that the flood zones do not account for the impact of nearby flood defences, and when accounting for the defences, the flood risk may reduce. Further investigation will be undertaken once the substation infrastructure locations have been confirmed.
- 10.6.4 Further design measures will be developed as the Project design evolves. This includes a minimum set-back distance between infrastructure and watercourses, flood mitigation measures infrastructure which must, through further design development, be located in higher flood risk areas due to a lack of alternative lower flood risk sites, and drainage design for substations to ensure no increase in flood or pollution risk arising from site runoff. These measures will be developed in collaboration with the engineering design team, other environmental disciplines and in consultation with relevant stakeholders.
- 10.6.5 There are areas of surface water flooding within both the proposed WMEL substation Siting Areas, and potentially affecting the Weston Marsh substation infrastructure. Surface water flood risk to and from the proposed substations will need to be assessed further, and compensatory storage or diversion of flow paths may be required depending on the design.
- 10.6.6 A suitable Drainage Strategy will be required for all substations and any other permanent above ground works. This will set out how changes in surface water runoff

will be captured and discharged. In doing so, the Drainage Strategy will describe how surface water runoff will be adequately attenuated and treated to avoid any change to flood risk and to protect the receiving water environment from pollution. Electrical equipment such as supercharged transformers contain oil and although self-bunded, surface water runoff from certain areas will be captured and passed through an oil separator. Reinforced concrete bunds forming the perimeter to the substations also act as a secondary spillage containment.

- 10.6.7 In keeping with the current National Standards for SuDs Guidance (Ref 10.1), where possible it is proposed that surface water outfalls to any receiving watercourse will be ditches. This avoids the need for the placement of new engineered structures along watercourses. The design of the final connection of these ditches to the receiving watercourse will be done after development consent is granted. Where required, the ES and FRA would identify specific measures, which would be adopted in the detailed design and secured through the development consent order.
- 10.6.8 Substations will generally be unmanned and operated remotely, and at this stage permanent welfare provision is not considered necessary.

Control and Management Measures

- 10.6.9 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice (CoCP) is provided in **Appendix 4A Initial Outline Code of Construction Practice**. Measures relevant to the control and management of impacts that could affect the water environment are (refer to **Appendix 4A** for the full description of each measure):
- GG05: on environmental training for construction workers.
 - GG07: requiring the development and implementation of a Construction Environmental Management Plan (CEMP).
 - GG09: on reinstatement of land and vegetation.
 - GG16: on storage of fuels, oils and chemicals.
 - GG17: on the control of water runoff.
 - GG18: on the wash down of vehicles and equipment, and use of sediment traps.
 - GG24: requiring the development of an Emergency Action Plan for the construction phase.
 - W01: on works near to, within, over or under Main Rivers or likely to affect the flow in Ordinary Watercourses, requiring appropriate environmental permits.
 - W02: on measures to be employed for any open cut watercourse crossings.
 - W03: on retention of riverbank and in-channel vegetation and use of natural substrate for temporary watercourse crossing culverts.
 - W04: on measures to be employed where watercourses are to be crossed by construction traffic.
 - W05: on requirements for works affecting watercourses, de-watering and other discharge activities.
 - W06: on surface water drainage measures to be incorporated into the design.
 - W07: on the use of the Environment Agency's Floodline service, for advance warning of potential local flooding events, and development and implementation of a suitable Flood Risk Action Plan.

- W08: on engagement and alternative supply where Private Water Supplies are impacted.
- W09: on response in the event of a significant spill during construction.
- W10: on potential severance of existing land drainage routes, including agricultural field drainage systems.
- W11: on control of runoff from working areas through implementation of a Drainage Management Plan (DrMP).

10.7 Potential for Significant Effects

- 10.7.1 A description of the construction, operation and maintenance of the Project stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the water environment ES assessment is set out below, taking into account the embedded design, and control and management measures described in Section 10.6.
- 10.7.2 Paragraphs 10.7.3 to 10.7.21 and **Table 10.7** identify the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to significant effects on receptors identified in the Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give rise to potentially significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.

Potential Sources of Impacts

Sources of Construction Impacts

- 10.7.3 Construction activities as described in **Chapter 4 Description of the Project**, including the following:
- soil stripping, earthworks and excavations;
 - use and refuelling of plant and vehicles;
 - watercourse crossings for access (culverts and clear span bridges);
 - watercourse crossings for overhead lines (crossing protection scaffolds);
 - temporary works (e.g. spoil storage; works on the floodplain);
 - temporary drainage;
 - water use for mixing small quantities of cementitious materials, dust suppression and welfare; and
 - foul drainage from welfare facilities.

Sources of Operational Impacts

- 10.7.4 Operational activities as described in **Chapter 4 Description of the Project**, including the following:
- runoff (volume and quality) from any impermeable surfaces; and
 - loss of floodplain storage/disruption of flow paths.
- 10.7.5 Potential adverse impacts on the surface water environment during operation are related to surface water runoff and spillage risk from the substation infrastructure.

Although there may be some small areas of new hardstanding elsewhere, these areas are likely to be too small to represent any pollution risk to water receptors or result in any change to flood risk.

Sources of Maintenance Impacts

- 10.7.6 Maintenance activities as described in **Chapter 4 Description of the Project** include the use of machinery and vehicles for non-intrusive inspections and localised repairs. Due to the small scale nature of these works, their low frequency and localised nature, there is no potential for significant effects providing standard good practice measures are adopted, that can be incorporated into task specific method statements and Environmental Management Plans.

Potential impacts

Construction Impacts

- 10.7.7 The control and management measures, described in Section 10.6 and detailed in **Appendix 4B**, would reduce the risk of pollution of the water environment during construction by removing pathways between sources and receptors for many construction activities. However, potential for specific construction works to cause localised and temporary pollution effects would remain.
- 10.7.8 Surface water quality of receiving water features may be adversely impacted by site runoff or the dewatering of excavations with high sediment concentrations, or from accidental spillage of fuels, oils, and other potentially polluting chemicals and liquids. The risk of pollution is higher when vegetation is removed and soil is exposed, as well as when works are close to or in, under or over watercourses. Herbicide may be used to control the growth of weeds on any stockpiles of soil and earth, therefore, stockpiles should be located away from water features to minimise risk and the use of herbicides will be carefully controlled.
- 10.7.9 There may be localised and temporary changes to hydromorphology at watercourse crossings for access tracks or temporary surface water outfalls. Construction works may also alter surface water flow paths, runoff volumes and rates of discharge, especially when vegetation has been removed, ground compacted, and temporary new hardstanding provided, as well as cause the build-up of sediment and other materials in the channel. This can potentially affect local flows in watercourses and result in localised erosion or deposition. Additionally, construction activities have the potential to create blockages in watercourses (e.g. from debris falling into watercourses or from the accumulation of silt).
- 10.7.10 During the construction of the substations, there would be the potential for impacts on existing land drainage regimes and associated surface water flood risk due to changes in land surface permeabilities or local topography. For example, vegetation cover may be stripped, earthworks may be undertaken, or existing land drainage infrastructure may be disrupted. Some infrastructure and working areas, including the temporary storage of excavation arisings, may also be located within Flood Zones 2 and 3. This has the potential to affect floodplain storage or conveyance during construction, and may require temporary compensation to be provided.
- 10.7.11 Overall, as detailed further in **Table 10.7**, there is the potential for some significant construction phase impacts on the surface water environment associated with the overhead line infrastructure and substations, which are **scoped into** the ES. Impacts

on flood conveyance and from any dewatering for substation construction are not likely to result in significant effects and are proposed to be scoped out, as detailed further in **Table 10.7**.

Operational Impacts

Overhead Line

- 10.7.12 Given the nature of these Project components (new overhead line and reconducted section), there is generally unlikely to be any permanent adverse impacts on watercourse hydromorphology, flow regimes or floodplains other than where existing towers may need to be replaced. In these cases, the application of suitable buffers from water features should avoid any significant adverse effects, although this is yet to be confirmed and so physical disturbance and change to flow regime is **scoped in** at this stage.
- 10.7.13 There would be no new consumptive water uses, and the water quality of water receptors would not be degraded. There are no significant sources of potential pollution associated with overhead line infrastructure once construction is complete. Therefore, the potential for likely significant effects on water features as well as any third-party users of water (such as licenced abstractions or PWS) is expected to be negligible and is proposed to be scoped out.
- 10.7.14 Alteration of ground elevations and changes in surface water flood flow pathways may result in the some very localised modification of surface water flows. The introduction of a barrier to natural overland flow paths, such as introduction of embankments may have permanent impacts on catchment dynamics for surfaced water. However, new electricity transmission infrastructure is likely to have a localised impact only that is unlikely to be significant, but this matter is **scoped in** at this stage due to the current uncertainty as to the location of new towers and set off distances.
- 10.7.15 There would be negligible adverse impacts to flood risk and land drainage during the operation of the overhead line, as long as the towers are situated at a minimum setback distance (assumed to be at least 15 m) from the banks of watercourses, with floodplains of watercourses avoided where possible, and appropriate post construction surface water management and land drainage systems are incorporated into the design. Some towers may have to be located within Flood Zones 2 and 3, however they are considered essential infrastructure. Any permanent impermeable surfaces associated with the towers could have a minimal impact on surface water runoff to watercourses and the capacity of floodplain storage, which is **scoped in**.
- 10.7.16 Overall, as detailed further in **Table 10.7**, it is proposed that the operational phase impacts associated with the overhead line infrastructure are **scoped in** to the ES at this stage, with the exception of increased water pollution risk, which is proposed to be scoped out.

Substations

- 10.7.17 The proposed WMEL-A and WMEL-B substations are located within Flood Zone 1, so are not at risk of fluvial flooding and should not require any associated compensatory storage. However, there is high existing surface water flood risk at the proposed substation locations. This will have to be managed in the design to ensure the surface water flood risk to nearby receptors is not increased. The Weston Marsh

substation infrastructure is located entirely within an extensive area of Flood Zone 3. This will be considered further through design to ensure that flood risk to the surrounding area is not increased.

- 10.7.18 The proposed substation infrastructure will have large areas of impermeable surfaces which have the potential to increase the volume of runoff in the area and increase flood risk to downstream receptors. This will be avoided through appropriate design of drainage infrastructure to limit runoff rates to the greenfield rate (or an alternative rate agreed with the LLFA or IDB).
- 10.7.19 There may also be plant and electrical equipment that contains oils and other potentially polluting substances. Drainage designs will incorporate the use of SuDS and other pollution control devices to ensure that the runoff discharged from the substations is of good quality, thereby avoiding water quality impacts on receiving water features.
- 10.7.20 Overall, it is proposed that the operational phase impacts associated with the substation infrastructure are **scoped into** the ES due to the potential risks, as detailed further in **Table 10.7**.

Maintenance Impacts

- 10.7.21 Maintenance activities would generally be limited to non-intrusive inspections. Where repairs are necessary, the activities involved would be similar to those for construction, albeit over a much smaller area and scale. Maintenance would be undertaken in line with National Grid operational management procedures and given the nature of the Project; maintenance activities are not considered likely to result in significant effects on surface water environment receptors. It is therefore proposed that all maintenance impacts are scoped out of any further assessment in the ES.

Table 10.7 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Soil stripping, earthworks and excavations, watercourse crossings, and temporary works	Pollution from silt, and other construction materials. Potential reduction in channel flow capacity due to siltation.	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	Yes – Although measures outlined in Section 10.6 would act to manage work site runoff to ensure water features are not polluted, nor their flow capacities reduced, the scale of the proposed works (especially at substation sites) means that the potential for a significant effect cannot be ruled out at this stage.	Scoped in
Construction	Watercourse crossings, temporary works, temporary drainage, use and refuelling of plant, water use on site, and foul drainage from welfare facilities.	Pollution from hydrocarbons, chemicals and other construction materials.	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	Yes – Although measures outlined in Section 10.6 would act to manage work site runoff to ensure water features are not polluted, the scale of the proposed works (especially at substation sites) means that the potential for a significant effect cannot be ruled out at this stage.	Scoped in
Construction	Watercourse crossings for access and OHL; Temporary works (e.g. temporary outfalls)	Physical disturbance and change to flow regime.	Watercourses	Yes – the Project will cross numerous watercourses, with potential for temporary physical disturbance and impacts on flow regimes. Watercourses should be buffered from the location of new towers.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Temporary works (e.g. spoil storage, in the floodplain)	Increased fluvial flood risk to people, existing property and infrastructure.	People, existing property, and infrastructure.	Yes – parts of the proposed works (overhead line and substation infrastructure) are located within the floodplain to the east of the study area, temporary works in floodplain cannot be avoided.	Scoped in
Construction	Temporary works (e.g. construction discharges).	Impacts on other forms of flood risk (e.g. surface water)	People, existing property, and infrastructure.	Yes – the Project interacts will interact with numerous minor watercourses and areas at risk from different forms of flooding.	Scoped in
Construction	Crossing protection scaffolds for watercourse crossings.	Impact on flood conveyance arising from scaffolding structures on river banks.	Watercourses.	No – installations will be temporary, with an anticipated relatively small footprint, and can be managed through good practice mitigation and regulatory permitting process (e.g. FRAP or Land Drainage Consent). Effects on flood conveyance will be localised. Significant effects are not likely to occur.	Scoped out
Construction	Temporary works impacting groundwater – surface water interactions.	Impact from any dewatering for substation construction	Watercourses, standing water bodies and any surface water abstractions.	No – relatively low levels of permeability and low BFI values for most gauged watercourses suggest the risk is low. Construction works would also be temporary.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				Significant effects are not likely to occur.	
Operation	Operational runoff from impermeable surfaces associated with towers.	Increased surface water flood risk.	People, existing property, and infrastructure.	Yes - Permanent new impermeable surfaces associated with the overhead line infrastructure could increase surface water flood risk.	Scoped in
Operation	Operational runoff from impermeable surfaces associated with towers.	Increased water pollution risk.	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	No – there are no significant sources of potential pollution associated with overhead line infrastructure once construction is complete. Significant effects are not likely to occur.	Scoped out
Operation	Placement of new towers and their foundations	Physical disturbance and change to flow regime.	Watercourses	Yes – there is currently uncertainty as to the location of new towers and a number of factors to balance and avoid water features by assumed off set distances may not always be possible.	Scoped in
Operation	Loss of floodplain storage/disruption to flow paths associated with overhead line.	Increased fluvial flood risk.	People, property and infrastructure	Yes - The footprint of the towers, which are likely to be a lattice design could cause increased flood risk from loss of floodplain storage/disruption to flow paths.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation	Loss of floodplain storage/disruption to flow paths associated with substations.	Increased flood risk.	People, property and infrastructure.	Yes – although the WMEL-A and WMEL-B substations are located in Flood Zone 1, there is a risk from surface water flooding. Both substation locations are impacted by a surface water flow path which will therefore need to be considered further so that flood risk to the development / surrounding land is not increased. The Weston Marsh substation infrastructure is located entirely within an extensive area of Flood Zone 3. This will need to be considered further so that flood risk to the development / surrounding land is not increased.	Scoped in
Operation	Surface water drainage from substations (including potential pollutants such as oil-filled transformers).	Increased surface water pollution risk.	Watercourses.	Yes – operational works have the potential to increase water pollution risk if suitable Drainage Strategies are not implemented. Any foul drainage will also need to be appropriately managed.	Scoped in
Maintenance	Use of machinery and vehicles for non-intrusive inspections and localised repairs.	Pollution of watercourses and physical disturbance.	Watercourses, standing water bodies, and any surface water abstractions.	No – the nature and scale of the maintenance activities would not cause pollution of the water	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				environment and any physical disturbance would be highly localised. Good practice methods and mitigation measures to be applied to all maintenance works. Significant effects are not likely to occur.	

10.8 Proposed Assessment Methodology

Proposed Data Sources

- 10.8.1 The scope of the assessment is based on a review of baseline information and will be confirmed through review of additional data sources, site visits and further consultation with relevant stakeholders.
- 10.8.2 In addition to the data sources listed in **Table 10.2** in Section 10.5, additional information will be used to inform the assessment including site walkover surveys, data from Environment Agency flood models, drainage and flood data from Local Authority Surface Water Management Plans and Strategic Flood Risk Assessments, data defining surface water catchment areas and hydrological properties (e.g. rainfall, slopes, and soil permeability) from the Flood Estimation Handbook webservice (Ref 10.19), as data on licenced and private water abstractions, discharges and pollution incidents recorded on the National Incident Reporting System in the past 5 years.

Technical Guidance

- 10.8.3 The assessment will be undertaken in accordance with the following good practice and guidance documents:
- Planning Inspectorate Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Ref 10.38);
 - Local flood risk management guidelines published by the LLFAs (various dates);
 - British Industry Standards and Construction Industry Research and Information Association (CIRIA) publications (various dates);
 - National Highways Design Manual for Roads and Bridges (DMRB) LA113 (Ref 10.39) and LA 104 for criteria to determine the significant of effect (Ref 10.40); and
 - Guidance for Pollution Prevention series (various dates).

Proposed Assessment Methodology

- 10.8.4 This section summaries the methodology proposed for the water environment assessment. This includes the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions.
- 10.8.5 Potential impacts of the Project on the water environment, drainage, and flood risk will be assessed by:
- Considering the existing (baseline) status of the water environment within the Study Area and relevant surroundings with respect to surface water features, flood risk, and drainage, following the source-pathway-receptor approach.
 - Identifying potential impacts of the Project on the water environment, drainage and flood risk during the operational and construction phases, as well as cumulative effects.
 - Proposing suitable mitigation measures to be incorporated into the Project design, construction and operation, to reduce or minimise significant adverse impacts (i.e. embedded mitigation).

- 10.8.6 Presenting additional mitigation measures to reduce, minimise or offset impacts, which remain after embedded and good practice measures have been accounted for.

Source-Pathway-Receptor Approach

- 10.8.7 The water environment, drainage, and flood risk impact assessment will be based on a source-pathway-receptor model. For an impact on the water environment to exist the following is required:
- An impact source (such as the release of polluting chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or the loss or damage to all or part of a water body);
 - A receptor that is sensitive to that impact (i.e. water bodies and the services they support); and
 - A pathway by which the two are linked.
- 10.8.8 The first stage in applying the Source-Pathway-Receptor model is to identify the causes or 'sources' of potential impact from the Project. The impact sources will be identified through a review of the details of the Project, including the size and nature of the Project, potential construction and operation methodologies and timescales. The next step is to undertake a review of the potential receptors, that is, the water environment receptors that have the potential to be affected. Water features including their attributes will be identified through desk study and walkover surveys, building on the baseline information provided in this chapter. The last stage of the model is, therefore, to determine if there is a viable exposure pathway or a 'mechanism' linking the source to the receptor. This will be undertaken in the context of local conditions relative to the water receptors within the Study Area, such as topography, geology, climatic conditions and the nature of the impact (e.g. the mobility of a liquid pollutant or the proximity to works that may physically impact a water body).
- 10.8.9 The assessment of the likely significant effects is qualitative, and will consider the construction and operational phases. Cumulative effects with other developments will be considered and reported in the ES.
- 10.8.10 To support the assessment of effects on the water environment some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

Water Quality and Resource Assessment

- 10.8.11 Relevant data will be requested and obtained from the Environment Agency. A walkover survey will be undertaken by a hydromorphologist and a water resources specialist. This will be to observe surface water features in the Order Limits and to make observations about their current condition and character, the presence of existing risks and any potential pathways for construction and operation impacts as a result of the Project.
- 10.8.12 Although relevant background water quality data from the Environment Agency will be used to inform the baseline at subsequent stages of assessment, the importance of water bodies will be determined from a holistic review of water body features and does not rely on water quality. This is due to the principle that no controlled water may be polluted and thus it is not appropriate to potentially allow a greater impact based on a perceived lower water quality. Due to the nature of the types of water quality impacts from the Project, the assessment will be based on a risk assessment

basis that does not require input of raw background water quality data. This is considered an appropriate and standard approach. Water quality monitoring is only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results, which is not considered the case here. Therefore, no water quality sampling is proposed to support the water environment assessment.

- 10.8.13 A qualitative assessment of potential effects on surface water quality from construction and operation of the Project will be undertaken. This will consider the risk to surface water features resulting from construction or future operation activity using the source-pathway-receptor approach. Where there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (e.g. Guidance on Pollution Prevention Notes, British Industry Standards and Construction Industry Research and Information Association guidance).

Hydromorphology and Water Framework Directive (WFD) Assessment

- 10.8.14 A WFD Screening and Scoping Assessment has been undertaken in accordance with Planning Inspectorate Advice on The Water Framework Directive (Ref 10.38), and is provided as **Appendix 10-1: Water Framework Directive (WFD) Screening and scoping Assessment**. It has concluded that there are potential risks from the Project to the WFD objectives of those water bodies screened in. A scoping review has also been undertaken to identify which WFD elements may be at risk from Project activities. The risks of WFD impacts are currently considered to be low, and it is likely that all WFD risks can be designed out or mitigated through the application of standard protection measures. However, until designs affecting water bodies including appropriate mitigation measures become available, risks to WFD objectives cannot be ruled out. The assessment therefore concludes, on a precautionary basis, that a WFD Impact Assessment will need to be undertaken to demonstrate WFD compliance.
- 10.8.15 At the ES stage, when more construction and design information is available, the existing screening and scoping assessment will be extended to determine the potential for any non-compliance of the Project with WFD objectives for affected water bodies, using readily available information and Site observations obtained during site walkover surveys. This will include a qualitative examination of the potential construction and operation phase impacts of the Project on relevant WFD hydromorphological, biological and physio-chemical parameters. Depending on the outcomes of the assessment, more detailed investigations may be required, which will be determined in consultation with the Environment Agency.

Surface Water Drainage Strategy

- 10.8.16 The design of drainage systems aims to ensure that there would be no significant increases in flood risk downstream, during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance for climate change.
- 10.8.17 A Surface Water Drainage Strategy will be prepared for the substations with the FRA to ensure the risk of surface water flooding is not increased as a result of the Project, including any increased land take for foundations and any access roads.
- 10.8.18 Careful consideration of the SuDS features, in keeping with local planning policy and through liaison with the LLFA, IDB and Environment Agency, will be undertaken to ensure that the Surface Water Drainage Strategy adequately attenuates and treats

runoff from the Project, whilst minimising flood risk to the Order Limits and surrounding areas.

- 10.8.19 In accordance with planning policies of the LLFAs (i.e. Leicestershire County Council, Lincolnshire County Council, West Northamptonshire Council and North Northamptonshire Council) and general good practice, mitigation will be provided by restricting surface water discharge rates and providing on-site attenuation, primarily via SuDS, such as Rural SuDS (RSuDS) techniques or other appropriate solutions.
- 10.8.20 A water quality risk assessment of the substation infrastructure sites will be undertaken using the Simple Index Approach described in The SuDS Manual (Version 6) (CIRIA C753) (Ref 10.29) and also summarised above. This will inform what, if any treatment measures are required to manage the risk from diffuse urban runoff to watercourses or ground.

Flood Risk Assessment

- 10.8.21 Given the size of the Project and the presence of areas of Floods Zone 2 and 3 within the Study Area, a FRA will be produced in accordance with the requirements of the NPS EN-1 and also the NPPF, PPG and local planning policy. The FRA will include a review of the current and future flood risk to the Project from all sources (including tidal, fluvial, surface water, groundwater, sewer, and artificial sources) to inform the Project design and set out any proposed mitigation requirements.
- 10.8.22 The proposed WMEL-A and WMEL-B substations are located within Flood Zone 1 and will be sequentially located away from any surface water flow paths. However, the siting area for the Weston Marsh substation infrastructure is located within a spatial extensive area of Flood Zone 3. An appropriate level of flood risk assessment will be required to assess this area for the most suitable site and to determine what design/mitigation measures are required.

Determining the Significance of Effects

- 10.8.23 The significance of effects will be determined using the principles of the guidance and criteria set out in the DMRB LA113 Road Drainage and the Water Environment (Ref 10.39) adapted to take account of hydromorphology, and DMRB LA 104 Environmental Assessment and Monitoring (Ref 10.40). This can be applied to all development types and represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.
- 10.8.24 In accordance with the stages of the methodology, there are three stages to the assessment of effects on water environment, drainage, and flood risk as follows:
- A level of importance (negligible to very high) is assigned to the water resources receptor from **Table 10.8** Criteria to Determine Receptor Importance (adapted from DMRB LA 113 (Ref 10.39)) and is based on a combination of attributes (such as water supply, biodiversity, recreation) and on receptors to flood risk based on the vulnerability of the receptor to flooding (i.e. as shown in **Table 10.8**, essential infrastructure would be very high importance, to water compatible development which would be of low importance).
 - The magnitude of potential and residual impact (classed as negligible, minor, moderate or major adverse/ beneficial) is determined based on the criteria listed in **Table 10.9** and the assessor's knowledge of the Project. Embedded or standard mitigation measures are considered in the initial assessment, but any other mitigation is not considered until the assessment of residual effects. The

magnitude of impact will be determined considering the likelihood of the effect occurring. The likelihood of an effect occurring is based on a scale of certain, likely or unlikely. Likelihood has been considered in the case of water resources only, as likelihood is inherently included within the FRA.

- A comparison of the importance of the resource and magnitude of the impact (for both potential and residual impacts) results in an assessment of the overall significance of the effect on the receptor using the matrix presented in **Table 10.10** (Ref 10.40). The significance of each identified effect (both potential and residual) will be classed as very large, large, moderate, slight or neutral and either beneficial or adverse significance. Effects that are moderate or worse are significant in planning terms (shaded cells in **Table 10.10**).

Table 10.8 Criteria to Determine Receptor Importance (adapted from DMRB LA 113 (Ref 10.39))

Importance	General Criteria	Surface Water	Hydromorphology	Flood Risk
Very High	Nationally significant attribute of high importance - the receptor has little or no ability to absorb change without fundamentally altering its present character and is therefore of very high environmental value.	Designated Salmonid/ Cyprinid fishery. Watercourse having a WFD classification as shown in a RBMP and $Q95 \geq 1.0 \text{ m}^3/\text{s}$. Site protected / designated under UK habitat legislation (SAC, SPA, SSSI, Water Protection Zones, Ramsar site). Species protected by UK legislation. Critical social or economic uses (e.g. public water supply and navigation).	Unmodified, near to or pristine conditions, with well-developed and diverse geomorphic forms and processes characteristic of river and lake type.	Essential Infrastructure or highly vulnerable development.
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance.	Watercourse having a WFD classification as shown in a RBMP and $Q95 < 1.0 \text{ m}^3/\text{s}$; Major Cyprinid Fishery. Species protected under UK habitat legislation. Critical social or economic uses (e.g. water supply and navigation). Important social or economic uses such as water supply, navigation or mineral extraction.	Conforms closely to natural, unaltered state and will often exhibit well-developed and diverse geomorphic forms and processes characteristic of river and lake type. Deviates from natural conditions due to direct and/or indirect channel, floodplain, bank modifications and/or catchment development pressures.	More vulnerable development.
Medium	Locally significant attribute of high importance - the receptor has moderate capacity to absorb change without significantly altering its present character.	Watercourses not having a WFD classification shown in a RBMP and $Q95 > 0.001 \text{ m}^3/\text{s}$. May be designated as a local wildlife site and support a small/ limited population of protected species. Limited social or economic uses.	Shows signs of previous alteration and/or minor flow/ water level regulation but still retains some natural features or may be recovering towards conditions indicative of the higher category.	Less vulnerable development.
Low	Lower quality, common place - the receptor is tolerant of change without detriment to its character and is of a local and low environmental value.	Watercourses not having a WFD classification shown in a RBMP and $Q95 < 0.001 \text{ m}^3/\text{s}$. Low aquatic fauna and flora biodiversity and no protected species. Minimal economic or social uses.	Substantially modified by past land use, previous engineering works or flow/ water level regulation. Watercourses likely to possess an artificial cross-section (e.g. trapezoidal) and will probably be deficient in bedforms and bankside vegetation. Watercourses may also be realigned or channelized with hard bank protection or culverted and enclosed. May be significantly impounded or abstracted for water resources	Water compatible development.

Importance	General Criteria	Surface Water	Hydromorphology	Flood Risk
			use. Could be impacted by navigation, with associated high degree of flow regulation and bank protection, and probable strategic need for maintenance dredging. Artificial and minor drains and ditches will fall into this category.	
Negligible	The receptor is resistant to change and is of little environmental value	Not applicable	Not applicable	Not applicable

Magnitude

- 10.8.25 The magnitude of change acting on water environment receptors is independent of the sensitivity of the feature. This is a largely qualitative assessment, which relies on professional judgement, although it may be informed by quantitative information and analysis where data is available and where appropriate. The criteria consider the scale and extent of the predicted change and the nature and duration of the impact. **Table 10.9** defines the criteria for how the magnitude of impact will be determined and provides potential examples in relation to the water environment.

Table 10.9 Magnitude of impact criteria (adapted from DMRB LA 113 (Ref 10.39))

Magnitude	Description
Major Adverse	Results in a loss of attribute and/or quality and integrity of the attribute.
Moderate Adverse	Results in impact on integrity of attribute, or loss of part of attribute.
Minor Adverse	Results in some measurable change in attribute's quality or vulnerability.
Negligible	Results in impact on attribute, but of insufficient magnitude to affect the use or integrity.
Minor Beneficial	Results in some beneficial impact on attribute or a reduced risk of negative impact occurring.
Moderate Beneficial	Results in moderate improvement of attribute quality.
Major Beneficial	Creation of new attribute or major improvement of attribute quality.
No Change	No loss or alteration of characteristic, features of elements; no observable impact in either direction.

Significance of effects

- 10.8.26 The importance of the receptor (**Table 10.8**) and the magnitude of impact (**Table 10.9**) are determined independently from each other and are then used to determine the overall significance of effects using the matrix provided in **Table 10.10**. Options for mitigation will be considered and secured where possible to avoid, minimise and reduce adverse impacts, particularly where significant effects may have otherwise occurred. The residual effects of the Project with identified mitigation in place will then be reported.

Table 10.10 Determination of significance matrix (Ref 10.40)

Magnitude of Impact (Table 5)						
Importance of Receptor (Table 4)		Major	Moderate	Minor	Negligible	No Change
	Very High	Very large	Large or very large	Moderate or large	Slight	Neutral
	High	Large or very large	Moderate or large	Slight or moderate	Slight	Neutral
	Medium	Moderate or large	Moderate	Slight	Neutral or slight	Neutral
	Low	Slight or moderate	Slight	Neutral or slight	Neutral or slight	Neutral
	Negligible	Slight	Neutral or slight	Neutral or slight	Neutral	Neutral

10.8.27 An impact is considered significant if the resultant effect is Moderate or greater. This matrix approach provides a guide to authors however professional judgement can be used in concluding the significance of an effect.

10.8.28 The following significance categories will be used for both potential and residual effects:

- Negligible: An imperceptible effect or no effect to a water resources receptor;
- Beneficial: A beneficial/ positive effect on the quality of a water resources receptor; or
- Adverse: A detrimental/ negative effect on the quality of a water resources receptor.

10.9 Assumptions and Limitations

10.9.1 To ensure transparency within the assessment, the following limitations and assumptions have been identified:

- Hydraulic modelling data will be requested from the Environment Agency, LLFAs and IDBs to characterise all aspects of flood risk to the Project. Where this is not available, hydraulic modelling may need to be undertaken as part of the FRA, although currently assumed not to be required. This will be discussed and agreed with the Environment Agency and LLFAs.
- It is assumed there is sufficient data from the Environment Agency to define the current condition and standards of protection provided by existing flood defences, and that no baseline condition surveys will be required. However, the Environment Agency will be consulted on this matter.
- The FRA will be based on desktop surveys and best available layout proposals in line with good practice. Where available, topographical data will be used to

support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA.

- The locations of PWS and licensed water abstractions have not yet been determined and so these are not included as specific receptors at this time. Details of any abstractions from surface water features will be identified and included in the ES.
- Water activity permits (i.e. permitted discharges) are not yet known in detail and have not been considered in the current baseline. These receptors and water feature attributes will be considered as part of the ES once data has been received from the Environment Agency.
- It is assumed that the iterative design process will allow water receptors to be avoided and a suitable drainage strategy developed that includes attenuation and treatment of runoff, as required.
- It is assumed that the new line will be entirely overhead. If any undergrounding of the line is required, further consideration of any impacts to surface water features will be required. This may include identification of any watercourse crossings and then the determination of a suitable crossing method and the minimum depth below the bed.
- Visual surveys will be undertaken of accessible water/drainage features to inform the surface water environment impact and WFD assessments. Where possible, surveys will be scheduled for late autumn through to mid-spring when vegetation growth is at its lowest allowing greater visibility of water features, and when flows tend to be higher to aid identification of smaller, perhaps ephemeral or only intermittently flowing watercourses. However, it may not be possible to survey all crossing locations or structures due to access constraints and visibility issues (e.g. dense vegetation) cannot be ruled out entirely. Where this is the case, a survey close to the area of interest will be attempted and this data used as a proxy. In addition, some watercourses may be small, ephemeral and flow only intermittently, and these may not be identified in the field or observed when flowing.
- As part of the EIA, the risk from surface water drainage to surface or groundwater features from new above ground development will be assessed according to the Simple Index Approach presented in the C753 The SuDS Manual (Ref 10.29).
- At the time of writing, it is not known whether there would be a need for a permanent foul drainage solution from any of the proposed new substations. If required, options may include connecting to the nearest available public sewer or a self-contained independent non-mains domestic storage and/or treatment system. Iterative design and assessment will consider the options and adopt a precautionary worst-case approach.

10.10 Conclusion

- 10.10.1 This Scoping Report chapter has outlined relevant legislation, policy and guidance in relation to the water environment assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact design, control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors as reported in **Table 10.7**.

10.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 10.1 Defra (2025) National standards for sustainable drainage systems. [Online] Available at: <https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems> [Accessed August 2025].
- Ref 10.2 MHCLG (2014) Planning Practice Guidance: Flood Risk and Coastal Change. [Online] Available at: <https://www.gov.uk/guidance/flood-risk-and-coastal-change>. [Accessed 31/07/2025].
- Ref 10.3 Environment Agency (2018) The Environment Agency's approach to groundwater protection. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Environment-Agency-approach-to-groundwater-protection.pdf. [Accessed August 2025].
- Ref 10.4 Environment Agency (2025) Environmental permits: regulatory position statements. [Online] Available at: <https://www.gov.uk/government/collections/basic-rules-environmental-permitting-regulatory-positions#groundwater-discharges> [Accessed August 2025].
- Ref 10.5 Environment Agency (2025) Anglian River Basin District [Online] Available at: <https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/5> [Accessed August 2025].
- Ref 10.6 Environment Agency (2025) Humber River Basin District [Online] Available at: <https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/4> [Accessed August 2025].
- Ref 10.7 Lincolnshire County Council (2011) Preliminary Flood Risk Assessment [Online] Available at: <https://www.lincolnshire.gov.uk/flood-risk-management/preliminary-flood-risk-assessment> [Accessed August 2025].
- Ref 10.8 JBA (2017) Leicestershire and Leicester City Level 1 Strategic Flood Risk Assessment [Online] Available at: <https://www.l1strategicgrowthplan.org.uk/the-plan/stage-two/developing-the-evidence-base/leicestershire-leicester-city-level-1-strategic-flood-risk-assessment/> [Accessed August 2025].
- Ref 10.9 AECOM (2017) South Kesteven District Council Strategic Flood Risk Assessment [Online] Available at: <https://www.southkesteven.gov.uk/planning-building-control/planning-policy-local-plans/south-kesteven-local-plan> [Accessed August 2025].
- Ref 10.10 Met Office (2025) Location-specific long-term averages at Wittering. [Online]. Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/location-specific-long-term-averages/gcrem3s9m> [Accessed August 2025].
- Ref 10.11 Ordnance Survey Mapping (2025) Bing Maps [Online] Available at: <https://www.bing.com/maps?cp=52.804386%7E-0.205645&lvl=12.2&style=s> [Accessed August 2025].

- Ref 10.12 British Geological Survey (2025) Geology Viewer [Online]. Available at: https://geologyviewer.bgs.ac.uk/?_ga=2.242096642.1894801621.1755169496-126629760.1755169496 [Accessed August 2025].
- Ref 10.13 British Geological Survey (2025) GeoIndex Onshore [Online] Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.174220770.1367311209.1755173341-451263298.1755173341 [Accessed August 2025].
- Ref 10.14 DEFRA. (2017) Designation of ‘main rivers’: guidance to the Environment Agency [Online] Available at: <https://www.gov.uk/government/publications/designation-of-main-rivers-guidance-to-the-environment-agency/designation-of-main-rivers-guidance-to-the-environment-agency> [Accessed August 2025].
- Ref 10.15 Department for Environment, Food and Rural Affairs (DEFRA) (2024). MAGIC Maps. [Online] Available at: <https://magic.defra.gov.uk/MagicMap.html> [Accessed August 2025].
- Ref 10.16 Cranfield Soil and AgriFood Institute (2024) Soilscales Map [Online]. Available at <https://www.landis.org.uk/soilscales/> [Accessed August 2025].
- Ref 10.17 DEFRA (2025) Hydrology Data Explorer. [Online] Available at: <https://environment.data.gov.uk/hydrology/explore> [Accessed August 2025].
- Ref 10.18 Environment Agency (2019). Environment Agency Statutory Main River Map [Online]. Available at: <https://www.arcgis.com/apps/webappviewer/index.html?id=17cd53dfc524433980cc333726a56386> [Accessed August 2025].
- Ref 10.19 UK Centre of Ecology & Hydrology Flood Estimation Handbook Web Service. [Online]. Available at: <https://fehweb.ceh.ac.uk/> [Accessed August 2025].
- Ref 10.20 GOV.UK (2010). Flood Map for Planning [Online]. Available at: <https://flood-map-forplanning.service.gov.uk/> [Accessed August 2025].
- Ref 10.21 Environment Agency (2024) Long Term Flood Risk [Online]. Available at: <https://www.gov.uk/check-long-term-flood-risk> [Accessed August 2025].
- Ref 10.22 NAFRA Dataset (2020) [Online]. Available at: <https://www.arcgis.com/home/item.html?id=f8488c24a34f4456a69abd894a2ba180> [Accessed August 2025].
- Ref 10.23 Environment Agency Risk of Flooding from Reservoirs (2024) [Online]. Available at: <https://check-long-term-flood-risk.service.gov.uk/map> [Accessed August 2025].
- Ref 10.24 Environment Agency Flood Defence Asset Database (2024) [Online]. Available at: <https://www.data.gov.uk/dataset/76828b72-3c9c-4700-83c7-d7c36047d322/floodmap-for-planning-rivers-and-sea-spatial-flood-defences-without-standardisedattributes> [Accessed August 2025].
- Ref 10.25 Environment Agency (2024). Catchment data explorer database [Online]. Available at: <https://environment.data.gov.uk/catchment-planning/> [Accessed August 2025].
- Ref 10.26 Environment Agency (2025). Water Quality Data Archive [Online]. Available at: <https://environment.data.gov.uk/water-quality/view/landing> [Accessed 11/08/2025].

- Ref 10.27 Natural England (2025) Designated Sites View [Online]. Available at: <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> [Accessed August 2025].
- Ref 10.28 Environment Agency (2025) Check for Drinking Water Safeguard Zones and NVZs [Online]. Available at: <https://environment.data.gov.uk/farmers/> [Accessed August 2025].
- Ref 10.29 CIRIA (2015) The SuDS Manual (C753F). [Online] Available at: <https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS> [Accessed August 2025].
- Ref 10.30 UK National River Flow Archive (2025) [Online] Available at: <https://nrfa.ceh.ac.uk/data/search> [Accessed August 2025].
- Ref 10.31 Environment Agency (2025) Drinking Water Protected Areas (Surface Water) [Online] Available at: <https://www.data.gov.uk/dataset/3d136e9a-78cf-4452-824d-39d715ba5b69/drinking-water-protected-areas-surface-water> [Accessed August 2025].
- Ref 10.32 Environment Agency (2021). Nene Catchment Abstraction Licensing Strategy [Online]. Available at: <https://assets.publishing.service.gov.uk/media/606d91e28fa8f57359cf4346/CAMS-Nene-Catchment-Abstraction-Management-Strategy.pdf> [Accessed August 2025].
- Ref 10.33 Environment Agency (2021). Welland Catchment Abstraction Licensing Strategy. [Online]. Available at: <https://assets.publishing.service.gov.uk/media/606d942fd3bf7f4017cbef03/CAMS-The-Welland-Catchment-Abstraction-Management-Strategy.pdf> [Accessed August 2025].
- Ref 10.34 Environment Agency (2020). Witham Abstraction Management Strategy [Online]. Available at: <https://www.gov.uk/government/publications/witham-abstraction-licensing-strategy/witham-abstraction-licensing-strategy> [Accessed 12/08/2025]
- Ref 10.35 Environment Agency (2020). Soar Abstraction Management Strategy [Online]. Available at: https://assets.publishing.service.gov.uk/media/5f574829e90e070995ad8255/Soar_Abstraction_Licensing_Strategy.pdf [Accessed August 2025].
- Ref 10.36 Met Office (2024). UKCP18 Summaries and Headline Findings [Online]. Available at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/summaries/index> [Accessed 15/08/2025].
- Ref 10.37 UK Centre for Ecology & Hydrology (2024). Future Flows and Groundwater Levels [Online]. Available at: <https://www.ceh.ac.uk/our-science/projects/future-flows-and-groundwater-levels> [Accessed: August 2025].
- Ref 10.38 Planning Inspectorate (2025). Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive [Online]. Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-eighteen-the-water-framework-directive> [Accessed August 2025].

- Ref 10.39 Highways England, Transport Scotland, Welsh Government and Department for Infrastructure (2020). Design Manual for Roads and Bridges. LA 113 Road Drainage and the Water Environment. [Online] Available at:
<https://www.standardsforhighways.co.uk/tses/attachments/d6388f5f-2694-4986-ac46-b17b62c21727?inline=true> [Accessed August 2025].
- Ref 10.40 National Highways (2020) Design Manual for Roads and Bridges (DMRB) LA 104 Environmental Assessment and Reporting [Online]. Available at:
<https://www.standardsforhighways.co.uk/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a> [Accessed August 2025].
- Ref 10.41 National Grid (n.d.) Documents [Online]. Available at:
<https://commercial.nationalgrid.co.uk/documents/all> [Accessed September 2025]

11. Geology and Hydrogeology

Contents

11.	Geology and Hydrogeology	11-1
11.1	Introduction	11-1
11.2	Legislation, Policy and Guidance	11-2
11.3	Consultation and Engagement	11-2
11.4	Study Area	11-4
11.5	Baseline Conditions	11-4
	Data Sources	11-4
	Baseline	11-5
	Future Baseline	11-14
11.6	Design and Control Measures	11-15
	Design Measures	11-15
	Control and Management Measures	11-15
11.7	Potential for Significant Effects	11-16
11.8	Proposed Assessment Methodology	11-23
	Proposed Data Sources	11-23
	Proposed Assessment Methodology	11-24
11.9	Assumptions and limitations	11-30
11.10	Conclusions	11-31
	Table 11.1 Engagement with Stakeholders	11-3
	Table 11.2 Impacts, receptors and the potential for significant effects	11-17
	Table 11.3 Initial Contamination Screening Assessment	11-25
	Table 11.4 Sensitivity of receptors	11-25
	Table 11.5 Magnitude of impact	11-27
	Table 11.6 Determination of significance matrix (Ref 11.6)	11-30
	References	11-32

11. Geology and Hydrogeology

11.1 Introduction

- 11.1.1 This chapter presents how the Geology and Hydrogeology assessment will consider the potential likely significant effects relating to land contamination, groundwater and designated geological sites, that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 11.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 11.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 11.1.4 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 8 Ecology and Biodiversity** – this chapter covers effects identified by the Geology and Hydrogeology assessment that may affect ecological receptors;
 - **Chapter 9 Cultural Heritage** – this chapter covers effects identified by the Geology and Hydrogeology assessment that may affect archaeological remains;
 - **Chapter 10 Water Environment** – this chapter considers effects on groundwater identified by the Geology and Hydrogeology assessment that may affect hydrological receptors; and
 - **Chapter 12 Agriculture and Soils** – this chapter covers the temporary and permanent loss of soils and soil functions.
- 11.1.5 This chapter is supported by the following figures and appendices:
- **Figure 1.2 Scoping Boundary.**
 - **Figure 11.1 Geology & Hydrogeology Location Plan and Study Areas (including Substations).**
 - **Figure 11.2 Superficial Geology.**
 - **Figure 11.3 Bedrock Geology.**

- **Figure 11.4 Groundwater Features.**

11.2 Legislation, Policy and Guidance

- 11.2.1 Key legislation, policy, and planning guidance relevant to the assessment of potential effects on Geology and Hydrogeology associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context, Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**
- 11.2.2 Technical Guidance relevant to the Geology and Hydrogeology chapter is provided below:
- The Environment Agency Land Contamination Risk Management (LCRM) guidance (2023) (Ref 11.1).
 - The Environment Agency Protect groundwater and prevent groundwater pollution (2017) (Ref 11.2).
 - The Environment Agency Groundwater protection technical guidance (2017) (Ref 11.3).
 - The Environment Agency Pollution Prevention Guidance (PPG) notes (PPG1, PPG5, PPG8 and PPG21) (Ref 11.4).
 - Construction Industry Research and Information Association (CIRIA) Contaminated land risk assessment guidance (2001) (Ref 11.5).
 - Design Manual for Roads and Bridges (DMRB) Environmental assessment and monitoring LA104 (2020) (Ref 11.6).
 - Design Manual for Roads and Bridges (DMRB) Sustainability and Environment Appraisal LA 109 Geology and soils” (2019) (Ref 11.7).

11.3 Consultation and Engagement

- 11.3.1 The ES will be informed by consultation and engagement with stakeholders, including the Environment Agency, Mining Remediation Authority (formerly the Coal Authority), Local Authorities and County Councils. These are: South Holland, South Kesteven, Melton, Harborough (District Councils), North Northamptonshire and West Northamptonshire (Unitary Authorities) and Leicestershire and Lincolnshire (County Councils). In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 11.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 11.1.**

Table 11.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
The Forestry Commission	Concerns about the impact of site stored fuel or chemicals on woodland habitats including ancient and veteran trees.	The storage of fuel and other chemicals has been considered during the construction, operation and maintenance phases. Table 11.2 sets out the proposed scope of assessment, with management and mitigation measures presented in Section 11.6 and Appendix 4A Initial Outline CoCP (GH04 and GG09). Ancient woodland has been avoided through consideration during option selection and routeing. Chapter 8 Ecology and Biodiversity considers potential effects and mitigation required on ancient woodland and veteran trees including pollution. Tree surveys will be undertaken in accordance with planning requirements.
Mineral Products Association (MPA)	Concerns about the lack of consideration of mineral safeguarding areas (MSAs) along the proposed development.	Section 11.7.4 and Chapter 4 provide detail on how mineral safeguarding areas will be presented in the Minerals Assessment Report which will be provided with the application for development consent.
Environment Agency	There is potential for contamination to be present across the proposed development, historical landfills are present along parts of the route. The proposed development crosses over areas of Source Protection Zone (SPZs) and will require further detail to ensure groundwater is protected during all phases.	Impacts on human health, geology, soil and groundwater during the construction phase have been considered. Table 11.2 sets out the proposed scope of assessment, with management and mitigation measures presented in Section 11.6 and Appendix 4A Initial Outline CoCP . Section 11.5 sets out the baseline conditions, including areas of potential contamination (historical

Stakeholder	Summary of response	Consideration in the Scoping Report
		landfills) and groundwater receptors.
Mining Remediation Authority (formerly Coal Authority)	The Project lies within a coal mining area which may contain unrecorded coal mining related hazards.	Impacts on human health regarding the coal mining reporting area have been considered in Table 11.2 which sets out the proposed scope of assessment, with management and mitigation measures presented in Section 11.6 and the Outline CoCP . Section 11.5.42 of the baseline outlines the coal mining reporting area and mine entries.

11.4 Study Area

- 11.4.1 The Scoping Boundary is shown on **Figure 1.2 Scoping Boundary**.
- 11.4.2 For the purposes of this assessment, the Study Area is defined as the Scoping Boundary plus a 250 m buffer for geological receptors and a 500 m buffer for hydrogeological receptors which has been applied, as shown on **Figure 11.1 Location Plan and Study Areas**. This is considered to be a proportionate and suitable approach for the assessment. Hydrogeological receptors further from the Study Area are more susceptible to effects from the Project due to the mobile nature of groundwater and corresponding potential for the Project to affect receptors at a greater distance.
- 11.4.3 The Study Area for the ES will be refined throughout the development of the Project, ultimately comprising the land within the Order Limits with the same buffer zones defined above applied.

11.5 Baseline Conditions

Data Sources

- 11.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:
- British Geological Survey (BGS) 1:50,000 scale geological mapping, available online at the BGS GeoIndex (Ref 11.13).
 - Department for Environment, Food and Rural Affairs (Defra) Multi-Agency Geographic Information for the Countryside (MAGIC) interactive Map (Ref 11.15).
 - Defra Hydrology Data Explorer (Ref 11.16).
 - Environment Agency data download for Groundwater Dependent Terrestrial Ecosystem information (GWDTE) (Ref 11.17).

- Environment Agency interactive map for Drinking Water Safeguard Zones and Nitrate Vulnerable Zones (NVZ) (Ref 11.18).
- Defra Catchment Data Explorer (Ref 11.19).
- Environment Agency Historical and Authorised landfill records, available online (Ref 11.20, Ref 11.21).
- Natural England designated Sites, i.e. Geological SSSIs (Ref 11.22).
- Satellite Imagery.

11.5.2 The initial overview of the baseline conditions provided in this chapter of the Scoping Report is intended only to establish the scope of effects that require assessment, so is focused only on key datasets and should not be considered exhaustive. More detailed information will be obtained and reported in the Preliminary Environmental Information Report (PEIR) and ES. Details of the proposed additional data gathering are provided in Section 11.8.

Baseline

11.5.3 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the Study Area of the five Sections as shown on **Figure 11.1 Location Plan and Study Areas**. The five Sections are presented below:

- Section 1: receptors within South Holland;
- Section 2: receptors within South Kesteven;
- Section 3: receptors within Melton;
- Section 4: receptors within Harborough; and
- Section 5: receptors within North Northamptonshire and West Northamptonshire.

11.5.4 The geological and hydrogeological setting and potential contamination for each Section is discussed below. The superficial and bedrock geology in the Study Area is shown in **Figure 11.2** and **Figure 11.3** respectively, and groundwater features shown in **Figure 11.4**.

Section 1

11.5.5 Section 1 comprises new overhead line from Weston Marsh substation to South Forty Foot Drain and includes Weston Marsh Substation Infrastructure.

11.5.6 The published geology within the Study Area for Section 1 is recorded to comprise:

- Made Ground deposits are recorded within the eastern extent of the Scoping Boundary and the wider 250 m Study Area. Further Made Ground deposits are likely to be present in areas adjacent to roads, tracks, railways and existing properties/structures including the A16, the East Coast Main Line Railway and Vernatt's Drain.

- Superficial deposits, present across the entire Study Area are recorded to comprise: Tidal Flat Deposits – Clay and Silt with a small pocket Abbey Sand and Gravel in the western extent of the Study Area for Section 1.
 - Bedrock is recorded to comprise the Oxford Clay Formation – Mudstone present across the entirety of the Study Area for Section 1.
- 11.5.7 Both the superficial deposits and the bedrock are defined by the Environment Agency as Unproductive Strata (strata that are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them).
- 11.5.8 Bedrock underlying the Refine Weston Marsh Substation Siting Zone comprises the Oxford Clay Formation. The underlying superficial deposits include Tidal Flat Deposits.
- 11.5.9 Radon levels in the area have been assessed using the published maps by the UK Health Security Agency (UKHSA) and are shown on the BGS on shore GeoIndex (Ref 11.13). The proposed Weston Marsh Substation Infrastructure is located within an area of low radon potential where less than 1% of homes are at or above the radon Action Level.
- 11.5.10 There are no WFD Groundwater bodies located within the Study Area for Section 1. WFD waterbodies are examined in more detail in **Chapter 10 Water Environment**.
- 11.5.11 The western end of Section 1 is located on two areas of Source Protection Zone (SPZ) 1 – Inner Protection Zone, surrounded by SPZ 2 – Outer Protection Zone and SPZ 3 – Total Catchment which share the same boundaries. These areas cover the westernmost 2km of the Study Area for Section 1, from near Northgate and to the west.
- 11.5.12 There are no groundwater Drinking Water Safeguard Zones within the Study Area for Section 1.
- 11.5.13 There are no GWDTE within the Study Area for Section 1.
- 11.5.14 Locations of groundwater abstractions and discharges will be identified and assessed at ES stage.
- 11.5.15 One historical landfill site is recorded within the Scoping Boundary of Section 1 approximately 900 m northwest of Crossgate. A further two historical landfill sites are recorded within the wider 250 m Study Area , but no authorised landfill sites are present.

Section 2

- 11.5.16 Section 2 includes new overhead line and the WMEL-A Substation.
- 11.5.17 The published geology within the Study Area for Section 2 comprises:
- Made Ground deposits are recorded within the Study Area for Section 2 and are located at the western extent near Sewstern associated with former pits. Further Made Ground is likely to be present in areas adjacent to roads, railways and existing properties/ structures such as the A1 which passes through Lobthorpe and associated with the East Coast Main Line Railway.
 - Superficial deposits, present across the entirety of the Study Area for Section 2 are recorded to comprise:

- Till, comprising sand and gravel of Mid Pleistocene age largely present in the central and western extent of the Study Area for Section 2.
- Glaciofluvial deposits comprising sand and gravel are present in pockets across the Study Area for Section 2.
- Abbey Sand and Gravel present in isolated pockets within the east of the Study Area for Section 2.
- Alluvium comprising clay, silt, sand and gravel present along the traces of rivers across the Study Area for Section 2.
- River Terrace deposits comprising sand and gravel present in the east of the Study Area for Section 2 and also present adjacent to the West Glen River in places.
- Peat is present southeast of Dunsby within the Study Area for Section 2.
- Tidal Flat Deposits – comprising clay and silt.
- Bedrock is recorded to comprise the following across the Study Area for Section 2:
 - Whitby Mudstone Formation.
 - Northampton Sand Formation - Ironstone, Ooidal.
 - Grantham Formation – Sandstone, Siltstone and Mudstone.
 - Limestone of the Lower Lincolnshire Limestone Member and Upper Lincolnshire Limestone Member is present in the western extent of the Study Area for Section 2.
 - Rutland Formation – Limestone present in pockets in the centre of the Study Area, and areas of argillaceous (clayey) rocks with subordinate Sandstone and Limestone present across much of the western half of the Study Area for Section 2.
 - Limestone of the Blisworth Limestone Formation and Cornbrash Formation.
 - Oxford Clay Formation – Mudstone.
 - Kellaways Sand Member – Sandstone and Siltstone.
 - Mudstone of the Kellaways Clay Member and Oxford Clay Formation.

11.5.18 Bedrock underlying the proposed WMEL-A Substation comprises Rutland Formation, Limestone of the Lower and Upper Lincolnshire Limestone Member and Blisworth Limestone Formation. No superficial deposits are recorded underlying the WMEL-A Substation.

11.5.19 Most of the superficial deposits present across the Study Area for Section 2 are designated as secondary A aquifers, these are the Glaciofluvial deposits, Abbey Sand and Gravel, Alluvium, and River Terrace Deposits. Secondary aquifers are described as permeable layers that can support local water supplies and may form an important source of base flow to rivers. Till and the River Terrace Deposits located near the West Glen River are described as secondary undifferentiated aquifers this means that it is impossible to categorise as either secondary A or secondary B because of variable characteristics of the rock type. Secondary B aquifers are mainly lower permeability layers that may store and yield limited amounts of groundwater

through characteristics such as thin cracks (fissures) and openings or eroded layers. Tidal Flat Deposits and Peat are described as unproductive strata. There are also areas where superficial deposits are absent across much of the central part of the Study Area for Section 2.

- 11.5.20 The Limestone of the Lower Lincolnshire Limestone Member and Upper Lincolnshire Limestone Member, and Bilsworth Limestone Formation underlying the Study Area for Section 2 are described as principal aquifers (layers of rock that have high intergranular and/or fracture permeability and a high level of water storage, they may support water supply and/or river base flow on a strategic scale). The Northampton Sand Formation, Cornbrash Formation, Kellaways Sand Member, and Rutland Formation – Limestone underlying the Study Area are all described as secondary A aquifers. The Rutland Formation – Sandstone and Limestone is described as a secondary B aquifer. The Grantham Formation is described as a secondary undifferentiated aquifer. The Whitby Mudstone Formation, Mudstone of the Kellaways Clay Member and Oxford Clay Formation are described as unproductive strata.
- 11.5.21 The Study Area for Section 2 crosses four WFD Groundwater bodies. Welland Limestone Unit B has an Overall Water Body status of Poor, due to a Poor Quantitative Status, despite a Good Chemical Status. Welland Mid Jurassic has an Overall Water Body status of Good, with Good Quantitative and Chemical statuses. Welland Limestone Unit A has an Overall Water Body status of Poor, due to a Poor Chemical status, despite a Good Quantitative status. Witham Lias has an Overall Water Body status of Good, with Good Quantitative and Chemical statuses.
- 11.5.22 Most of the Study Area for Section 2 is located on SPZs, with SPZ 3 – Total Catchment other than a small area extending 5 km west of Lobthorpe to the western boundary. SPZ 2 – Outer Protection Zone covers all of the Study Area for Section 2 east of Swayfield, which accounts for approximately three quarters of the Study Area for Section 2. Much of the eastern most 4 km of the Study Area for Section 2 is covered by SPZ 1 – Inner Protection Zone, this is in the area west of Haconby. The areas of SPZ 1 are not continuous, there are areas between these which have the lower classification of SPZ 2.
- 11.5.23 There are no groundwater Drinking Water Safeguard Zones within the Study Area for Section 2.
- 11.5.24 The Lincolnshire Limestone groundwater NVZ covers most of the western part of the Study Area for Section 2 there is complete coverage across the Study Area for Section 2 from 4 km west of Morton to 3 km east of the crossing of the A1; further west, the NVZ is absent.
- 11.5.25 There are two GWDTEs within the Study Area for Section 2, The Hermitage SSSI located between Irnham and Corby Glen, and Porter's Lodge Meadows SSSI located between South Witham and Castle Bytham. Both are located within the 500m buffer but not within the Scoping Boundary.
- 11.5.26 Locations of groundwater abstractions and discharges will be identified and assessed at ES stage.
- 11.5.27 Radon levels in the area have been assessed using the published maps by the UK Health Security Agency (UKHSA) and shown on the BGS on shore GeoIndex (Ref 11.13). The proposed WMEL-A Substation is in an elevated area of radon potential, where more than 10-30% of homes are at or above the radon Action Level.

- 11.5.28 No historical or authorised landfills are present within the Scoping Boundary; one historical landfill is recorded within the wider 250 m Study Area.
- 11.5.29 Existing or historical airfields present within the Study Area for Section 2 may be a source of potential contamination. Royal Air Force (RAF) North Witham is a former RAF station situated within the Study Area located approximately 80 m north of the Scoping Boundary, the site opened and operated during the Second World War. Historical mapping shows part of the runways to be within the Study Area for Section 2 of the Scoping Boundary. Potential contamination sources associated with RAF Witham include underground tanks, fuel spillages and asbestos.

Section 3

- 11.5.30 Section 3 includes new overhead line, WMEL-B Substation and reconductoring of the existing overhead line.
- 11.5.31 The published geology within the Study Area for Section 3 comprises:
- Made Ground deposits are recorded within the Scoping Boundary located near Wartnaby, Ab Kettleby, Holwell, Saxelbye, Asfordby, Ashby Folville and a small area in the northeastern corner located near Sewstern. Further Made Ground deposits are recorded within the wider 250 m Study Area north of Holwell and Sewstern. The Made Ground deposits are largely associated with former quarries and pits.
 - Superficial deposits, present across the entirety of the Study Area for Section 3 are recorded to comprise:
 - Bytham Sand and Gravel Formation present along the traces of rivers.
 - Thrussington Member is present in an isolated area in the southern extent of the Study Area.
 - Oadby Member glacial till – Lias and Trias-Rich and Diamicton.
 - Birstall Member present in isolated pockets south of Asfordby.
 - Till, Mid Pleistocene – Diamicton present in the eastern extent of the Study Area for Section 3.
 - Glaciofluvial deposits present in isolated pockets
 - Head, Alluvium, Colluvium and River Terrace deposits present along the traces of rivers across the Study Area for Section 3.
 - Bedrock is recorded to comprise the following across the Study Area for Section 3:
 - Charmouth Mudstone Formation;
 - Dyrham Formation consisting of Silt and Sand with impersistent beds of limestone and sandstone.
 - Whitby Formation – Mudstone.
 - Scunthorpe Mudstone Formation.
 - Marlstone Rock Formation – Limestone.
 - Northampton Sand Formation - Ironstone, Ooidal.

- Grantham Formation – Sandstone, Siltstone and Mudstone.
- Lower Lincolnshire Limestone Member.
- North of Sholby largely comprises Mudstone of the Blue Lias, Scunthorpe and Charmouth Mudstone Formation and Granby Member – Mudstone and Limestone.

- 11.5.32 Bedrock underlying the proposed WMEL-B Substation comprises largely Charmouth Mudstone Formation with Dyrham Formation and Sandstone in the northeastern corner. Superficial deposits recorded in the area of the proposed WMEL-B Substation include Till (Oadby Member) across the entire Substation with traces of clay, silt, sand and gravel (Head).
- 11.5.33 Most of the Study Area for Section 3 is located on superficial deposits described as secondary undifferentiated, these units comprise Head, Till, Oadby Member Glacial Till and the Thrussington Member. Predominantly located along rivers within the Study Area for Section 3 are the remaining superficial aquifers: Alluvium, River Terrace Deposits, Bytham Sand and Gravel Formation, Glaciofluvial Deposits, and Birstall Member are all described as secondary A, whilst Colluvium is described as secondary B. There are also areas where superficial deposits are absent, the largest area of which is north of Wartnaby on the northern corner of the Study Area for Section 3.
- 11.5.34 The Study Area for Section 3 is located partly on the Lower Lincolnshire Limestone Member principal aquifer, the only principal aquifer within the Study Area for Section 3. The Dyrham Formation where it is a Sandstone, Marlstone Rock Formation and Northampton Sand Formation are described as secondary A aquifers and the Granby Member is described as a secondary B aquifer. The Charmouth Mudstone Formation and Blue Lias Formation which underly most of the Study Area for Section 3 are described as secondary undifferentiated aquifers, along with the Grantham Formation and the Dyrham Formation where it is interbedded Siltstone and Mudstone. The Whitby Formation and Scunthorpe Mudstone Formations are described as unproductive strata.
- 11.5.35 There are no SPZs within the Study Area for Section 3.
- 11.5.36 The Study Area for Section 3 crosses three WFD Groundwater bodies, all with an Overall Water Body status of Good, with Good Quantitative and Chemical statuses. These are: Witham Lias, Soar – Secondary Combined, and Lower Trent Erewash – Secondary Combined.
- 11.5.37 There are no groundwater Drinking Water Safeguard Zones within the Study Area for Section 3.
- 11.5.38 A small area in the eastern end of the Study Area for Section 3 directly south of Sewstern is part of the Lincolnshire Limestone groundwater NVZ, there are no other areas of groundwater NVZ within the Study Area for Section 3.
- 11.5.39 There are two GWDTEs within the Study Area for Section 3 – Holweth Mouth SSSI is located within the Scoping Boundary and is 1km north of Ab Kettleby. Frisby Marsh SSSI is located 0.8 km west of Frisby on The Wreake and is fully within the Scoping Boundary.
- 11.5.40 Locations of groundwater abstractions and discharges will be assessed at ES stage.

- 11.5.41 Radon levels in the area have been reviewed using the published maps by the UKHSA (Ref 11.13). The proposed WMEL-B Substation is in an area of elevated radon potential, with a 30% chance or more of homes exceeding the radon Action Level (Ref 11.13).
- 11.5.42 A coal mining reporting area covers part of the Study Area for Section 3 in the northwestern extent including WMEL-B Substation. Two mine entries are shown, located within the wider 250 m Study Area southwest of Welby.
- 11.5.43 Multiple historical landfill sites are recorded within the Scoping Boundary located near Asfordby and one is located southeast of Ashby Folville. No authorised landfill sites are recorded within the Study Area for Section 3.

Section 4

- 11.5.44 Section 4 includes reconductoring of the existing overhead line.
- 11.5.45 The published geology within the Study Area for Section 4 comprises:
- Made Ground deposits are recorded across the Scoping Boundary in isolated areas comprising of former quarries, pits and historical landfills.
 - Superficial deposits, present across the entirety of the Study Area for Section 4 are recorded to comprise:
 - Till.
 - Oadby Member – Diamicton.
 - a small pocket of Glaciolacustrine deposits.
 - glaciofluvial deposits consisting of sand and gravel present in pockets across the Study Area for Section 4;
 - Alluvium and Colluvium comprising clay, silt, sand and gravel present along the traces of rivers across the Study Area for Section 4. Small pockets of Head are recorded adjacent to Stonton Brook and Glooston Arm; tributaries of the River Welland; and
 - pockets of River Terrace Deposits and Alluvial Fan deposits are present in the southern extent of the Study Area for Section 4.
 - Bedrock is recorded to comprise the following across the Study Area for Section 4:
 - Mudstone of the Blue Lias Formation and Charmouth Mudstone Formation in a small area of the northern extent;
 - Dyrham Formation – Siltstone and Mudstone;
 - Limestone of the Marlstone Rock Formation; and
 - Whitby Mudstone Formation.
- 11.5.46 Most of the superficial deposit coverage in the Study Area for Section 4 is from units described as secondary (undifferentiated) aquifers. These are Till, Oadby Member, Glaciofluvial Deposits and Head. There are also large areas within the Study Area for Section 4 where superficial deposits are absent. River Terrace Deposits, Alluvium and Alluvial Fan Deposits are present within the Study Area for Section 4 and are

described as secondary A aquifers. Colluvium is described as a secondary B aquifer and the Glaciolacustrine deposits are described as unproductive strata.

- 11.5.47 Most of the Study Area for Section 4 is underlain by bedrock units described as secondary and unproductive, these are the Blue Lias Formation, Charmouth Mudstone Formation and the Dyrham Formation. Limestone of the Marlstone Rock Formation is described as a secondary A aquifer, and the Whitby Mudstone Formation is described as unproductive strata.
- 11.5.48 The Study Area for Section 4 crosses two WFD Groundwater bodies all with an Overall Water Body status of Good, with Good Quantitative and Chemical statuses. These are: Soar – Secondary Combined, and Welland Lower Jurassic Unit.
- 11.5.49 There are no SPZs, groundwater Drinking Water Safeguard Zones, or groundwater NVZs within the Study Area for Section 4.
- 11.5.50 There is one GWDTE within the Study Area for Section 4, Great Bowden Borrow pit SSSI located on the northern edge of Great Bowden in the South and located fully within the Scoping Boundary.
- 11.5.51 Locations of groundwater abstractions and discharges will be identified and assessed at ES stage.
- 11.5.52 Five historical landfills are recorded within the Scoping Boundary, but no authorised landfills are present within the Study Area for Section 4.

Section 5

- 11.5.53 Section 5 proposed include reconductoring of the existing overhead line.
- 11.5.54 The published geology within the Study Area for Section 5 comprises:
- Made Ground deposits are present across the Study Area for Section 5 in areas recorded as historical landfill sites and former pits. A large area of Made Ground is present in the southern extent of the Scoping Boundary, Upper Nene Gravel Pits SSSI. Further Made Ground deposits are likely adjacent to roads and existing properties and structures including the A427, A6, A14, A43, A45 and villages in the Scoping Boundary.
 - Superficial deposits, present across the entirety of the Study Area for Section 5 are recorded to comprise:
 - Bozeat Till present in isolated pockets across the Study Area for Section 5;
 - Oadby Member – Diamicton present to Foxall;
 - Till– Diamicton present from Foxall to Market Harborough;
 - glaciofluvial deposits present in isolated pockets;
 - sand and gravel (Grendon Member and Ecton Member) and river terrace deposits comprising isolated pockets adjacent to rivers in the north and south of the Study Area for Section 5;
 - Alluvial Fan deposits and Alluvium present along the traces of rivers; and
 - Tufa present in a few small pockets across the southern extent of the Scoping Boundary including approximately 700 m north of Hardwick.

- Bedrock is recorded to comprise the following across the Study Area for Section 5:
 - Whitby Mudstone Formation;
 - Northampton Sand Formation – Ironstone, Ooidal;
 - Grantham Formation – Sandstone, Siltstone and Mudstone;
 - Stamford Member – Sandstone and Siltstone;
 - Rutland Formation – Mudstone;
 - Lower Lincolnshire Limestone Member located near Harrington;
 - Limestone of the Wellingborough Member and Blisworth Member; and
 - towards Market Harborough, in the north of the Study Area for Section 5 the bedrock largely consists of Mudstones including Charmouth Mudstone, Dyrham Formation and Whitby Mudstone.

- 11.5.55 Most of the superficial deposit coverage in the Study Area for Section 5 is from units described as secondary (undifferentiated) aquifers, these are Till, Oadby Member and Bozeat Till. Note that there are large areas within the Study Area where superficial deposits are absent. Glaciofluvial deposits, river terrace deposits, alluvium and alluvial fan deposits and tufa are present and are described as secondary A aquifers.
- 11.5.56 There are two geological units that are described as principal aquifers, Blisworth Limestone Formation and Lower Lincolnshire Limestone Member. The Stamford Member, the Northampton Sand Formation and the Wellingborough Limestone Member are described as secondary A aquifers. The Rutland Formation is described as a secondary B aquifer. The Grantham Formation, Charmouth Mudstone and the Dyrham Formation are described as secondary (undifferentiated) aquifers. The Whitby Mudstone Formation is described as unproductive strata.
- 11.5.57 The Study Area for Section 5 crosses three WFD Groundwater bodies all with an Overall Water Body status of Good, with Good Quantitative and Chemical statuses. These are: Welland Lower Jurassic Unit, Nene Mid Lower Jurassic Unit, and Northampton Sands.
- 11.5.58 There are no SPZs within the Study Area for Section 5.
- 11.5.59 There are no groundwater Drinking Water Safeguard Zones within the Study Area for Section 5.
- 11.5.60 Most of the Study Area for Section 5 is within the Northampton Sands groundwater NVZ.
- 11.5.61 There are three GWDTEs within the Study Area for Section 5, Birch Spinney & Mawsley Marsh SSSI is located on the north side of Mawsley Village, entirely within the Scoping Boundary. Hardwick Lodge Meadow SSSI is located between Hardwick and Hannington, within the 500 m Study Area. The Upper Nene Valley Gravel Pits SSSI extend across the south of Section 5, partly within the Scoping Boundary.
- 11.5.62 Locations of groundwater abstractions and discharges will be identified and assessed at ES stage.

- 11.5.63 Multiple historical landfill sites are recorded within the Study Area for Section 5. No authorised landfill sites are recorded.
- 11.5.64 Existing or historical airfields present within the Study Area for Section 5 include RAF Harrington, a former RAF station located south of the village of Harrington. Historical aerial photography shows that the eastern extent of the airfield site within the Scoping Boundary. The airfield opened in 1943 with the majority now returned to agricultural land however the Thor Missile launch pads remain visible on the aerial photos approximately 70 m west of the Scoping Boundary. RAF Harrington has potential contamination sources associated with historical underground tanks and bomb storage including high explosive (HE), pyrotechnic and classified warhead store within Section 5 of the Scoping Boundary.

Future Baseline

- 11.5.65 The future baseline relates to known or anticipated changes to the current baseline in the near future. These will be assessed for the Project in the ES.
- 11.5.66 To assess the potential effects of the Project, it is required to predict how the baseline conditions recorded within this chapter may change from the time of baseline data collection to the commencement of development and during the construction, operation and maintenance. It is currently anticipated that, subject to gaining development consent in 2029, construction works would begin in 2030 and be completed by 2034. Up to and including that period, it is not expected that ground conditions, with respect to land contamination and geology, would change significantly. This assumes that any future activities undertaken within the Study Area would be permitted or controlled in accordance with current land contamination legislation and planning policy.
- 11.5.67 Hydrogeological conditions are more susceptible to change and therefore may be affected by the following factors:
- Climate change – changes in rainfall can affect aquifer recharge, groundwater levels and flow gradients.
 - Future developments, including housing – increases in housing within the areas surrounding the Study Area have the potential to affect recharge to the underlying aquifers. Increased demand for drinking water associated with these can also affect future water resources and groundwater levels in aquifers, including the SPZs present within Sections 1 to 5.
- 11.5.68 Regarding climate change impacts on hydrogeology, the UK Climate Projections 2018 (UKCIP18) predicts the following changes up to 2099 (Ref 11.23):
- Temperatures will continue to increase, with larger temperature increases estimated in summer.
 - The average summer rainfall rate is estimated to decrease, whereas the average winter rainfall is estimated to increase.
 - An overall increase in extreme weather events.
- 11.5.69 The UK Groundwater Forum concluded the following, as the potential impacts of climate change on groundwater (Ref 11.24):
- A long-term decline in groundwater storage.

- Increased frequency and severity of groundwater droughts.
- Increased frequency and severity of groundwater-related floods.

- 11.5.70 This will lead to greater variability in groundwater levels, with prolonged periods of high and low groundwater levels relating to the variability of rainfall and recharge.
- 11.5.71 The UK Centre for Ecology and Hydrology (UKCEH) has run predictive models to simulate these impacts of climate change, across England, Scotland and Wales, using predictions from UKCP09 (Ref 11.25). This report also predicts the impact on groundwater stations, the closest of which is New Red Lion, at Aslackby, approximately 4.6 km to the north of the Scoping Boundary in Section 2. This groundwater station is on the Lincolnshire Limestone. At this location, groundwater level is predicted to change between -2.0 and +2.0 m in elevation to 2070, with ~2 m seasonal variation.
- 11.5.72 It is not considered likely at this stage that any change in baseline conditions would be likely to significantly influence the assessment of effects. However, this will be reviewed during the EIA and consideration given to any instances where the future baseline requires more detailed specific consideration, on a case-by-case basis. This will include consideration of changes in baseline conditions that could result from any nearby allocated/proposed future development sites, which will be considered in the Geology and Hydrogeology ES and/or cumulative effects assessment as appropriate.

11.6 Design and Control Measures

Design Measures

- 11.6.1 The Project has, where possible, been routed to avoid, geologically designated sites and sensitive receptors, considering both overhead line routing and substation sites, as set out in the Corridor Preliminary Routing and Siting Study (CPRSS) (Ref 11.14). With suitable stand offs from springs, spring catchments and groundwater abstractions.
- 11.6.2 Vehicle parking, fuel storage, de-icer storage, rock salt storage, and washout/cleaning of ready-mix concrete vehicles and equipment will be sited outside SPZ1, where possible. For the purposes of assessing the effects of the Project it will be assumed that the design of the Project will incorporate suitable consideration of the ground conditions, and therefore that risks from ground instability, or from the chemical aggressivity of the ground towards construction materials, would be considered within the engineering design of the new infrastructure, in accordance with best practice. This will mean that the Project will be built with the required design and construction mitigation in place. As this is a fundamental engineering requirement it is considered to be an embedded measure.
- 11.6.3 Further design measures will be developed as the Project design evolves.

Control and Management Measures

- 11.6.4 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice is provided in **Appendix 4A: Initial Outline Code of Construction Practice (CoCP)**. Measures relevant to the control and management of impacts that could affect geology and hydrogeology are (refer to **Appendix 4A** for the full description of each measure):

- GH01 – on ground investigations and assessment.
- GH02 – on construction methods including piling techniques in line with guidance (Ref 11.8).
- GH03 – on the use of appropriate occupational health and safety measures and statutory and safety compliance.
- GH04 and GH05 – on the use, handling and storage of chemicals in accordance with relevant regulations and guidance.
- GH06 – on the control of earthworks or materials movement under appropriate Environmental Permits, exemptions or CL:AIRE (Ref 11.9).
- GH07 – on temporary dewatering activities during construction being undertaken with the relevant guidance.
- GH08 – on dealing with unexpected contamination.
- GH09 – on contamination avoidance and waste management procedures.
- GH10: If required, herbicides to be used in accordance with relevant Defra guidance.
- GH11 – on any application of salt grit.
- GH12 – on water discharges and pre-treatment.
- GH13 – on minimising the area of hardstanding required during construction.

11.7 Potential for Significant Effects

- 11.7.1 The Geology and Hydrogeology assessment in the ES will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of aspects and matters in the scope of the Geology and Hydrogeology ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 11.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 11.6. The receptors identified within the Study Area and the potential impacts as a result of construction, operation and maintenance activities associated with the Project are described. Where an impact could give rise to potentially significant effects on receptors identified in the Study Area, these are scoped into the ES. Impact pathways that are unlikely to give rise to significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.
- 11.7.3 A precautionary approach has been taken and where there is no strong evidence, insufficient or incomplete baseline, or the significance is uncertain at this stage the impact has been scoped into the ES. Where there is clear evidence that the effect from the impact will not be significant, either alone or in combination with other plans and projects, the impact has been scoped out of the ES.

Table 11.2 Impacts, receptors and the potential for significant effects

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Disturbance of ground during construction that is affected by pre-existing contamination	Harm to human health through exposure to contamination, including dust and vapours	Adjacent land users, construction workers	Yes - initial consideration of the Study Area indicates a generally low risk of potential contamination, but isolated areas of existing contamination cannot be discounted.	Scoped in
		Deterioration in chemical quality of the land and aquifers	Aquifers Groundwater abstractions Springs		
Construction	Groundwater control measures (construction dewatering and associated discharge), e.g. during excavations for foundations for new structures	Physical effects on aquifers, such as depletion of the aquifer and increased solids/turbidity Deterioration in chemical quality of aquifers	Aquifers Groundwater abstractions Springs GWDTEs	Yes - due to the nature of the Project and the potential for shallow groundwater, there is likely to be some level of dewatering required, so the effect is scoped in for further consideration/ assessment.	Scoped in
Construction	Release of contamination and sediment by construction activities (e.g.	Deterioration in chemical quality of the land and aquifers	Soil/land quality Aquifers Groundwater abstractions Springs	Yes – Some level of risk of inadvertent release of contamination is inherent in the construction activities associated with the Project.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	accidental loss of fuels to an aquifer)		GWDTEs	However, environmental and site management controls should be such that any accidental leaks / spills are minimised as far as reasonably possible.	
Construction	Ingress and accumulation of ground gas within buildings or other confined spaces	Explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures	Adjacent land users, construction workers	Yes - potential for localised areas of gas generating soils cannot be discounted, so the effect should be given consideration on a precautionary basis.	Scoped in
Construction	Ingress and accumulation of ground gas within buildings or other confined spaces	Explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures	Structures	No – although there is potential for localised areas of gas generating soils, this is considered to be a matter of engineering design and will be addressed as an ‘embedded engineering measure’.	Scoped out
Construction	Dissolution of soluble rocks due to changed patterns of groundwater flow/ discharges caused by construction activities	Deterioration in chemical quality of the land and aquifers	Soil/land quality (aspects related to land contamination, other effects for these receptors fall under Chapter 12 Agriculture and Soils) Groundwater within aquifers s of differing	Yes - initial consideration of the Study Area indicates a potential for dissolution. There is generally a low potential for contamination, but isolated areas of existing contamination cannot be discounted. Therefore, there is a risk that construction	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
			sensitivities, including principal aquifers and groundwater Source Protection Zones (SPZ)	activities could introduce contamination pathways.	
Construction	Any construction activity involving ground disturbance	Damage to designated geological conservation sites	Geological conservation sites	No - at present no such sites have been identified within the Study Area. On this basis, significant effects are not likely to occur.	Scoped out See Note ¹
Construction	Disturbance of unstable ground from historical mining, leading to potential emergency of sink holes	Harm to human health and aquifers from disturbance of historical mining	Adjacent land users, construction workers Groundwater aquifers, Surface water bodies	No – this will be addressed by the engineering/geotechnical study and design, following applicable standards to ensure no likely significant environmental effects.	Scoped out
Construction	Disturbance of unstable ground from historical mining, leading to potential mobilisation of mine gases and mine water	Harm to human health and aquifers from disturbance of historical mining	Adjacent land users, construction workers Groundwater aquifers, Surface water bodies	Yes - part of Section 3 is located within a Coal Mining Reporting Area (Section 3 and WMEL-B Substation).	Scoped in
Operation and Maintenance	Presence of residual soil contamination from construction activities	Harm to human health through exposure to contamination,	Future land users, adjacent land users Aquifers Groundwater abstractions	No - Whilst some ground disturbance may be necessary during maintenance, this is likely to be restricted to land	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		including dust and vapours Deterioration in chemical quality of the land and aquifers	Springs GWDTEs	previously disturbed during construction. Earthworks and materials movement would be controlled by National Grid standard operational and maintenance procedures. Having regard to the nature of the operational and maintenance phases, significant effects are not likely to occur.	
Operation and Maintenance	Presence of impermeable surfaces (in relation to infiltration)	Potential changes to shallow groundwater flow and levels at the site and downstream and to hydraulically connected habitats as a result of permanent below ground structures (e.g. piling) and surface structures intercepting recharge (e.g. hardstanding).	Aquifers Groundwater abstractions Springs GWDTEs	Yes – particularly in relation to substations due to the relatively larger area of impermeable surfacing and presence of engineered drainage. Effects on flows and levels from other aspects of the Project, such as tower foundations and permanent accesses, are not expected to be significant, but this should be verified through assessment.	Scoped in
Operation and Maintenance	Groundwater control measures during the operational phase	Physical effects on aquifers, such as depletion of the aquifer and	Aquifers Groundwater abstractions Springs	No – there are not expected to be any permanent dewatering requirements during the operational and	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		increased solids/turbidity	GWDTEs	maintenance phase of the Project. On this basis, significant effects are not likely to occur.	
Operation and Maintenance	Unstable or chemically aggressive ground conditions	Structural damage caused by aggressive ground conditions.	Proposed Structures	No – this is considered to be a matter of engineering design (i.e. addressed as an ‘embedded engineering measure’ as previously described) and is not to be considered further within the ES.	Scoped out
Operation and Maintenance	Ingress and accumulation of ground gas within substation buildings	Explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures	Workers (i.e. manual access to carry out operational activities).	Yes – there is potential for localised gas generating ground in proximity of proposed substations and possible mine gas.	Scoped in
Operation and Maintenance	Disturbance of ground that is affected by pre-existing contamination for maintenance purposes	Harm to human health via exposure to contamination, including dust and vapours	Maintenance workers, future land users, adjacent land users	No - initial consideration of the Study Area indicates a generally low risk of potential contamination and National Grid standard operational and maintenance procedures will be implemented. This is considered sufficient to ensure no likely significant effects during operation and maintenance.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		Deterioration in chemical quality of the land and aquifers	Soil/land quality Aquifers Groundwater abstractions Springs GWDTEs	Yes - initial consideration of the Study Area indicates a generally low risk of potential contamination but isolated areas of existing contamination cannot be discounted.	Scoped in
Operation and Maintenance	Release of contamination by maintenance activities (e.g. accidental loss of fuels to an aquifer)	Deterioration in chemical quality of the land and aquifers via maintenance purposes	Soil/land quality Aquifers Groundwater abstractions Springs GWDTEs	Yes - although National Grid standard operational and maintenance procedures will be implemented, there is a risk of inadvertent and/or accidental release or spillage of contamination during operation.	Scoped in
1- Note that this is provisional and is subject to confirmation of the absence of locally designated sites in the Scoping Boundary and Study Area, which will be carried out as part of further baseline characterisation to support the ES. Therefore, the proposed assessment methodology in Section 11.7 includes a methodology for how effects on geological conservation receptors would be assessed, should it be necessary to scope this effect back into the assessment following further baseline characterisation.					

11.7.4 Additionally, the following effects will not be covered in this chapter. It is emphasised that these effects are not scoped out, and will be addressed in full in the ES chapters as described below:

- Effects of groundwater level changes on archaeological remains which rely on groundwater for preservation. These will be considered in **Chapter 9 Cultural Heritage**. This assessment will consider any effects on groundwater levels identified by the Geology and Hydrogeology assessment and how these may in turn affect these archaeological receptors.
- Effects on Groundwater Dependent Terrestrial Ecosystems (GWDTE). These are ecological receptors and will be considered in **Chapter 8 Ecology and Biodiversity**. This assessment will consider any effects on groundwater levels or quality identified by the Geology and Hydrogeology assessment and how these may in turn affect these ecosystem receptors.
- Effects on surface water receptors. These are a hydrological receptor and will be considered in **Chapter 10 Water Environment**. This assessment will consider any effects on groundwater levels or quality identified by the Geology and Hydrogeology assessment and how these may in turn affect these hydrological receptors.
- Minerals safeguarding. As stated in **Chapter 4 Description of the Project** it is not anticipated that there would be likely significant effects in EIA terms regarding minerals and waste, However, if required for compliance with relevant policy, this matter will be addressed through a stand-alone Minerals Assessment Report. This will identify safeguarded minerals and provide an appraisal of the effects of the Project in terms of relevant minerals policy. This report will not form part of the ES but will be submitted as a separate document as part of the application for development consent. This approach is considered to present a proportionate way of assessing potential minerals sterilisation in a manner that is familiar to relevant consultees (i.e. a conventional minerals planning report), allowing transparent appraisal of the Project against relevant policy requirements.
- Risk of damage to structures from vibrations caused by piling, should this be required for the proposed structures. If required, this is a matter of consideration for a structural engineer and would be dealt with by the “Engineering Requirements”, so is outside the scope of the Geology and Hydrogeology assessment.

11.8 Proposed Assessment Methodology

Proposed Data Sources

11.8.1 In addition to the data sources listed in Section 11.5.1, the following data sources are proposed to be used to inform the Geology and Hydrogeology ES assessment:

- Observations from site walkovers at PEIR stage.
- Published historical mapping to identify potentially contaminative former land uses.
- UK Health Security Agency radon mapping.

- Groundwater abstraction details (public and private), discharge consents, historical pollution incident records, and historical and authorised landfills, as available from the Environment Agency and Local Planning Authorities and to be obtained through formal data requests.
- Hazard mapping for naturally occurring geohazards.
- Natural England designated Sites, i.e. Geological SSSIs, GWDTEs.
- Environment Agency Report SC040016/R 'New Groundwater Vulnerability Mapping Methodology in England, and Wales'.
- Any relevant information regarding historical ground contamination that is available from the local planning authorities. This would be obtained through formal data requests to the Environment Protection departments (or equivalent) of each authority.
- Records on locally designated geological sites (LGS), including a review of relevant local planning documentation and any readily available local geo-conservation documents.

Proposed Assessment Methodology

- 11.8.2 The following section summarises the methodology proposed to be used for the Geology and Hydrogeology ES assessment which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.
- 11.8.3 The data collection outlined above will enable the baseline conditions to be considered. For land contamination these data will be used to identify potential source-pathway-receptor linkages and inform a risk-based assessment of the effects of the Project. This approach follows published guidance (e.g. Land Contamination Risk Management (Ref 11.1)).
- 11.8.4 For each potential contamination source, an initial contamination screening assessment will be undertaken to determine the risk and potential for contamination as shown in **Table 11.3**. The potential contamination sources classed as moderate or greater risk will be subject to further assessment in the ES as described below.
- 11.8.5 For each potential effect, the receptor sensitivity and magnitude of effect will be assigned using **Table 11.4** and **Table 11.5** which will then be combined to give an output in **Table 11.6**.
- 11.8.6 The output of the assessment will be the level of effect determined from **Table 11.6**. This will classify each potential effect as either negligible, minor, moderate or major. Effects may be adverse or beneficial. An example of a beneficial effect could be remediation of ground contamination that happens as a direct result of the Project.
- 11.8.7 It should be noted that, when considering effects relating to contamination, the output of the assessment is a risk classification, rather than a predicted effect. For example, minor 'effects' in relation to health risks from exposure to soil contamination would reflect an assessment that there is a low/very low risk of significant effects occurring, rather than indicating that there is a predicted adverse effect that would be of a minor nature.
- 11.8.8 This approach integrates the topic-specific requirement for effects to be assessed via a risk-based approach in the EIA methodology and is an application of the

methodology provided within Construction Industry Research and Information Association (CIRIA) C552 (Ref 11.11), which recommends considering potential effects as a function of ‘consequence’ and the probability of the effect occurring.

Table 11.3 Initial Contamination Screening Assessment

Risk Classification	Potential for Contamination
Very Low	Contamination that could be of note in the context of electricity infrastructure construction project is very unlikely – e.g. residential, retail or offices, agriculture
Low	Some potential for contamination, but previous and current uses are of low risk and unlikely to be of note in the context of an electricity infrastructure construction project e.g. low risk commercial uses, such as depots or warehouses
Moderate	Some potential for contamination, with previous and current processes that are considered a risk of generating widespread slightly elevated contamination levels and/or more localised areas of more severe contamination – e.g. railways, railway yards, collieries, scrap yards, inert landfills
High	Previous and current uses that are commonly associated with widespread elevated contamination potential – e.g. major industry, “non-hazardous” landfills
Very High	Previous and current uses that are associated with the highest risk of elevated contamination – e.g. hazardous landfills, gas works, chemical works

11.8.9 Each potential effect of moderate or greater risk of contamination as per **Table 11.3** above will then be carried forward for assessment in the ES using **Table 11.4** and **Table 11.5**, to give an assessment of the effect in **Table 11.6**

Sensitivity

11.8.10 The value or sensitivity of receptors will be reported in accordance with the criteria presented in **Table 11.4**.

Table 11.4 Sensitivity of receptors

Value/Sensitivity	Land Contamination, Geological Conservation	Hydrogeology
Very High	Human health risk, in areas of high sensitivity land use (e.g. residential, allotments) where receptor characteristics promote exposure and/or vulnerability to soil contamination or ground gas Geological conservation: very rare and of either international or	Principal aquifer providing a regionally important resource and/or supporting a site protected under EC legislation. Ecology and Nature Conservation. Groundwater locally supports designated GWDTE. Source Protection Zone I (inner zone)

Value/Sensitivity	Land Contamination, Geological Conservation	Hydrogeology
	national importance with no potential for replacement (e.g. United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Sites, UNESCO Global Geoparks, Geological Conservation Review (GCR) sites where citations indicate features of international importance, geological SSSI, ASSI). Geology meeting international or national designation citation criteria which is not designated as such.	associated with a Public Water Supply.
High	Human health risk, in areas of high sensitivity e.g. public open space, schools, where receptor characteristics promote exposure and/or vulnerability to soil contamination or ground gas and vapour. Geological conservation: rare and of either international or national importance with little or potential for replacement (e.g. Geological SSSI, ASSI). Geology meeting international or national designation citation criteria which is not designated as such.	Principal aquifer providing locally important resource or supporting a river ecosystem. Groundwater supports a GWDTE (non-designated). Licensed groundwater abstraction. Source Protection Zone I associated with a private water abstraction, SPZ 2 (outer zone) associated with a Public Water Supply.
Medium	Human health risk, medium sensitivity land use such as commercial or industrial where receptor characteristics limit exposure and/or vulnerability to soil contamination, ground gas and vapour. Soil/land: crops, livestock, or plants in managed planting/landscaping schemes (parks/verges) etc. Agricultural assets whose quality may be affected by exposure to contamination. Geological Conservation: geology of regional importance with limited potential for replacement (e.g.	Aquifer providing water for agricultural or industrial use with limited connection to surface water. Secondary aquifers, unlicensed abstractions, SPZ 3 (total catchment).

Value/Sensitivity	Land Contamination, Geological Conservation	Hydrogeology
	Regionally Important Geological Sites/Local Geological Sites (LGS). Geology meeting regional designation criteria which is not designated as such	
Low	Human health risk, low sensitivity land use such as highways and rail where receptor characteristics significantly minimise exposure and/or vulnerability to soil contamination and ground gas. Geology of local importance interest with potential for replacement e.g. non designated geological exposures, former quarries, mining sites.	Unproductive strata.
Negligible	Human health undeveloped land, no sensitive land uses proposed. Land/soil: phytotoxic effects on non-agricultural plants that are not part of managed planting/landscaping schemes. Geological Conservation: no designated sites or geology of known recorded local interest.	n/a

Magnitude

11.8.11 Magnitude of change will be reported in accordance with the criteria listed in **Table 11.5**.

Table 11.5 Magnitude of impact

Magnitude	Land Contamination, Geological Conservation	Hydrogeology ¹
Major	Risk assessments indicate that contaminant levels exceed relevant screening criteria (e.g. Category 4 screening levels) and may present unacceptable acute or substantial chronic human health risks.	Release of Priority Hazardous Substances or substances regulated under The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 (Ref 11.3) of the Water Supply (Water

¹The hydrogeological criteria do not include the magnitude of effect that may be caused to GWDTE or surface water receptors as a result of changes to groundwater that feeds these receptors. This is because effects on these receptors are considered in Chapter 8 Ecology and Biodiversity and Chapter 10 Water Environment, respectively.

Magnitude	Land Contamination, Geological Conservation	Hydrogeology ¹
	Geological conservation: loss of geological features/ designation and/or quality and integrity, severe damage to key characteristics, features, or elements.	Quality) Regulations 2016 (Ref 11.4) at concentrations that may present a direct/imminent risk to abstractions. Physical or chemical effects on an aquifer (i.e. changes in groundwater levels, flows, yield, or quality) that substantively restrict its viability as an abstractable resource and/or its WFD status.
Moderate	Risk assessment indicates that contaminant concentrations may be slightly or moderately above precautionary screening criteria, potentially resulting in a chronic health risk that although likely to be low or moderate, may require remediation and/or control measures. Death or major health effects on livestock or significant direct damage to crops or plants in a managed planting /landscaping scheme that is directly attributable to soil contamination. Geological conservation: partial loss of geological feature/designation, potentially adversely affecting the integrity; partial loss of/damage to key characteristics, features, or elements.	Release of contamination at concentrations that may lead to substantial localised degradation in groundwater quality but not present a direct/ imminent risk to abstractions. Physical or chemical effects on an aquifer (i.e. changes in groundwater levels, flows, yield or quality) that limit its effectiveness as a resource and may affect its status.
Minor	Contaminant concentrations are below relevant screening levels and there is no requirement for control/remediation measures. Minor damage to crops or plants in a managed planting /landscaping scheme that is directly attributable to soil contamination.	Minor localised changes to groundwater quality, flow, levels, or yields. Changes are localised, with little effect on the use or status of the groundwater resource and present no significant risk to abstractions.

Magnitude	Land Contamination, Geological Conservation	Hydrogeology ¹
	Geological conservation: minor measurable change in geological feature/designation attributes, quality, or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features, or elements.	
Negligible	Contaminant concentrations are at background and risk assessments indicate that there is no significant potential for adverse human health effects from soil contamination. No damage to crops, livestock or plants. Geology: negligible loss or detrimental alteration to one or more characteristics, features or elements of geological feature/designation. Overall integrity of resource unaffected.	Minimal measurable effect on groundwater levels, quantities, flows, or chemical quality, or on the use or status of a groundwater resource.
No Change	Contaminant concentrations are at or below background and risk assessments indicate that there is no significant potential for adverse human health effects from soil contamination. No damage to crops, livestock or plants. Geology: no loss or detrimental alteration to one or more characteristics, features or elements of geological feature/designation. Overall integrity of resource unaffected.	No measurable effect on groundwater levels, quantities, flows, or chemical quality, or on the use or status of a groundwater resource.

Significance of effects

- 11.8.12 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of impacts is outlined in **Table 11.6**.

Table 11.6 Determination of significance matrix (Ref 11.6)

Magnitude of Impact						
Sensitivity of Receptor		Major	Moderate	Minor	Negligible	No Change
	Very High	Very large	Large or very large	Moderate or large	Slight	Neutral
	High	Large or very large	Moderate or large	Slight or moderate	Slight	Neutral
	Medium	Moderate or large	Moderate	Slight	Neutral or slight	Neutral
	Low	Slight or moderate	Slight	Neutral or slight	Neutral or slight	Neutral
	Negligible	Slight	Neutral or slight	Neutral or slight	Neutral	Neutral

- 11.8.13 An impact is considered significant if the resultant effect is Large or Moderate. A resultant effect of Slight/Neutral is not considered significant. This matrix approach provides a guide however professional judgement will be used in concluding the significance of an effect.

11.9 Assumptions and limitations

- 11.9.1 The following assumptions and limitations apply to this chapter of the Scoping Report:
- A detailed baseline data gathering exercise is yet to be undertaken and will be completed as part of the EIA and reported in the PEIR and ES. Whilst this is essential to inform the assessment of effects, it is considered unlikely that the findings will substantively alter the scope of or approach to, the assessment described in this chapter.
 - The proposed assessment approach in this chapter is based on desk study information. 'Reasonable worst case' assumptions regarding the likely ground conditions will be made when assessing effects in the ES, determined from the desk study information. It is not proposed to undertake site inspections or ground investigation specifically to support the ES unless specific high-risk circumstances are identified from desk study information that would warrant this. However, ground investigation is planned to collect site data for design purposes and this data will be used to support the ES, where relevant and where programmes align.
 - The scope of assessment and likely significant effects described in this chapter are based on the current Scoping Boundary and the Project description provided in **Chapter 4 Description of the Project**. It is anticipated that these details of the development will be subject to refinement as the Project progresses and subsequent reports will be based on more detailed design information. The approach to data gathering and assessment provided within this chapter is

intended to be flexible and is expected to remain applicable as the design develops.

- At scoping stage, the source of construction water supply is unknown. This could either be from mains water, surface water or groundwater. If groundwater is selected as a source for construction water at a later phase, the assessment of impact of this abstraction will be incorporated into the Geology and Hydrogeology assessment.

11.10 Conclusions

- 11.10.1 This Scoping Report chapter has outlined relevant legislation, policy and guidance in relation to the Geology and Hydrogeology assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, together with the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 11.2**.
- 11.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 11.1 The Environment Agency Land Contamination Risk Management (LCRM) guidance (2023).
- Ref 11.2 The Environment Agency Protect groundwater and prevent groundwater pollution (2017).
- Ref 11.3 The Environment Agency Groundwater protection technical guidance (2017).
- Ref 11.4 The Environment Agency Pollution Prevention Guidance (PPG) notes (PPG1, PPG5, PPG8 and PPG21).
- Ref 11.5 Construction Industry Research and Information Association (CIRIA) Contaminated land risk assessment guidance (2001).
- Ref 11.6 Design Manual for Roads and Bridges (DMRB) Environmental assessment and monitoring LA104 (2020).
- Ref 11.7 Design Manual for Roads and Bridges (DMRB) Sustainability and Environment Appraisal LA 109 Geology and soils” (2019).
- Ref 11.8 CL:AIRE guidance ‘Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention’ (Ref, 2025).
- Ref 11.9 CL:AIRE ‘The definition of Waste: The development industry Code of Practice (2011).
- Ref 11.10 CIRIA 648 ‘Control of water pollution from linear construction projects (2006).
- Ref 11.11 CIRIA C552 Contaminated land risk assessment. A guide to good practice’ (2001).
- Ref 11.12 Environmental Protection Act (1990), Chapter 43.
- Ref 11.13 British Geological Survey (2025) *GeoIndex Onshore*. [online] Available at: <https://mapapps2.bgs.ac.uk/geoindex/home.html> [Accessed 17 July 2025]
- Ref 11.14 National Grid (2025) Weston Marsh to East Leicestershire Corridor Preliminary Routing and Siting Study. [online] Available at: <https://www.nationalgrid.com/document/561431/download> [Accessed 29 August 2025]
- Ref 11.15 Department for Environment Food and Rural Affairs (2025) *MAG/IC*. [online] Available at: <https://magic.defra.gov.uk/MagicMap.html> [Accessed 17 July 2025]
- Ref 11.16 Department for Environment Food and Rural Affairs (2025) *Hydrology Data Explorer*. [online] Available at: <https://environment.data.gov.uk/hydrology/explore> [Accessed 17 July 2025]
- Ref 11.17 Data.gov.uk (2025) *Environment Agency, Groundwater Dependent Terrestrial Ecosystems*. [online] Available at: <https://www.data.gov.uk/dataset/72a149a2-1be7-441f-bc37-94a77f261e27/groundwater-dependent-terrestrial-ecosystems-england-only> [Accessed 17 July 2025]

- Ref 11.18 Environment Agency (2025) *Check for Drinking Water Safeguard Zones and NVZs Ecosystems*. [online] Available at: <https://environment.data.gov.uk/farmers/> [Accessed 17 July 2025]
- Ref 11.19 Department for Environment Food & Rural Affairs (2025) *Environment Agency, Catchment Data Explorer*. [online] Available at: <https://environment.data.gov.uk/catchment-planning/> [Accessed 17 July 2025]
- Ref 11.20 Environment Agency, (2025). Historical Landfill Sites. Available at: <https://www.data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites1>. Accessed 16 July 2025.
- Ref 11.21 Environment Agency, (2025). Permitted Waste Sites – Authorised Landfill Site Boundaries. Available at: <https://www.data.gov.uk/dataset/ad695596-d71d-4cbb-8e32-99108371c0ee/permitted-waste-sites-authorised-landfill-site-boundaries1>. Accessed 16 July 2025.
- Ref 11.22 Natural England, (2025). Designated Sites View.
- Ref 11.23 Met Office Hadley Centre and Environment Agency, (2019). *UKCP18 Science Overview Report*.
- Ref 11.24 UK Groundwater Forum, (2011). *Groundwater Resources and Climate Change*.
- Ref 11.25 C. Prudhomme *et al.*, (2014). Future Flows: a dataset of climate, river flow and groundwater levels for climate change impact studies in Great Britain in *Hydrology in a changing world: environmental and human dimensions* (IAHS Publication, 363). Wallingford, International Association of Hydrological Sciences, 2014, pp. 330-335.

12. Agriculture and Soils

Contents

12.	Agriculture and Soils	12-1
12.1	Introduction	12-1
12.2	Legislation, Policy and Guidance	12-2
12.3	Consultation and Engagement	12-3
12.4	Study Area	12-4
12.5	Baseline Conditions	12-4
	Data Sources	12-4
	Baseline	12-5
	Future Baseline	12-17
12.6	Design and Control Measures	12-18
	Design Measures	12-18
	Control and Management Measures	12-18
12.7	Potential for Significant Effects	12-19
12.8	Proposed Assessment Methodology	12-25
	Proposed Data Sources	12-25
	Proposed Assessment Methodology	12-25
12.9	Assumptions and limitations	12-29
12.10	Conclusion	12-30

Table 12.1	Engagement with Stakeholders	12-3
Table 12.2	Soil Associations within the Scoping Boundary in Section 1	12-5
Table 12.3	Distribution of Agricultural Land Classification within the Scoping Boundary in Section 1	12-6
Table 12.4	Soil Associations within the Scoping Boundary in Section 2	12-7
Table 12.5	Distribution of Agricultural Land Classification within the Scoping Boundary in Section 2	12-9
Table 12.6	Soil Associations within the Scoping Boundary in Section 3	12-9
Table 12.7	Distribution of Agricultural Land Classification within the Scoping Boundary in Section 3	12-12
Table 12.8	Soil Associations within the Scoping Boundary in Section 4	12-12
Table 12.9	Distribution of Agricultural Land Classification within the Scoping Boundary in Section 4	12-14
Table 12.10	Soil Associations within the Scoping Boundary in Section 5	12-15
Table 12.11	Distribution of Agricultural Land Classification within the Scoping Boundary in Section 5	12-17
Table 12.12	Impacts, receptors and the potential for significant effect	12-20
Table 12.13	Sensitivity of soil receptors	12-25
Table 12.14	Sensitivity of topsoil and subsoil resources	12-26
Table 12.15	Sensitivity of agricultural land holdings	12-26
Table 12.16	Magnitude of impact on agriculture and soils	12-27
Table 12.17	Magnitude of impact on agricultural land holdings	12-28
Table 12.18	Determination of significance matrix	12-29

12. Agriculture and Soils

12.1 Introduction

- 12.1.1 This chapter presents how the Agriculture and Soils assessment will consider the potential likely significant effects on agricultural and soil receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4 Description of the Project**). Agricultural and soil receptors comprise best and most versatile (BMV) agricultural land, soil resources and agricultural operations. It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed in the Environmental Statement (ES). As detailed in **Chapter 4 Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 12.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 12.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 12.1.4 There may be interrelationships with other disciplines and therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 6 Landscape**, where soils are significant in characterising landscapes and the soil requirements for establishing vegetation for landscaping;
 - **Chapter 8 Ecology and Biodiversity**, where habitat mapping identifies land use, particularly where soil is fundamental to a habitat and its biodiversity, and the soil requirements for habitat creation proposals;
 - **Chapter 10 Water Environment**, which includes the connection between the surface water cycle and drainage and agriculture; and,
 - **Chapter 11 Geology and Hydrogeology** which includes the base geology beneath soil formation and detail of groundwater receptors that could be impacted by any land contamination or pollution related impacts from the Project
- 12.1.5 This chapter is supported by the following figures and appendix:
- **Figure 12.1 Provisional Agricultural Land Classification;**
 - **Figure 12.2 Soil Associations;** and
 - **Appendix 12A Agriculture and Soils Survey Strategy.**

12.2 Legislation, Policy and Guidance

12.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on Agriculture and Soils associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context, Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

12.2.2 National guidance exists for field assessment of soils, assessment of environmental impacts and for good practice in handling soils and the sustainable use of soil in relation to development projects. Relevant guidance and standards, along with other relevant material, that have informed the scoping process are listed below and will also be taken into account as part of the ES assessment:

- **Natural England’s Guide to Assessing Development Proposals on Agricultural Land** (Ref 12.1): sets out the government policies and legislation that developers and local planning authorities (LPA) should refer to when considering proposals that affect agricultural land and provides guidance on when Natural England should be consulted on development proposals. The guidance notes that the LPA should ensure that development proposals include plans to protect soils. It explains circumstances in which new detailed surveys may be required and summarises the required survey methodology (also presented in Natural England’s Technical Information Note 049 (Ref 12.2).
- The Institute of Environmental Management and Assessment (IEMA), now known as The Institute of Sustainability and Environmental Professionals (ISEP), published the first guidance for the consideration of the impacts of development on soils and land in *EIA: A New Perspective on Land and Soil in Environment Impact Assessment* (Ref 12.3) (hereafter referred to as ‘the ISEP guidance’). The aim of the ISEP guidance is to advocate “*a broader approach [to the assessment of soils and agricultural land in EIA] that involves assessing the natural capital and functional ecosystem services provided by land and soils*”. The guidance introduces a soil functions-based evaluation methodology and improved mitigation measures for soil conservation, to avoid and minimise detrimental impacts on soil.
- Defra’s Construction Code of Practice for the Sustainable Use of Soil on Development Sites (Ref 12.4) provides technical guidance on the handling, storage and (re)use of soil within construction projects.
- The Institute of Quarrying (IoQ) Good Practice Guide for Handling Soils in Mineral Workings (Ref 12.5) details good practice methods for stripping, handling, storage, reinstatement, and management of soil resources. This guidance updates and replaces the Ministry of Agriculture, Fisheries and Food’s (MAFF) Good Practice Guide for Handling Soils and despite originating in the quarrying sector is considered relevant as the described measures are applicable to all development where soils are handled.
- MAFF’s Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land (Ref 12.6) provides the current guidelines and criteria for grading the quality of agricultural land in England and Wales.

- The British Society of Soil Science (BSSS) Guidance Document 3: Working with Soil - Guidance Note on Benefitting from Soil Management in Development and Construction (2021) (Ref 12.7) has been written for development planning and control professionals, site owners and developers to help promote the protection of soils and the important functions they support within the planning system and the development of individual sites.

12.3 Consultation and Engagement

- 12.3.1 The ES will be informed by consultation and engagement with stakeholders, including Natural England, which is a statutory consultee for projects affecting more than 20 ha of Best and Most Versatile (BMV) agricultural land. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 12.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received during Non-Statutory Consultation held from 11 June to 6 August 2025
- 12.3.3 The principal feedback received from Non-statutory Consultation of relevance to this scoping chapter is included in **Table 12.1** together with a response on how the comments have been considered in this Scoping Report, where applicable.

Table 12.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
South Kesteven District Council, South Holland District Council and National Farmers Union	Concern over the loss of arable farmland and BMV land from construction.	Agricultural Land Classification, including BMV, will be ascertained through soils sampling and analysis and be mapped as part of the assessment. Impacts on BMV can be minimised by considering the location of infrastructure, however, some BMV land will be impacted. The effects of this impact will be assessed as described in Section 12.8 of this chapter and reported in the ES.
National Farmers Union	Concern over the timing of the consultation falling over the harvest period for farmers.	Public consultation exercises are carried out at key stages of the programme and subject to various requirements. Engagement with relevant parties directly affected by the Project will be ongoing outside of this public consultation periods as the design and assessment

Stakeholder	Summary of response	Consideration in the Scoping Report
		progress and as part of the statutory process of applying for development consent.

12.4 Study Area

- 12.4.1 For the purposes of this Scoping Report, the Study Area is the Scoping Boundary, without applying a buffer, as shown in **Figure 1.2 Scoping Boundary**. Impacts regarding the loss of agricultural land relate only to those soils directly affected. This is considered an appropriate Study Area based on this stage of the project, requirements for completing a Scoping Report, professional judgment, and knowledge of similar projects.
- 12.4.2 The Study Area for the assessment will be further refined throughout the development of the Project, ultimately comprising the land within the Order Limits defined in the application for development consent.
- 12.4.3 The identified receptors in relation to agriculture and soils within the Study Area are:
- Agricultural land (the quality of which is defined by the Agricultural Land Classification (ALC) system and includes BMV land);
 - Soil resources; and
 - Agricultural land holdings.

12.5 Baseline Conditions

Data Sources

- 12.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:
- Provisional ALC, published by Natural England and available within Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) (Ref 12.8). The ALC system classifies land into five grades. Grade one is best quality and grade five is poorest quality. Grade 3 is divided between Subgrades 3a and 3b. Grade 1 to Subgrade 3a are considered BMV farmland. Provisional ALC mapping does not currently differentiate between Subgrades 3 and 3b, meaning that the identification of BMV land from baseline data is incomplete if based solely on provisional ALC mapping. However, as described in **Appendix 12A Agriculture and Soils Survey Strategy**, Natural England is to present more accurate ALC grading for England than is provided in the published ALC mapping, that will include subdivision of Grade 3 land into Subgrades 3a and 3b.
 - The Land Information System (LandIS) operated by Cranfield University, including 'Soilscapes Viewer' an online soil reporting tool providing summary soils information that conveys summary information for broad regional variation in the soil landscapes of England and Wales (Ref 12.9). It provides summary information of soil texture, fertility, and drainage, which supports further

generalised information on land cover and agricultural cropping suitability. Soilscape units are assigned a Soilscape reference number and attributes are listed within the mapping viewer.

- The Soil Survey of England and Wales Eastern England as presented on the National Soil Map of England and Wales digital mapping product 'NATMAP' (Ref 12.10).

12.5.2 The following additional sources of published information will be used to establish the baseline environment for Agriculture and Soils:

- Likelihood of Best and Most Versatile (BMV) Agricultural Land - Strategic scale map East (Natural England, 2017) (Ref 12.11).
- Met Office (1989) Climatological Data for Agricultural Land Classification (ALC) (Ref 12.12).
- Cranfield University (2015). 'Research to develop the evidence base on soil erosion and water use in agriculture: Final Technical Report (Ref 12.13).

Baseline

12.5.3 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported below for each Section.

Section 1

Soils and Geology

12.5.4 Soil associations within Section 1 are presented in **Table 12.2**. Each soil type is deep and stoneless, either clayey or silty, derived from marine alluvium.

Table 12.2 Soil Associations within the Scoping Boundary in Section 1

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
AGNEY	737.1	Seasonally wet deep silty	Deep stoneless calcareous fine and coarse silty soils.	Marine alluvium
WALLASEA 2	153.0	Seasonally wet deep clay	Deep stoneless clayey soils. Calcareous in places.	Marine alluvium
WISBECH	956.9	Seasonally wet deep silty	Deep stoneless calcareous coarse silty soils.	Marine alluvium

Soilscape and Land Use

- 12.5.5 The soils in Section 1 fall exclusively within Soilscape 21. They are loamy and clayey soils of coastal flats with naturally high groundwater. Soils are mostly drained. Shallow groundwater and ditches at field boundaries make water resources vulnerable to pollution. The land is typically flat and soils are generally stoneless with much available water. As such, lighter soils support a wide range of crops and are highly productive.

Agricultural Land Classification

- 12.5.6 The provisional ALC grade is dominated by Grade 1 land with some Grade 2 at the western boundary of Section 1, summarised in **Table 12.3**.

Table 12.3 Distribution of Agricultural Land Classification within the Scoping Boundary in Section 1

ALC Grade	Area (ha)	Percentage
Grade 1	1864.5	97.6
Grade 2	45.4	2.4
Grade 3	0	0
Grade 4	0	0
Grade 5	0	0
Non-agricultural	0	0
Urban	0	0

Section 2

Soils and Geology

- 12.5.7 Soil associations within Section 2 are presented in **Table 12.4**. Soil types are typically loamy, but there are also areas of deep clay and silt close to the boundary with Section 1. The geology, referenced in **Table 12.4**, associated with each soil type is variable.

Table 12.4 Soil Associations within the Scoping Boundary in Section 2

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
ASWARBY	77.3	Loam over limestone	Shallow permeable calcareous fine loamy soils over limestone, some affected by groundwater.	Jurassic limestone and clay
BADSEY 2	213.4	Loam over gravel	Well drained calcareous fine loamy soils over limestone gravel.	River terrace and lacustrine gravel
BANBURY	3.4	Loam over sandstone	Well drained brashy fine and coarse loamy ferruginous soils over ironstone.	Jurassic and Cretaceous ironstone
BECCLES 1	156.2	Seasonally wet deep loam to clay	Chalky till	Slowly permeable seasonally waterlogged fine loamy over clayey soils,
CURDRIDGE	363.5	Seasonally wet deep loam	Deep stoneless permeable coarse loamy soils with groundwater controlled by ditches.	Jurassic sand and clay
DENCHWORTH	80.8	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils.	Jurassic and Cretaceous clay
ELMTON 1	678.0	Shallow loam over limestone	Shallow well drained brashy calcareous fine	Jurassic Limestone

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
			loamy soils over limestone.	
Elmton 3	1034.5	Shallow loam over limestone	Shallow well drained brashy calcareous fine loamy soils over limestone.	Jurassic limestone and clay
RAGDALE	2217.2	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils.	Chalky till
WALLASEA 2	1328.5	Seasonally wet deep clay	Deep stoneless clayey soils. Calcareous in places.	Marine alluvium
WISBECH	49.6	Seasonally wet deep silty	Deep stoneless calcareous coarse silty soils.	Marine alluvium

Soilscape and Land Use

- 12.5.8 Soilscape 21 is represented also in the eastern parts of Section 2. Progressing westward, the soils form a mixture of Soilscares 5 and 22. Soilscape 5 contains freely draining lime-rich loamy soils. The soils are considered well suited to autumn sown cereal cropping. Soilscape 22 comprises loamy soils with naturally high groundwater, which also makes water resources vulnerable to pollution. Soils are typically drained and may be droughty in summer. Most land is used for arable cropping. The ALC is a combination of Grades 2 and 3 with the higher grade more likely to be associated with Soilscape 5.
- 12.5.9 Westward the soils of the Section 2 form bands (oriented north south) of Soilscares 18 and 3. Soilscape 18 are slowly permeable, seasonally wet clayey soils that may become compacted or poached. The soils are best suited to grass production for livestock with some cereal production for animal feed. Land may be tile drained with periodic mole drainage. Soilscape 3 comprises shallow, lime-rich soils over chalk or limestone. Cereals can be grown but over hard limestone soils are suitable only for grassland. Yields are most likely limited by soil moisture.

Agricultural Land Classification

- 12.5.10 The provisional ALC of both Soilscares is principally Grade 3 but with substantial areas of Grade 2 and minor components of Grade 1 and Grade 4, summarised in **Table 12.5**.

Table 12.5 Distribution of Agricultural Land Classification within the Scoping Boundary in Section 2

ALC Grade	Area (ha)	Percentage
Grade 1	14.0	0.2
Grade 2	1837.9	29.2
Grade 3	4399.3	69.8
Grade 4	28.1	0.4
Grade 5	0	0
Non-agricultural	22.4	0.4
Urban	0	0

Section 3

Soils and Geology

- 12.5.11 Soil associations within Section 3 are presented in **Table 12.6**. Soil types are typically deep loams and clays. The geology, referenced in **Table 12.6**, exhibits variability to include Jurassic and Cretaceous materials but also river alluvium, glaciofluvial river terrace drift and chalky till.

Table 12.6 Soil Associations within the Scoping Boundary in Section 3

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
ASHLEY	593.5	Deep loam to clay	Fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging associated with similar but wetter soils.	Chalky till
BANBURY	428.8	Loam over sandstone	Well drained brashy fine and coarse loamy ferruginous soils over ironstone.	Jurassic and Cretaceous ironstone
DENCHWORTH	267.6	Seasonally wet deep clay	Slowly permeable seasonally waterlogged	Jurassic and Cretaceous clay

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
			clayey soils with similar fine loamy over clayey soils.	
FLADBURY 1	272.2	Seasonally wet deep clay	Stoneless clayey soils, in places calcareous variably affected by groundwater.	River alluvium
FLINT	278.6	Deep red loam	Reddish fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.	Reddish till
HANSLOPE	3767.5	Deep clay	Slowly permeable calcareous clayey soils.	Chalky till
OXPASTURE	146.1	Deep loam to clay	Fine loamy over clayey and clayey soils with slowly permeable subsoils and slight seasonal waterlogging.	Drift over Jurassic and Cretaceous clay shale
RAGDALE	3862.9	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils.	Chalky till
WICK 1	45.9	Deep loam	Deep well drained coarse loamy and sandy soils locally over gravel.	Glaciofluvial or river terrace drift

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
WICKHAM 2	1033.8	Seasonally wet silty to clayey over shale	Slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils.	Drift over Jurassic and Cretaceous clay or mudstone
Water body	29.9	N/A	N/A	N/A

Soilscape and Land Use

- 12.5.12 Section 3 is dominated by Soilscape 18 (described in paragraph 12.5.9). For much of Section 3 it is in mosaic with Soilscape 9, which comprises lime-rich loamy and clayey soils with impeded drainage. These soils are suited to autumn sown crops and grassland.
- 12.5.13 Distribution of Soilscape 7 is very localised, but it is present south of Sewston, at the eastern boundary of Section 3 and around Holwell in the western part. Soilscape 7 contains freely draining acid but base-rich soils. They are suitable for arable crops and grassland. Soil moisture is most likely to limit yields, particularly where soils are stony or shallow.
- 12.5.14 West of Melton Mowbray, there are also areas of Soilscape 20 on floodplain soils and of Soilscape 6. Soilscape 20 are clayey and loamy soils with a naturally high groundwater. Productive grassland is found provided drainage is maintained but there is a risk of poaching and soil damage early and late in the grazing season. Cereal production is only possible where the flood risk is low. Soilscape 6 is a freely draining, slightly acid loamy soil, suitable for cereal cropping or grass. Grass has a long grazing season. Shortage of soil moisture is the most likely limiting factor on cereal yields, particularly where stony or shallow.

Agricultural Land Classification

- 12.5.15 The provisional ALC grading is dominated by Grade 3 with areas of Grade 2 forming a mosaic that approximates to areas of Soilscape 9. Section 3 incorporates some relatively minor Grade 4 land. The ALC distribution is summarised in **Table 12.7**.

Table 12.7 Distribution of Agricultural Land Classification within the Scoping Boundary in Section 3

ALC Grade	Area (ha)	Percentage
Grade 1	0	0
Grade 2	1314.5	12.2
Grade 3	8786.9	81.3
Grade 4	702.1	6.5
Grade 5	0	0
Non-agricultural	0	0
Urban	0	0

Section 4

Soils and Geology

- 12.5.16 Soil associations within Section 4 are presented in **Table 12.8**. Soil types are typically deep loams and clays, with some areas of silt over shale. The geology, referenced in **Table 12.8**, exhibits variability to include Jurassic and Cretaceous materials but also river alluvium and chalky till.

Table 12.8 Soil Associations within the Scoping Boundary in Section 4

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
BANBURY	335.6	Loam over sandstone	Well drained brashy fine and coarse loamy ferruginous soils over ironstone.	Jurassic and Cretaceous ironstone
BECCLES 3	170.6	Seasonally wet deep loam to clay	Slowly permeable seasonally waterlogged fine loamy over clayey soils and similar soils with only slight seasonal waterlogging.	Chalky till

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
DENCHWORTH	1133.2	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils.	Jurassic and Cretaceous clay
FLADBURY 1	685.6	Seasonally wet deep clay	Stoneless clayey soils, in places calcareous variably affected by groundwater.	River alluvium
HANSLOPE	877.0	Deep clay	Slowly permeable calcareous clayey soils.	Chalky till
OXPASTURE	435.7	Deep loam to clay	Fine loamy over clayey and clayey soils with slowly permeable subsoils and slight seasonal waterlogging.	Drift over Jurassic and Cretaceous clay shale
RAGDALE	2913.1	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils.	Chalky till
WICK 1	15.3	Deep loam	Deep well drained coarse loamy and sandy soils locally over gravel.	Glaciofluvial or river terrace drift
WICKHAM 2	1778.1	Seasonally wet silty to clayey over shale	Slowly permeable seasonally waterlogged fine loamy over clayey, fine silty	Drift over Jurassic and Cretaceous clay or mudstone

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
			over clayey and clayey soils.	
Water body	3.6	N/A	N/A	N/A

Soilscape and Land Use

- 12.5.17 Section 4, like Section 3 is similarly dominated by Soilscape 18. It incorporates Soilscares 8, 9 and 20. Soilscape 8 is slightly acid loamy and clayey soils with impeded drainage. Cropping options are reasonably flexible but are most suited to autumn sown crops and grassland, particularly as wet soil conditions in spring may limit options groundwork and grazing opportunities. The remaining soilscares are described above in paragraphs 12.5.9, 12.5.12, 12.5.14.

Agricultural Land Classification

- 12.5.18 The provisional ALC grading within Section 4 is principally Grade 3 with very limited areas of Grade 2 and some limited areas of Grade 4, associated with floodplain soils as shown in **Table 12.9**.

Table 12.9 Distribution of Agricultural Land Classification within the Scoping Boundary in Section 4

ALC Grade	Area (ha)	Percentage
Grade 1	0	0
Grade 2	217.6	2.6
Grade 3	7806.4	92.9
Grade 4	268.7	3.2
Grade 5	0	0
Non-agricultural	0	0
Urban	113.2	1.3

Section 5

Soils and Geology

- 12.5.19 Soil associations within Section 5 are presented in **Table 12.10**. Soil types are principally deep clays, with some loams and silts. Section 5 includes areas of restored soils following ironstone working. The geology, referenced in **Table 12.10**, includes Jurassic and Cretaceous ironstone, including soils of the Banbury association, that have not been worked. Other geology includes Permian, Jurassic

and Cretaceous limestone, drift over Jurassic and Cretaceous mudstone, chalky till and river alluvium and river terrace drift.

Table 12.10 Soil Associations within the Scoping Boundary in Section 5

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
ABERFORD	117.5	Loam over limestone	Shallow, locally brashy well drained calcareous fine loamy soils over limestone.	Permian Jurassic and Eocene limestone
ASHLEY	9.0	Deep loam to clay	Fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging associated with similar but wetter soils.	Chalky till
BANBURY	2100.9	Loam over sandstone	Well drained brashy fine and coarse loamy ferruginous soils over ironstone.	Jurassic and Cretaceous ironstone
DENCHWORTH	989.7	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils.	Jurassic and Cretaceous clay
FLADBURY 1	594.1	Seasonally wet deep clay	Stoneless clayey soils, in places calcareous variably affected by groundwater.	River alluvium
FLY RST IRONSTONE	474.9	Restored following ironstone working	Restored ironstone workings. Very variable depending on restoration but	Jurassic ironstone

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
			mainly fine loamy over clayey often reddish soils.	
HANSLOPE	4804.3	Deep clay	Slowly permeable calcareous clayey soils.	Chalky till
MORETON	1402.0	Clayey over limestone	Jurassic clay and limestone	Jurassic clay and limestone
OXPASTURE	1046.9	Deep loam to clay	Fine loamy over clayey and clayey soils with slowly permeable subsoils and slight seasonal waterlogging.	Drift over Jurassic and Cretaceous clay shale
RAGDALE	195.9	Seasonally wet deep clay	Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils.	Chalky till
STRETHAM	213.7	Deep clay	Deep well drained calcareous clayey soils	Chalky till
WATERSTOCK	365.5	Deep loam	Deep permeable mainly fine loamy soils variably affected by groundwater.	River terrace drift
WICKHAM 2	1107.3	Seasonally wet silty to clayey over shale	Slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils.	Drift over Jurassic and Cretaceous clay or mudstone

Soil Association	Area (ha)	Soil site characteristic	Dominant soils	Geology
Water body	78.0	N/A	N/A	N/A

Soilscapes and Land Use

- 12.5.20 Section 5 comprises an intricate mosaic of soilscapes. These are principally Soilscapes 5, 7, 8, 9 and 18, described in the preceding descriptions. There are also very limited areas of Soilscape 24, which are restored soils, mostly from quarry and opencast spoil. Many such sites suffer from compaction and are most suitable for grass.

Agricultural Land Classification

- 12.5.21 The provisional ALC grading within Section 5 is principally Grade 3 with areas of Grade 2 and some Grade 4 land, presented in **Table 12.11**.

Table 12.11 Distribution of Agricultural Land Classification within the Scoping Boundary in Section 5

ALC Grade	Area (ha)	Percentage
Grade 1	0	0
Grade 2	2092.4	15.4
Grade 3	10674.2	78.8
Grade 4	623.3	4.6
Grade 5	0	0
Non-agricultural	0	0
Urban	161.7	1.2

Future Baseline

- 12.5.22 The future baseline relates to known or anticipated changes to the current baseline in the future that are predicted to occur in the absence of the Project.
- 12.5.23 It is considered that the baseline in relation to soils and ALC grades would not change from that described within the timeframe for the construction of the Project. While there may be potential changes in relation to climate change, including greater rainfall intensity and droughts, that could affect soil conditions, land grade and farming practices, it is likely that these would only be visible over periods of time equivalent to or longer than the operational life of the Project.
- 12.5.24 There could potentially be changes to land management practices and business approaches across the landowners/land managers over the construction and operation of the Project.

12.6 Design and Control Measures

Design Measures

- 12.6.1 The Project has been designed to avoid, as far as reasonably practicable, sensitive agriculture and soil features as set out in the Corridor and Preliminary Routing and Siting Study (CPRSS) (Ref 12.14).
- 12.6.2 The extent of land required temporarily and permanently to construct and operate the Project will continue to be evaluated as part of the design development process, in order to minimise impacts on BMV land, soils, and agricultural land use, where practicable.
- 12.6.3 Further design measures will be developed as the Project design evolves.

Control and Management Measures

A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An **Initial Outline Code of Construction Practice** (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect agriculture and soils are (refer to **Appendix 4A** for the full description of each measure):

- GG03: on the requirement for a final CoCP (based on the provisions in the Outline CoCP) to be produced prior to the commencement of construction.
- GG04: on the appointment of Environmental Managers and Environmental Clerks of Works during construction.
- GG05: on environmental training for construction workers, including on soil management.
- GG06: on recording existing conditions to inform appropriate reinstatement.
- GG07: on production of a Soil Management Plan (SMP) prior to construction.
- GG20: on dust suppression during earthworks and stockpiling of soil.
- GG25/AS09: on the use of temporary work pads of suitable materials (stone, wooden, bog mats or similar) where heavy equipment is to be used.
- LV03: requiring a five-year aftercare period mitigation planting.
- AS01: on management measures to be included in the SMP.
- AS02: on returning land to agricultural use, soil conditions, and appropriate depth.
- AS03: on maintaining access to residential, commercial, community and agricultural land uses and engagement with the landowner/occupier.
- AS04: on water supplies for livestock.
- AS05: on land drainage.
- AS06: on procedure if a potential burial site is discovered.
- AS07: on movement of plant and vehicles in the event of a disease outbreak in the vicinity of the Project and working methods required to reduce the biosecurity risk.

- AS08: on the prevention of preferential drainage pathways being created.

12.7 Potential for Significant Effects

- 12.7.1 The Agriculture and Soil assessment in the ES will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the Agriculture and Soil ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 12.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 12.6.
- 12.7.3 **Table 12.12** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to potentially significant effects on receptors identified in the Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give risk to significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.

Table 12.12 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction of overhead line infrastructure, including supporting structures, and associated access tracks in areas of agricultural land use.	Temporary and permanent loss of agricultural land (including BMV land) during construction with associated reduction in agricultural production.	Agricultural land/BMV land (as defined by the ALC system)	Yes - A very large proportion of land within the Scoping Boundary is predicted to be BMV land and therefore the Project could result in an unavoidable temporary or permanent loss of agricultural land which is likely to include BMV land. ALC surveys are to be undertaken in areas where soils will be disturbed and BMV land is predicted. The assessment will inform good practice soil handling measures that will be detailed in the SMP.	Scoped in
Construction	Construction of overhead line infrastructure, including supporting structures, and associated access tracks in areas of agricultural land use.	Loss of agricultural soil function or volume with consequences for soil ecosystem services.	Soil	Yes – the Project would potentially result in soil quality being adversely affected during construction. Due to the presence of soils with low resilience to structural damage (particularly clayey soils), a significant effect on soils cannot be ruled out although good practice soil handling measures would be implemented through a SMP during construction.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction of overhead line infrastructure, including supporting structures, and associated access tracks in areas of agricultural land use.	Temporary acquisition and permanent loss of agricultural land holdings during construction.	Agricultural land holdings	Yes – a very large proportion of the land within the Scoping Boundary is predicted to be BMV land, the impact on which has the potential to result in a significant adverse effects on agricultural productivity and thus agricultural land holdings. However, once mitigation measures are considered, residual effects may not be significant. The temporary acquisition of land to accommodate construction activities will result in temporary disruption and severance to agricultural land holdings and the permanent loss of some land from agricultural land holdings, resulting in reduction in the operational capacity and loss of income to farm businesses (which would be addressed through compensation agreements, which lie out with the scope of the ES).	Scoped in*
Operation and Maintenance	Operation and maintenance of overhead line infrastructure, including supporting structures,	Temporary loss of agricultural land (including BMV land)	Agricultural land/BMV land (as	No – The construction phase assessment will account for both temporary and permanent	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	and associated access tracks in areas of agricultural land use.	during operation and maintenance.	defined by the ALC system)	loss of agricultural land, and therefore no further significant effects are anticipated. Periodic vehicle access for routine maintenance and emergency repairs may require temporary access tracks and small compound areas, but based on the Applicant's experience of similar projects these are likely to be limited in extent. All soil handling would be undertaken in line with published good practice, such as the measures described in AS01 of Appendix 4A Initial Outline Code of Construction Practice which will be part of the SMP and be required, and therefore no likely significant effects are expected. The ISEP guidelines (Ref 12.3) recognises temporary work to be low magnitude.	
Operation and Maintenance	Operation and maintenance of overhead line infrastructure, including supporting structures, and associated access tracks in areas of agricultural land use.	Loss of agricultural soil function or volume during operation and maintenance with consequences for soil ecosystem services.	Soil	No – The construction phase assessment will account for both temporary and permanent loss of agricultural land, and the majority of land required for construction would be returned to its pre-construction land use;	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				therefore, no further significant effects are anticipated during the operation and maintenance phases. Maintenance activities may impact soil function and quality, but at a much smaller scale than construction. Any disturbance to soils during maintenance would be undertaken in accordance with good practice soil handling methods, such as the measures described in measure AS01 of Appendix 4A Initial Outline Code of Construction Practice in relation to the SMP, and, therefore, no likely significant effects are expected. The ISEP guidelines (Ref 12.3) recognises temporary work to be low magnitude.	
Operation and Maintenance	Operation/maintenance of overhead line infrastructure, including supporting structures, and associated access tracks in areas of agricultural land use.	Temporary acquisition of agricultural land during operation and maintenance.	Agricultural land holdings	No – The majority of land required for construction would be returned to its pre-construction land use on completion of construction. Any impacts on farm businesses from periodic vehicle access for routine maintenance and emergency repairs would be	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				limited and would not result in significant effects. Financial agreements for access would lie outside the scope of the ES.	

* The implementation of mitigation measures, such as the provision of temporary access to farmland, is expected to reduce the effects of the Project on agricultural land holdings during construction to a level that is not significant. The significance of effects will be fully considered for those agricultural holdings subject to targeted soil survey, for which it is proposed additional information will be gathered from farmers on their agricultural operations. This information will be referenced in the ES. If, following consideration of this additional information, it is determined that there is no potential for significant effects on agricultural land holdings, the assessment of such effects will be scoped out of the ES.

12.8 Proposed Assessment Methodology

Proposed Data Sources

- 12.8.1 The data sources listed in section 12.5 will provide baseline information, supplemented by field data for substation sites. Field survey is additionally proposed in agricultural fields for tower locations to assist with micro-siting, if there is evidence for the presence of BMV land. Surveys will be undertaken in accordance with published guidance as described in **Appendix 12A Agriculture and Soils Survey Strategy** and used to inform the ES assessment.
- 12.8.2 Data on agricultural land holdings will be collected through landowner/occupier or land agent interviews to inform the ES assessment. The agricultural land holding information will enable an understanding of agricultural operations and if necessary, inform an assessment of impacts (including cumulative impacts) on agricultural land holdings.

Proposed Assessment Methodology

- 12.8.3 The following section summarises the methodology proposed to be used for the Agriculture and Soils ES assessment, which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.
- 12.8.4 The assessment of Agriculture and Soils in the ES will be undertaken based on ISEP’s guidance document ‘A New Perspective on Land and Soil in Environmental Impact Assessment’ (Ref 12.3), with particular reference to Section 9: Assessing Impacts on Land and Soil. It will focus on the potential impacts to agricultural land and land use including the loss of BMV land, and loss of soil functions/volumes and soil-related features.

Sensitivity

- 12.8.5 The sensitivity criteria to be used to inform the assessment of effects on agricultural land and soils are developed from Table 2 of the ISEP guidance (Ref 12.3) and are presented in **Table 12.13** and **Table 12.14** below.
- 12.8.6 Sensitivity criteria for agricultural land holdings are based on the spatial relationship between agricultural infrastructure and the farmed land and the frequency of access required between areas of the holding. Descriptions are provided in **Table 12.15**.

Table 12.13 Sensitivity of soil receptors

Sensitivity	Description
Very high	ALC Grade 1 & 2
High	ALC Subgrade 3a
Medium	ALC Subgrade 3b
Low	ALC Grade 4 & 5
Negligible	As for low sensitivity but with only indirect, tenuous and unproven links between sources of impact and soil functions.

Table 12.14 Sensitivity of topsoil and subsoil resources

Sensitivity	Description
High (low resilience to structural damage)	Soils with high clay and silt fractions (clays, silty clays, sandy clays, heavy silty clay loams and heavy clay loams) and organo-mineral and peaty soils where the Field capacity days (FCD) are 150 or greater. Medium-textured soils (silt loams, medium silty clay loams, medium clay loams and sandy clay loams) where the FCDs are 225 or greater. All soils in wetness class (WC) V or VI.
Medium (medium resilience to structural damage)	Clays, silty clays, sandy clays, heavy silty clay loams, heavy clay loams, silty loams and organo-mineral and peaty soils where the FCDs are fewer than 150; Medium-textured soils (silt loams, medium silty clay loams, medium clay loams and sandy clay loams) where FCDs are fewer than 225. Sands, loamy sands, sandy loams, and sandy silt loams where the FCDs are 225 or greater or are in WC III or WC IV.
Low (high resilience to structural damage)	Soils with a high sand fraction (sands, loamy sands, sandy loams, and sandy silt loams) where the FCDs are fewer than 225 and are in WCI or WCII.

Table 12.15 Sensitivity of agricultural land holdings

Receptor Sensitivity	Description
Very high	Areas of land in which the enterprise is wholly reliant on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a frequent basis (daily).
High	Areas of land in which the enterprise is dependent on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a frequent basis (weekly).
Medium	Areas of land in which the enterprise is partially dependent on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a reasonably frequent basis (monthly).
Low	Areas of land which the enterprise is not dependent on the spatial relationship of land to key agricultural infrastructure; and

Receptor Sensitivity	Description
	Access between land and key agricultural infrastructure is required on an infrequent basis (monthly or less frequent)
Negligible	Areas of land which are infrequently used on a non-commercial basis.

Magnitude

- 12.8.7 Magnitude of impact criteria to be used to inform the assessment of effects to agricultural land and soils are presented in **Table 12.16**. These are taken from Table 3 of the ISEP guidance (Ref 12.3). These consider the magnitude (or scale) of change from current baseline conditions; and as described in the guidance are based on “permanent irreversible loss of one or more soil functions or soil volumes (including the permanent sealing or land quality downgrading”.
- 12.8.8 Magnitude of impact criteria for agricultural land holdings are presented in **Table 12.17**

Table 12.16 Magnitude of impact on agriculture and soils

Magnitude	Description
Large	Permanent irreversible loss of one or more soil functions or soil volumes (including permanent sealing or land quality downgrading) or permanent improvement of one or more soil functions or soil volumes (due to remediation or restoration) over greater than 20 hectares (ha) of agricultural land.
Medium	Permanent irreversible loss (including permanent sealing or land quality downgrading) or permanent improvement of one or more soil functions or soil volumes (due to remediation or restoration) over greater than 5 ha but less than 20 ha of agricultural land.
Small	Permanent irreversible loss (including permanent sealing or land quality downgrading) or permanent improvement of one or more soil functions or soil volumes (due to remediation or restoration) over less than 5 ha of agricultural land. Temporary reversible loss / reduction of one or more soil function(s) and restriction to current or approved future use (e.g., through degradation, compaction, erosion of soil resource) or a temporary improvement in one or more soil functions due to remediation or restoration or off-site improvement.
Negligible	No discernible loss/reduction or improvement of soil functions or soil volumes that restrict current or proposed land use.

Table 12.17 Magnitude of impact on agricultural land holdings

Magnitude	Description
Large	Private property and housing, community land and assets, development land and businesses and agricultural land holdings: 1) Loss of resource and / or quality and integrity of resource; Severe damage to key characteristics, features or elements. e.g., direct acquisition and demolition of buildings and direct development of land to accommodate assets; and / or 2) Introduction (adverse) or removal (beneficial) of complete severance with no / full accessibility provision.
Medium	Private property and housing, community land and assets, development land and businesses and agricultural land holdings: 1) Partial loss of / damage to key characteristics, features or elements, e.g., partial removal or substantial amendment to access or acquisition of land compromising viability of property, businesses, community assets or agricultural holdings; and/or 2) Introduction (adverse) or removal (beneficial) of severe severance with limited / moderate accessibility provision.
Small	Private property and housing, community land and assets, development land and businesses and agricultural land holdings: 1) A discernible change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements, e.g., amendment to access or acquisition of land resulting in changes to operating conditions that do not compromise overall viability of property, businesses, community assets or agricultural holdings; and / or 2) Introduction (adverse) or removal (beneficial) of severance with adequate accessibility provision.
Negligible	Private property and housing, community land and assets, development land and businesses and agricultural land holdings: 1) Very minor loss or detrimental alteration to one or more characteristics, features or elements. e.g., acquisition of non-operational land or buildings not directly affecting the viability of property, businesses, community assets or agricultural holdings; and / or 2) Very minor introduction (adverse) or removal (beneficial) of severance with ample accessibility provision.
No change	No loss or alteration of characteristics, features, elements or accessibility; no observable impact in either direction.

Significance of effects

- 12.8.9 The general approach adopted for evaluating the significance of effects, considering the sensitivity of the receptor and the magnitude of impacts, is outlined in **Table 12.18**. The significance matrix allows for an element of professional judgement to consider, for example, permanent loss of cropped agricultural land for creation of permanent ecological habitats, but where soil function is preserved.

- 12.8.10 Following the criteria set out in the ISEP guidance (Ref 12.3), any permanent loss of highly sensitive Grade 1 or Grade 2 agricultural land will be classed as a significant effect regardless of the scale of that loss. Similarly, permanent loss of BMV land in Subgrade 3a may potentially result in significant effects, but is scale dependent.

Table 12.18 Determination of significance matrix

		Sensitivity of Receptor				
		Very high	High	Medium	Low	Negligible
Magnitude of Impact	Large	Major	Major/moderate	Moderate/minor	Minor	Minor/negligible
	Medium	Major/moderate	Moderate	Moderate/minor	Minor/negligible	Negligible
	Small	Moderate/minor	Moderate/minor	Minor	Minor/negligible	Negligible
	Negligible	Minor/negligible	Minor/negligible	Minor/negligible	Negligible	Negligible

- 12.8.11 An impact is considered significant if the resultant effect is Major or Moderate and a resultant effect of Minor or Negligible is not considered significant. This matrix approach provides a guide to authors but, as recognised in paragraph 12.8.9, professional judgement can be used in concluding the significance of an effect. Both positive and negative effects will be considered.

12.9 Assumptions and limitations

- 12.9.1 It is assumed that at the end of the construction phase, land temporarily taken by the Project will be reinstated and returned to agricultural use, whilst land required permanently for the Project will remain out of agricultural use.
- 12.9.2 The provisional data for ALC does not differentiate between ALC Subgrades 3a (BMV) and 3b (non-BMV) and consequently cannot be used to determine the quantity or geographical distribution of BMV land. It is anticipated that most land is BMV but the provisional data is not accurate at the field level and it does not pick up variations in ALC grade for areas less than approximately 80 ha.
- 12.9.3 Furthermore, the provisional ALC mapping was produced in the 1970s and therefore there is the potential for some areas, which are shown as agricultural land within the mapping (that is, assigned an ALC grade) to have been subject to development.
- 12.9.4 The limitations in the use of provisional ALC data will be overcome by use of the new preliminary Natural England ALC data (when available), and focused soil and ALC surveys which will be reported in the ES, subject to land access.

12.10 Conclusion

- 12.10.1 This Scoping Report chapter has outlined the proposed scope for further assessment for the Project in relation to the Agriculture and Soils ES Chapter.
- 12.10.2 The data sources that will be used to define the current and future baselines have been presented, along with the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors.
- 12.10.3 Whilst the measures included in **Appendix 4A Initial Outline Construction Code of Practice** will reduce effects as far as reasonably practicable, and at this stage, no matters are proposed to be scoped out in relation to the construction phase.
- 12.10.4 The construction phase assessment will account for both temporary and permanent loss of agricultural land. No further significant effects are anticipated in relation to the operation and maintenance phases and all matters are proposed to be scoped out.
- 12.10.5 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 12.1 Natural England (2021) Guide to assessing development proposals on agricultural land. Available at: <https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development> (Accessed 9 July 2025)
- Ref 12.2 Natural England (2012) Technical Information Note 049, 'Agricultural Land Classification: protecting the Best and Most Versatile agricultural land'. Available at: <http://publications.naturalengland.org.uk/publication/35012> (Accessed 9 July 2025)
- Ref 12.3 Institute of Environmental Management and Assessment (2022). A New Perspective on Land and Soil in Environmental Impact Assessment. (Not available online)
- Ref 12.4 DEFRA (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Available at: <https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites>
- Ref 12.5 Institute of Quarrying (2021) Good Practice Guide for Handling Soils in Mineral Workings. Available at : <https://www.quarrying.org/soils-guidance> (Accessed 9 July 2025)
- Ref 12.6 MAFF (1988) 'Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land'. Available at: <http://publications.naturalengland.org.uk/publication/6257050620264448> (Accessed 9 July 2025)
- Ref 12.7 British Society of Soil Science (2021). Guidance Document 3: Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction. Available at <http://publications.naturalengland.org.uk/publication/35012> (Accessed 9 July 2025)
- Ref 12.8 Department for Environment Food and Rural Affairs. (2025). Multi-Agency Geographic Information for the Countryside. Available at: <https://magic.defra.gov.uk/MagicMap.html> Accessed 9 July 2025 (Accessed 9 July 2025)
- Ref 12.9 Cranfield University. (2025). Land Information System. Available at: <https://www.landis.org.uk/> (Accessed 9 July 2025)
- Ref 12.10 Soil Survey of England and Wales (1984). Soils and their Use in Eastern England and accompanying 1:250,000 map Sheet 4
- Ref 12.11 Natural England. (2020). Likelihood of Best and Most Versatile (BMV) Agricultural Land - Strategic scale map Eastern Region (ALC020). Available at: <https://publications.naturalengland.org.uk/publication/6205542189498368?category=5208993007403008> (Accessed 9 July 2025)
- Ref 12.12 Natural England. (1989). Climatological Data for Agricultural Land Classification (ALC010). Retrieved from Natural England Publications. Available at: <https://publications.naturalengland.org.uk/publication/6493605842649088> (Accessed 9 July 2025)

- Ref 12.13 Cranfield University. (2015). Research to develop the evidence base on soil erosion and water use in agriculture: Final Technical Report. Available at: <https://www.theccc.org.uk/wp-content/uploads/2015/06/Cranfield-University-for-the-ASC.pdf> (Accessed 9 July 2025)
- Ref 12.14 National Grid (2025) Corridor Preliminary Routeing and Siting Study, Weston Marsh to East Leicestershire. Available at: <https://www.nationalgrid.com/the-great-grid-upgrade/weston-marsh-to-east-leicestershire/document-library> (Accessed 9 July 2025)

13. Traffic and Transport

Contents

13.	Traffic and Transport	13-1
13.1	Introduction	13-1
13.2	Legislation, Policy and Guidance	13-2
13.3	Consultation and Engagement	13-2
13.4	Study Area	13-5
13.5	Baseline Conditions	13-5
	Data Sources	13-5
	Baseline	13-5
	Future Baseline	13-16
13.6	Design and Control Measures	13-18
	Design Measures	13-18
	Control and Management Measures	13-18
13.7	Potential for Significant Effects	13-19
13.8	Proposed Assessment Methodology	13-25
	Proposed Data Sources	13-25
	Proposed Assessment Methodology	13-25
13.9	Assumptions and limitations	13-34
13.10	Conclusion	13-34
	Table 13.1 Engagement with Stakeholders	13-3
	Table 13.2 Impacts, receptors and the potential for significant effect	13-20
	Table 13.3 Sensitivity of receptors	13-28
	Table 13.4 Magnitude of impact	13-31
	Table 13.5 Magnitude of impact of a PRow diversion and/or closure	13-32
	Table 13.6 Determination of significance matrix	13-33
	References	13-35

13. Traffic and Transport

13.1 Introduction

- 13.1.1 This chapter presents how the Traffic and Transport assessment will consider the potential likely significant effects on traffic and transport receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 13.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 13.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 13.1.4 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 14 Air Quality** – which covers the air quality impacts associated with traffic as a result of the Project;
 - **Chapter 15 Noise and Vibration** – which covers the noise and vibration impacts associated with traffic as a result of the Project;
 - **Chapter 16 Socio-economics, Recreation and Tourism:** which considers potential disruption to users of recreational routes including public rights of way (PRoW);
 - **Chapter 17 Health and Wellbeing** – which considers potential impact on residents' access to recreational routes and potential changes to neighbourhood quality as a result of noise, dust, air quality and amenity from traffic; and
 - **Chapter 18 Climate Change** – which calculates greenhouse gas emissions from traffic.
- 13.1.5 This chapter is supported by the following figures and appendices:
- **Figure 13.1 Baseline Transport Network;** and
 - **Figure 13.2 Strategic Road Network.**

13.2 Legislation, Policy and Guidance

13.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on traffic and transport associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context. Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

13.2.2 Relevant principal guidance and standards that have informed the scoping process are listed below and will be taken into account as part of the assessment, along with other relevant material:

- Institute of Sustainability and Environmental Professionals (ISEP) 2023 Environmental Assessment of Traffic and Movement (Ref 13.1) - Guidance on examining the environmental impacts of developments in terms of traffic and movement. This guidance has been used to outline the scope of the assessment.
- Planning Practice Guidance: Travel Plans, Transport Assessments and Statements, 2014 (Ref 13.2) - Sets out ways of assessing and mitigating the negative transport impacts of developments that generate significant amounts of movement, in order to promote sustainable development.
- Department for Transport (DfT) Strategic Road Network and the Delivery of Sustainable Development, Circular 01/2022 (Ref 13.3) – Guidance explaining how National Highways will engage with the planning system and fulfil its remit to be a partner for sustainable economic growth, whilst maintaining, managing and operating a safe and efficient strategic road network, with an emphasis on encouraging measures to reduce the impact of traffic.
- Design Manual for Roads and Bridges (DMRB): LA103 Scoping for Environmental Assessment, 2020 (Ref 13.4) - Covers the requirement and procedures that should be followed when scoping a project, to reach a reasoned conclusion on the likely effects of a project on the environment in line with the requirements of the EIA Directive 2014/52/EU (Ref 13.5).
- DMRB: LA104 Environmental Assessment Monitoring, 2020 (Ref 13.6) – Covers the requirement and procedures that should be followed when assessing, reporting and monitoring the environmental effects of projects in line with the requirements of the EIA Directive 2014/52/EU (Ref 13.5).

13.3 Consultation and Engagement

13.3.1 The ES will be informed by consultation and engagement with stakeholders. This includes:

- Highway authorities responsible for the road network crossed by the Scoping Boundary - Lincolnshire County Council, Leicestershire County Council, North Northamptonshire Council, West Northamptonshire Council and National Highways, as well as any neighbouring highway authorities that would be materially affected by construction traffic.
- Rail stakeholders including Network Rail and if appropriate, Train Operating Companies; and

- Water Authorities including the Environment Agency and Canal & Rivers Trust as appropriate for navigable waterways.

- 13.3.2 In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 13.3.3 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 13.1**.

Table 13.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Lincolnshire County Council	Impacts on PRow need careful consideration including where they would cross haul roads. An appropriate management plan should be prepared. No comments are made on highways at this stage. When the scheme is more developed, engagement can take place on Transport Assessment scope. Concerns raised about the potential for significant transport related impacts during the construction phase due to multiple Nationally Significant Infrastructure Projects (NSIPs) being developed over a similar time period in an area that is rural in nature with limited network capacity.	Appendix 4A Initial Outline Code of Construction Practice (CoCP) includes measures relating to the management of PRow during construction. Changes in journey distance due to PRow closures/diversions during construction have been considered as set out in Table 13.2. The Applicant will engage with the highway authorities to agree the Transport Assessment scope. The Transport Assessment will consider other NSIP's which have planning consent, and traffic associated with these developments in the future baseline, see paragraph 13.5.103. A cumulative effects assessment will be undertaken and reported in the ES as described in Chapter 5 EIA Approach and Methodology, which will include consideration of other developments where relevant.
Leicestershire County Council	Confirms that the County Council intends to engage with the Project as further detail on highways emerge.	The Applicant will engage with the highway authorities to agree the Transport Assessment scope.

Stakeholder	Summary of response	Consideration in the Scoping Report
Network Rail	Network Rail's Asset Protection team in the eastern region must be consulted to ensure that all risks to the railway infrastructure are safely managed from all construction-related activities associated with the Project.	The Applicant will engage with Network Rail's Asset Protection team in developing the design of the Project.
South Holland District Council	The consequence of construction traffic on already narrow country roads will be severe. Construction traffic flows may cause delays and highway safety effects on some sections of the A16, A18, A1173, A158, A1104, A1111, and the A157.	The impact of construction traffic on road users, public transport users, pedestrians, and cyclists during construction would be considered, see Table 13.2. Appendix 4A Initial Outline CoCP sets out the initial measures for management of construction traffic. An Outline Construction Traffic Management Plan (CTMP) will be developed in consultation with the relevant highway authorities.
National Highways	The scale and nature of the Project is likely to have an impact on the Strategic Road Network. National Highways would be expected to be consulted on the Transport Assessment which would form a key submission of any forthcoming planning application. It is recommended that the Transport Assessment is undertaken in a staged approach with the contents and methodology scoped out with National Highways and Lincolnshire County Council in advance. In addition to a Transport Assessment and Staff Travel Plan, National Highways would expect to see a separate CTMP.	A Transport Assessment will be prepared and submitted with the application for development consent. The Applicant will consult the highway authorities on the scope of the Transport Assessment in advance of undertaking it, and continue engagement throughout the development stages of the Project. Appendix 4A Initial Outline CoCP sets out the initial measures for management of construction traffic. An Outline CTMP will be developed in consultation with the relevant highway authorities.

13.4 Study Area

- 13.4.1 The Scoping Boundary is shown on **Figure 1.2 Scoping Boundary**.
- 13.4.2 The extent of the Study Area for the ES assessment of transport impacts and effects has not been defined at this stage. However, it is likely to include areas of the transport network that are beyond the Scoping Boundary. The Study Area will take account of likely access/delivery routes and will consider the extent of likely significant effects on the transport network.
- 13.4.3 To inform this EIA Scoping Report the baseline transport network in the vicinity of the Scoping Boundary has been used, as shown on **Figure 13.1 Baseline Transport Network**. This highlights the key infrastructure including highways, bus routes, railways, Public Rights of Way (PRoW), National Cycle Network and navigable waterways that are in and around the Scoping Boundary and which may be impacted by the Project depending on the evolving design. The baseline transport network is described in Section 13.5.
- 13.4.4 The Strategic Road Network (SRN), operated by National Highways, may be impacted by the Project and may form part of the Study Area for the ES. The strategic road network is shown on **Figure 13.2 Strategic Road Network**.
- 13.4.5 The Applicant will liaise with the relevant highway authorities to agree the Study Area.

13.5 Baseline Conditions

Data Sources

- 13.5.1 The baseline described in this chapter and associated appendices has been informed by the following data sources:
- Road network - Ordnance Survey open map, Google Earth Pro and FindMyStreet (National Street Gazetteer).
 - Bus route information – local bus operators, highway authorities.
 - Rail information – National Rail.
 - Navigable Waterways - Environment Agency and Navigation Authority and The inland Waterways Association.
 - Designated non-motorised user (NMU) routes – Sustrans/local authorities.
 - PRoW – Local Authority Definitive maps.

Baseline

- 13.5.2 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown on **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the strategic highway links and then by Section including substation

Siting Areas/Zone, from the east (Section 1) to the south (Section 5) along the Scoping Boundary.

Strategic highway links

- 13.5.3 **Figure 13.2 Strategic Road Network**, shows the Scoping Boundary in the context of the SRN.
- 13.5.4 The A1, A14 and A45 cross the Scoping Boundary, and the M1, A52 and A46 are in the vicinity of the Scoping Boundary.
- 13.5.5 The M1 provides a north-south route up to 20km west of the Scoping Boundary, while the A1 offers a north-south route between Bedford and Grantham, crossing the Scoping Boundary near South Witham in Section 2.
- 13.5.6 The A14 provides an east-west route between the M1 at Lutterworth and the A1(M) at Huntingdon, crossing Section 5 near Rothwell. The A45 provides a southwest-northeast route between the M1 at Northampton and Thrapston, crossing Section 5 near Wellingborough.
- 13.5.7 The A52 provides an east-west route between the M1, Nottingham and Boston to the north of the Scoping Boundary, and the A46 located to the west of the Scoping Boundary provides a north-south route between the M1 at Leicester and Bingham.
- 13.5.8 The M1, A1, A14, A45 and A46 are dual carriageways generally subject to the national speed limit (70mph). The A52 is a dual carriageway between the M1 and Nottingham and a two-lane single carriageway subject to the national speed limit, with a 40mph limit through urban areas.
- 13.5.9 Footways are generally only present where the non-motorway SRN passes through built-up areas.

Section 1

Overhead Line

Highway network

- 13.5.10 The SRN does not intersect with Section 1.
- 13.5.11 The following A and B roads intersect Section 1:
- the A16; and
 - the B1356 Surfleet Road.
- 13.5.12 The A16 is generally a two-lane single carriageway, providing a north-south route between the A52 to the north (Boston) and the A47 to the south (Peterborough). The A16 provides a connection into the A152 which runs just to the north of Section 1 and the A151 towards Spalding, just to the south of Section 1. The B1356 Surfleet Road is a two-lane single carriageway providing a north-south route between Spalding and the A152. The A152 provides a route to the B1397 which runs east-west to the north of Section 1 and the A151 provides a route through Spalding to the B1180 which runs east-west to the south of Section 1.
- 13.5.13 In addition, the following unclassified roads are within Section 1: Wykeham Lane, The Chase, Stumps Lane, Marsh Road, West Marsh Road, Dunnegate Way, Herdgate

Lane, Ten Acre Lane, Old Hall Lane, White Cross Lane, Green Lane, Cuckoo Lane, Bacons Lane, Burtey Fen Lane, Beach Bank, Coward's Lane, Beach Lane, Cheal Lane, Cross Lane, Beck Bank, Parson Drove and Short Drove.

Walking and cycling

- 13.5.14 A network of PRow cross Section 1. The Millennium Walk crosses Section 1 between Surfleet and Pinchbeck along the River Glen.
- 13.5.15 There are no National Cycle Network routes (NCN) that cross Section 1.

Public transport

- 13.5.16 Four bus services run through Pinchbeck and Surfleet along the B1356: service B3, service B9, service B13 and service G76. Services B3, B9 and B13 provide connections between Boston and Spalding. Services B3 and B9 operate on weekdays between 7 am and 6 pm, while the B13 offers five trips in each direction on Saturdays. Service G76 operates on schooldays, providing one morning and one evening trip between Gosberton Risegate and Spalding.
- 13.5.17 Additionally, one school bus service runs along the southern end of Beck Bank within Section 1: service G78. The route operates between Spalding and West Pinchbeck, offering one morning and one evening service.
- 13.5.18 An on-demand bus service, CallConnect, operates within and nearby Section 1.
- 13.5.19 The Peterborough to Lincoln Railway Line passes through Section 1 and provides approximately hourly services in each direction between Peterborough and Lincoln, stopping at Spalding, Sleaford, Ruskington, and Metherringham.

Navigable waterways

- 13.5.20 The River Welland, River Glen and Boston to Peterborough Wetland Corridor and Navigable Black Sluice (also known as the South Forty Foot Drain) are all navigable waterways that pass within Section 1.

Airports

- 13.5.21 There are no airports within or near Section 1.

Weston Marsh Substation Infrastructure Siting Zone

Highway network

- 13.5.22 The SRN does not intersect with the Weston Marsh Substation Infrastructure Siting Zone.
- 13.5.23 There are no A or B roads crossing the Weston Marsh Siting Zone. The following A and B roads are located nearby:
- The A17;
 - the A151;
 - the A16; and
 - the B1357.

13.5.24 The A17 and the A16 are generally two-lane single carriageways. The A17 runs to the east of the Siting Zone and connects to the A16 to the north and the A151 to the south. The A16 runs to the west between the A52 at Boston to the north and the A47 at Peterborough to the south. The A16 also connects to the A17 and the A151. The A151 is a two-lane single carriageway that runs in an east-west direction just to the south of the Siting Zone. The B1357 runs to the east of the Weston Marsh Siting Zone and provides a north-south route between the A17 and the A151.

13.5.25 In addition, the following unclassified roads are within the Weston Marsh Substation Infrastructure Siting Zone: Stone Gate, Marsh Road and Wykeham Lane.

Walking and cycling

13.5.26 A network of PRow cross the Weston Marsh Substation Infrastructure Siting Zone.

13.5.27 There are no National Cycle Network routes (NCN) that cross the Weston Marsh Siting Zone.

Public transport

13.5.28 There are no public transport services operating within the Weston Marsh Substation Infrastructure Siting Zone.

13.5.29 The nearest bus stops are on the A151 at Weston, and an on-demand bus service, CallConnect, operates near to the Siting Zone at Moulton Seas and Weston.

Navigable waterways

13.5.30 There are no navigable waterways that pass within the Weston Marsh Substation Infrastructure Siting Zone.

13.5.31 The nearest navigable waterway is the River Welland, which runs just to the west of the Weston Marsh Siting Zone.

Airports

13.5.32 There are no airports within or near Weston Marsh Substation Infrastructure Siting Zone.

Section 2

Overhead Line

Highway network

13.5.33 The A1 which is part of the SRN, crosses Section 2 near South Witham.

13.5.34 The following A and B roads intersect Section 2:

- the A15;
- the A151;
- the B1177 Main Road; and
- the B1176 Corby Road/Winstead Road/Bitchfield Road.

- 13.5.35 The A15 and A151 are two-lane single carriageways. The A15 provides a north–south route between Lincoln and Peterborough, while the A151 offers an east–west connection to the A1 to the west. The A15 bisects Section 2 and connects to the B1177 at its northern edge. Similarly, the A151 bisects Section 2, provides access to the B1176, and crosses the railway line. The B1177 Main Road is a two-lane single carriageway north–south route between the A52 and the A15. The B1176 Corby Road/Winstead Road/Bitchfield Road) is also a two-lane single carriageway, providing access from the A151.
- 13.5.36 The following unclassified roads are within Section 2: Haconby Drove, Hall Road, Haconby Lane, West Road, Stainfield Road, Kirkby Underwood Road, Hanthorpe Road, Hangmans Lane, Edenham Road (Bulby), Bulby Road (Elsthorpe), Bulby Road (Irnham), Main Street (Bulby), Forstedd Hill, Swinstead Road, Irnham Road (Corby Glen), Swayfield Road, Corby Road, Castle Bytham Road, Overgate Road, Ling Lane, Honey Pot Lane, Woolleys Lane, Water Lane, North Witham Road, South Witham Road, and Moor Lane.

Walking and cycling

- 13.5.37 A network of PRoW cross Section 2. The South Kesteven Round is a long distance walk route which crosses Section 2 along Kirkby Underwood Road and Hanthorpe Road between Hanthorpe and Kirkby Underwood. There is a nearby trail, the Mowbray Way, to the north of Section 2, which runs in an east-west direction between Buckminster and Scaford.
- 13.5.38 There are no NCN routes crossing Section 2.

Public transport

- 13.5.39 There is one bus service that runs along the A15 and B1177 within Section 2: Service 401 (Aslackby - Bourne). Service 401 generally offers a limited service during school days, college days, and Thursdays.
- 13.5.40 There are three bus services that run along the A1 within Section 2: Service 33 (Lincoln - Bourne), Service 101 (Morton - Peterborough), and Service 401 (Aslackby - Bourne). Service 33 provides one service in each direction on weekdays. Service 101 operates approximately two services per hour from Monday to Saturday and hourly services on Sundays and public holidays. Service 401 generally offers a limited service during school days, college days, and Thursdays.
- 13.5.41 There is one service that runs along the A151 and the B1176 Swinstead Road/Corby Glen Road: Service 404 (Bourne - Little Bytham), which provides one service in each direction on school days only. Service 183 (Great Casterton - Corby Glen) also provides one morning and one evening service on school days only via the A151 Station Road/Village Street/Bourne Road between the A1 and Corby Glen.
- 13.5.42 There are two bus services, Service 28 (Grantham - Stamford) and Service 183 (Corby Glen - Great Casterton), that pass through South Witham Road and North Witham Road, providing service on school days only.
- 13.5.43 An on-demand bus service, CallConnect operates within and nearby Section 2.
- 13.5.44 The East Coast Main Line passes through Section 2 which provides rail services running between London and Edinburgh via Peterborough and Grantham. The nearest station is Grantham approximately 12 km to the north of the Scoping Boundary.

Navigable waterways

- 13.5.45 There are no navigable waterways crossing Section 2.

Airports

- 13.5.46 There are no airports within or near Section 2.

New WMEL-A Substation

Highway network

- 13.5.47 The WMEL-A Substation is located in Section 2.
- 13.5.48 The nearest SRN route is the A1 located approximately 4km to the west of the Siting Area.
- 13.5.49 The A151 is a two-lane single carriageway providing an east-west route connecting with the A1 and passing close to the WMEL-A Substation Siting Area.

Walking and cycling

- 13.5.50 There is one PRow – footpath (BurC/10/1) which crosses the WMEL-A Substation Siting Area. There are no NCN routes nearby.

Public transport

- 13.5.51 There are no bus routes passing the WMEL-A Substation Siting Area. The nearest railway is the East Coast Main Line which runs near the eastern boundary of the Siting Area.

Navigable waterways

- 13.5.52 There are no navigable waterways crossing the WMEL-A Siting Area.

Airports

- 13.5.53 There are no airports crossing the WMEL-A Siting Area.

Section 3

Overhead Line

Highway network

- 13.5.54 The SRN does not intersect with Section 3.
- 13.5.55 The following A and B roads intersect with Section 3:
- the A607;
 - the A606;
 - the A6006;
 - the A607;

- the B676; and
- the B6047.

- 13.5.56 The A607 is a two-lane single carriageway providing a north–south route between Grantham and Melton Mowbray. The A606 and B6047 are two-lane single carriageways, running east–west and approximately north–south respectively. The A6006 and A47 are two-lane single carriageways providing east–west routes across Section 3. These A roads bisect Section 3, with the A606 providing access to the B6047 at the northern edge. The B676 is a two-lane single carriageway providing an east–west route between the A1 and the A606 (Melton Mowbray).
- 13.5.57 In addition, the following unclassified roads are within Section 3: Wymondham Road (Sewstern), Sewstern Road, Sewstern Lane, Garthorpe Road, Wymondham Road (Garthorpe), Garthorpe Road (Wymondham), Gipsy Nook, Jubilee Lane, Garthorpe Lane, Freeby Lane, Waltham Road, Woodfold Lane, Thorpe Side, Melton Spinney Road, Melton Road, Scalford Road, Holwell Lane, Gorse Lane, Stone Penn Lane, Nursery Lane, Clawson Lane, Clawson Road, Six Hills Road, Chapel Lane, Welby Lane, Wartnaby Road, Saxelby Road, Ostler Lane, Main Street (Grimston), Saxelbye Lane, Main Street (Saxelby), Saxelby Park Road, Shoby Lane, Main Street (Shoby), Thorpe Satchville Road, North Pasture Lane, Ashby Folville Road, Bakers Lane, Pasture Lane, Great Dalby Road, Gaddesby Lane, Foxville Street, Klondyke Lane, Ashby Road (Gaddesby/Barsby/Twyford), Gated Road, Main Street (Twyford), Burrough Road (Twyford and Thorpe), Station Road (John O Gaunt), Leicester Road and numbers of unnamed roads.

Walking and cycling

- 13.5.58 A network of PRoW cross Section 3, along with two walking routes. In the area of Section 3, the Jubilee Way passes through Burrough Jill Country Park and Woolsthorpe By Belvoir via PRoW between Melton Spinney Road and Melton Road/Scalford Road. Frisby on the Wreake Parish Walk is a circular walking route to the north of the A607 starting in Frisby on the Wreake and passing through Kirby Bellars, Priority Water Nature Reserve and Kirby Lake.
- 13.5.59 Two NCN routes cross Section 3. Route 64 runs primarily as a north-south route between Scalford and Melton Mowbray, to the west of the A607. Route 48 provides a general north-south route between Nether Broughton and Rotherby via Saxelbye, Asfordby, and Frisby on the Wreake.

Public transport

- 13.5.60 There are ten bus services that operate within Section 3.
- 13.5.61 Nine bus services are routed along the A607, where it crosses Section 3.
- 13.5.62 Two bus services operate on the section north of Melton Mowbray. Service 8 (Melton Mowbray - Grantham), which crosses the A607 twice, provides daily services on Monday to Saturday with a two-hour frequency. Service 19 (Melton Mowbray - Nottingham) operates on the A607 between Nottingham and Melton Mowbray, providing daily services with a two-hour frequency on Monday to Saturday .
- 13.5.63 Seven bus services operate on the section south of Melton Mowbray. These include Service 5 (Leicester - Melton Mowbray), Service 5A (Leicester - Melton Mowbray), Service X5 (Leicester - Melton Mowbray), Service R29 (Essendine - Brooksby College), Service LC2 (Bottesford - Melton Mowbray), Service LCC2 (Bottesford -

Melton Mowbray), and Service LC8 (Melton Mowbray - Loughborough). Some of these bus routes also run through local roads within Section 3, such as Station Lane (Kirby Bellars) and Saxelbye Lane.

- 13.5.64 Bus service LC1 (Oakham - Melton Mowbray), operates on the A47 and the A6047.
- 13.5.65 The Birmingham to Peterborough rail line and Old Dalby Test Track pass through Section 3 to the west of Melton Mowbray. The nearest station on the Birmingham to Peterborough line is Melton Mowbray, which is just outside Section 3. The Old Dalby Test Track runs between Melton Mowbray and Nottingham.
- 13.5.66 The Birmingham to Peterborough Line is a cross-country railway connecting Birmingham, Leicester and Peterborough which provides hourly rail services daily.

Navigable waterways

- 13.5.67 The Melton Mowbray Navigation (also known as the River Wreake) is a navigable waterway that crosses Section 3 between Melton Mowbray and East Goscote, to the north of the A607.

Airports

- 13.5.68 There are no airports within the Section 3.

New WMEL-B Substation

Highway network

- 13.5.69 The WMEL-B Substation is located in Section 3.
- 13.5.70 The nearest SRN route is the A46 located approximately 6.5km to the west of the Siting Area.
- 13.5.71 The nearest A road is the A606 located approximately 1.5km to the east of the siting area. Six Hills Lane, which is approximately 0.6km north of the Siting Area connects between the A46 and the A606 and provides access to Ostler Lane. Ostler Lane, which is a narrow rural road is approximately 200m from the Siting Area.

Walking and cycling

- 13.5.72 There is one PRoW – bridleway (G67) that crosses the WMEL-B Siting Area.
- 13.5.73 NCN route 48 crosses Six Hills Lane to the west of the WMEL-B Siting Area.

Public transport

- 13.5.74 There are no bus services operating along the nearby the WMEL-B Siting Area. The nearest railway line is the Old Dalby Test Track that runs to the west of the Siting Area.

Navigable waterways

- 13.5.75 There are no navigable waterways crossing the Siting Area.

Airports

- 13.5.76 There are no airports within the Siting Area.

Section 4

Overhead Line

Highway network

- 13.5.77 The SRN does not cross Section 4.

- 13.5.78 The following A and B roads cross Section 4:

- the A47;
- the A6;
- the A4304;
- the A508; and
- the B6047.

- 13.5.79 The A47 is generally a two-lane single carriageway providing an east–west route between the A563 at Leicester and the A6003. The A47 connects to the B6047, which generally runs in a north–south direction both within and adjacent to Section 4. The B6047 extends northward within Section 4 and westward beyond it, linking to the A6 in the south. The A6 is generally a two-lane single carriageway and provides a route to the A47 via the B6047, and to the A14 in the south, facilitating access to the southern edge of Section 4. The A4304 is a two-lane single carriageway that provides a route to the A508; however, it is subject to a height restriction at the crossing over the Midland Main Line railway.

- 13.5.80 In addition, the following unclassified roads are within Section 4: Park Road, Marefield Lane, Twyford Road (John O Gaunt/Owston and Newbold/Marefield/Lowesby/South Croxton), Marefield Road, Lowesby Road, Church Hill, Skeg Hill, Skeg Hill Road, Main Street (Cold Newton), Hungarton Road, Endersbys Lane, Sludge Hall Hill, Marefield Lane (Tilton on the Hill), Main Street (Tilton on the Hill), Oakham Road, Tilton Lane, Back Road, Skeffington Glebe Road, Loddington Road, Green Lane, Skeffington Wood Road, Wood Lane, Main Street (Tugby), Hallaton Road, Crackbottle Road, Palmers Lane, The Avenue, Rolleston Road, Skeffington Road, Illston Road, Three Fates Road, Langton Road/ Cranoe Road (Stonton Wyville/Tur Langton), Church Hill Street (Slawston), Welham Lane (Cranoe), Cranoe Road (Welham), Welham Road (Slawston), Slawston Road (Welham), Main Street (Welham), Bowden Lane (Welham), Thorpe Langton Road, Welham Road (Thorpe Langton), Main Street (Thorpe Langton), Church Lane, Green Lane, Weston Road, Bowden Lane, Welham Lane, Bowden Road, Langton Road.

Walking and cycling

- 13.5.81 A network of PRow cross Section 4. There are also ten promoted walking routes within Section 4, which are summarised below:
- Hungarton Parish Walks – Walk 2 is a circular walking route that starts from Hungarton and crosses the western edge of the Scoping Boundary at Cold Newton.

- Tilton on the Hill Parish Walks are two promoted circular walking routes between Tilton on the Hill and Cold Newton, and between Tilton on the Hill and Skeffington Wood.
- Skeffington Parish Walks are two promoted circular walking routes. Walk 1 is routed from Skeffington via Skeffington Wood Road and several PRow before returning to the trailhead. Walk 2 starts from Skeffington, runs to the south to Rolleston and then east towards Turby before returning to the trailhead via a network of PRow.
- There are five promoted short walks around Market Harborough. These are Route 1 - Rectory Lane, Little Bowden; Route 2 - Little Bowden Recreation Ground; Route 5 - Views from the edge; Route 9 - Great Bowden Village; Route 10 - The big one: Market Harborough and Great Bowden,.

13.5.82 Two NCN routes cross Section 4. Route 63 runs approximately north-south from Owston and Stoughton via Tugby and Goadby, crossing the A47 and the B6047. Route 64 provides a north-south route between Goadby and Market Harborough via Glooston, Cranoe, Welham, and Great Bowden.

Public transport

13.5.83 There is one bus service that crosses Section 4 on the A47. Service LC7 (Leicester to Uppingham) provides daily services with a 2-hour frequency on Monday to Saturday.

13.5.84 There are three bus services that run along the A1304: Service HC1 (Market Harborough - Rail Station and Little Bowden), Service LC11 (Market Harborough - Corby), and Service WW (Market Harborough - Cottingham). Service HC1 provides hourly services on Monday to Sunday. Service LC11 provides two services in each direction on Wednesdays and Saturdays only. Service WW runs between Market Harborough and Cottingham once a week on Tuesdays only.

13.5.85 The Midland Main Line railway connects London, Leicester, Nottingham and Sheffield and passes through the southern end of Section 4 near Market Harborough.

Navigable waterways

13.5.86 There are no navigable waterways crossing Section 4.

Airports

13.5.87 There are no airports within Section 4.

Section 5

Overhead Line

Highway network

13.5.88 The A14 and A45 which are part of the SRN cross Section 5 near Kettering and Wellingborough respectively.

13.5.89 The following A and B roads cross Section 5:

- the A427,

- the A6;
- the A43;
- the A509;
- the A4500;
- the B664;
- the B574; and
- the B573.

13.5.90 The A427, A6, A43, A509, and A4500 are generally two-lane single carriageways. The A427 provides an east–west route between the A6 at Market Harborough and the A43 at Corby, and connects to the B664, which provides access to the northern edge of Section 5. The A6 provides access to the area north of the Midland Main Line railway, which bisects Section 5, and connects to the A14. The A43 provides a north–south route between the A14 and the A45. The A45 also connects to the B573, which runs within and along the western edge of Earls Barton, to the north of the A45. The A509 provides a north-south route connecting the A14, A4500 and A45, which are east-west routes. The B664 is a two-lane single carriageway providing a northeast–southwest route between the A427 and Weston-by-Welland. The B574 is a two-lane single carriageway forming a circular route with the A509. The B573 is a two-lane single carriageway providing connections between the A45 and A4500, and links to Station Road, which leads to the existing Grendon Substation.

13.5.91 In addition, the following unclassified roads are within Section 5: Green Lane (Weston by Welland), Welham Road (Weston by Welland), Valley Road (Weston by Welland), Dingley Road, Sutton Lane, Desborough Road (Braybrooke, Arthingworth and Harrington), Harborough Road, Harrington Road, Griffin Road, Braybrooke Road (Braybrooke and Arthingworth), Arthingworth Road, Church Lane (Harrington), Thorpe Under Wood Road, Harrington Road (Rothwell), Rothwell Road (Harrington and Draughton), High Street (Harrington), Loddington Road (Harrington), Lamport Road (Rothwell), Old Orton Road, Orton Road, Rothwell Road, Main Street (Orton), Lamport Road (Orton), Harrington Road (Orton, Lamport and Loddington), Old Road (Lamport and Broughton), Loddington Road (Old), Broughton Road (Walgrave), Wellingborough Road, Broughton Road (Pytchley), High Street (Pytchley), Isham Road, Pytchley Road, Isham Road (Orlinsbury), Harrowden Road, Orlinsbury Road, Hardwick Road, Moonshine Gap, Sywell Road, Meers Ashby Road, Wilby Road, Doddington Road, Cut Throat Lane, Hardwater Road, Station Road and Main Road

Walking and cycling

13.5.92 A network of PRow cross Section 5, along with one promoted walking route - Castle Ashby Circular. This circular route passes through the village of Castle Ashby and crosses the southern end of Section 5.

13.5.93 NCN Route 6 crosses Section 5 to the south of Market Harborough.

Public transport

13.5.94 Two bus services operate along the A427 in Section 5. Service LC11 (Market Hall - George Street) provides two daily services in each direction on Wednesdays and Saturdays only. The Welland Wanderer West bus service runs along the A4505,

A427 and B664 between Market Harborough and Corby, providing one service per direction daily.

- 13.5.95 Service 18 (Ise Lodge - Market Harborough) and Service 78 (Walgrave - Kettering) run along Braybrooke Road and Harborough Road within Section 5. Service 18 provides broadly an hourly service on Mondays to Saturdays, while Service 78 offers one service per direction on Fridays only.
- 13.5.96 There are three bus services that are routed along the A45 and local roads at Mawsley, Broughton, and Pytchley. Service 10 (Northampton - Kettering), Service X10 (Northampton - Kettering), and Service 78D (Kettering - Weston Favell Centre), The combined operation of services 10 and X10 provides an approximate hourly frequency throughout the week (Monday to Sunday), with enhanced service levels during weekday morning peak periods. Service 78D provides a pre-booked service only. Additionally, Service 80P (Mawsley - Northampton) runs along the local roads at Mawsley.
- 13.5.97 Service 78C (Kettering (Venture Park) - Pytchley) provides one service from Kettering to Pytchley on Fridays and bank holidays only, running through local roads between Pytchley and Kettering via Broughton, Great Cransley, Loddington, and Thorpe Malsor. Service ChattyBus2 provides one service per direction daily, passing through local roads between Kettering and Wellingborough via Pytchley, Orlingbury, Little Harrowden, and Great Harrowden.
- 13.5.98 There are three bus services - Service X4 (Northampton - Corby - Peterborough), Service X46 (Northampton - Rushden), and Service VH11 (Stanwick Lakes - Northampton) - that run through the A509 and A4500. Service X47 (Northampton - Raunds) also runs through the A4500 and the A573. Service X46 and Service VH11 provide frequent daily services on Mondays to Saturdays, while Service X4 and Service X47 also offer frequent daily services on Sundays.
- 13.5.99 The Midland Main Line railway connects London, Leicester, Nottingham and Sheffield and passes through the northern end of Section 5 near Market Harborough.

Navigable waterways

- 13.5.100 There are no navigable waterways in Section 5.

Airports

- 13.5.101 There are no airports within Section 5.

Future Baseline

- 13.5.102 A Transport Assessment (TA) will be prepared to assess the transport impacts of the Project, establishing the basis from which the effects on transport receptors would be assessed in the ES. The impacts from the Project will be measured from a future baseline.
- 13.5.103 The future baseline relates to known or anticipated changes to the current baseline in the future that are predicted to occur in the absence of the Project. The future baseline for the TA would take account of committed developments (with planning consent in this case) and transport schemes, along with background growth (general growth in traffic due to changes in population, employment, housing, car ownership for example).

- 13.5.104 There is no anticipated impact on traffic and transport during the operational phase of the Project that will require assessment or necessitate the development of a future baseline. Therefore, a future baseline will be only considered to assess construction activity that is likely to have a material impact and may require mitigation works.
- 13.5.105 The ISEP Guidance (Ref 13.1) suggests that future baseline and cumulative assessment are two different considerations within the environmental assessment process. The ISEP Guidance (Ref 13.1) states that:
- “Derived forecast traffic growth (e.g. TEMPro) should be utilised to derive future year baseline traffic conditions. However, discrete projects within the agreed study area that are existing, approved or likely to come forward (where sufficient certainty and relevant information about the project exists) should not be added to the baseline scenario and should be considered in the cumulative scenario.”*
- 13.5.106 The inference is that this avoids double counting of growth from forecast growth factors and committed developments.
- 13.5.107 The future baseline will comprise the same Study Area and receptors as the existing baseline (once confirmed). For the Project, it is proposed to use a single scenario that combines forecast growth and committed developments whilst minimising double counting. The future baseline will be produced by factoring the baseline traffic flows using TEMPro, and then adding any extra trips generated by committed developments where they exceed the TEMPro growth i.e. the difference between the committed development trip generation and the TEMPro growth that would be added to the future baseline. Additional traffic from committed developments will be discussed with the relevant highway authorities.
- 13.5.108 Construction traffic generated from the TA for use in the ES will include future growth and those other developments which have planning consent, in the future baseline scenario described above. Therefore, to avoid the double counting identified above, the cumulative assessment using traffic data in the ES will only consider those additional other developments identified as described **Chapter 5 EIA Approach and Methodology**.
- 13.5.109 The future baseline traffic volumes will be established for a single year during the construction period, which for the Project, is anticipated to take place between 2030 and 2034. The future baseline year for assessment will be taken as the year when the peak month of construction traffic movements are forecast to occur but for the purpose of this Scoping Report, the future baseline year is assumed to be 2032.
- 13.5.110 The construction assessment will consider the single year future baseline, in conjunction with the peak month construction activities from the overall construction programme (whenever these may occur) to ensure a reasonable worst case is assessed. The peak construction period(s) will be identified within the ES when more detailed construction information is available.
- 13.5.111 It is difficult to forecast how public transport services may change in the future; therefore, unless information on future services is available, it would be assumed that public transport services for the future year of assessment would be the same as those currently operating (baseline). Similarly, pedestrian and cycle demand and facilities would be assumed to remain unchanged from the base year.

13.6 Design and Control Measures

Design Measures

- 13.6.1 The emerging preferred corridor on which the Scoping Boundary is based has been designed to avoid, as far as reasonably practicable, sensitive traffic and transport features identified through the Corridor Preliminary Routing and Siting Study (CPRSS) (Ref 13.7) and design development which is summarised in **Chapter 3 Main Alternatives Considered**.
- 13.6.2 As part of the Project design process, a number of embedded measures will be proposed to reduce the potential impacts and likely significant effects for traffic and transport. These measures will evolve as the design and EIA progresses develop and in response to consultation. Examples of such design measures include:
- The construction strategy would seek to route construction vehicles along A and B classified roads as far as reasonably practicable.
 - Site haul roads would be designed into the Project to run alongside the overhead lines to move construction materials/equipment and reduce HGV movements on less suitable public roads and through local communities.
 - Highway improvements potentially including junction modifications, passing places and carriageway widening would be designed as required, to manage the safe passing of construction vehicles on construction HGV routes.
- 13.6.3 The embedded measures would be developed and secured appropriately as part of the Project through Requirements(s) of the Development Consent Order.

Control and Management Measures

- 13.6.4 A range of standard measures for the Project would be adopted throughout the duration of the construction phase. An **Initial Outline Code of Construction Practice** (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could be relevant to traffic and transport are (refer to **Appendix 4A** for the full description of each measure):
- GG07 - setting out the documents (including CTMP) collectively referred to as 'the Environmental Control Plans (ECPs)' that will be produced prior to construction.
 - GG14 - on maintenance and operation of plant and vehicles.
 - GG15 - on materials and equipment handling.
 - TT01 - on the CTMP measures to manage and control construction vehicle movements. The Outline CTMP will be provided with the application for development consent and the final CTMP secured through the draft DCO.
 - TT02 - on monitoring and reporting to check compliance with the measures set out within the CTMP.
 - TT03 - on management of affected PRow.
 - W04 - on measures to cross navigable waterways.
 - AS03 - on maintaining access to residential, commercial, community and agricultural land uses.

13.7 Potential for Significant Effects

- 13.7.1 The traffic and transport assessment in the ES will consider the construction, and operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The proposed scope of the ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 13.7.2 The potential for the Project to result in likely significant effects has been determined taking into account the embedded design, and control and management measures described in Section 13.6.
- 13.7.3 **Table 13.2** identifies the sources of potential impacts on receptors identified in the baseline transport network that could result in a significant effect. Where an impact could give rise to potentially significant effects on receptors, these are scoped into the ES. Impact pathways that are unlikely to give rise to significant effects on receptors are proposed to be scoped out of the ES.

Table 13.2 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction traffic volumes and routes	Increased traffic or Heavy Goods Vehicle (HGV) volumes and congestion due to construction traffic and increased journey times/distance due to road closures/diversions.	Road users	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on road users as a result of construction traffic and road closures/diversions leading to potential Severance, Driver Delay and Highway Safety effects (as defined in Section 13.8).	Scoped in
Construction	Construction traffic volumes and routes	Increased traffic volumes and congestion due to construction traffic and increased journey times/distance due to road closures/diversions.	Public transport users (bus)	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on public transport users as a result of construction traffic and road closures/diversions leading to potential Public Transport Delays.	Scoped in
Construction	Construction traffic volumes and routes	Increased traffic volumes due to construction traffic, increased journey times/distance due to PRow closures/diversions and construction works in general.	Pedestrians and cyclists	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on pedestrians and cyclists as a result of construction traffic leading to Traffic Severance, Pedestrian Delay, Pedestrian and Cycle Amenity effects, and Fear and Intimidation. There is also PRow or designated pedestrian and cycle route closures/diversions potentially leading to Increased Journey Time.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Abnormal loads	Increased congestion and increased journey times/distance due to road closures/diversions for abnormal load access.	Road users	Yes – whilst short-term and temporary in nature, and generally planned for off peak times when the road network is less busy; the frequency of abnormal load deliveries, construction routes and traffic management requirements are not defined at this stage, and it is therefore considered that effects on road users should be scoped in at this stage.	Scoped in
Construction	Hazardous loads	Increased number of vehicles transporting hazardous loads as a result of construction.	General public	No - there is low potential for significant effects on the general public as a result of a road traffic accident leading to a Hazardous Load spill. The only bulk hazardous material expected to be delivered during construction is fuel for construction plant. These are likely to be infrequent and delivered to several construction sites along the route rather than a single central site. Therefore, in addition to the low numbers, deliveries are also spread over a large area of the network resulting in a likely very low increase in loads on any one route. No likely significant effect is anticipated therefore this matter is scoped out.	Scoped out
Construction	Methods to construct overhead line.	Closure of a railway line to enable construction of the overhead line.	Railway users	No – methods will be employed when installing overhead line to avoid any potential impacts on the railway. This	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				may include overnight blockades/temporary closures to install protection/temporary works. The new overhead line would cross the rail network in only 2 locations, once over the Peterborough to Lincoln Railway Line (in Section 1 near Pinchbeck) and once over the East Coast Mainline (in Section 2 near Corby Glen). Tower locations will be designed to avoid the rail line meaning that only short-term temporary scaffolding over the rail line would be required while the conductors are pulled into place over them, this would be undertaken using overnight blockades/closures when passenger rail services are not fully operational. Extensive works or permanent structures would not be required on or over the rail line. The proposed method and timing would be developed in consultation with Network Rail to ensure significant effects on the rail network are avoided. A similar approach would be employed for reconductoring where the existing overhead line crosses rail infrastructure at two further locations, and one test track. Significant effects are not likely to occur.	

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Methods to construct overhead line	Closure of navigable waterways to enable construction of the overhead line.	Navigable waterway users	No – there are four navigable waterways that could potentially be crossed by the new overhead lines and one navigable waterway that is crossed by the existing overhead line. Where navigable waterways are to be crossed by construction traffic, measures to be applied include the use of temporary culverts or temporary spanned bridges. Once the temporary culvert is installed, the area above the temporary culvert will be backfilled and construction mats placed over the backfilled area to permit the passage of plant, equipment, materials, and people. Specific detailed designs for each navigable waterway crossing, consistent with the principles set out in Appendix 4A Initial Outline Code of Construction Practice will be subject to appropriate consent by the relevant regulatory body. Significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Operational/maintenance vehicles	Increased traffic volumes due to operational staff trips.	Road users, public transport users (Bus), pedestrians and cyclists,	No - during operation (inc. maintenance) of the Project, traffic generated would be associated with routine maintenance and occasional repair, inspection activities, and a small number of operational staff. The impact of operational traffic from OHL projects would be expected to be substantially	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				lower than 10% of existing traffic and movements are not anticipated to have a material effect on the transport network and receptors. This approach has been successfully undertaken by National Grid on similar OHL projects, and is also suitable for this Project. Traffic and transport effects during operation (inc. maintenance) are therefore proposed to be scoped out.	
Operation and Maintenance	PRoW closures/diversions	Increased journey times/distance due to permanent PRoW closures/diversions associated with the substations.	Pedestrians and cyclists	Yes - there is potential for significant effects on pedestrians and cyclists as a result of permanent PRoW closures/diversions leading to potential Increased Journey Time.	Scoped in
Operation and Maintenance	Operational/maintenance vehicles	Vehicle crossing points (if required).	Railway users	No – maintenance vehicles would only cross railway lines using existing highway crossing points e.g. bridges, underpasses or level crossings, therefore no impacts are anticipated. Traffic and transport effects during operation (inc. maintenance) are therefore proposed to be scoped out.	Scoped out

13.8 Proposed Assessment Methodology

- 13.8.1 The following section summarises the methodology proposed to be used for the traffic and transport assessment in the ES, which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.

Proposed Data Sources

- 13.8.2 In addition to the data sources listed in Section 13.5, the following data sources are proposed to be used as appropriate to inform the traffic and transport assessment:
- historic traffic count data from local Councils and/or the Department for Transport (DfT);
 - traffic counts and speed survey data;
 - non-motorised user (NMU) counts;
 - highway boundary information from relevant highway authorities;
 - census travel mode share;
 - Personal Injury Collision (PIC) data for the latest five years; and
 - OS/GIS mapping.

Surveys

- 13.8.3 Traffic data will be obtained to determine the baseline traffic flow through various sources, including existing DfT and local authority data (where appropriate data is available). Traffic surveys will be commissioned by the Applicant where data is not available and at required locations to support the baseline information.
- 13.8.4 This will also apply to NMU flows on key routes and PRow where surveys are required to establish baseline flows.
- 13.8.5 Where a navigable waterway is likely to be impacted by the construction works, the Applicant will consider the need for surveys to establish baseline usage.
- 13.8.6 The locations and types of surveys will be discussed with the relevant highway authorities.

Proposed Assessment Methodology

- 13.8.7 The following section summarises the methodology proposed to be used for the traffic and transport assessment in the ES, which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.
- 13.8.8 In accordance with the 2023 ISEP Guidance (Ref 13.1), the following matters will be considered in the assessment.
- severance of communities;
 - road vehicle driver and passenger delay;
 - non-motorised user delay;
 - non-motorised amenity;

- fear and intimidation on and by road users;
 - road user and pedestrian safety; and
 - hazardous/large loads (Note: hazardous loads are scoped out, see **Table 13.2**).
- 13.8.9 The ISEP Guidance (Ref 13.1) sets out two broad rules for identifying potential highway links for analysis:
- Rule 1: include highway links where traffic flows will increase by more than 30 per cent (or the number of HGVs will increase by more than 30 per cent); and
 - Rule 2: include highway links of high sensitivity where traffic flows have increased by 10 per cent or more.
- 13.8.10 Highway links would therefore be assessed where traffic flows are expected to increase by 30 per cent or more, and where there are increases of 10 per cent or more in an area identified as sensitive.
- 13.8.11 The ISEP Guidance (Ref 13.1) suggests that the rules may not be appropriate for road safety and driver delay. Safety can be assessed by a competent independent auditor/professional in accordance with DMRB guidance GG 119 (Ref 13.8) and driver delay by undertaking highway/junction modelling if these aspects require further consideration.
- 13.8.12 In addition to the above, potential traffic-related effects will also be considered by other topics (see section 13.1.4).
- 13.8.13 The type of traffic which is anticipated to be generated by the Project will comprise general traffic, light good vehicles (LGVs), HGVs and Abnormal Indivisible Loads (AILs). It is intended that the proposed routing and movement of construction traffic would be discussed with the relevant highway authorities.
- 13.8.14 Once the routing and estimated volumes of construction traffic have been established, these will be compared to the future baseline flow (Without Development) to establish whether the increase in traffic would meet either of ISEP Rules 1 or 2 (as described above).
- 13.8.15 For those locations where there is an increase in traffic of at least 10 per cent, the receptors that would be impacted by the increase in vehicle movements will be identified. Historic data or Automatic Traffic Counts (ATCs) would be used to derive 24 hour Annual Average Daily Traffic (AADT) for individual links, subdivided for total traffic and HGVs.
- 13.8.16 The methodology for assessing the impact of construction traffic from the Project will be based on that outlined in the ISEP Guidance (Ref 13.1).
- 13.8.17 Sensitive receptor locations will inform the assessment of likely significant effects when development traffic is assigned to the network. The ISEP Guidance (Ref 13.1) identifies the following list of 'special interests' which will be considered when defining sensitive receptor locations:
- people at home/people at work;
 - sensitive and/or vulnerable groups (including younger and older age groups; lower income; poor health status; social disadvantage; and access and geographic factors);

- locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools, care/retirement homes);
- retail areas;
- recreational areas/tourist attractions;
- collision clusters and routes with road safety concerns; and
- junctions and highway links already at (or over) capacity.

- 13.8.18 All of the affected parties are considered to be potentially exposed to changes in traffic volume due to their proximity to a construction traffic route. It is important to note that the ISEP methodology does not consider the duration of effect, especially whether it is temporary (construction) or permanent (operational traffic). Therefore the assessment of likely significant effects will also consider the duration or frequency of impact during construction.
- 13.8.19 The traffic and transport assessment in the ES will include consideration of potential cumulative effects of the Project in relation to other similar existing, consented and proposed developments, as outlined in **Chapter 5 EIA Approach and Methodology** and in line with Planning Inspectorate Advice (Ref 13.9).

Assessment Scenarios

- 13.8.20 The following scenarios would be assessed in the Transport Assessment to determine the impact of the Project:
- 2032* Future Baseline ('Without Development') – AM, PM and daily flows; and
 - 2032 Future Baseline plus Construction ('With Development') – AM, PM and daily flows.
- * 2032 assumed future baseline year (see paragraph 13.5.109)
- 13.8.21 A Baseline scenario (2025) would be used from which to develop the future baseline traffic flows, taking account of committed developments and transport schemes, along with background traffic growth. The future baseline traffic flows would form the basis for assessing the impacts and effects of the Project.
- 13.8.22 The 'With Development' scenario would consider the 2032 future baseline, in conjunction with the peak construction traffic movements from the overall construction programme (whenever these may occur).
- 13.8.23 The peak construction traffic flows will be derived from the construction activities and programme of works. Construction HGVs would be assigned to designated routes. A simple gravity model would be used to assign worker trips to and from the proposed construction compounds. The result of the assignment of construction traffic to the highway network and the impact of any road diversions will be used to calculate the resultant percentage change in traffic flow on each road link.
- 13.8.24 The scope of the TA will be discussed with the relevant Highway Authorities, and effort will be made to reach agreement. In the event that junction capacity analysis is required, this will be discussed with the relevant highway authorities.

Sensitivity

- 13.8.25 The general criteria for defining the importance or sensitivity of receptors for Traffic and Transport are set out in **Table 13.3**. Key factors influencing this include:
- the value of the receptor or resource based upon empirical and/or intrinsic factors, for example, considering any legal or policy protection afforded which is indicative of the receptor or resources' value internationally, nationally or locally; and
 - the sensitivity of the receptor or resource to change, for example is the receptor likely to acclimatise to the change. This will consider legal and policy thresholds which are indicative of the ability of the resources to absorb change.

Table 13.3 Sensitivity of receptors

Value/Sensitivity	Description
Very High	Highway links and junctions: more than two sensitive users' locations present (e.g. schools, care/retirement homes, disabled parking bays, hospitals, places of worship, recreational/tourist and retail areas, routes with poor safety and congestion). Walk/cycle/bridleway links including PRow: heavily trafficked highways with on-road pedestrian/cycle/bridleway routes.
High	Highway links and junctions: two sensitive users' locations present (e.g. schools, care/retirement homes, disabled parking bays, hospitals, places of worship, recreational/tourist and retail areas, routes with poor safety and congestion). Walk/cycle/bridleway links including PRow: lightly trafficked highway with on-road pedestrian/cycle/bridleway routes.
Medium	Highway links and junctions, at least one of the following: • one sensitive users' location present (e.g. schools, care/retirement homes, disabled parking bays, hospitals, places of worship, recreational/tourist and retail areas, routes with poor safety and congestion); • many residential properties with direct frontage to the highway link being used for construction traffic; • pedestrians using footways, PRow and/or crossings on highway link; and • cyclists using on-road designated cycle routes along highway link. Walk/cycle/bridleway links including PRow: heavily trafficked highway with off-road pedestrian/cycle/bridleway routes.
Low	Highway links and junctions: at least one of the following:

Value/Sensitivity	Description
	• few residential properties with direct frontage to the highway link being used for construction traffic; • workplaces with direct frontage to the highway link being used for construction traffic; and • cyclists using off-road designated cycle routes along highway link. Walk/cycle/bridleway links including PRow: lightly trafficked highway with off-road pedestrian/cycle/bridleway route.
Negligible	Highway links and junctions: no receptors on link. Walk/cycle/bridleway links including PRow: pedestrian/cycle/bridleway route not running alongside carriageway.

- 13.8.26 The sensitivity of links within the Study Area will be assigned based on the above criteria. The link sensitivity will be based on an average sensitivity of the whole link with no separate assessment of high/very high receptors. Some links will be broken down into sensible sections where appropriate, for example, between junctions or villages.

Magnitude

- 13.8.27 The ISEP Guidance (Ref 13.1) states in paragraph 1.27 that the magnitude of each impact should be determined as the predicted deviation from the baseline conditions.
- 13.8.28 The ISEP Guidance (Ref 13.1) sets out a number of criteria by which the magnitude of impact can be measured. These are outlined below. Many of the criteria do not provide specific thresholds by which such impacts can be measured, and as a result will be measured qualitatively using professional judgement and experience on similar projects where necessary.
- 13.8.29 **Severance** – severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure. As set out in paragraph 3.16 of the ISEP Guidance (Ref 13.1), changes in traffic flow of 30 per cent, 60 per cent and 90 per cent are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance, respectively, although caution should be applied to very low baseline flows.
- 13.8.30 **Road vehicle driver and passenger delay** – traffic delays to non-development traffic can occur as a result of development. The ISEP Guidance (Ref 13.1) indicates that these are only likely to be significant when the traffic on the network is already at, or close to capacity. The Project could result in changes which could significantly affect perceptions of driver delay during construction because of increased vehicle travel demand on the local network. In addition, where any temporary road closures or traffic management is likely to be in place to enable construction of the Project, any additional potential delay caused by resultant diversion routes will be reported. The

assessment of delay will be based on technical work reported in the TA (i.e. junction modelling outputs) using professional judgement.

- 13.8.31 **Non-Motorised User delay** - Drawing upon the ISEP Guidance (Ref 13.1), the assessment of pedestrian delay serves as a proxy for the delay that other modes of NMU may experience when crossing roads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in NMU delay. The ISEP Guidance (Ref 13.1) advises against definitive thresholds and recommends the use of professional judgement to determine the significance.
- 13.8.32 **Public transport delay** occurs due to a temporary closure or diversion of a highway. The effect would depend on whether a temporary closure or diversion is proposed, any increases in bus journey length as a result and how long any potential disruption would last. The assessment will consider indicative thresholds which have been derived based on professional judgement.
- 13.8.33 **Non-Motorised User amenity** - Pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is affected by traffic flow, traffic composition and pavement width/separation from traffic. Drawing upon the ISEP guidance (Ref 13.1), with regard to amenity, there are no set thresholds, but the following is stated, “*a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled*” and that: “*thresholds... should be used cautiously in any assessment. The assessment of amenity should pay full regard to specific local conditions.*”
- 13.8.34 **Fear and intimidation** – The ISEP Guidance (Ref 13.1) indicate the extent of fear and intimidation is dependent on the volume of traffic, heavy vehicle composition speed of vehicles, proximity of traffic to people and the perception of protection/lack of protection. The guidance sets out thresholds to define the degree of hazard based on average traffic flow, 18 hour heavy vehicle flow and average speed over an 18 hour day, the level of fear and intimidation from combining the hazard scores and the magnitude of impact based on the change in level from baseline conditions.
- 13.8.35 **Highway safety** – Highway safety considers personal injury collision data for the most recent five year period on the local highway to include links and junctions along proposed construction traffic routes. These will be used to assess whether the additional traffic during construction of the Project would be likely to have a detrimental effect on road safety. The ISEP Guidance (Ref 13.1) references collision rates and collision clusters. Links where traffic flows increase by more than 30 per cent (Rule 1) will be considered.
- 13.8.36 **Hazardous and dangerous loads** – The ISEP Guidance (Ref 13.1) states the assessment should estimate the number and composition of such loads and if significant should “*include a risk or catastrophe analysis to illustrate the potential for an accident to happen*”. There may be a requirement to transport some hazardous loads during construction of the Project. However, hazardous loads have been scoped out of the assessment due to the low potential for a significant effect, see **Table 13.2**. Abnormal load deliveries will be identified as the Project progresses and the impacts of such loads will be considered as a qualitative risk assessment. The Outline CTMP submitted with the ES will include details of measures that will be employed to ensure the safe vehicular transport of components to and from the Project.
- 13.8.37 **Table 13.4 and Table 13.5** summarise the criteria that will be used to assess the magnitude of impact, along with the thresholds that will be used to determine whether

the impacts are considered large, medium, small or negligible. Depending on the baseline information available, the various thresholds identified for the proportional increase in traffic flow relate to peak hour and daily flows. Within these tables, neither the sensitivity of receptors, nor the duration of effects is taken into consideration. These tables are formed using the ISEP Guidance (Ref 13.1) and professional judgement.

Table 13.4 Magnitude of impact

Impact	Negligible	Small	Medium	Large
Severance	Increase in total flows of 29% or under	Increase in total flows of 30-59%	Increase in total flows of 60-89%	Increase in total flows of 90% and above
Driver delay	Professional judgement – informed by analysis of junction modelling outputs where available and/or length and duration of diversions.			
NMU delay	Professional judgement based on changes in journey time.			
NMU amenity	Increase in total flows of 49% or under	Increase in total traffic flows of 50-69%	Increase in total traffic flows of 70-99%	Increase in total traffic flows of 100% or above
Fear and intimidation	No change in calculated level of fear and intimidation	One step change in level with <400 vehicle increase in average 18hr flow and/or <500 HGV in total 18hr flow	One step change in level with >400 vehicle increase in average 18hr flow and/or >500 HGV in total 18hr flow	Two step change in calculated level of fear and intimidation
Public Transport Delay (diversion)	Percentage change in total bus journey distance less than 10%	Percentage change in total bus journey distance between 10% and 20%	Percentage change in total bus journey distance between 20% and 40%	Percentage change in total bus journey distance 40% or more
Highway safety	Increase in total flows of 29% or under (or increase in HGV flows under 10%)	All links with increase in traffic flows over 30% (or HGVs 10%) and which have an average of more than three accidents per year in the most recent five year period would be assessed on case by case basis using professional judgement.		
Hazardous/dangerous loads	Probability of personal injury collision occurring – resulting in a serious or fatal incident.			

- 13.8.38 The above table gives indicative thresholds only where guidance is available. Throughout the assessment professional judgment will be applied taking account of local conditions.
- 13.8.39 An assessment of national/regional walking and cycling routes as well as PRow will also be carried out where these are directly affected by construction works in terms of diversions. **Table 13.5** shows the magnitude of impact thresholds for PRow diversions and/or closures.

Table 13.5 Magnitude of impact of a PRow diversion and/or closure

Impact	Negligible	Small	Medium	Large
PRow diversion and/or closure	A diversion and/or closure with less than 100 m increase in journey length or an increase in journey length for less than 7 days	A diversion and/or closure with an increase in journey length of 100- 250 m or an increase in journey length for a period of 1-4 weeks	A diversion and/or closure of 250-500 m or an increase in journey length for 4-8 weeks	A diversion and/or closure of 500 m or more or an increase in journey length for 8 weeks or more

- 13.8.40 The tables above set out the proposed magnitude thresholds for the respective environmental impacts that will be considered in the assessment. With the exception of PRow diversion and closure effects, all effects have a proposed magnitude that does not initially consider the duration over which an effect is likely to be experienced.
- 13.8.41 Duration is considered when assessing the overall significance of residual effects, recognising that permanent impacts will be more significant than those of a temporary nature and reversibility of the change, as set out in DMRB guidance LA 104 (Ref 13.6).
- 13.8.42 The majority of traffic and transport effects will be associated with the construction of the Project and therefore would be temporary effects. Some temporary effects are likely to last longer than others, which will be clearly explained and reported in the ES. The permanent closure or diversion of PRow or changes to the road network would be permanent effects and will be reported in the ES. Following the quantified assessment, residual effects will be reported taking into account professional judgement on the duration over which effects are likely to be experienced.

Significance of effects

- 13.8.43 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of impacts is outlined in **Table 13.6**.

Table 13.6 Determination of significance matrix

		Value/Sensitivity of Receptor				
		Very high	High	Medium	Low	Negligible
Magnitude of Impact	Large	Major	Major/ Moderate	Major/ Moderate/ Minor	Moderate/ Minor	Minor/ Negligible
	Medium	Major/ Moderate	Major/ Moderate	Moderate/ Minor	Minor/ Negligible	Negligible
	Small	Major/ Moderate/ Minor	Moderate/ Minor	Moderate/ Minor	Minor/ Negligible	Negligible
	Negligible	Minor/ Negligible	Minor/ Negligible	Minor/ Negligible	Negligible	Negligible

13.8.45 An impact is considered significant if the resultant effect is Major or Moderate and a resultant effect of Minor or Negligible is considered not significant. This matrix approach provides a guide to authors, however professional judgement can be used in concluding the significance of an effect.

Transport Assessment

- 13.8.46 The ability of the highway network to accommodate the construction traffic will be assessed and reported in a TA, which will form a separate assessment document to support the application for development consent. The findings from the TA will be used to inform the ES assessment. The TA will include information on:
- relevant national, regional and local policies;
 - the existing baseline conditions including a description of the roads, bus routes, railway lines, footpaths, bridleways, cycle paths and navigable waterways crossed by the route and/or impacted by the works;
 - personal injury collision data for the most recent five-year period within the proposed Study Area;
 - details of the Project including a description of the proposed works, the construction programme, compound locations, access routes to compounds, potential road or PRow closures/diversions and construction methods for individual railway, road and navigable waterway crossings (where appropriate);
 - future baseline including committed developments and transport schemes;
 - trip generation during construction including worker trips and HGV traffic to/from compounds. Trip generation associated with the operation of the substations and overhead lines;
 - the distribution and assignment of construction trips on the road network;

- the impact of the construction works and operation of the Project (where applicable) on the transport network;
- mitigation measures; and
- summary and conclusions.

13.9 Assumptions and limitations

- 13.9.1 At this stage the extent of the traffic and transport Study Area for the ES assessment has not been defined as the predicted construction traffic volumes and routings have not been determined. The Applicant will liaise with the relevant highway authorities to agree the Study Area.

13.10 Conclusion

- 13.10.1 This Scoping Report chapter has outlined the proposed scope of the assessment in relation to traffic and transport for the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 13.2**.
- 13.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 13.1 Institute of Sustainability and Environmental Professionals (2023). Environmental Assessment of Traffic and Movement [online]. Available at: <https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf>. Accessed 14 July 2025.
- Ref 13.2 Ministry of Housing, Communities & Local Government and Department for Levelling Up, Housing and Communities (2014). Travel Plans, Transport Assessments and Statements [online]. Available at: <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements> [Accessed 26 September 2025].
- Ref 13.3 Department for Transport and National Highways (2022). Strategic road network and the delivery of sustainable development [online]. Available at: <https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development> [Accessed 26 September 2025].
- Ref 13.4 Standards for Highways (2020). LA 103 Scoping projects for environmental assessment [online]. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/fb43a062-65ad-48d3-8c06-374cfd3b8c23?inline=true> [Accessed 26 September 2025].
- Ref 13.5 Directive 2014/52/eu of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, L 124/1 25.4.2014. [Online] Available at: [Directive - 2014/52 - EN - EIA - EUR-Lex](#) [Accessed 01 October 2025].
- Ref 13.6 Standards for Highways (2020). LA 104 Environmental assessment and monitoring [online]. Available at: <https://www.standardsforhighways.co.uk/tses/attachments/0f6e0b6a-d08e-4673-8691-cab564d4a60a?inline=true>. Accessed 26 September 2025.
- Ref 13.7 National Grid (2025). WMEL Corridor Preliminary Routeing and Siting Study (CPRSS) [online]. Available at: <https://www.nationalgrid.com/document/561431/download>. Accessed 14 July 2025.
- Ref 13.8 DMRB GG119 – Road safety audit [online]. Available at: <https://standardsforhighways.co.uk/search/html/69517ebd-ed8d-4558-b101-c1e80611000a?standard=DMRB>. Accessed 26 September 2025.
- Ref 13.9 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. [online] Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/> Accessed: 21 August 2025.

14. Air Quality

Contents

14.	Air Quality	14-1
14.1	Introduction	14-1
14.2	Legislation, Policy and Guidance	14-1
14.3	Consultation and Engagement	14-2
14.4	Study Area	14-3
14.5	Baseline Conditions	14-4
	Data Sources	14-4
	Baseline	14-4
	Background Pollutant Concentrations	14-6
	Receptors	14-7
	Future Baseline	14-8
14.6	Design and Control Measures	14-9
	Design Measures	14-9
	Control and Management Measures	14-9
14.7	Potential for Significant Effects	14-10
14.8	Proposed Assessment Methodology	14-15
	Proposed Data Sources	14-15
	Proposed Assessment Methodology	14-15
14.9	Assumptions and limitations	14-18
14.10	Conclusion	14-18
	Table 14.1 Engagement with Stakeholders	14-2
	Table 14.2 2023 Annual Mean NO ₂ Concentrations at Diffusion Tube Monitoring Sites in Northamptonshire Section	14-6
	Table 14.3 Average 2023 Defra projected background concentrations (µg/m ³) within the Scoping Boundary for each Section	14-6
	Table 14.4 Average 2030 Defra projected background concentrations for Scoping Boundary	14-9
	Table 14.5 Impacts, receptors and the potential for significant effect	14-11
	Table 14.6 Criteria for quantifying the magnitude of impact (IAQM 2024)	14-18
	References	14-20

14. Air Quality

14.1 Introduction

- 14.1.1 This chapter presents how the air quality assessment will consider the potential likely significant effects on air quality sensitive receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed in the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 14.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 14.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project; and**
 - **Chapter 5 EIA Approach and Methodology.**
- 14.1.4 In addition, there may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 8 Ecology and Biodiversity** includes details of the potential for air quality effects on ecological receptors;
 - **Chapter 13 Traffic and Movement** includes details the potential change in traffic movements hence a difference in air quality pollutant emissions;
 - **Chapter 17 Health and Wellbeing** includes details the potential for air quality effects on health and wellbeing; and
 - **Chapter 18 Climate Change** includes details the potential effect on climate from changes in air quality.
- 14.1.5 This chapter is supported by **Figure 14.1 Air Quality Monitoring Locations**.

14.2 Legislation, Policy and Guidance

- 14.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on air quality associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context, Appendix 2A**

Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.

- 14.2.2
- Relevant air quality guidance and standards, along with other relevant material, that have informed the scoping process are listed below and will also be taken into account as part of the ES assessment:
- Environment Act 2021 (Ref 14.1);
 - Environmental Protection Act (EPA) 1990 (Ref 14.2);
 - Air Quality Standards Regulations 2010 (amended 2016) (Ref 14.3);
 - The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023) (Ref 14.4);
 - The Non-Road Mobile Machinery (Type-Approval and Emission of Gaseous and Particulate Pollutants) Regulations 2018 (Ref 14.5);
 - Institute of Air Quality Management (IAQM) Dust Guidance (Ref 14.6);
 - Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (Ref 14.7);
 - Environmental Protection UK(EPUK) and Institute of Air Quality Management (IAQM) Land-Use Planning & Development Control (Ref 14.8); and
 - European Council Directive 92/43/EEC (Habitats Directive) (The Council of the European Communities, 2013) (Ref 14.10).

14.3 Consultation and Engagement

- 14.3.1
- The ES will be informed by consultation and engagement with stakeholders, including local authorities along the Project. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 14.3.2
- In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 14.1**.

Table 14.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
The Forestry Commission	Identification of Ancient Semi Natural Woodlands (ASNW) and Plantations on Ancient Woodland (PAWS) they consider relevant to the Project.	Sensitive receptors relevant to the air quality assessment will be identified and considered for assessment using the air quality study area discussed in Section 14.4 and the methodology summarised in Section 14.8 .

14.4 Study Area

- 14.4.1 The key sources for consideration in the air quality assessment are dust and emissions from construction, traffic emissions during construction and generator use/non-road mobile machinery emissions during construction. No operational study area is identified as no significant operational effects are expected. Further detail on matters proposed to be scoped in and out of further assessment is provided in Section 14.7.
- 14.4.2 Construction routes, site entrances and the location of source activities are not currently defined, so will be considered as part of the assessment within the ES. Therefore, to establish the baseline for scoping, the Scoping Boundary has been used as the Study Area. This is based on professional judgement and knowledge of similar projects.
- 14.4.3 The ES will present refined Study Areas for dust and traffic emissions determined from construction traffic routes, predicted traffic numbers and locations where generators/Non-Road Mobile Machinery (NRMM) may be used, based on relevant guidance. The Study Areas in the ES would comprise:
- **Dust** - The air quality Study Area would be defined in the assessment by the screening criteria within the IAQM guidance (Ref 14.6):
 - Human receptors within the Order Limits plus a 250 m buffer, or within 50 m of the proposed routes used by construction traffic on the public highway up to 500 m from a construction site entrance; and
 - Any ecological designated site within the draft Order Limits plus a 50 m buffer, or within 50 m of the proposed routes used by construction traffic on the public highway up to 500 m from a construction site entrance.
 - **Traffic emissions** - The Study Area for construction phase road traffic impacts will be defined with reference to Environmental Protection UK/IAQM Planning Guidance (Ref 14.8). The Affected Road Network (ARN) would also be defined according to the predicted changes in traffic volumes with reference to the EPUK/IAQM guidance (Ref 14.8):
 - A change in Light Duty Vehicles (LDVs) of 100 Annual Average Daily Traffic (AADT) within or adjacent to an Air Quality Management Area (AQMA) or 500 AADT elsewhere, and/or
 - A change in Heavy Duty Vehicles (HDVs) >3.5 tonnes of 25 AADT within or adjacent to an AQMA or 100 AADT elsewhere.
 - **Generator Use/Non-Road Mobile Machinery (NRMM)** - no specific guidance exists on the definition of a Study Area for NRMM and generator emissions due to the large variation in potential effects from different types of sources. For the purposes of this assessment, a Study Area of up to a 100 m radius from the temporary construction areas/compounds is considered appropriate given the potential size and duration of the operations to be undertaken and the likely size of plant required.
- 14.4.4 Sensitive receptors would be chosen at worst case locations depending on the relevant source and following best practice guidance from the EPUK/IAQM guidance (Ref 14.8 and Ref 14.2). It is noted that the EPUK/IAQM guidance is under review (Ref 14.9) and it is being updated. Any updates to the guidance will be reflected in

the ES once published. Consultation will be undertaken with relevant consultation bodies in an effort to agree the sensitive human and ecological receptors.

14.5 Baseline Conditions

Data Sources

14.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:

- Department for Environment, Food and Rural Affairs (Defra) Background Air Quality (Ref 14.11);
- Defra AQMA dataset (Ref 14.12);
- Local Air Quality Management Reports (various Ref 14.13 to Ref 14.17); and
- Environment Agency (EA) register on industrial installations (Ref 14.18); and
- Air Pollution Information System (APIS) (Ref 14.19).

Baseline

Industrial Processes

14.5.2 Industrial air pollution sources are regulated through a system of operating permits or authorisations, requiring stringent emission limits to be met and ensuring that any releases to the environment are minimised or rendered harmless. Regulated (or prescribed) industrial processes are classified as Part A or Part B processes, regulated through the Environmental Permitting regime. The larger more-polluting processes (Part A) are regulated by the Environment Agency, and the smaller less-polluting ones (Part B) by the local authorities. Local authorities tend also to regulate only for emissions to air, whereas the Environment Agency (Ref 14.18) regulates emissions to air, water and land.

14.5.3 The EA register (Ref 14.18) shows there are no Part A processes, with any activities that release emissions to the air within the Scoping Boundary. The closest industrial site with release of emissions to the air is Spalding Energy Expansion Limited (permission number EPR/AP3732KC), located approximately 600 m south of the Scoping Boundary near Spalding, South Holland.

14.5.4 The contribution of industrial processes to local air quality is included in the background concentrations presented in the Background Pollutant Concentrations section below, based on Defra's modelled background pollution maps (Ref 14.11). These maps incorporate emissions from a range of sectors, including industrial sources. However, it is acknowledged that industrial processes, particularly those that are new, or atypical, may not be fully represented in the background data.

Road Traffic

14.5.5 In recent decades, atmospheric emissions from transport on a national basis have grown to match or exceed other sources in respect of many pollutants, particularly in urban areas. The main sources of traffic emissions surrounding the Scoping Boundary are the A15, A1, A606, A607, A427, A6, A47, A13, A45, A43, A4500 and

the A14. Although the total length of these roads within the Scoping Boundary is relatively short, vehicle emissions will still have a contribution to air pollution both within and around the Study Area.

Local Air Quality

- 14.5.6 The Environment Act 2021 (Ref 14.1Ref 14.18) requires local authorities to report to Defra on local air quality and local air quality management within their local authority area. This also requires an assessment of compliance with the relevant limit or objective values.
- 14.5.7 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the Sections along the Scoping Boundary in the respective sections below.
- 14.5.8 Where compliance objectives are not predicted to be met, local authorities must declare the area as an AQMA. In addition, local authorities are required to produce an Air Quality Action Plan (AQAP) which includes measures to improve air quality in the AQMA. No AQMAs have been identified within the Scoping Boundary.

Section 1: South Holland

- 14.5.9 South Holland District Council operates automatic and diffusion tube monitoring sites (Ref 14.13). However, none of these sites are located within the Scoping Boundary.

Section 2: South Kesteven

- 14.5.10 South Kesteven District Council operates automatic and diffusion tube monitoring sites (Ref 14.14), however, none of these sites are located within the Scoping Boundary.

Section 3: Melton

- 14.5.11 Melton Borough Council operates automatic and diffusion tube monitoring sites (Ref 14.15), however, none of these sites are located within the Scoping Boundary.

Section 4: Harborough

- 14.5.12 Harborough District Council operates automatic and diffusion tube monitoring sites (Ref 14.16) however, none of these sites are located within the Scoping Boundary.

Section 5: Northamptonshire

- 14.5.13 North Northamptonshire Council does not have any automatic monitoring sites (Ref 14.17), but it undertakes diffusion tube monitoring of nitrogen dioxide (NO₂). There are six diffusion tube monitoring sites in North Northamptonshire Council in the Scoping Boundary. The diffusion tube monitoring sites in Northamptonshire (Section 5) are operated by Wellingborough Town Council at the locations shown on **Figure 14.1. Table 14.2** presents the results of the diffusion tube monitoring sites in 2023 (the only year for which North Northamptonshire Council has undertaken monitoring to date).

Table 14.2 2023 Annual Mean NO₂ Concentrations at Diffusion Tube Monitoring Sites in Northamptonshire Section

Monitoring Sites ID	X	Y	Type	NO ₂ (µg/m ³)
W12	485058	264690	Suburban	10.3
W13	485419	262904	Suburban	8.9
W21	486999	268577	Kerbside	15.0
W22	486508	267322	Roadside	13.2
W23	486800	266864	Roadside	15.3
W24	487872	269656	Suburban	17.8

Background Pollutant Concentrations

- 14.5.14 Background concentrations refer to the existing levels of pollution in the atmosphere, produced by a variety of stationary and non-stationary sources, such as roads and - industrial processes. The Defra website (Ref 14.11) includes estimated background pollutant concentrations for nitrogen oxides (NO_x), NO₂, particulate matter (PM₁₀ and PM_{2.5}) for each 1 km by 1 km Ordnance Survey (OS) Grid square in the UK.
- 14.5.15 The 2023 Defra background concentrations of NO₂ are found to be well below the Air Quality Objective (AQO) within the Scoping Boundary. The Defra website includes estimated background pollutant concentrations for NO₂, PM₁₀ and PM_{2.5} for more recent years (2024), however, the year 2023 is used as the baseline to align with the 2023 local monitoring data. The highest background NO₂ concentration is 9.7 µg/m³ in Section 5, well below the AQO of 40 µg/m³. The lowest NO₂ background concentration is 5.0 µg/m³ in Section 3.
- 14.5.16 The background concentrations of NO_x (relevant to ecological receptors) are low within the Scoping Boundary, and there are no exceedances of the AQO for the protection of vegetation of 30 µg/m³. The highest background concentration of NO_x is 12.7 µg/m³ in Section 5, the lowest concentration is 6.3 µg/m³, in Section 3.
- 14.5.17 The background concentrations of PM₁₀ are not exceeding the annual mean AQO (40 µg/m³). The highest concentration within the Scoping Boundary is 15.8 µg/m³ in Section 2 and the lowest is 10.2 µg/m³ in Section 4. Background concentrations of PM_{2.5} are also not exceeding the relevant AQO, in this case 10 µg/m³, where the highest concentration within the Scoping Boundary is 8.7 µg/m³ in Section 5 and the lowest concentration is 5.8 µg/m³ in Section 2.
- 14.5.18 The 2023 background pollutant concentrations within the Scoping Boundary for each Section are presented in **Table 14.3**.

Table 14.3 Average 2023 Defra projected background concentrations (µg/m³) within the Scoping Boundary for each Section

Sections	2023			
	NO ₂	NO _x	PM ₁₀	PM _{2.5}
South Holland	5.9	10.1	14.4	6.4

Sections	2023			
	NO ₂	NO _x	PM ₁₀	PM _{2.5}
South Kesteven	5.6	8.5	15.8	7.4
Melton	5.8	8.9	13.7	6.8
Harborough	5.6	11.5	12.9	8.0
Northamptonshire	7.9	11.5	14.6	7.8

Note: The Scoping Boundary covers multiple OS grid squares. Therefore, the result presented above is the average taken from the grid square for each Section in 2023 as this is consistent with the latest year of local authority monitoring.

Receptors

14.5.19 The presence of human and ecological receptors has been identified for the baseline assessment within the Scoping Boundary.

Human Receptors

14.5.20 Sensitive receptors include:

- residential receptors;
- commercial receptors, e.g., places of work;
- community receptors, e.g., community centres or parks; and
- ecological receptors (designated and non-designated sites).

14.5.21 Receptors that merit particular attention due to the relative vulnerability of people who may occupy them include:

- areas where people would expect a high level of personal amenity¹;
- medical facilities;
- residential care homes or sheltered accommodation; and
- schools, nurseries, and other places of education where children or young people are present.

14.5.22 Relevant receptors that may be affected by dust (Ref 14.1) during demolition/ construction have also been considered.

14.5.23 The Project is located to avoid large residential and urban areas, as far as practicable, and therefore avoids likely areas of poor air quality. Full details of human receptors will be provided in the ES once the Study Areas have been refined.

14.5.24 The main communities identified within the Scoping Boundary include settlements at Corby Glen, Haconby, Swayfield, Garthorpe, Ab Kettleby, Asforby, Frisby on the Werake, Twyford, Lowesby, Cold Newton, Marefield, Tilton on the Hill, Skeffington, Tugby, Rolleston, Noseley, Geabdy, Glosston, Stonton Wyville, Glooston, Cranoe,

¹ indicative examples include dwellings, museums and other culturally important collections, medium and long term car parks and car showrooms.

Welham, Weston by Wekkand, Sutton Basset, Great Bowden, Dingley, Braybrooke, Harrington, Orton, Loddington, Great Cransley, Mawsley, Broughton, Orilingbury, Little Harrowden, Hardwick, Earls Barton and Grendon.

Ecological Receptors

- 14.5.25 There are both designated and non-designated ecological receptors within the Scoping Boundary. These include one Ancient Tree (AT), 16 Veteran Trees (VT), 30 Ancient Woodlands (AW), seven Sites of Special Scientific Interest (SSSI), one Special Protection Area (SPA) and one Ramsar site. The internationally and nationally designated sites (SSSIs, and SPA and Ramsar) are listed below:
- SPA/Ramsar - Upper Nene Valley Gravel Pits;
 - SSSI Badsaddle, Withmale Park and Bush Walk Woods;
 - SSSI Frisby Marsh;
 - SSSI Holwell Mouth;
 - SSSI Leighfield Forest;
 - SSSI Great Bowden Borrowpit;
 - SSSI Upper Nene Valley Gravel Pits; and
 - SSSI Birch Spinney and Mawsley Marsh.

Future Baseline

- 14.5.26 The future baseline relates to known or anticipated changes to the current baseline in the future which are predicted to occur in the absence of the Project.
- 14.5.27 The air quality chapter within the ES will consider changes which may affect the future air quality environment in the absence of the Project. The future baseline will also take into account any committed developments that are likely to be present in the future baseline. At the time of writing, the opening year of the Project is estimated as 2034. For the air quality assessment, 2030 will be used as the future baseline year as it presents a slightly conservative estimate for the future year compared to 2034, as background concentrations would be expected to reduce with technology improvements and take up of electric vehicles.
- 14.5.28 The Defra background air pollutant concentrations are currently available using 2021 base year for projections, up to 2030 (Ref 14.11). These are predicted to improve over time due to reductions in emissions resulting from:
- reductions in transport emissions resulting from improvements in fuel efficiency and uptake in low emission vehicles;
 - general reduction in the use of fossil fuels;
 - reductions in pollutant emissions from agricultural sources due to improvements in management envisaged in the 2019 Clean Air Strategy (Ref 14.20); and
 - improved emission standards for NRMM and static generators.
- 14.5.29 The predicted concentrations for the year 2030, as shown in **Table 14.4**, show reductions in both NO₂ and NO_x levels within the Scoping Boundary compared to the 2023 baseline year, shown in **Table 14.3**.

Table 14.4 Average 2030 Defra projected background concentrations for Scoping Boundary

Sections	2030			
	NO ₂	NO _x	PM ₁₀	PM _{2.5}
South Holland	6.6	8.3	13.8	5.9
South Kesteven	5.6	7.0	15.2	7.0
Melton	5.8	7.3	13.1	6.3
Harborough	7.4	9.5	12.4	7.4
Northamptonshire	7.3	9.4	13.9	7.2

Note: The Scoping Boundary covers multiple OS grid squares. Therefore, the result presented above is the average taken from the grid square for each Section in 2023 as this is consistent with the latest year of local authority monitoring.

- 14.5.30 The air quality assessment for the ES will also consider the relevant rate of nitrogen deposition, ammonia concentrations and critical load ranges for the identified sensitive ecological receptors, based on the data from Air Pollution Information System (APIS) (Ref 14.19).

14.6 Design and Control Measures

Design Measures

- 14.6.1 The Project has been designed to avoid as far as practicable sensitive air quality features such as built-up residential areas and ecologically designated sites, as described in **Chapter 3 Main Alternatives Considered** and **Chapter 4, Description of the Project**. Further embedded measures would be developed as the Project design evolves.

Control and Management Measures

- 14.6.2 A range of standard measures for the Project would be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice is provided in **Appendix 4A: Initial Outline Code of Construction Practice (CoCP)**. Measures relevant to the control and management of impacts that could affect air quality include but are not limited to (refer to **Appendix 4A** for the full description of each measure):
- GG12: on locating potential nuisance activities away from sensitive receptors.
 - GG14: on maintenance and operation of plant and vehicles.
 - GG15: on materials and equipment handling.
 - GG20: on earthworks and soil stockpiling.
 - GG21/AQ06: on prohibiting burning of materials.
 - AQ01 to AQ05: requiring the preparation of a Dust Management Plan and measures to reduce and manage dust.

- TT01: on construction traffic management.

14.6.3 All of these standard measures would reduce impacts from air quality on identified receptors.

14.7 Potential for Significant Effects

- 14.7.1 The air quality assessment in the ES will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the air quality ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 14.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 14.6.
- 14.7.3 **Table 14.5** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to potentially significant effects on receptors identified in the Study Areas, these are then scoped into the assessment. Impact pathways that are unlikely to give rise to significant effects on receptors identified in the Study Areas are proposed to be scoped out of the assessment.
- 14.7.4 The likely effects of the Project have been split into:
- Construction – dust emissions, pollutant emissions from generators/NRMM, and construction phase traffic; and
 - Operation and maintenance – Pollutant emissions from traffic and activities associated with operation and maintenance.

Table 14.5 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction dust	Dust impacts from construction activities such as earthworks has the potential to impact local air quality	Ecological and human receptors	Yes - potential for significant effects at ecological and human receptors, from deterioration in local air quality (PM ₁₀ and PM _{2.5}), caused by dust, due to proximity of proposed construction activities to sensitive receptors.	Scoped in
	Generators and NRMM	Use of generators and NRMM can have the potential to temporarily deteriorate local air quality during this phase	Ecological and human receptors	Yes - potential for temporary deterioration in local air quality (NO ₂ , NO _x , PM ₁₀ and PM _{2.5}) at local human and ecological receptors, when the use of NRMM including generators occurs.	Scoped in
	Construction traffic	Increase in traffic from construction activity and the increase of vehicle movement in the area during this	Ecological and human receptors	Yes - potential for deterioration in local air quality (NO ₂ , NO _x , PM ₁₀ and PM _{2.5}) at local human and ecological receptors.	Scoped in (if the EPUK/IAQM indicative criteria (Ref 14.3) are met or exceeded)

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		phase may impact receptors		This will be scoped out if the EPUK/IAQM indicative criteria (Ref 14.8) are not met, as there would be no potential for significant effects. It will be scoped in if the EPUK/IAQM indicative criteria (Ref 14.8) are met or exceeded. The assessment of emissions from diverted traffic and road closures would also be scoped out if the EPUK/IAQM indicative criteria (Ref 14.3) are not met, as there would be no potential for significant effects. It will be scoped in if the EPUK/IAQM indicative criteria (Ref 14.3) are met or exceeded.	

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Dust, vehicle emissions, generators and NRMM	Pollutant emissions from traffic and activities associated with operation and maintenance may impact receptors.	Ecological and human receptors	No - significant effects are not likely to occur. The only vehicle trips associated with the operational phase will be for maintenance and these would be minimal across an annual period. The predicted volumes of traffic would not meet the EPUK/IAQM indicative criteria (Ref 14.8). Therefore, vehicle emissions during operation and maintenance are proposed to be scoped out. No significant effects are likely to occur from dust sources, generators and NRMM, due to the infrequent, temporary and transient nature of any maintenance	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				works and incorporation of best practice measures (akin to those for construction as outlined within Appendix 4A Initial Outline CoCP) and NRMM standards.	
				Therefore, no significant operation or maintenance effects are predicted.	

14.8 Proposed Assessment Methodology

Proposed Data Sources

- 14.8.1 In addition to the data sources listed in Section 14.5, the following data sources are proposed to be used to inform the ES air quality assessment:
- AddressBase dataset points;
 - construction programmes, locations, and methodologies;
 - details of human receptors;
 - APIS database and information on pollutants and their impacts on habitats and species;
 - project design information ; and
 - construction traffic data developed for the Project as a result of the iterative design process.

Proposed Assessment Methodology

- 14.8.2 The following section summarises the methodology proposed to be used for the air quality ES assessment, which differs from the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology** as more suitable industry specific methods are available. For example, following IAQM guidance (Ref 14.9) for dust assessment, risk would be identified and mitigation recommended with the conclusion of a dust assessment assuming that mitigation is suitably implemented and embedded. For traffic, the EPUK/IAQM guidance (Ref 14.8) would be followed as this represents industry best practice.

Construction Dust

- 14.8.3 The construction dust assessment will be undertaken following the risk-based approach outlined in the IAQM guidance (Ref 14.1) for the assessment of dust from demolition and construction activities.
- 14.8.4 The IAQM guidance (Ref 14.1) considers the potential for dust emissions from the following activities:
- demolition;
 - earthworks i.e. soil stripping, ground levelling, excavation and land;
 - construction; and
 - trackout i.e. incidental movement of dust and dirt from the construction or demolition site onto the public road network.
- 14.8.5 For each of the above activities, the guidance considers three separate dust effects:
- annoyance due to dust soiling;
 - harm to ecological receptors; and
 - the risk of health effects due to a significant increase in PM₁₀ exposure.

- 14.8.6 The methodology takes into account the scale at which the above effects are likely to be generated (classed as small, medium or large). The distance of the closest receptors and background PM₁₀ concentrations are also considered in order to determine the sensitivity of the surrounding area.
- 14.8.7 An overall site risk is then derived and suitable mitigation measures identified. Receptors can be either human or ecological and are chosen based on their sensitivity to dust soiling and PM₁₀ exposure. A detailed, individual construction dust risk assessment for each of the five Sections would also be provided for the ES.

Construction Traffic

- 14.8.8 Predicted traffic flows using the public highway as a result of construction of the Project could potentially meet the assessment criteria from the EPUK/IAQM guidance (Ref 14.8). It is noted that the EPUK/IAQM guidance (Ref 14.8) is under review and it is being updated. This updated guidance will have a focus on emissions reduction, with consideration of screening thresholds, and a method for defining impact descriptors. These updates are likely to be published in time to be reflected in the ES, If they are not published in time for the ES, the current EPUK/IAQM guidance (Ref 14.8) will be used.
- 14.8.9 Where traffic flows meet the criteria for assessment, detailed dispersion modelling would be undertaken on the relevant road links to assess the changes in concentrations of air pollutants. The screening criteria are:
- A change in LDV flows of more than 100 AADT within or adjacent to an AQMA or more than 500 AADT elsewhere.
 - A change in HDV (>3.5 tonnes) flows of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere.
- 14.8.10 The above screening criteria would be used to identify the ARN which would define the extent of highway network to be included in the assessment. Road links that do not meet the criteria would not be subject to assessment. Where applicable, diverted traffic and road closures would also be considered as part of the assessment if these are reflected in the highway network extent.
- 14.8.11 Sensitive receptors within 200 m of the ARN would be considered. Beyond this distance concentrations are expected to have dispersed to concentrations equivalent to background levels and would not be assessed.
- 14.8.12 If the screening criteria is not met, an assessment of construction traffic emissions is proposed to be scoped out as detailed in **Table 14.5** above. If the screening criteria is met or exceeded, then calculation of emissions from construction traffic would be undertaken using the latest available version of the Defra Emissions Factor Toolkit (EFT) (currently v13.1) (Ref 14.21). Dispersion modelling would be undertaken using the Air Dispersion Modelling System-Roads (ADMS) dispersion modelling program.
- 14.8.13 The conversion of road NO_x to NO₂ would be undertaken using the latest version of the Defra Local Air Quality Management NO_x to NO₂ Calculator (currently v9.1) (Ref 14.22).

Generators / NRMM

- 14.8.14 No specific guidance exists on the definition of a Study Area for NRMM and generator emissions due to the large variation in potential effects from different types of sources.
- 14.8.15 For the purposes of the ES assessment, a Study Area of up to a 100 m radius from the temporary construction areas/compounds is considered appropriate given the potential size and duration of the operations to be undertaken and the likely size of plant required. This Study Area also follows precedent set on other National Grid projects such as the Bramford to Twinstead Reinforcement project (National Grid, 2023) and Norwich to Tilbury (National Grid, 2025). Beyond this distance it is considered that the effect of any emissions on local air quality would be very limited due to dispersion and influence of other pollution sources.
- 14.8.16 A conservative assessment of emissions taking into consideration the plant operating times and likely pollutant dispersion would be undertaken to determine the impact of generators/NRMM on sensitive receptors within a 100 m radius from the relevant construction areas/compounds. Where a potential impact is identified additional mitigation will be recommended to minimise the effect from NRMM.

Sensitivity

- 14.8.17 Sensitive receptors include locations where people are likely to be exposed to air pollutants for an averaging time commensurate with the pollutant objective or limit value being assessed against. Sensitive receptors are identified in Section 14.5.
- 14.8.18 While the legal limit and objective values for air pollutants are established in law, it is widely recognised that the air pollutants identified in the Air Quality Standards Regulations 2010 (amended in 2016) (Ref 14.3) are considered to be non-threshold pollutants (i.e., there is no safe exposure limit below which there are no health impacts). Therefore, all receptors that are exposed to air pollutants for a time period relevant to the limit or objective value for a given pollutant are considered to be highly sensitive receptors.
- 14.8.19 The criteria used to determine the value and sensitivity of the receiving environment to air quality effects can be found in Tables 4 and 5 of Section 7 of the Dust Risk Assessment Guidance (Ref 14.6). These tables take account of the number of receptors within a given distance of construction works, the sensitivity of receptors and the background pollutant concentration through a semi-quantitative method to establish the sensitivity according to dust soiling impacts, human health impacts and ecological impacts.

Magnitude

- 14.8.20 The terminology for describing the magnitude of impact for construction traffic emissions would be assigned based on the criteria from EPUK/IAQM guidance (Ref 14.8) which is presented in
- 14.8.21 **Table 14.6.**

Table 14.6 Criteria for quantifying the magnitude of impact (IAQM 2024)

Long-term Average Concentration at Receptor in Assessment Year	% Change in Concentration Relative to the Air Quality Assessment Level (AQAL)			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Significance of effects

- 14.8.22
- The impact descriptors at each of the assessed receptors would be used as a starting point to make a judgement on the overall significance of effect of the Project, however other influences would also be accounted for, such as:

 - the existing future air quality in the absence of the Project;
 - the extent of current and future population exposure to the impacts; and
 - the influence and validity of any assumptions adopted when undertaking the prediction of impacts.
- 14.8.23
- Professional judgement would be used to determine the overall significance of effects of the Project, however, in circumstances where the Project can be judged in isolation, the guidance suggests that a ‘moderate’ or ‘substantial’ impact is likely to give rise to a significant effect and a ‘negligible’ or ‘minor’ is not likely to result in a significant effect.
- 14.8.24
- The air quality results for the ecological receptors will be presented in the air quality chapter of the ES. The significance of any air quality impacts on ecological receptors would require the evaluation of impacts by an ecologist, the conclusions of which will be reported in the ecology chapter of the ES.

14.9 Assumptions and limitations

- 14.9.1
- This EIA Scoping Report has been collated based on a range of publicly available data and information only. It is assumed that the data collated is accurate. The data will be supplemented with additional data as part of the EIA process.
- 14.9.2
- In the absence of data, a precautionary approach has been taken and professional judgement, based on experience of similar linear schemes, has been used where required to inform the scope of the assessment.

14.10 Conclusion

- 14.10.1
- This Scoping Report chapter has outlined the proposed scope for further assessment for the Project in relation to the air quality ES chapter.

- 14.10.2 The data sources that will be used to define the current and future baselines have been presented, along with the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors.
- 14.10.3 The assessment of the risk of impacts from construction dust has been scoped into the assessment on the basis that there is potential for significant effects on receptors in close proximity to the Project. This will be completed using the IAQM guidance (Ref 14.6) on the assessment of dust from demolition and construction.
- 14.10.4 If the EPUK/IAQM guidance (Ref 14.8) screening criteria are met or exceeded for construction vehicles, then an assessment of the effects of the emissions of construction traffic using the public highway will be scoped into the assessment. The same approach is proposed for emissions from diverted traffic and road closures.
- 14.10.5 The assessment of potential emissions from generators and NRMM during construction has been scoped into the ES on the basis that there is a potential for localised air quality effects associated with NRMM use.
- 14.10.6 In the operational phase, it is predicted that there will be infrequent and temporary dust generating activities or generator/NRMM use, such as maintenance and repair works or inspection and monitoring activities, which will not lead to significant effects. Therefore, dust generation and generator/NRMM use has been scoped out for operation and maintenance.
- 14.10.7 During the operational phase vehicle numbers associated with the maintenance of the project are expected to be small and as such operational effects are scoped out of the assessment.
- 14.10.8 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 14.1 Environment Act 2021 [online]. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted> [Accessed 7 July 2025].
- Ref 14.2 Environment Protection Act 1990 [online]. Available at: Environmental Protection Act 1990 [Accessed 7 July 2025].
- Ref 14.3 Air Quality Standards Regulations 2010 (amended in 2016) [online]. Available at: <https://www.legislation.gov.uk/uksi/2010/1001/contents> [Accessed 7 July 2025].
- Ref 14.4 Department of Environment Food and Rural Affairs (Defra) (2023) The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 [online] Available at: <https://www.legislation.gov.uk/uksi/2023/96/contents/made> [Accessed 7 July 2025].
- Ref 14.5 Department of Environment Food and Rural Affairs (Defra) (2018) The Non-Road Mobile Machinery (Type-Approval and Emission of Gaseous and Particulate Pollutants) Regulations 2018 [online] Available at: <https://www.legislation.gov.uk/uksi/2018/764> [Accessed 7 July 2025]
- Ref 14.6 Institute of Air Quality Management (2024). Guidance on the Assessment of Dust from Demolition and Construction [online]. Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf> [Accessed 7 July 2025].
- Ref 14.7 Institute of Air Quality Management (IAQM) (2018) Guidance on Monitoring in the Vicinity of Demolition and Construction Sites [online] Available at: https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf. [Accessed 7 July 2025].
- Ref 14.8 Environmental Protection UK and Institute of Air Quality Dust Management (2017). Land Use Planning & Development Control: Planning for Air Quality [online]. Available at: <https://www.iaqm.co.uk/text/guidance/air-quality-planning- guidance.pdf> [Accessed 7 July 2025]
- Ref 14.9 Environmental Protection UK and Institute of Air Quality Dust Management Update. Land Use Planning & Development Control: Planning for Air Quality [online]. Available at: https://iaqm.co.uk/wp-content/uploads/2025/02/IAQM_Briefing_Land-use_Guidance_25.pdf. [Accessed 7 July 2025]
- Ref 14.10 The Council of the European Communities (2013) European Council Directive 92/43/EEC(Habitats Directive).
- Ref 14.11 Department for Environment, Food and Rural Affairs (2024). Background Mapping data for local authorities - 2021 [online]. Available at: <https://uk-air.defra.gov.uk/data/iaqm-background-maps?year=2021> [Accessed 7 July 2025].
- Ref 14.12 Department for Environment, Food and Rural Affairs (2024). AQMAs Interactive Map. Retrieved from UK Air Information Resources [online]. Available at: <https://uk-air.defra.gov.uk/aqma/> [Accessed 7 July 2025].

- Ref 14.13 South Holland District Council (2024). South Holland District Council Annual Progress Report 2023 [online]. Available at: <https://www.sholland.gov.uk/article/25397/Air-Quality-Monitoring-Annual-Status-Reports> [Accessed 7 July 2025].
- Ref 14.14 South Kesteven District Council (2024). South Kesteven District Council Annual Progress Report 2023 [online]. Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2025/02/South-Kesteven-ASR-2024.pdf> [Accessed 7 July 2025].
- Ref 14.15 Melton Borough Council (2023). Melton Borough Council Annual Progress Report 2022 [online]. Available at: <https://www.melton.gov.uk/media/gxonbljy/2023-air-quality-annual-status-report-accessible-template.pdf> [Accessed 7 July 2025].
- Ref 14.16 Harborough District Council (2024). Harborough District Council Annual Progress Report 2023 [online]. Available at: https://www.harborough.gov.uk/downloads/download/30/air_quality_review_and_assessment_reports [Accessed 7 July 2025].
- Ref 14.17 North Northamptonshire Council (2024). North Northamptonshire Council Annual Progress Report 2023 [online]. Available at: <https://www.northnorthants.gov.uk/environment/air-quality> [Accessed 7 July 2025].
- Ref 14.18 Environment Agency Industrial Processes (2025) [online]. Available at: <https://environment.data.gov.uk/public-register/view/search-industrial-installations> [Accessed July 2025].
- Ref 14.19 Air Pollution Information System (2025) Critical level (NO_x and NH₃) and load (nitrogen deposition rates) data for designated ecological sites [online]. Available at: <https://www.apis.ac.uk/> [Accessed 7 July 2025].
- Ref 14.20 Clean Air Strategy 2019, sites [online]. Available at: Clean Air Strategy 2019 - GOV.UK [Accessed 7 July 2025].
- Ref 14.21 Department of Environment Food and Rural Affairs (Defra), Emissions Factors Toolkit (EFT) v13.1 sites [online]. Available at: <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/emissions-factors-toolkit/> [Accessed 7 July 2025].
- Ref 14.22 Department of Environment Food and Rural (Defra) Local Air Quality Management NO_x to NO₂ Calculator (currently v9.1). sites [online]. Available at: <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/nox-to-no2-calculator/> [Accessed 7 July 2025].

15. Noise and Vibration

Contents

15.	Noise and Vibration	15-1
15.1	Introduction	15-1
15.2	Legislation, Policy and Guidance	15-2
15.3	Consultation and Engagement	15-2
15.4	Study Area	15-3
15.5	Baseline Conditions	15-3
	Data Sources	15-3
	Baseline	15-4
	Future Baseline	15-6
15.6	Design and Control Measures	15-7
	Design Measures	15-7
	Control and Management Measures	15-7
15.7	Potential for Significant Effects	15-8
15.8	Proposed Assessment Methodology	15-13
	Proposed Data Sources	15-13
	Proposed Assessment Methodology	15-13
15.9	Assumptions and limitations	15-20
15.10	Conclusion	15-21

Table 15.1	Engagement with Stakeholders	15-2
Table 15.2	Impacts, receptors and the potential for significant effect	15-9
Table 15.3	BS5228 Part 1 – ABC method for determining the threshold of potential significant construction effects at dwellings	15-14
Table 15.4	Construction noise LOAEL and SOAEL	15-16
Table 15.5	Magnitude of impact from construction traffic noise at residential receptors	15-16
Table 15.6	Construction vibration effect levels at residential receptors	15-17
Table 15.7	Vibration impact criteria for buildings (conservative criteria below which there is no risk of cosmetic damage)	15-18
Table 15.8	Magnitude of impact from operational substation noise at residential receptors along with LOAEL and SOAEL thresholds	15-19
Table 15.9	Noise impact screening criteria at non-residential receptors (construction and operation)	15-20

References	15-22
------------	-------

15. Noise and Vibration

15.1 Introduction

- 15.1.1 This chapter presents how the Noise and Vibration assessment will consider the potential likely significant effects on Noise and/or Vibration sensitive receptors (NSRs) that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4 Description of the Project**). The NSR receptor types are listed in **Section 15.8**. This chapter describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4 Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 15.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**, and the Noise and Vibration Study areas are illustrated on **Figure 15.1 Noise and vibration Study Areas**.
- 15.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 15.1.4 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 8 Ecology and Biodiversity** – considers noise impacts on ecology receptors;
 - **Chapter 9 Historic Environment** – considers noise impacts on heritage assets, including vibration;
 - **Chapter 13 Traffic and Transport** – considers impacts of construction traffic;
 - **Chapter 16 Socio-economics, Recreation and Tourism** – considers impacts on communities; and
 - **Chapter 17 Health and Wellbeing** – considers noise amenity impacts on the population.
- 15.1.5 This chapter primarily considers human receptors. Ecological and heritage assets are considered in other chapters as listed above.
- 15.1.6 This chapter is supported by the following figures and appendices:
- **Figure 15.1 Noise and Vibration Study Areas;** and

- **Figure 15.2 Noise and Vibration Baseline.**

15.2 Legislation, Policy and Guidance

- 15.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on Noise and Vibration associated with the construction, operation and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context, Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**
- 15.2.2 Relevant guidance and standards that have informed the scoping process are listed below:
- Annex E of British Standard 5228-1 (Ref 15.1);
 - Annex B of British Standard 5228-2 (Ref 15.2);
 - Design Manual for Roads and Bridges LA 111 (Ref 15.4);
 - British Standard 7385-2 (Ref 15.5);
 - British Standard 4142 (Ref 15.6); and
 - British Standard 7445-1 (Ref 15.7).

15.3 Consultation and Engagement

- 15.3.1 The ES will be informed by consultation and engagement with stakeholders, including local planning authorities within the Study Areas i.e. the environmental health officers at Lincolnshire County Council, South Holland District Council, South Kesteven District Council, Leicestershire County Council, Melton District Council, Harborough District Council, North Northamptonshire Council and West Northamptonshire Council. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 15.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 15.1.**

Table 15.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Lincolnshire County Council	Concern about amenity.	Potential impacts during construction and operation are described in Section 15.7. Section 15.8 describes the noise and vibration assessment proposed and the findings will be reported in the ES.
South Kesteven District Council	Concern regarding residential amenity, including noise from	Potential impacts during the construction and operation phases have been considered in Section 15.7. Section 15.8 describes the

Stakeholder	Summary of response	Consideration in the Scoping Report
	construction and operational activities.	noise and vibration assessment proposed and the findings will be reported in the ES.
South Holland District Council	Highlighting local policy and agreeing that noise and vibration should be assessed, and requesting a detailed construction and environmental management plan.	Potential impacts during the construction and operation phases have been considered in Section 15.7. Section 15.8 describes the noise and vibration assessment proposed and the findings will be reported in the ES. Chapter 2 Regulatory and Planning Policy Context and associated appendices list the policy considered in this report, which will also be considered in the ES. Appendix 4A Initial Outline Code of Construction Practice described measures proposed to manage environmental impacts during construction, this will be updated and submitted with the application for development consent.

15.4 Study Area

- 15.4.1 The Study Areas adopted for the purposes of this Scoping Report are illustrated in **Figure 15.1 Noise and Vibration Study Area**. These are defined as distance buffers from the Scoping Boundary and encompass the possible locations of proposed infrastructure and construction working areas. Once the Order Limits have been defined, the Study Areas for the purposes of the ES assessment will be refined as described in the following paragraphs.
- 15.4.2 For construction site noise the Study Area will be 300m from potential locations of noisy construction works, including the use of handheld, mobile or static plant.
- 15.4.3 For construction traffic noise the Study Area will be 50m around proposed haulage routes i.e. public roads with the potential for an increase in basic noise level of 1 dB(A) or more as a result of the addition of construction traffic to existing traffic levels.
- 15.4.4 For construction vibration, the Study Area will be 100m from vibratory construction works.
- 15.4.5 For operational noise, a Study Area of 500m from substations and 200m from overhead lines, is considered sufficient to capture operational noise impacts. Sound levels are expected to be below those likely to cause a risk of a significant effect at, or beyond, these distances.

15.5 Baseline Conditions

Data Sources

- 15.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:

- Ordnance Survey (OS) AddressBase® Plus data, as presented in **Figure 15.1 Noise and Vibration Study Areas**;
- other potentially sensitive receptors (e.g. ecological or heritage) informed by relevant topic specialists;
- Department for Environment, Food and Rural Affairs (Defra) Strategic Noise Mapping Round¹ 4 2022, presented as noise contours within **Figure 15.2 Noise and Vibration Baseline**, represents the daytime ambient noise levels from road and rail sources;
- Department for Environment, Food and Rural Affairs (Defra) Noise Action Planning Important Areas Round 3 2019 England - Noise Important Areas (NIAs), presented as polygons within **Figure 15.2 Noise and Vibration Baseline**; and
- current OS mapping.

15.5.2 Noise surveys are planned to be undertaken to supplement the above data sources for the EIA.

Baseline

15.5.3 The emerging preferred corridor on which the Scoping Boundary is based has been designed as far as reasonably practicable to avoid NSRs. This includes avoiding settlements and residential areas, passing predominantly through rural areas, with the majority of NSRs being isolated dwellings or part of small settlements. **Figure 15.1 Noise and Vibration Study Areas** also shows NSR locations, including residential and noise sensitive non-residential receptors.

15.5.4 The noise environment is expected to vary across the Study Areas depending on the nature of the surroundings. For example, close to noise sources, such as roads and railways and in built-up areas, ambient noise levels are expected to be higher. Further away from road and rail sources and in rural areas, ambient and background noise levels would be expected to be lower. Daytime noise level contours from existing road and railway sources are presented in **Figure 15.2 Noise and Vibration Baseline**, showing how existing noise levels vary across the Study Area. These noise level contours are from the Defra Strategic Noise Mapping Round 4 2022 which are the latest available at the time of writing (the Defra Strategic Noise Mapping is updated every five years). Areas outside of the contours are generally considered to have low ambient and background noise levels. Areas where road and rail contours overlap are considered to experience noise effects from both sources.

15.5.5 The Defra Noise Action Planning Noise Important Areas (NIAs) Round 3 2019 highlight the residential areas experiencing the highest one percent of noise levels from road and rail sources in England and are shown in **Figure 15.2 Noise and Vibration Baseline**. NIAs have been determined via the previous round of the strategic noise maps (Defra Strategic Noise Mapping Round 3 2017). NIAs are not yet available for the Defra Strategic Noise Mapping Round 4 2022. NIAs are primarily relevant to transportation projects but are considered in this project for completeness, as the future baseline could change in these areas if the NIAs are mitigated.

¹ "Round" refers to the cycle of strategic noise mapping conducted under the Environmental Noise Directive and published by Defra. For example, Round 4 represents the fourth iteration of the cycle of publishing strategy noise maps.

- 15.5.6 Vibration impacts are typically assessed against fixed thresholds, rather than relative thresholds. It is assumed that the existing vibration levels within the Study Area are negligible compared with vibration impact threshold values, which is likely to be the case even close to railways or busy main roads.
- 15.5.7 The Project has been divided into five Sections as described in **Chapter 4 Description of the Project** and shown on **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the Sections within the Study Areas in the respective sections below.

Section 1

- 15.5.8 This Section 1 includes receptors in South Holland. This Section is predominantly rural, passing through agricultural land with isolated dwellings and villages within the Study Areas. The villages in this part of the Study Area include Surfleet, Crossgate and Northgate.
- 15.5.9 The main sources of environmental noise in this Section include the A16 and B1356 roads, Peterborough to Lincoln railway line, and traffic on local roads. The main source of industrial noise in this Section is likely to be agricultural activity. There are no NIAs in this part of the Study Area.

Section 2

- 15.5.10 This Section includes receptors in South Kesteven. The Section is predominantly rural with agricultural land, villages and dispersed dwellings. The villages in this part of the Study Areas include Haconby, Stainfield, Corby Glen, Swayfield, Birkholme, Dunsby, Morton, Hanthorpe, Bulby, Irnham, Swinstead, North Witham and South Witham.
- 15.5.11 The main sources of environmental noise in this Section include the A15, A151, A1, B1176 and B1177, the East Coast Main Line (ECML) railway line and traffic on local roads. The main source of industrial noise in this Section is likely to be agricultural activity. There is one NIA in this part of the Study Area (NIA 7888, on the A1 road).

Section 3

- 15.5.12 This Section includes receptors in Melton. The Section is predominantly rural with agricultural land, villages and dispersed dwellings. The villages in this part of the Study Areas include Coston, Garthorpe, Ab Kettleby, Wartnaby, Grimston, Saxelbye, Shoby, Ashfordby, Frisby on the Wreake, Kirby Bellars, Ashby Folville, Barsby, Thorpe Satchville and Twyford.
- 15.5.13 The main sources of environmental noise in this Section include the A607, A606, A6006, A1, B676, B674, B6047, the Melton Mowbray to Nottingham railway line, the Melton Mowbray to Leicester railway line, and traffic on local roads. The main source of industrial noise in this Section is likely to be agricultural activity. There is one NIA in this part of the Study Areas (NIA 11677, on the A607 road).

Section 4

- 15.5.14 This Section includes receptors in Harborough. The Section is predominantly rural with agricultural land, some villages and isolated dwellings. The villages in this part of the Study Area include Lowesby, Marefield, Cold Newton, Tilton on The Hill,

Halstead, Skeffington, Tugby, Rolleston, Noseley, Goadby, Glooston, Stonton Wyville, Cranoe, Slawston, Thorpe Langton, Welham, Great Bowden and Little Bowden

- 15.5.15 The main sources of environmental noise in this Section include the A47, A6, A4304, A508 and B6047, the Leicester to Melton Mowbray to Kettering railway line and traffic on local roads. The main source of industrial noise in this Section is likely to be agricultural activity. There are several NIAs in this part of the Study Area, including NIA 11689, NIA 11691 and NIA 11692 on the A47 road.

Section 5

- 15.5.16 This Section includes receptors in North Northamptonshire and West Northamptonshire. The Section is a mix of rural and urban environments. There is agricultural land, towns, villages, and dispersed dwellings. This part of the Study Areas includes the towns of Market Harborough and Wellingborough, and the villages of Weston By Welland, Sutton Bassett, Dingley, Braybrooke, Arthingworth, Harrington, Thorpe Underwood, Orton, Foxhall, Loddington, Mawsley Village, Great Cransley, Broughton, Pytchley, Orlingbury Little Harrowden, Great Harrowden, Hardwick, Mers Ashby, Wilby, Great Doddington, Earls Barton, Whiston, Grendon and Castle Ashby.
- 15.5.17 The main sources of environmental noise in this Section include the A427, A6, A14, A43, A508, A509, A4500 and A45, B664, B574, B573, the Market Harborough to Kettering railway line and traffic on local roads. The main source of industrial noise in this Section is likely to be agricultural activity. There is one NIA in this part of the Study Areas (NIA 11716 on the A509 road).

Future Baseline

- 15.5.18 The future baseline relates to known or anticipated changes to the current baseline in the future which would develop in the absence of the Project and should be considered as part of the assessment and described in the **Chapter 5 EIA Approach and Methodology**. The introduction of new infrastructure, development consented under permitted development, or changes to existing road or rail sources as a result of mitigating noise associated with a NIAs could result in changes to the future baseline noise levels.
- 15.5.19 Other developments proposed in proximity to the Project would be identified as these projects have the potential to affect the future baseline. The other developments that are likely to be completed before commencement of construction of the Project would be considered in the future baseline, whereas, those that would be delivered during the same period as the Project would be considered in the cumulative effects assessment, as described in **Chapter 5 EIA Approach and Methodology**. Changes to the future baseline are not expected to affect the assessment of operational noise, however, should there be any changes, these would be assessed within the ES.
- 15.5.20 Any committed developments that would introduce NSRs within the Study Areas will be considered in the assessment. The final date for including receptors relating to other developments in the assessment will be the same as that used for the cumulative assessment.

15.6 Design and Control Measures

Design Measures

- 15.6.1 The Project has been routed to avoid designated sites and NSRs as far as reasonably practicable, considering overhead line routeing and substation Siting Areas, as set out in the Corridor Preliminary Routeing and Siting Study (CPRSS) (Ref 15.16). This will be further refined as the Project design evolves taking noise and other environmental and engineering constraints into account.
- 15.6.2 The proposed overhead line system is a 'triple Araucaria' conductor bundle, which is regarded as practically quiet during both typical dry and wet weather conditions and would not lead to significant adverse effects at nearby NSRs. In addition, tower fittings, such as insulators, dampers, spaces, and clamps, shall be designed and procured in accordance with a series of National Grid Technical Specifications and must be type registered (rigorously tested) to ensure the fitting conforms to the specification. These processes reduce the potential for audible noise and tones to occur from all types of fittings, including insulators. Where noise from fittings does occur which results in a complaint, appropriate action will be taken to seek to remedy the cause of the noise, usually through cleaning or replacing the relevant fitting.
- 15.6.3 At this stage, the proposed substations have not yet been designed in detail. However, appropriate noise mitigation measures will be identified through the EIA process to avoid or minimise significant adverse noise effects. This will include consideration of the equipment selected, site layout, hours of operation, screening, and enclosures, as may be considered appropriate.
- 15.6.4 Substation plant would also include vibration isolation measures as necessary. This is principally to protect the plant from potential external sources of vibration but also serves to attenuate vibration from the plant such that vibration levels would be well below impact levels at the nearest NSRs.

Control and Management Measures

- 15.6.5 Best practicable means (BPM), as defined under Section 72 of the Control of Pollution Act (CoPA) 1974 (Ref 15.17), will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other NSRs arising from construction activities at all times. This will be secured through the Code of Construction Practice (CoCP) and management plans.
- 15.6.6 Standard measures comprising management activities and techniques, would be implemented during construction of the Project to limit impacts through adherence to good site practices and achieving legal compliance. This is captured within **Appendix 4A Initial Outline Code of Construction Practice** in accordance with the CoPA (Ref 15.17) and the Environmental Protection Act 1990 (Ref 15.18). An Initial Outline Code of Construction Practice (CoCP) is provided in **Appendix 4A Initial Outline Code of Construction Practice**. Measures relevant to the control and management of impacts that could affect noise and vibration are (refer to **Appendix 4A** for the full description of each measure):
- NV01 - on the use of BPM to minimise noise and vibration at neighbouring residential properties and other NSRs.
 - NV02 - on the construction working hours.

Control of Pollution Act 1974

- 15.6.7 The CoPA (Ref 15.17) sets out the framework for the legislative control of construction noise and vibration on any given site. It also sets out the principle of BPM (as defined in Section 72 of the Act) and how that should be applied to construction activity noise. The Act refers to approved Codes of Practice, which include British Standards 5228 Part 1 (Ref 15.1) and Part 2 (Ref 15.2), as being relevant for the purposes of determining the ‘best practicable means’.
- 15.6.8 Section 61 of the Act states that consent may be sought from the relevant local authorities prior to the construction works commencing. If prior consent is sought, the relevant local authorities will need to be provided with information about the proposed construction works and how construction noise will be managed, including the use of BPM.

15.7 Potential for Significant Effects

- 15.7.1 The Noise and Vibration assessment in the ES will consider the construction, operation and maintenance of the Project. A description of each of these stages are set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the Noise and Vibration ES assessment is set out below.
- 15.7.2 **Table 15.2** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect, taking into account the embedded design, and control and management measures described in Section 15.6. Where an impact could give rise to potentially significant effects on receptors identified in the relevant Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give risk to potentially significant effects on receptors identified in the relevant Study Area are proposed to be scoped out of the ES.

Table 15.2 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction activities including general construction activities, such as construction of the overhead line, reconductoring and substations	Noise impact from construction activities	NSRs within the Study Area	Yes – there is the potential for effects due to construction noise within the Study Area. There is a greater likelihood of significant adverse effects from construction noise at static sites, such as construction compounds where the duration of works may be medium to long term. Furthermore, any activities required to be undertaken outside of normal working hours (for example, any night-time working associated with trenchless crossing locations), or where certain operations cannot be stopped once started.	Scoped in
		Vibration impact from construction activities	Structures within the Study Area	Yes – whilst construction vibration is not anticipated to result in damage to buildings or structures during the works, an assessment is required to ensure that appropriate mitigation measures are put in place should the potential for damage to structures be identified. This would be reviewed during the iterative design process and potential areas of concern would be highlighted.	Scoped in
		Vibration impact from construction activities	Humans within NSRs in the Study Area	Yes – there is the potential for effects on human receptors due to construction vibration at NSRs within the Study Area.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
	Construction traffic	Noise impact from construction traffic	NSRs within the Study Area	Yes – there is the potential for significant effects at NSRs close to construction traffic routes.	Scoped in
		Vibration impact from construction traffic	NSRs within the Study Area	No – vibration from traffic on public highway is caused by irregularities in the road surface. Where the road surface is well maintained, as per TT01 of Appendix 4A Initial Outline Code of Construction Practice , and free from irregularities, such as potholes, significant vibration effects would not be expected, even at relatively short distances.	Scoped out
Operation	Overhead lines	Noise impact from overhead lines	NSRs within the Study Area	No – the proposed overhead line system is a ‘triple Araucaria’ conductor bundle, which is regarded as practically quiet during both typical dry and wet weather conditions and would not lead to significant adverse effects at nearby Noise and/or Vibration Sensitive Receptors. In addition, tower fittings, such as insulators, dampers, spaces, and clamps, shall be designed and procured in accordance with a series of National Grid Technical Specifications and must be type registered (rigorously tested) to ensure the fitting conforms to the specification. These processes reduce the potential for audible noise and tones to occur from all types of fittings, including insulators. Therefore, operational noise from the overhead lines and towers is not likely to be significant at	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				nearby Noise Sensitive Receptors under any weather conditions. If an alternative type of conductor is considered later in developing the design the potential for significant noise effects will be considered appropriately in the ES.	
	Substation reactive plant (e.g. transformers) and associated cooling plant	Noise from substation reactive plant (e.g. transformers) and associated cooling plant	NSRs within the Study Area	Yes – there is the potential for significant effects at NSRs close to substations, particularly from those elements which operate on a 24-hour basis (for example, transformers generally run continuously).	Scoped in
	Substation switchgear and auxiliary plant	Noise from substation switchgear and auxiliary plant	NSRs within the Study Area	No – Switchgear noise is generated, in the main, by the operation of circuit breakers, for which the noise emissions are ‘impulsive’ in character (i.e. of short duration.) Modern switchgear operates with a dull ‘thud’. Switchgear would operate infrequently and is therefore proposed to be scoped out. Auxiliary plant may comprise standby diesel generators and air compressors to provide emergency back-up power to cooling plant. When present and operating, these would generate noise. However, they do not run continuously and would be housed in a building or outdoor acoustic enclosure. Noise from such assets is therefore not considered significant,	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				given its emergency function and as such is proposed to be scoped out.	
	Operational vibration	Vibration impact at Vibration Sensitive Receptors	NSRs within the Study Area	No – Substation plant would include vibration isolation measures within the design (see Section 15.6). With these measures in place, operational vibration due to substation plant is not expected to result in any vibration impact at NSRs. There are no other sources of operational vibration proposed as part of the Project and as such, this matter is proposed to be scoped out.	Scoped out
Maintenance	Maintenance for overhead lines, and/or substations	Noise or vibration impact from maintenance activities	NSRs within the Study Area	No – maintenance of the overhead lines, and substations would be infrequent, localised and short term in duration. Maintenance activities would follow standard measures to reduce noise and vibration where required and as such, this matter is proposed to be scoped out.	Scoped out

15.8 Proposed Assessment Methodology

Proposed Data Sources

- 15.8.1 In addition to the data sources listed in paragraph 15.5.1, the following data sources are proposed to be used to inform the Noise and Vibration assessment to be presented in the ES:
- planning information for future developments which include NSRs;
 - noise survey data (survey procedures will follow the guidance in British Standard BS 7445-1 (Ref 15.7) and BS 4142 (Ref 15.6) with survey locations being identified in consultation with Local Planning Authorities;
 - project design information;
 - construction programme, schedule, and plant data (if available);
 - locations of construction activities;
 - construction haulage routes;
 - baseline and construction traffic data;
 - topography data; and
 - substation plant noise and/or specification data.

Proposed Assessment Methodology

- 15.8.2 The following section summarises the methodology proposed to be used for the Noise and Vibration assessment. This differs from the generic assessment methodology set out in **Chapter 5 EIA Approach and Methodology** and instead employs noise assessment methods accepted across the profession.

Sensitive receptors

- 15.8.3 The following receptors are considered NSRs and will therefore be included in the assessment:
- residential receptors (including buildings used for residential purposes e.g. care homes);
 - education facilities;
 - medical facilities;
 - community facilities;
 - places of worship;
 - landscapes/parks and gardens prized for their tranquillity;
 - Hotels; and
 - Offices.
- 15.8.4 Public Rights of Way (PRoW) are by their nature transitory in their use, with users not staying in any one location for any length of time. Levels of noise from the

construction and operation of the Project will vary as the PRow moves closer to, and further from, the Project. Noise effects would generally be reduced by the control measures defined in the CoCP during construction and the embedded mitigation during operation. Significant noise effects are therefore considered unlikely on PRow during either construction or operation.

- 15.8.5 Public open spaces and outdoor sports/recreation community facilities (e.g. football pitches, golf courses) are, by their nature, transitory in their use. Outdoor sport activities are unlikely to be significantly affected by noise at the levels associated with construction or operation of the Project, outside the Order Limits. Increases in noise due to construction and operation of the Project may adversely affect the acoustic character of the area around such facilities. However, as users will not be exposed to any increased noise for long periods the adverse noise effects on users are not considered significant.

Impact assessment and significance criteria

- 15.8.6 This section describes the impact thresholds and significance criteria for the various noise and vibration impact pathways associated with the Project. Reference is made to 'lowest observed adverse effect levels' (LOAEL) and significant observed adverse effect levels' (SOAEL) when describing the thresholds of impact for various sources. LOAELs and SOAELs are defined based on applicable guidance with reference to the Noise Policy Statement for England (Ref 15.20) and Planning Practice Guidance (PPG) for Noise (Ref 15.21).
- 15.8.7 The final significance of effect will be determined based on the predicted levels of noise and vibration at sensitive receptors in relation to the impact thresholds and the context of the impact (see further detail for each impact pathway below).

Construction Noise

- 15.8.8 Construction noise impacts at residential receptors will be assessed in accordance with BS 5228-1 (Ref 15.1).
- 15.8.9 Annex E of BS 5228-1 describes the 'ABC' method for determining construction noise significance. This method involves defining a threshold of potential significant effect (Category A, B or C) for each dwelling, or group of dwellings, based on the pre-existing ambient noise levels. For each time period, the ambient noise level is determined and rounded to the nearest 5dB, then compared with the Category A values in **Table 15.3**.

Table 15.3 BS5228 Part 1 – ABC method for determining the threshold of potential significant construction effects at dwellings

Assessment category and threshold value period	Threshold value, in decibels dB LAeq,T (measured or predicted 1 m in front of most exposed façade)		
	Category A ⁽¹⁾	Category B ⁽²⁾	Category C ⁽³⁾
Daytime (07:00 – 19:00)	65	70	75
Saturdays (07:00 – 13:00)			
Weekday evenings (19:00 – 23:00)	55	60	65

Assessment category and threshold value period	Threshold value, in decibels dB $L_{Aeq,T}$ (measured or predicted 1 m in front of most exposed façade)		
	Category A ⁽¹⁾	Category B ⁽²⁾	Category C ⁽³⁾
Saturdays (13:00 – 23:00) Sundays (07:00 – 23:00)			
Night-time (23:00 – 07:00)	45	50	55
(1) Category A: threshold value to use when ambient noise levels (rounded to the nearest 5 dB) are less than these values			
(2) Category B: threshold value to use when ambient noise levels (rounded to the nearest 5 dB) are the same as Category A values			
(3) Category C: threshold value to use when ambient noise levels (rounded to the nearest 5 dB) are higher than Category A values			

- 15.8.10 A potential significant effect is indicated where the construction site noise level ($L_{Aeq,T}$) exceeds the threshold level for the category appropriate to the ambient noise level. If the ambient sound level exceeds the Category C threshold values given in **Table 15.3**, i.e. the ambient sound level is higher than the Category C values, then a potential significant effect is identified if the total $L_{Aeq,T}$ level for the period increases by more than 3dB due to site noise.
- 15.8.11 Having established whether there is a potential significant effect using the ‘ABC’ method, the final assessment of significance is made by considering the following:
- exceedance over the established thresholds of potential significant effect;
 - the levels of noise exposure and character of existing sound environment;
 - combined exposure to construction noise and vibration;
 - effectiveness of mitigation measures that may be provided;
 - the duration of the construction impact; and
 - professional judgement.
- 15.8.12 In terms of duration, a significant effect will be considered for the Project where the identified threshold levels are exceeded for the following minimum periods:
- 10 or more days or nights in any 15 consecutive days or nights; or
 - a total number of days exceeding 40 in any six consecutive months.
- 15.8.13 Additionally, the effect levels have been defined in Government policy terms, that is the LOAEL and the SOAEL. These are based upon the ‘ABC’ method described above and are presented in **Table 15.4**.

Table 15.4 Construction noise LOAEL and SOAEL

Time period	LOAEL	SOAEL
Day (0700-1900 weekday and 0700-1200 Saturdays)	65 dB L _{Aeq,T}	75 dB L _{Aeq,T}
Night (2300-0700)	45 dB L _{Aeq,T}	55 dB L _{Aeq,T}
Evening and weekends (time periods not covered above)	55 dB L _{Aeq,T}	65 dB L _{Aeq,T}

Construction traffic noise

- 15.8.14 Noise from construction traffic on the public highway would be calculated in accordance with the Calculation of Road Traffic Noise (CRTN) (Ref 15.3) and assessed against the criteria detailed in the Design Manual for Roads and Bridges (DMRB) LA 111 (Ref 15.4). The Basic Noise Level (BNL) from roads within the construction traffic Study Area would be calculated in accordance with CRTN for the with and without the Project construction traffic scenarios in the construction year.
- 15.8.15 The calculated BNL values for the with and without construction noise scenarios, throughout the construction period, would be compared to determine the magnitude of the impact in accordance with criteria specified by DMRB LA 111 as detailed in **Table 15.5**.

Table 15.5 Magnitude of impact from construction traffic noise at residential receptors

Magnitude	Increase in BNL of closest public road used for construction traffic (dB)
Major	Greater than or equal to 5.0
Moderate	Greater than or equal to 3.0 and less than 5.0
Minor	Greater than or equal to 1.0 and less than 3.0
Negligible	Less than 1.0

- 15.8.16 Receptors close to roads experiencing a major or moderate magnitude of impact for the following minimum durations will be determined to experience a significant effect:
- 10 or more days or nights in any 15 consecutive days or nights; or
 - a total number of days exceeding 40 in any six consecutive months.

Construction vibration on human receptors

- 15.8.17 Construction vibration levels would be calculated and assessed in accordance with the methodologies described in BS 5228-2 (Ref 15.2). Since the vibration impact depends on the absolute vibration level instead of comparing against baseline vibration level, no vibration baseline study is proposed within the assessment and construction vibration levels will be compared against fixed appropriate assessment criteria detailed in BS 5228-2.
- 15.8.18 Vibration levels from key vibratory construction activities would be calculated in accordance with the methodology described in Annex E of BS 5228-2. Construction vibration effect threshold levels, including applicable LOAEL and SOAEL, are presented in **Table 15.6**.

Table 15.6 Construction vibration effect levels at residential receptors

Vibration Level mm/s PPV(*)	Effect
0.14	Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
0.3	Vibration might be just perceptible in residential environments (LOAEL).
1.0	It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents (SOAEL).
10	Vibration is likely to be intolerable for any more than a very brief exposure to this level in most building environments

(*) Peak Particle Velocity

- 15.8.19 The overall significance of the effect is assessed using professional judgement by considering not only the criteria above but also other factors, such as the duration of exposure and the particular characteristics of the source and the receptor.

Construction vibration on structures

- 15.8.20 Risk of damage to buildings from ground-borne vibration is assessed using the criteria in **Table 15.7**. The criteria are derived from BS 7385-2 (Ref 15.5). This ensures there is no risk of the lowest damage category (cosmetic) being exceeded. However, minimising disturbance to people will generally control damage risk since the effects in terms of even cosmetic damage to buildings would occur only for vibration exposures much higher than perceptible levels.

Table 15.7 Vibration impact criteria for buildings (conservative criteria below which there is no risk of cosmetic damage)

Category of building	Peak particle velocity ⁽¹⁾ (mm/s)	
	Transient vibration ⁽²⁾	Continuous vibration ⁽³⁾
Potentially vulnerable building	6	3
Structurally sound buildings	12	6

Notes:

(1) At the building foundation

(2) Transient relative to building response e.g. from impulsive plant

(3) Continuous relative to building response e.g. from vibrating rollers

Operational noise

- 15.8.21 The assessment of operational noise will follow the methodology stated in BS 4142 (Ref 15.6).
- 15.8.22 Noise limits will be determined based on background sound level surveys at locations representative of nearby NSRs. Sound level surveys will be conducted in accordance with the requirements of BS 4142 and in general accordance with the methodology detailed in BS 7445 (Ref 15.7).
- 15.8.23 BS 4142 assesses the potential significance of effects by comparing the 'rating sound level' of an industrial source to the typically representative 'background sound level' at the location of nearby receptors. The sound rating is a combination of the specific sound level at the NSR and any applicable penalties that may be required for acoustic character, such as tonality or impulsivity.
- 15.8.24 The specific sound level at nearby NSRs will be predicted by incorporating the available design information in a computer noise model, based on the methodology detailed in International Organization for Standardization (ISO) 9613 (Ref 15.9).
- 15.8.25 The predicted sound rating levels will be compared against the relevant noise limits determined from the baseline sound level survey data. The lower the rating level is relative to the measured background sound level, the less likely it is that there will be an adverse impact, depending on context. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context. The guidance from BS 4142 for operational noise are detailed in **Table 15.8**.
- 15.8.26 When considering context, BS 4142 references BS 8233 (Ref 15.8) as providing context where background and rating noise levels are low. BS 8233 provides recommended noise levels for a variety of situations and locations, including in habitable spaces such as living rooms and bedrooms, and external amenity areas. Guidance may also be sought from the Association of Noise Consultants (ANC) BS 4142 guidance (Ref 15.10).

- 15.8.27 It is anticipated that specific mitigation measures for operational noise from substations, if required, would be secured via an appropriate Requirement of the Development Consent Order, if granted. For example, the assessment may include noise limits such that adverse impacts are avoided.
- 15.8.28 In UK Government policy terms, depending on the absolute sound levels in consideration, the SOAEL is defined for this assessment as a rating level of 10dB above the representative background sound level. The LOAEL is defined as 5 dB above the representative background sound level.

Table 15.8 Magnitude of impact from operational substation noise at residential receptors along with LOAEL and SOAEL thresholds

Comparison of sound rating level and background sound level	BS 4142 Impact Guidance
Rating level $\geq$ 10 dB above the background sound level SOAEL	Likely to be an indication of a significant adverse impact, depending on context
Rating level of 5 dB above the background sound level LOAEL	Likely to be an indication of an adverse impact, depending on context
Rating level below background sound level	Likely to be an indication of a low impact, depending on context. The lower the rating level is relative to the measured background sound level, the less likely it is to be an adverse or significant adverse impact

Non-residential receptors (construction and operational noise)

- 15.8.29 Impacts of noise from construction or operation at non-residential receptors will be compared with the screening criteria set out in **Table 15.9**. Where the predicted noise levels exceed the criteria, an assessment of the potential for significant effects will be undertaken for each impacted receptor, taking into account other factors such as the:
- use and sensitivity of the receptor or land use;
 - design of the receptor or land use;
 - existing sound environment at and within the receptor, or land use;
 - magnitude of the predicted impact (noise change);
 - potential combined impacts of noise and vibration;
 - frequency and duration over which temporary impacts may occur; and
 - effectiveness of mitigation through design or other means.

Table 15.9 Noise impact screening criteria at non-residential receptors (construction and operation)

Description	Impact (screening) criteria		Outcome	Reference
	Day (0700-2300)	Night (2300-0700)		
Place of meeting for religious worship, courts, cinemas, lecture theatres, museums, outdoor space receptors such as public rights of way (PRoW), and small auditoria or halls	50dBL _{pAeq,T} and a change >3 dB	-	Disturbance	BS8233 (Ref 15.8) BB93 (Ref 15.11), HTM08-01 (Ref 15.12), WHO guidelines (Ref 15.13, Ref 15.14, Ref 15.15)
Schools; colleges; hospitals*; hotels*; and libraries	50dBL _{pAeq,T} and a change >3 dB	(2)45dBL _{pAeq,T} and a change > 3 dB	Disturbance and *sleep disturbance	
Offices	ABC ⁽¹⁾ or 55dBL _{pAeq,T} and a change >3dB	-	Disturbance	
Notes:				
(1) For construction asses using A and B categories from ABC Method				
(2) The night-time criteria of 45 dB L _{pAeq,T} for sleep disturbance applies to student residential accommodation, hospitals and hotels				

15.9 Assumptions and limitations

- 15.9.1 The assessment of noise and vibration will be based on the best available data with regards to proposed construction methods at the time of assessment. Where there is uncertainty in the assessment, this will be stated and precautionary principles will be applied, such as assuming the shortest distance between construction noise sources and NSRs, typical worst-case plant selection, and high percentage 'on-times'.
- 15.9.2 The assessment of operational noise will be based on available design information and/or National Grid noise specification data for operational plant. Proposed plant would be required to produce noise levels at or below the specification noise levels therefore the assessment would be expected to be relatively worst-case.

15.10 Conclusion

- 15.10.1 This Scoping Report chapter has outlined relevant legislation, policy and guidance in relation to the Noise and Vibration assessment for the Project. The data sources that will be used to define the current and future baselines, and the impact control and management measures that will be implemented have been presented. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 15.2**.
- 15.10.2 With regards to noise and vibration impacts associated with the Project a number of matters are scoped in. The assessment of both noise and vibration from construction activities (including general construction activities such as construction of the overhead line, reconductoring and substations) are scoped into the assessment. For construction traffic, only noise is scoped into the assessment. For operation, only noise from substation reactive plant (e.g. transformers) and noise from associated cooling plant are scoped into the assessment.
- 15.10.3 A number of matters are proposed to be scoped out of the Project with regards to noise and vibration impacts, due to the embedded measures applied as part of the Project design. Vibration from construction traffic is scoped out of the assessment. Operational noise from overhead lines, substation switchgear and auxiliary plant are scoped out of the assessment. Operational vibration is also scoped out. Finally, noise and vibration impacts associated with maintenance activities for overhead lines, and/or substations are scoped out of the assessment.
- 15.10.4 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 15.1 BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise, British Standards Institution, 2014.
- Ref 15.2 BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration, British Standards Institution, 2014.
- Ref 15.3 Department of Transport. (1988). Calculation of Road Traffic Noise.
- Ref 15.4 Highways England et al. (2020). Design Manual for Roads and Bridges LA 111 Noise and vibration Revision 2.
- Ref 15.5 BS 7385-2:1993 Evaluation and measurement for vibration in buildings – Guide to damage levels from groundborne vibration, British Standards Institution, 1993
- Ref 15.6 BS 4142:2014+A1:2019. Methods for rating and assessing industrial and commercial sound, British Standards Institution, 2019.
- Ref 15.7 British Standard 7445-1:2003 – Description and measurement of environmental noise – Part 1: Guide to quantities and procedures, British Standards Institution, 2003.
- Ref 15.8 BS 8233:2014 Guidance on sound insulation and noise reduction for buildings, British Standards Institution, 2014.
- Ref 15.9 BS ISO 9613-2:2024 Acoustics – Attenuation of sound during propagation outdoors. Part 2: Engineering method for the prediction of sound pressure levels outdoors. International Organisation for Standardization. 2024.
- Ref 15.10 BS 4142:2014+A1:2019 Technical Note Version 1.0. Association of Noise Consultants, 2020.
- Ref 15.11 Department for Education/Education Funding Agency (2015). Acoustic design of schools: performance standards. Building bulletin (BB) 93.
- Ref 15.12 Department of Health (2013). Health technical memorandum 08-01: Acoustics.
- Ref 15.13 World Health Organization (1999). Guidelines for community noise.
- Ref 15.14 World Health Organization (2009). Night noise guidelines for Europe.
- Ref 15.15 World Health Organization (2018). Environmental noise guidelines for the European Region.
- Ref 15.16 Weston Marsh to East Leicestershire Corridor Preliminary Routeing and Siting Study. June 2025 [online]. Available at: <https://www.nationalgrid.com/document/561431/download> [Accessed 16 July 2025]
- Ref 15.17 Control of Pollution Act 1974 [online]. Available at: <https://www.legislation.gov.uk/ukpga/1974/40/contents> [Accessed 16 July 2025]
- Ref 15.18 Environmental Protection Act 1990 [online]. Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed 16 July 2025]

- Ref 15.19 Ministry of Housing, Communities & Local Government. (2024). National Planning Policy Framework.
- Ref 15.20 Department for Environment, Food and Rural Affairs. (2010). Noise Policy Statement for England.
- Ref 15.21 Planning Practice Guidance for Noise. 2019 [online]. Available at: <https://www.gov.uk/guidance/noise--2> [Accessed 16 July 2025].

16. Socio- economics, Recreation and Tourism

Contents

16.	Socio-economics, Recreation and Tourism	16-1
16.1	Introduction	16-1
16.2	Legislation, Policy and Guidance	16-2
16.3	Consultation and Engagement	16-2
16.4	Study Area	16-3
16.5	Baseline Conditions	16-4
	Data Sources	16-4
	Baseline	16-5
	Future Baseline	16-20
16.6	Design and Control Measures	16-21
	Design Measures	16-21
	Control and Management Measures	16-22
16.7	Potential for Significant Effects	16-22
16.8	Proposed Assessment Methodology	16-32
	Proposed Data Sources	16-32
	Proposed Assessment Methodology	16-32
16.9	Assumptions and limitations	16-35
16.10	Conclusion	16-35
	Table 16.1 Engagement with Stakeholders	16-2
	Table 16.2 Study Areas	16-3
	Table 16.3 Local authorities within the Study Area by average IMD score rank (Ref 16.3)	16-6
	Table 16.4 Key settlements within the Study Area	16-7
	Table 16.5 Economic activity and unemployment rate by geographical area (Ref 16.1)	16-8
	Table 16.6 Employment by industry by geographical area (Ref 16.5)	16-9
	Table 16.7 Tourism Visits and Spend (Ref 16.10)	16-11
	Table 16.8 Employment in the Tourism Industry (Ref 16.5)	16-11
	Table 16.9 Inventory Rooms in Serviced Accommodation (Ref 16.13; Ref 16.11)	16-12
	Table 16.10 Strategic Visitor Attractions (Ref 16.12)	16-13
	Table 16.11 Renewable energy infrastructure within the Study Area	16-14
	Table 16.12 Aviation and defence infrastructure within the Study Area	16-15
	Table 16.13 Open Space within the Study Area	16-16
	Table 16.14 Population change from 2021 to 2043 (total and by age group) (Ref 16.2)	16-20
	Table 16.15 Impacts, receptors and the potential for significant effect	16-23
	Table 16.16 Sensitivity of receptors	16-32
	Table 16.17 Magnitude of impact	16-33
	Table 16.18 Determination of significance matrix	16-34
	References	16-36

16. Socio-economics, Recreation and Tourism

16.1 Introduction

- 16.1.1 This chapter presents how the socio-economic, recreation and tourism assessment will consider the potential likely significant effects on socio-economic, recreation and tourism receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4 Description of the Project**). It describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed for the purpose of the Environmental Statement (ES). As detailed in **Chapter 4 Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 16.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 16.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 16.1.4 It is important to note that there are interrelationships related to the potential effects on socio-economics, recreation and tourism and other environmental topics, for example the likely amenity impacts of these receptors are assessed within specific topic chapters, and the scope of the assessment seeks to avoid duplication or double counting the reporting of significant effects throughout the ES. The approach seeks to draw on findings of other topic chapters taking into account the potential for in-combination effects. Therefore, this assessment should be read in conjunction with the following chapters:
- **Chapter 7 Visual** – visual amenity effects on population and users of promoted recreational routes and Public Rights of Way (PRoW) of significance in the Study Area;
 - **Chapter 12 Agriculture and Soils** – impacts on farm holdings;
 - **Chapter 13 Traffic and Movement** – impacts on access and promoted recreational routes and PRoW of significance in the Study Area;
 - **Chapter 14 Air Quality** – amenity effects on residential and community receptors, and local businesses in the Study Area;
 - **Chapter 15 Noise and Vibration** – amenity effects on noise and vibration sensitive receptors, including residential and community receptors, local

businesses, and users of promoted recreational routes and PRow in the Study Area; and

- **Chapter 17 Health and Wellbeing** – amenity effects on population and users of promoted recreational routes and PRow of significance in the Study Area.

16.1.5 This chapter is supported by the following figures:

- **Figure 16.1 Indices of Multiple Deprivations.**
- **Figure 16.2 Socio-economic, Tourism and Recreation Receptors.**

16.2 Legislation, Policy and Guidance

16.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation and policy relevant to the assessment of potential effects on socio-economics, recreation and tourism associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context. Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

16.2.2 There is no dedicated United Kingdom (UK) legislation that details the content required for a socio-economic assessment as part of an EIA. Instead, the scoping process has been informed by relevant guidance and standards. The principal guidance is listed below and will be taken into account as part of the assessment, along with other relevant material:

- **Additionality Guide (4th Edition)** (Ref 16.21);
- **The Green Book – Appraisal and Evaluation in Central Government** (Ref 16.22); and
- **The Magenta Book – Guidance for Evaluation** (Ref 16.23).

16.3 Consultation and Engagement

16.3.1 The ES will be informed by consultation and engagement with stakeholders including local authorities. In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.

16.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 16.1.**

Table 16.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
South Holland District Council, and Lincolnshire	Operational impact on local tourism/ local tourism business/ facilities.	Impacts on local tourism during the operation and maintenance phase have been considered as part of the “Tourism accommodation” and the “Affected communities, community facilities, visitor

Stakeholder	Summary of response	Consideration in the Scoping Report
County Council		attractions and businesses” receptor (both direct and indirect). Table 16.15 sets out the proposed scope of assessment for these receptors, with reference to the management and mitigation measures described in Section 16.6 where relevant. Section 16.5 sets out the baseline conditions, including detail on local tourism and recreation within the Study Area, providing a robust basis for assessing potential effects and ensuring these impacts are fully considered within the socio-economic assessment. The Scoping Report ensures that effects are fully captured and appropriately considered for further assessment.

16.4 Study Area

- 16.4.1 The Study Area for the assessment of socio-economic, recreation and tourism effects varies depending on the likely spatial extent of the effect under consideration.
- 16.4.2 The Study Areas for this Scoping Report are shown on **Figure 1.2 Scoping Boundary** and **Figure 16.2 Socio-economic, Tourism and Recreation Receptors**. The Study Areas for the assessment will be defined using the same principles and areas applied to the Order Limits defined at that time.
- 16.4.3 **Table 16.2** summarises the Study Areas considered for each receptor type that are taken into account within this Chapter. Section 16.5 presents a baseline for each receptor type. The baseline describes the current conditions within the Study Area for direct effects i.e. within the Local Authorities of Harborough, Melton, North Northamptonshire, South Kesteven, South Holland, and West Northamptonshire.

Table 16.2 Study Areas

Receptor Type	Study Area for Direct Effects	Study Area for Indirect Effects
Population and deprivation	Receptors located within the Scoping Boundary	Receptors located within a regional and sub-regional level
Economy and employment	Receptors located within a regional and sub-regional level	Receptors located within a regional and sub-regional level
Tourism and recreation	Receptors located within the Scoping Boundary	Receptors located within 5 km of the Scoping Boundary
Local business and community receptors	Receptors located within the Scoping Boundary	Receptors located within 500 m of the Scoping Boundary

Receptor Type	Study Area for Direct Effects	Study Area for Indirect Effects
Development land, utilities and renewable infrastructure	Receptors located within the Scoping Boundary	Receptors located within 500 m of the Scoping Boundary
Strategic housing land allocations	Receptors located within the Scoping Boundary	Receptors located within 500 m of the Scoping Boundary
Recreational routes and PRow of significance in the local area	Receptors located within the Scoping Boundary	Receptors located within 500 m of the Scoping Boundary
Open space	Receptors located within the Scoping Boundary	Receptors located within 500 m of the Scoping Boundary
Aviation and defence infrastructure	Receptors located within the Scoping Boundary	Receptors located within up to 5 km of the Scoping Boundary

16.5 Baseline Conditions

Data Sources

- 16.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:
- Office for National Statistics (ONS), Census 2021 (Ref 16.1);
 - ONS (2024) Mid-year population estimates (Ref 16.2);
 - Ministry of Housing, Community and Local Government (now Department for Levelling Up, Housing and Communities), (2019), English Indices of Deprivation (Ref 16.3);
 - ONS (2023), Regional Gross Value Added (balanced) per head and income components (Ref 16.4);
 - ONS (2022), UK Business Register and Employment Survey (Ref 16.5);
 - ONS (2018) Population projections (Ref 16.6);
 - Ordnance Survey Open Greenspace (Ref 16.7);
 - OS Local Important Buildings (Ref 16.8);
 - OS AddressBase (Ref 16.9);
 - Visit Britain (2025), England domestic tourism: regional and subregional data (Ref 16.10);
 - Visit Britain (2024), England Hotel Occupancy (Ref 16.11);
 - Visit Britain (2024), Annual Attractions Survey 2024 (Ref 16.12); and
 - CoStar (2025) (Ref 16.13).
- 16.5.2 The baseline for private assets is based on desk-based research to identify locations of residential properties, businesses, community and recreational facilities.

- 16.5.3 The baseline for development land allocations will be provided in the Preliminary Environmental Information Report (PEIR) and ES. Development land allocations will be identified based on the adopted Local Plans for each Local Planning Authority (LPA) within the Study Area, and, where relevant, any emerging or replacement Local Plans (and acknowledging their status). Development land allocation polygons will be mapped using Geographic Information Systems (GIS) and cross-referenced with the Study Area to understand the potential interface of any strategic site allocations with the Project.

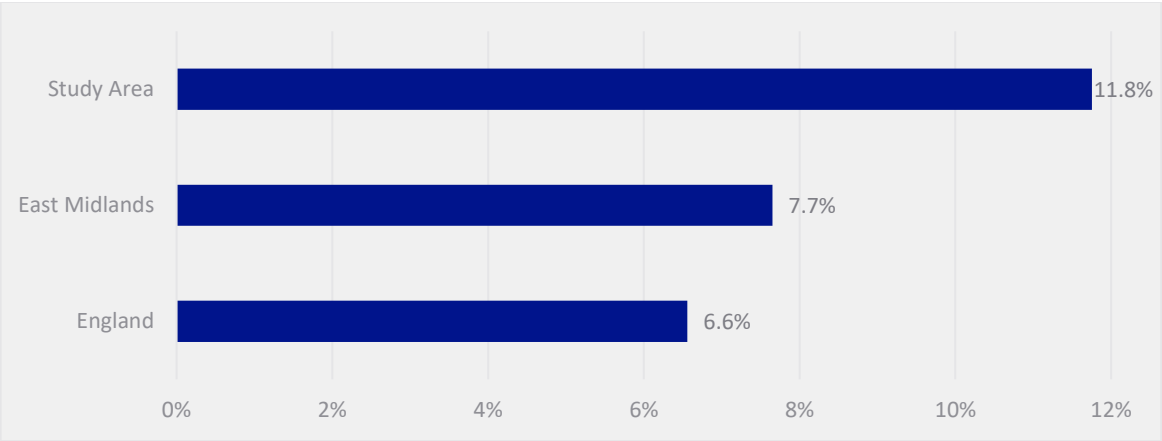
Baseline

- 16.5.4 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities.
- 16.5.5 For the purposes of this chapter, taking into account the multiple receptor types and the nature of their features (e.g. long-distance recreational routes that span geographical boundaries), a route-wide approach to present the baseline has been taken in order to avoid unnecessary duplication and assist legibility for the reader, and the baseline is described by receptor type in the sections below. The baseline describes the current conditions within the Study Areas for direct effects i.e. within the Local Authorities of Harborough, Melton, North Northamptonshire, South Kesteven, South Holland, and West Northamptonshire (see **Table 16.2**).
- 16.5.6 The potential impacts arising from the Project are assessed relative to the baseline conditions and benchmarked against regional and national standards where appropriate. The key indicators and measures of the areas will be established for:
- population and deprivation;
 - an overview of the local economy; and
 - the local labour market.
- 16.5.7 This section provides the baseline conditions for the following geographical areas:
- the local authorities of South Holland, South Kesteven, Melton, Harborough, North Northamptonshire; and West Northamptonshire (collectively as the 'Study Area');
 - the East Midlands region; and
 - England.

Population and deprivation

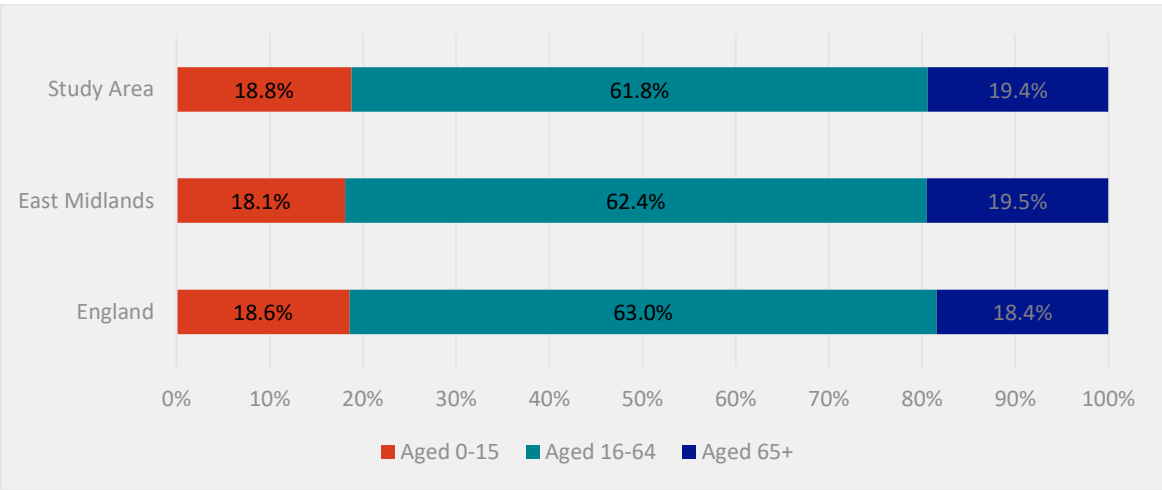
- 16.5.8 In 2021, the total population across the Study Area (as defined in **Table 16.2**) was 1,173,155. **Image 16.1** illustrates the population change in the Study Area, the East Midlands and across England. The Study Area recorded a population increase of 11.8% between 2011 and 2021. At the regional level, the East Midlands region recorded a population growth rate of 7.7% between 2011 and 2021, and nationally England recorded a growth rate of 6.6%.

Image 16.1 Population change by geographical area, 2011-2021 (Ref 16.1)



16.5.9 **Image 16.2** shows the age profile of the geographical areas within the Study Area. The proportion of the population of working age (aged between 16 and 64) in the Study Area is 61.8% which is slightly lower than the regional and national averages of 62.4% and 63.0%. At 19.4%, the Study Area has a similar proportion of elderly (aged 65+) people to the East Midlands (19.5%), but slightly higher than in England as a whole (18.4%).

Image 16.2 Population age profile by geographical area (Ref 16.1)



16.5.10 **Table 16.3** presents the local authorities in the Study Area by the average Index of Multiple Deprivation (IMD) score rank, as set out in the English Indices of Deprivation 2019 (Ref 16.2). Corby (now part of North Northamptonshire) was the most deprived local authority in 2019, ranking 70th of 317 district-tier local authorities in England by average IMD score. By contrast, South Northamptonshire (now part of West Northamptonshire) was the least deprived local authority within the Study Area.

Table 16.3 Local authorities within the Study Area by average IMD score rank (Ref 16.3)

Local Authority	IMD Score Rank
Harborough	308
Melton	248

Local Authority	IMD Score Rank
South Holland	144
South Kesteven	234
Corby*	70
East Northamptonshire*	226
Kettering*	161
Wellingborough*	124
Daventry*	243
Northampton*	105
South Northamptonshire*	312

**In April 2021 Corby, East Northamptonshire, Kettering and Wellingborough merged to form North Northamptonshire, and Daventry, Northampton, and South Northamptonshire merged to form West Northamptonshire. As the IMD was last updated in 2019, data is presented for the former local authority districts.*

16.5.11 **Table 16.4** below identifies the key urban areas, based on towns identified within the first tier of the settlement hierarchy in each of the respective Local Plans for each local authority within the Study Area.

Table 16.4 Key settlements within the Study Area

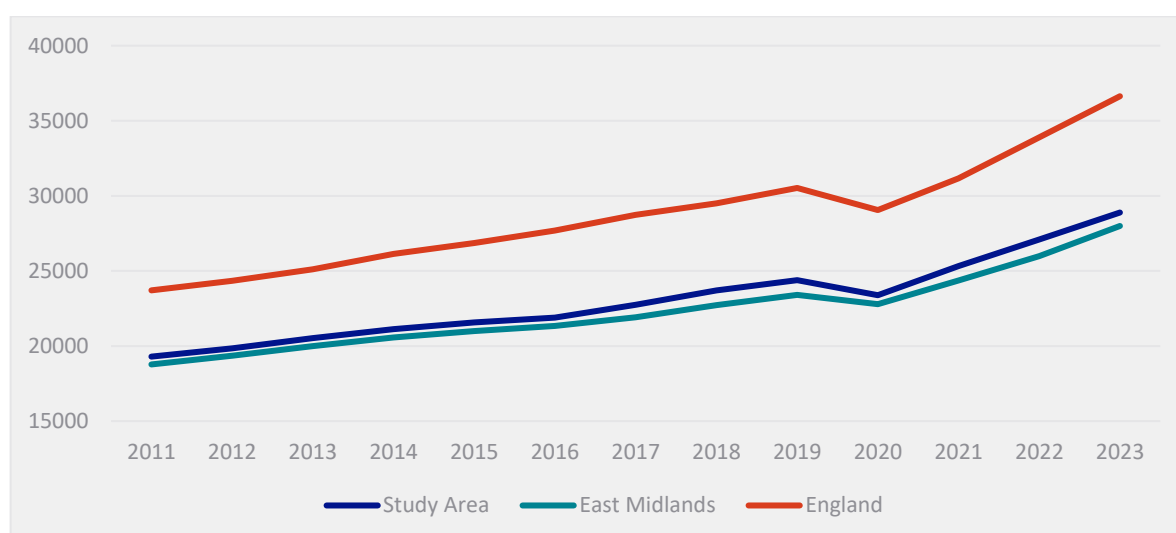
Local Planning Authority	First tier of settlement hierarchy	Key settlements in first tier of settlement hierarchy
Harborough District Council (Ref 16.15)	Tier 1: Adjoining Leicester Urban Area	Scraptoft, Thurnby, Bushby and land adjoining the built-up areas of Leicester City and the Borough of Oadby and Wigston
Melton Borough Council (Ref 16.16)	Service Centres	Asfordby, Bottesford, Croxton Kerrial, Harby, Hose, Long Clawson, Old Dalby, Scalford, Somerby, Stathern, Waltham, Wymondham
South Holland District Council (Ref 16.17)	Sub-Regional Centres	Spalding
South Kesteven District Council (Ref 16.18)	Sub-Regional Centres	Grantham
North Northamptonshire Council (Ref 16.19)	The Growth Towns	Corby, Kettering, Wellingborough and Rushden

Local Planning Authority	First tier of settlement hierarchy	Key settlements in first tier of settlement hierarchy
West Northamptonshire Council (Ref 16.20)	Principal Urban Area	Northampton

Economy and employment

- 16.5.12 Gross Value Added (GVA) is a way to measure how much economic value a sector produces in goods and services, calculated as the difference between outputs and inputs. **Image 16.3** presents GVA per head in the economy and employment Study Area (as defined in **Table 16.2**) compared to the regional and national averages for 2011-2023. As of 2023, GVA per head across the Study Area is £28,900, similar to the regional average of £28,000 but lower than the national average of £36,600. Since 2011, GVA per capita has increased across all geographies, and all geographies have now returned to their pre-pandemic levels.

Image 16.3 Gross Value Added per capita by geographical location (Ref 16.4)



- 16.5.13 **Table 16.5** shows the economic activity and unemployment rate among the population aged 16 years and over across the geographies. The Study Area has an economic activity rate of 63.8% which is higher than the East Midlands (59.9%) and England (60.9%). The Study Area also has a lower unemployment rate at 2.7% compared to 3.0% regionally and 3.5% nationally.

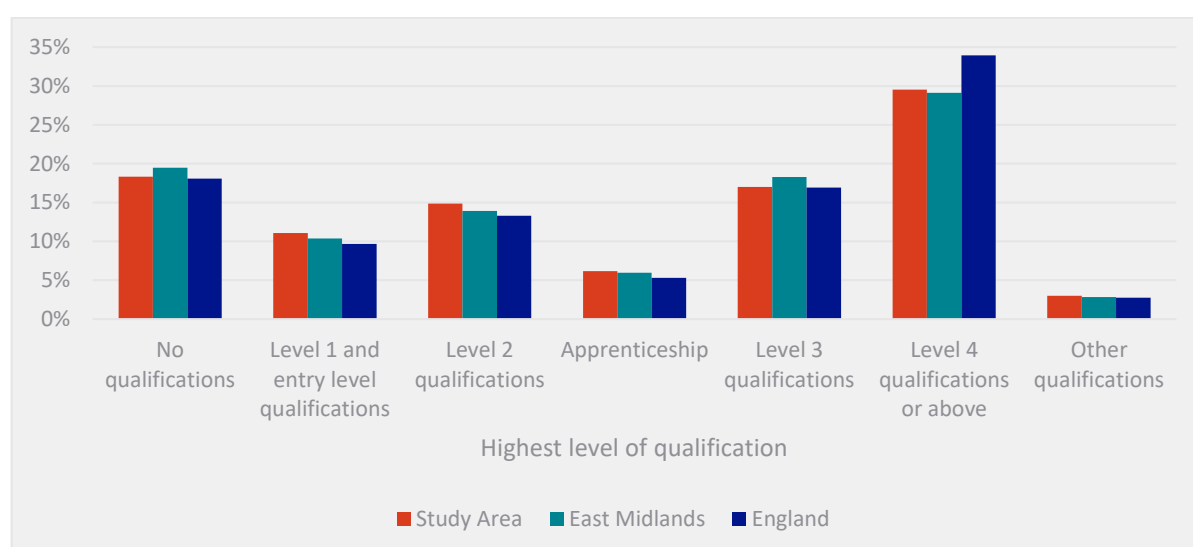
Table 16.5 Economic activity and unemployment rate by geographical area (Ref 16.1)

Area	Economic activity rate (%)	Unemployment rate (%)
Study Area	63.8	2.7
East Midlands	59.9	3.0

Area	Economic activity rate (%)	Unemployment rate (%)
England	60.9	3.5

- 16.5.14 **Image 16.4** illustrates the highest level of qualification attained across the Study Area and comparator geographies. It shows that in the Study Area, 29.5% of residents have a degree-level qualification (National Vocational Qualification (NVQ) Level 4) or above. This is similar to the East Midlands (29.1%) but lower than across England (33.9%). The proportion of residents with no qualifications is 18.3% which is lower than the regional level (19.5%) and in line with the national level (18.1%).

Image 16.4 Highest level of qualification by geographical area (Ref 16.1)



- 16.5.15 Across the Study Area, **Table 16.6** shows that health is the largest employment sector, making up 13.1% employment. This is followed by the manufacturing sector in which 12.0% of people are employed in, and the transport and storage sector in which 10.4% of people are employed in. In contrast, the largest employment sectors in the East Midlands are health (13.5%), professional, scientific and technical (9.6%) and business administration and defence (8.9%), and the largest employment sectors in England are health (14.6%), manufacturing (12.3%) and education (9.0%).
- 16.5.16 The baseline in the PEIR and ES reports will use a lower level of geographic administrative area, such as wards, which may reveal further trends in employment data that are not highlighted here.

Table 16.6 Employment by industry by geographical area (Ref 16.5)

Employment sector	Study Area	East Midlands	England
Agriculture, forestry & fishing (A)	1.0%	0.7%	0.5%
Mining, quarrying & utilities (B, D and E)	1.0%	1.4%	1.1%

Employment sector	Study Area	East Midlands	England
Manufacturing (C)	12.0%	12.3%	7.4%
Construction (F)	4.2%	4.3%	4.7%
Motor trades (Part G)	2.4%	2.3%	1.7%
Wholesale (Part G)	7.1%	4.9%	3.8%
Retail (Part G)	7.5%	8.0%	8.2%
Transport & storage (inc. postal) (H)	10.4%	7.0%	5.1%
Accommodation & food services (I)	5.9%	7.0%	7.8%
Information & communication (J)	2.4%	2.7%	4.8%
Financial & insurance (K)	1.9%	1.4%	3.4%
Property (L)	1.7%	1.7%	1.9%
Professional, scientific & technical (M)	7.3%	7.4%	9.6%
Business administration & support services (N)	8.3%	7.6%	8.9%
Public administration & defence (O)	2.5%	4.1%	4.4%
Education (P)	7.6%	9.0%	8.6%
Health (Q)	13.1%	14.6%	13.5%
Arts, entertainment, recreation & other services (R, S, T and U)	3.7%	3.8%	4.5%

Tourism and recreation

- 16.5.17 **Table 16.7** presents the tourism value for each county¹ within the Study Area as of 2024. This includes Northamptonshire (encompassing local authorities North and West Northamptonshire), Leicestershire (encompassing local authorities Harborough and Melton), and Lincolnshire (encompassing local authorities South Holland and South Kesteven), as well as the broader East Midlands region.
- 16.5.18 Data indicates that Leicestershire records higher volumes and spend for day visits compared to Northamptonshire and Lincolnshire. On average, Leicestershire receives 15.6 million day visits annually, with associated spending of £834 million,

¹ Data is presented at county level as current data is not available at the local authority level.

while Northamptonshire sees 8.1 million day visits and £333 million in spend, and Lincolnshire sees 13.1 million day visits and £450 million in spend.

- 16.5.19 Lincolnshire records higher numbers of overnight trips and volume of overnight spend compared to Leicestershire and Northamptonshire, hosting 1.7 million overnight trips per year compared to 1.4 million and 1.1 million respectively. In terms of overnight spend, Lincolnshire sees average £408 million, compared to £382 million in Leicestershire and £236 million in Northamptonshire. Data for the East Midlands indicates the region attracts 79.4 million day visits and 7.7 million overnight stays annually.

Table 16.7 Tourism Visits and Spend (Ref 16.10)

Area	Day visits volume, annual average (millions)	Day visits spend, annual average (£millions)	Overnight trips, annual average (millions)	Overnight spend, annual average (£millions)
County				
Leicestershire	15.6	834.0	1.4	382.0
Lincolnshire	13.1	450.0	1.7	408.0
Northamptonshire	8.1	333.0	1.1	236.0
Region				
East Midlands	79.4	3,091.0	7.7	1,838.4

- 16.5.20 **Table 16.8** shows the number and proportion of jobs in the tourism sector as of 2024 (composed of employment in accommodation, food and beverage services, and travel and tour agency related activities) in the Study Area. The tourism sector supports approximately 31,430 jobs in the Study Area, accounting for 6.1% of all employment, a lower proportion than in the East Midlands (7.1%) and England overall (8.1%).

Table 16.8 Employment in the Tourism Industry (Ref 16.5)

Employment sector	Study Area	East Midlands	England
Tourism Sector (number)	31,430	152,500	2,237,000
Tourism Sector (% of total)	6.1%	7.1%	8.1%

- 16.5.21 **Table 16.9** summarises the number of inventory rooms available in the serviced accommodation sector, which includes hotels and similar establishments, such as bed and breakfasts (B&Bs) using 2025 data gathered from CoStar (Ref 16.13). In total, there are 11,018 serviced accommodation inventory rooms among the local

authorities within the Study Area. West Northamptonshire accounts for the highest proportion of inventory rooms, followed by North Northamptonshire. Occupancy data from VisitBritain 2024 survey indicates a hotel occupancy rate of 83% over the peak month (July) in the East Midlands region. Applying this 17% spare capacity rate indicates that there could be 1,873 spare inventory rooms within the Study Area over the peak tourist season. Analysis on the regional level indicates there could be c. 5,285 inventory rooms available in peak occupancy seasons. This analysis will be reviewed further at PEIR and ES stages.

Table 16.9 Inventory Rooms in Serviced Accommodation (Ref 16.13; Ref 16.11)

	Total inventory rooms	Total spare inventory rooms (17% capacity)
North Northamptonshire	1,575	268
West Northamptonshire	7,483	1,272
Harborough	475	81
Melton	290	49
South Holland	232	39
South Kesteven	963	164
Study Area Total	11,018	1,873
East Midlands	31,086	5,285

- 16.5.22 The baseline for strategic visitor attractions is considered over a wider geography, i.e. the Study Area includes a 5 km buffer beyond the Scoping Boundary, as strategic visitor attractions of importance to the local and regional economy that could be sensitive to indirect effects in relation to access, such as temporary disruption during construction, or in-combination effects on amenity.
- 16.5.23 No strategic visitor attractions are within 5 km of the Project Scoping Boundary. Therefore, **Table 16.10** shows the closest strategic visitor attractions identified within each county² within the Study Area as of 2024. This includes Northamptonshire (encompassing local authorities North and West Northamptonshire), Leicestershire (encompassing local authorities Harborough and Melton), and Lincolnshire (encompassing local authorities South Holland and South Kesteven) using data from the Visit Britain Annual Attractions Survey 2024 report. For the purposes of the baseline study, strategic visitor attractions are defined as tourism attractions that are considered to be of importance to the regional economy, and, where data is available, record over 50,000 visitors per year. Five of the strategic visitor attractions identified in the baseline study are located in Lincolnshire, showing the importance of the tourism sector for the local economy in this area.

² Data is presented at county level in the absence of current data at the local authority level.

Table 16.10 Strategic Visitor Attractions (Ref 16.12)

Tourist Attraction	County	Category	Visitor Numbers	Distance from Scoping Boundary
Bradgate Park	Leicestershire	Country Park	Over 200,000	15 km
Canons Ashby	Northamptonshire	Historic Monument / Archaeological Site	50,001-100,000	28 km
Forestry England Salcey	Northamptonshire	Country Park	Over 200,000	3 km
Leicester Guildhall	Leicestershire	Museum and/or Art Gallery	50,001-100,000	12 km
Leicester Museum & Art Gallery (formerly New Walk Museum)	Leicestershire	Museum and/or Art Gallery	Over 200,000	13 km
National Space Centre	Leicestershire	Science / Technology Centre	Over 200,000	13 km
Belton House	Lincolnshire	Historic House / House and Garden / Palace	Over 200,000	14 km
International Bomber Command Centre	Lincolnshire	Heritage / Visitor Centre	100,001-200,000	43 km
Rand Farm Park	Lincolnshire	Farm / Rare Breeds / Farm Animals	100,001-200,000	50 km
Skegness Natureland Seal Sanctuary	Lincolnshire	Safari Park / Zoo / Aquarium / Aviary	100,001-200,000	42 km
The Ropewalk	Lincolnshire	Museum and/or Art Gallery	50,001-100,000	95 km

Local businesses and community receptors

- 16.5.24
- The Study Area includes numerous towns and villages, including those identified in **Table 16.4**.
- 16.5.25
- Businesses tend to be clustered in town and village centres, with farms and other businesses such as farm shops located in more rural areas. Clusters of commercial properties have been identified using the OS AddressBase dataset (Ref 16.9).
- 16.5.26
- Community receptors, such as schools, medical facilities, sports and recreational facilities, and places of worship tend to be located centrally within the settlements, remaining accessible to the local residents. These have been identified using the OS Local Important Buildings dataset (Ref 16.8).
- 16.5.27
- Using desk-top research, the PEIR and ES will identify businesses and community receptors within the local Study Area.

Development land, utilities and renewables infrastructure

Development Land

- 16.5.28
- Each Local Plan within the Study Area (as defined in **Table 16.2**) includes strategic land allocations for future development. These will be identified using latest information available for the assessment and shown on a figure at PEIR and ES stage.

Renewables Infrastructure

- 16.5.29
- Within the Study Area there is a range of renewable energy infrastructure including solar farms, battery storage facilities and anaerobic digestion plants. **Table 16.11** provides a summary of those within the Scoping Boundary and within 500m of the Scoping Boundary. Some of these receptors may operate as businesses and engagement is ongoing to understand how the infrastructure operates, including needs and requirements. Relevant receptors will be identified and shown in a figure at PEIR and ES stages.

Table 16.11 Renewable energy infrastructure within the Study Area

Renewable energy infrastructure	Status	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Wardentree Lane Battery Storage	Application submitted	N	Y
Sewstern Road Anaerobic Digestion Facility	Application submitted	N	Y
Hall Farm, Wymondham Road - Solar PV Panels	Planning permission granted	Y	Y

Renewable energy infrastructure	Status	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Ashfordby Solar Farm	Operational	Y	Y
Twyford Solar Farm	Planning permission granted	Y	Y
Eckland Lodge Solar Farm	Operational	N	Y
Land at Meadow Farm Solar	Operational	N	Y
Sywell Solar Farm	Operational	N	Y
Beckworth Emporium Anaerobic Digester Plant	Application submitted	N	Y

Aviation and Defence Infrastructure

- 16.5.30 National Grid guidance (Ref 16.24) considers impacts to aviation and defence receptors that are within a 5 km buffer of an infrastructure development. **Table 16.12** below details the aviation and defence infrastructure located within 5 km of the Scoping Boundary. The nature of the receptors will be analysed further at PEIR and ES stage.
- 16.5.31 The nearest significant aviation infrastructure is East Midlands Airport, located around 23 km to the west of the Wartnaby area of the Scoping Boundary. This is well in excess of National Grid guidance (Ref 16.24) on the study area of aviation assets of this nature (15 km for passenger airports).
- 16.5.32 It is recognised that there are aerodromes and airfields outside of the Study Area and any potential impact of the Project on flight paths will be considered through ongoing stakeholder engagement.

Table 16.12 Aviation and defence infrastructure within the Study Area

Aviation and defence infrastructure receptor	Distance from Scoping Boundary
Former RAF Melton Mowbray	1.5 km
Sywell Aerodrome EGBK	0.8 km
Castle Bytham/Black Spring Farm Private Airstrip	0.6 km
Buckminster Gliding Club	3.9 km

Aviation and defence infrastructure receptor	Distance from Scoping Boundary
Aslackby Decoy Farm Private Airstrip	3.4 km
Kendrew Barracks	2.5 km
Ministry of Defence Animal Centre	0.6 km
Government Pipelines and Storage System Stonesby	0.7 km

Recreational Routes and PRow

- 16.5.33 National cycle routes, the local cycle network, long-distance paths and national trails have been identified in the Study Area. These are shown on **Figure 16.2 Socio-economic, tourism and recreation receptors**, and **Figure 13.1 Proposed Traffic and Transport Study Area**. Information about these routes can be found in **Chapter 13 Traffic and Transport**, which includes a baseline of PRow, National Cycle Networks, and recreational routes within the Study Area. The traffic and movement assessment will identify PRow of significance in the local area.

Open Space

- 16.5.34 The Study Area comprises large areas of agricultural land or open countryside interspersed by settlements. Open spaces within the Study Area are shown in **Figure 16.2 Socio-economic, tourism and recreation receptors**.
- 16.5.35 Open spaces have been identified using the OS Open Greenspace dataset (Ref 16.7), which is a vector polygon dataset of open greenspaces in urban and rural areas including playing fields, sports' facilities, play areas and allotments. **Table 16.13** lists open greenspaces within 500 m of the Scoping Boundary.
- 16.5.36 Whilst the OS Open Greenspace dataset provides a useful indication of the level of green space provision, it does not provide a comprehensive dataset of areas of open access and common land to which there is a right of access under the Countryside and Rights of Way Act 2000 (Ref 16.14). Those areas will be identified in the assessment through further desk-based study. The Project crosses numerous fields and open spaces, and engagement is ongoing to understand how these open spaces are used to inform the socio-economic, recreation, and tourism assessment.

Table 16.13 Open Space within the Study Area

Open Space	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Spalding Golf Club	Y	Y
Greenspace adjacent to St Andrew's Church, Haconby	Y	Y
Morton Cemetery	N	Y

Open Space	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Greenspace adjacent to St John the Baptist's Church, Morton	N	Y
Morton Field and Play Park	N	Y
Greenspace adjacent to All Saint's Church, Dunsby	N	Y
Irnham Park	N	Y
Greenspace adjacent to St Andrew's Church, Irnham	N	Y
Swinstead Allotments	N	Y
Greenspace adjacent to St Mary's Church, Swinstead	N	Y
Corby Glen Playing Field	Y	Y
Corby Glen Bowling Green	Y	Y
Corby Glen Allotments	Y	Y
Greenspace adjacent to St John's Church, Corby Glen	Y	Y
Greenspace adjacent to St Nicholas' Church, Swayfield	Y	Y
Swayfield Bowling Green	Y	Y
Greenspace adjacent to St Mary's Church, North Witham	N	Y
South Witham Playing Field	N	Y
South Witham Allotments	Y	Y
Sewstern Allotments	N	Y
Greenspace adjacent to St Andrew's Church, Coston	Y	Y
Greenspace adjacent to St Mary's Church, Garthorpe	Y	Y
Greenspace adjacent to St Peter's Church, Stonesby	N	Y
Melton Mowbray Golf Club	Y	Y
Scalford Allotments	N	Y
Melton Country Park	N	Y
Wartnaby Playing Field	Y	Y
Greenspace adjacent to St Michael's Church, Wartnaby	Y	Y
Mowbray Rangers Football Club	N	Y
Asfordby Allotments	Y	Y
Asfordby Playing Fields	Y	Y
Greenspace adjacent to St Peter's Church, Asfordby	Y	Y

Open Space	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Greenspace adjacent to St Luke's Church, Gaddesby	N	Y
Ashby Folville Playing Field	Y	Y
Greenspace adjacent to St Michael's Church, Thorpe Satchville	Y	Y
The Willows Natural Burial Ground	N	Y
Twyford Allotments	Y	Y
Twyford Playing Field	Y	Y
Greenspace adjacent to St Andrew's Church, Twyford	Y	Y
Greenspace adjacent to All Saint's Church, Lowesby	Y	Y
Lowesby Playing Field	Y	Y
Greenspace adjacent to St Peter's Church, Tilton	Y	Y
Billesdon Cemetery	N	Y
Greenspace adjacent to St Thomas À Becket's Church, Skeffington	Y	Y
Tugby Allotments	Y	Y
Greenspace adjacent to St Mary's Church, Noseley	Y	Y
Greenspace adjacent to St John's Church, Glooston	Y	Y
Greenspace adjacent to St Michael's Church, Cranoe	Y	Y
Greenspace adjacent to St Denys' Church, Stonton Wyville	Y	Y
Greenspace adjacent to St Andrew's Church, Welham	Y	Y
Greenspace adjacent to St Mary's Church, Weston By Welland	Y	Y
Great Bowdon Cemetery	Y	Y
Great Bowden Playing Field	Y	Y
Greenspace adjacent to All Saint's Church, Dingley	Y	Y
Symingtons Recreation Ground	N	Y
Market Harborough Playing Field	N	Y
Little Bowden Playing Field	Y	Y
Harborough Town Football Club	Y	Y
Market Harborough Rugby Union Football Club	Y	Y
Market Harborough Golf Course	N	N
Greenspace adjacent to All Saint's Church, Braybrooke	Y	Y

Open Space	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Greenspace adjacent to St Helen's Church, Great Oxendon	Y	Y
Greenspace adjacent to St Peter and Paul's Church, Harrington	Y	Y
Montsaye Community Sports Centre	N	Y
Rothwell Allotments	N	Y
Loddington Playing Fields	Y	Y
Greenspace adjacent to St Leonard's Church, Loddington	Y	Y
Mawsley Village Playing Field	Y	Y
Broughton Playing Fields	Y	Y
Mawsley Road Allotments	Y	Y
Broughton Cemetery	Y	Y
Pytchley Playing Fields	Y	Y
Isham Cricket Club	Y	Y
Greenspace adjacent to St Mary's Church, Orlingbury	Y	Y
Little Harrowden Playing Fields	Y	Y
Greenspace adjacent to St Mary's Church, Little Harrowden	Y	Y
Wellingborough Golf Course	Y	Y
Weillingborough Grammarians Memorial Sportsfield	Y	Y
Queensway Estate Park, Wellingborough	Y	Y
Redwell Leisure Centre	N	Y
Stanwell Park	Y	Y
Wilby Playing Field	Y	Y
Wilby Allotments	Y	Y
Weavers Leisure Centre	Y	Y
Sywell Country Park	N	Y
The Grange Sportsfield	Y	Y
Clock Close Allotments	Y	Y
Wellingborough Rugby Club	Y	Y
Great Doddington Allotments	N	Y
Greenspace adjacent to St Nicholas' Church, Great Doddington	Y	Y

Open Space	Within Scoping Boundary?	Within 500 m of Scoping Boundary?
Earls Barton Rec	Y	Y
Earls Barton Bowling Green	Y	Y
Earls Barton Allotments	Y	Y
Greenspace adjacent to St Mary's Church, Whiston	Y	Y
Castle Ashby Gardens	N	Y
Greenspace adjacent to St Mary's Church, Grendon	Y	Y
Grendon Allotments	Y	Y
Grendon Play Area	Y	Y

Future Baseline

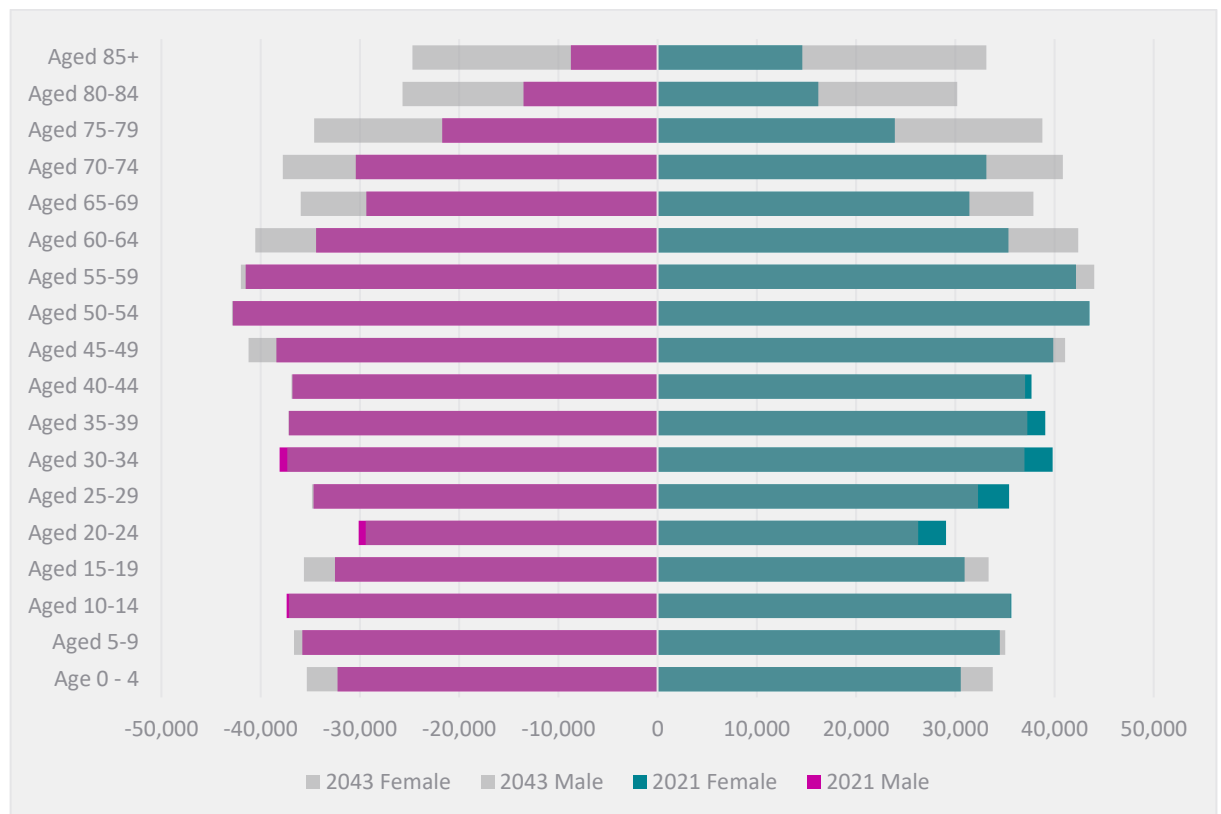
- 16.5.37 The future baseline relates to known or anticipated changes to the current baseline in the future which would develop in the absence of the Project.
- 16.5.38 **Table 16.14** uses data from ONS 2018 based population projections to show total population change and projected change by age group to 2043 (Ref 16.2). The population of the population and deprivation Study Area (see **Table 16.2**) is expected to grow by 11.3%, exceeding the national average of 9.3%, though remaining below the regional average of 12.5%.
- 16.5.39 The working-age population in the Study Area is projected to increase by just 1.6%, the lowest growth rate among comparator geographies. In contrast, the East Midlands is projected to see a 5.1% increase, and England as a whole a 2.1% rise. All geographies are expected to experience substantial growth in the population aged 65 and over, with the Study Area forecast to see the largest increase at 49.3%, compared to 42.4% in the East Midlands and 41.6% nationally.

Table 16.14 Population change from 2021 to 2043 (total and by age group) (Ref 16.2)

	Aged 0 to 15	Aged 16 to 64	Aged 65+	Total
Study Area	3.7%	1.6%	49.3%	11.3%
East Midlands	5.8%	5.1%	42.4%	12.5%
England	1.6%	2.1%	41.6%	9.3%

- 16.5.40 **Image 16.5** shows a population pyramid of the total population within the Study Area in 2021, with the grey bars representing an increase in population between 2021 and 2043. The widening of the top of the pyramid reflects an ageing population, with an increasing proportion of the population in the area aged 60 and over.

Image 16.5 Population pyramid of the local authorities within the Study Area from 2018 to 2043 (Ref 16.1; Ref 16.2)



16.5.41 The future baseline for residential properties, businesses, community facilities, open spaces, visitor attractions and development land over the medium to longer-term is uncertain beyond where allocated and planned development sites have been identified. Due to this uncertainty, it is assumed the future baseline for the Study Area would be unchanged from the current baseline to the completion of the Project, except where new development is expected to be delivered in line with allocated and planned development sites as set out above.

16.6 Design and Control Measures

Design Measures

- 16.6.1 The Scoping Boundary has been designed as far as is practicable to avoid direct effects to sensitive socio-economic, recreational and tourism features as set out in **Chapter 3 Main Alternatives Considered**.
- 16.6.2 The detailed design, including the selection of the preferred route corridor and the precise siting of the substations will also seek to avoid and minimise effects on potential receptors as far as is practicable.
- 16.6.3 Where practicable, the Project has been routed to avoid interacting with clusters of local businesses, properties, recreational and community facilities and visitor attractions.

Control and Management Measures

- 16.6.4 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction (CoCP) is provided in **Appendix 4A Initial Outline Code of Construction Practice**. Measures c relevant to the control and management of impacts that could affect socio-economics, recreation and tourism are (refer to **Appendix 4A** for the full description of each measure):
- GG03 – on development of a final CoCP.
 - GG12 – on potential nuisance activities being located away from sensitive receptors.
 - TT03 – on PRoW diversions and requirement for a Public Right of Way Management Plan (PRoWMP).
 - NV01 and NV02– on working hours and adoption of Best Practicable Means (BPM) for noise management.
 - S01 – on provision of environmental training of construction workers.
 - S02 – on recreational routes and their inclusion in the PRoWMP.

16.7 Potential for Significant Effects

- 16.7.1 The socio-economic, recreation and tourism assessment will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the socio-economic, recreation and tourism ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 16.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 16.6.
- 16.7.3 **Table 16.15** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to potentially significant effects on receptors identified in the Study Area, these are then scoped into the ES. Impact pathways that are unlikely to give rise to significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.

Table 16.15 Impacts, receptors and the potential for significant effect

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Potential employment and training benefits within the local labour market, including supply chain opportunities, as well as opportunities for training and skills development.	Local labour market	Yes – the Project will generate beneficial direct and indirect temporary employment, training and apprenticeship opportunities both on site and indirectly in the supply chain during the construction phase, which could be significant.	Scoped In
Operation and Maintenance	Potential employment and training benefits across the supply chain.	Local labour market	No – the scale of operational employment generated is likely to be very limited, and is not likely to result in significant effects. This has therefore been scoped out of further consideration.	Scoped Out
Construction	Potential disruption to local users of recreational routes and PRow of significance in the local area.	Users of recreational routes and PRow of significance in the local area	Yes – disruption to recreational routes and PRow of significance in the local area during the construction phase will be avoided as far as possible and considered with a PRowWMP. However, there is the potential for	Scoped In

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			significant effects during construction due to the possible need for temporary or permanent suitable diversions to be agreed with relevant bodies, and so this has been scoped in for further consideration at this stage.	
Operation and Maintenance	Potential disruption to local users from temporary closure or diversions of recreational routes and PRow of significance in the local area.	Users of promoted recreational routes and PRow of significance	No – any temporary, long-term or permanent effects on recreational routes and PRow of significance in the local area would arise during the construction period and would therefore be assessed as construction effects. Any long-term impacts would be reflected in the construction assessment conclusions accordingly. No significant effects on recreational routes and PRow of significance in the local area are anticipated during operation. Disruption to recreational routes and PRow of significance in	Scoped Out

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			the local area during maintenance will be avoided as far as possible, managed with a PRowMP, and it is not considered that there is the potential for significant effects.	
Construction	Potential temporary or permanent loss of development land.	Development land, utilities and renewables infrastructure	Yes – the Project has been designed to avoid development land, utilities and renewables infrastructure as far as possible, however there may be the potential for land take which could result in the potential for significant effects and so this has been scoped in for further consideration at this stage.	Scoped In
Operation and Maintenance	Potential temporary or permanent loss of development land.	Development land, utilities and renewables infrastructure	No – any temporary, long-term or permanent effects on development land, utilities and renewables infrastructure would arise during the construction period and would therefore be assessed as construction effects. Any long-term impacts would	Scoped Out

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			be reflected in the construction assessment conclusions accordingly. No significant effects on development land are anticipated during operation. Disruption to development land during maintenance will be avoided as far as possible and it is not considered that there is the potential for significant effects.	
Construction	Potential temporary or permanent loss of open space	Open space	Yes – the Project has been designed to avoid open space as far as possible, however there may be the potential for land take which could result in the potential for significant effects and so this has been scoped in for further consideration at this stage. In the event of permanent loss of open space, mitigation measures such as replacement land will be considered.	Scoped In

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Potential temporary or permanent loss of open space	Open space	No – any temporary, long-term or permanent effects on open space would arise during the construction period and would therefore be assessed as construction effects. Any long-term impacts would be reflected in the construction assessment conclusions accordingly. No significant effects on open space are anticipated during operation. Disruption to open space during maintenance will be avoided as far as possible and it is not considered that there is the potential for significant effects.	Scoped Out
Construction	Potential disruption during construction-based activities (amenity & severance)	Affected communities, community facilities, visitor attractions and businesses (indirect)	Yes – the Project has been designed to avoid effects on these receptors as far as possible. However, there is the potential for direct and indirect temporary effects to arise from construction activities that may give	Scoped In

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			rise to significant effects, so this has been scoped in for further consideration at this stage.	
Operation and Maintenance	Potential disruption during operational activities (amenity & severance)	Affected communities, community facilities, visitor attractions and businesses (indirect)	No – access to these receptors will be reinstated post construction and their ongoing use will be unaffected during operation and maintenance activities. Therefore, significant effects are not likely to occur.	Scoped Out
Construction, Operation, and Maintenance	Potential temporary or permanent loss of or impact on receptors (land take).	Affected communities, community facilities, visitor attractions and businesses (direct)	No – the Project has been designed to avoid direct impacts on these receptors and therefore, significant effects are not likely to occur. Should this position change between Scoping and PEIR or ES stage, any communities, community facilities, visitor attractions and businesses likely to be directly impacted, would be included in further assessment as appropriate. Indirect	Scoped Out

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			effects which may occur during construction such as disruption to access and noise will be managed through the Construction Traffic Management Plan (CTMP) and CEMP.	
Construction	Potential for impacts on the availability of tourism accommodation due to use by the construction workforce.	Tourism accommodation	Yes – impact of the construction workforce on bedspace availability is scoped in due to the potential scale of employment generated during the construction phase and the cumulative impact of other projects in the region.	Scoped In
Operation and Maintenance	Potential for impacts on the availability of tourism accommodation during operation and maintenance.	Tourism accommodation	No – the scale of operational employment generated is likely to be very limited. Therefore, tourism accommodation availability will be unaffected during operation and maintenance activities. Significant effects are not likely to occur.	Scoped Out

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction, operation and maintenance	Potential temporary or permanent loss of residential property, access, and impact on amenity.	Residential properties	No – the emerging preferred corridor for the Project and substation siting areas avoids acquisition or over-sail of residential properties. Indirect effects which may occur during construction such as disruption to access and noise will be managed through the CTMP and CEMP. Significant effects are not likely to occur.	Scoped Out
Construction, operation and maintenance	Potential for impacts on the operation of aviation infrastructure	Aviation infrastructure	Yes – the Project has been designed to avoid effects on these receptors as far as possible. However, there is the potential for aviation infrastructure to be directly or indirectly impacted and so this has been scoped in for further consideration at this stage. An assessment of the effects of the Project on users of airfields as socio-economic receptors will be presented in the ES when information from	Scoped In

Project phase	Source	Receptor	Potential for significant effect	Proposed to be scoped in/out
			specialist aviation consultation is available.	

16.8 Proposed Assessment Methodology

Proposed Data Sources

- 16.8.1 A desk-based baseline assessment will be undertaken using a range of sources to provide a description of the socio-economic conditions within the geographical areas set out in Section 16.5. This will be done using established statistical sources as set out in Section 16.5.1, and in consultation with stakeholders, where relevant. Relevant policy will be reviewed at the local, regional and national levels to identify the key issues of relevance to the Project.
- 16.8.2 Community facilities, open space, business and tourism receptors will be identified using web mapping of OS data, cross-checked against internet searches, and taking into account stakeholder feedback. The baseline for promoted and recreational routes will also draw on OS data, as well as information from the relevant local planning authorities, maps of Sustrans National Cycle Network routes, and the baseline collected by **Chapter 13 Traffic and Transport**.

Proposed Assessment Methodology

- 16.8.3 The following section summarises the methodology proposed to be used for the socio-economic, recreation and tourism ES assessment which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.
- 16.8.4 As noted above, there is limited technical guidance available for socio-economics, recreation and tourism assessments. As such, the methodology for assessing impacts will follow standard EIA guidance and will entail:
- assessment of the likely scale, permanence and significance of effects associated with socio-economics, recreation and tourism receptors; and
 - an assessment of the potential cumulative impacts with other projects within the surrounding area.
- 16.8.5 For socio-economics, recreation and tourism there is no accepted definition of what constitutes a significant (or not significant) effect. It is however recognised that effects are categorised based upon the relationship between the scale (or magnitude) of impact and the sensitivity (or value) of the affected resource or receptor.
- 16.8.6 Appropriate qualitative and quantitative sensitivity and magnitude criteria have been defined, based on expert judgment and understanding of local and regional priorities, to assess the scale and nature of the impacts of the Project against baseline conditions.

Sensitivity

- 16.8.7 **Table 16.16** sets out the sensitivity criteria that will be used in the assessment.

Table 16.16 Sensitivity of receptors

Value/Sensitivity	Description
Very high	Businesses, individuals, groups of individuals, or other receptors possessing very significant economic, social

Value/Sensitivity	Description
	and/or community value. These receptors are considered very likely to incur a material loss or gain as a result of potential changes in the environment, with little to no potential for substitution.
High	Businesses, individuals, groups of individuals, or other receptors possessing some significant economic, social and/or community value. These receptors are considered likely to incur some material loss or gain as a result of potential changes in the environment, with limited potential for substitution.
Medium	Businesses, individuals, groups of individuals, or other receptors possessing some economic, social and/or community value. These receptors are considered likely to incur a material loss or gain as a result of potential changes in the environment, with potential for substitution.
Low	Businesses, individuals, groups of individuals, or other receptors possessing some economic, social and/or community value. These receptors are not considered likely to incur any loss or gain as a result of potential changes in the environment.
Negligible	Businesses, individuals, groups of individuals, or other receptors possessing limited economic, social and/or community value. These receptors are not considered likely to incur any loss or gain as a result of potential changes in the environment.

Magnitude

16.8.8 **Table 16.17** sets out the criteria that will be used to define the magnitude of impact in the assessment.

Table 16.17 Magnitude of impact

Magnitude	Description
Large	An impact that would be likely to result in total loss of an individual receptor or permanent changes to baseline conditions for a large number of businesses, individuals or groups of individuals.
Medium	An impact that would be very likely to result in partial changes to baseline conditions for a moderate number of businesses, individuals or groups of individuals.
Small	An impact that would be likely to result in minor changes to baseline conditions for a small number of businesses, individuals or groups of individuals.

Magnitude	Description
Negligible	An impact that would be likely to result in little or no change to baseline conditions for businesses, individuals or groups of individuals.

Significance of effects

- 16.8.9 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of impacts is outlined in **Table 16.18**.

Table 16.18 Determination of significance matrix

Value/Sensitivity of Receptor						
Magnitude of Impact		Very high	High	Medium	Low	Negligible
	Large	Major	Major/moderate	Major/moderate/minor	Moderate/minor	Minor/negligible
	Medium	Major/moderate	Major/moderate	Moderate/minor	Minor/negligible	Negligible
	Small	Major/moderate/minor	Moderate/minor	Moderate/minor	Minor/negligible	Negligible
	Negligible	Minor/negligible	Minor/negligible	Minor/negligible	Negligible	Negligible

- 16.8.10 This matrix will be used as the basis for assigning significance to an effect; however, the identification of significance typically requires the application of professional judgement. As an illustration, a high sensitivity receptor subject to a large magnitude of change would experience a major or moderate effect, and a low sensitivity receptor subject to a small magnitude of change would experience a minor or negligible effect. The assessment matrix is a tool to assist with professional judgement; there are no defined cut-off points between the categories, and there is no guidance on which score should be assigned where the matrix provides alternatives.
- 16.8.11 Those effects which are found to be moderate or major are typically considered 'significant' and those which are minor or negligible considered 'not significant'. Duration of impact will also be considered, with more weight given to reversible long-term or permanent changes than to short-term, temporary ones. Temporary effects are typically considered to be those associated with the construction and maintenance works, whereas long-term reversible effects/permanent effects are generally those associated with the operational stage (notwithstanding in some cases there may be exceptions, such as permanent PRoW diversions during construction).

16.9 Assumptions and limitations

- 16.9.1 This EIA Scoping Report has been collated based on a range of publicly available data and information only. It is assumed that the data collated is accurate. The baseline will be supplemented with additional data collected as part of the EIA process. A precautionary approach has been taken and professional judgement, based on experience of similar linear projects, has been used where required to inform the scope of the assessment.
- 16.9.2 The commercial agreement for land, including productive land, between the Applicant and landowners is beyond the scope of this chapter and the ES assessment. This chapter does not consider the financial effects on individual businesses, as this may be the subject of the landowner negotiations and may result in compensation payments to offset effects on landowners and businesses. In addition, this chapter does not consider the effects of the Project on property values as this is not a matter for assessment under the EIA Regulations 2017. As a result, this is scoped out of the ES. Also, it should be noted that potential impacts on farm business would be included in **Chapter 12 Agriculture and Soils**.
- 16.9.3 A baseline of aviation and defence receptors, such as airports, airfields, barracks and associated infrastructure has been undertaken in Section 16.5. However, the detailed assessment of potential effects on these receptors will be undertaken when information from specialist aviation consultation is available.
- 16.9.4 Information on open greenspace has been drawn from desk-based research using OS data and checked against Google Maps. This may not capture the most comprehensive or up to date information, and therefore, the list of baseline open greenspaces should be viewed as indicative.
- 16.9.5 A proportion of the construction and maintenance workers are likely to live locally to the site, while a proportion will travel to the site to work. More detail on the average and peak number of workers expected to work across the construction and maintenance period, and the proportion of workers who will be expected to live locally to the site, will likely become available as the Project progresses and will be set out in the ES. This will inform the assessment of construction employment effects.

16.10 Conclusion

- 16.10.1 This Scoping Report chapter has outlined relevant legislation, policy and guidance in relation to the socio-economic, tourism, and recreation assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors in **Table 16.15**.
- 16.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 16.1 Office for National Statistics, (2025). Census. [online] Available at: <https://www.ons.gov.uk/census> [Accessed 21 Jul. 2025].
- Ref 16.2 Office for National Statistics, (2024). Population estimates for England and Wales: Mid-2023. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2023> [Accessed 21 Jul. 2025]
- Ref 16.3 Department for Levelling Up, Housing and Communities, (2019). English Indices of Deprivation 2019. [online] Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> [Accessed 21 Jul. 2025]
- Ref 16.4 Office for National Statistics, (2025). Nominal regional gross value added (balanced) per head and income components. [online] Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalregionalgrossvalueaddedbalancedperheadandincomecomponents> [Accessed 21 Jul. 2025]
- Ref 16.5 Office for National Statistics, (2022). Business Register and Employment Survey. [online] Available at: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey> [Accessed 21 Jul. 2025]
- Ref 16.6 Office for National Statistics, (2019). National population projections: 2018-based. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2018based> [Accessed 21 Jul. 2025]
- Ref 16.7 Ordnance Survey, (2025). OS Open Greenspace. [online] Available at: <https://www.ordnancesurvey.co.uk/products/os-open-greenspace> [Accessed 21 Jul. 2025]
- Ref 16.8 Ordnance Survey, (2025). OS OpenMap Local. [online] Available at: <https://www.ordnancesurvey.co.uk/products/os-open-map-local> [Accessed 21 Jul. 2025]
- Ref 16.9 Ordnance Survey, (2025). AddressBase. [online] Available at: <https://www.ordnancesurvey.co.uk/products/addressbase> [Accessed 21 Jul. 2025]
- Ref 16.10 VisitBritain, (2025). England domestic tourism: regional and subregional data. [online] Available at: <https://www.visitbritain.org/research-insights/england-domestic-tourism-regional-and-subregional-data> [Accessed 21 Jul. 2025]
- Ref 16.11 VisitBritain, (2025). England hotel occupancy: latest. [online] Available at: <https://www.visitbritain.org/research-insights/england-hotel-occupancy-latest> [Accessed 21 Jul. 2025]

- Ref 16.12 VisitBritain, (2025). England visitor attractions: latest. [online] Available at: <https://www.visitbritain.org/research-insights/england-visitor-attractions-latest> [Accessed 21 Jul. 2025]
- Ref 16.13 CoStar Group, (2025). CoStar. [online] Available at: <https://www.costar.com/> [Accessed 21 Jul. 2025]
- Ref 16.14 UK Government, (2000). Countryside and Rights of Way Act 2000. [online] Available at: <https://www.legislation.gov.uk/ukpga/2000/37/contents> [Accessed 21 Jul. 2025]
- Ref 16.15 Harborough District Council, (2025). Proposed Submission Draft Harborough Local Plan. [online] Available at: https://www.harborough.gov.uk/downloads/file/8926/proposed_submission_draft_harborough_local_plan [Accessed 25 Jul. 2025]
- Ref 16.16 Melton Borough Council, (2018). Local Plan: Appendix 3 Settlement Hierarchy. [online] Available at: <https://democracy.melton.gov.uk/documents/s6271/Item%2012%20appendix%202-%20Full%20Local%20Plan%20appendices.pdf> [Accessed 25 Jul. 2025]
- Ref 16.17 South East Lincolnshire Joint Strategic Planning Committee, (2019). South East Lincolnshire Local Plan 2011-2036. [online] Available at: <https://southeastlincslocalplan.org/article/20102/Adopted-Plan> [Accessed 25 Jul. 2025]
- Ref 16.18 South Kesteven District Council, (2020). South Kesteven Local Plan. [online] Available at: <https://www.southkesteven.gov.uk/planning-building-control/planning-policy-local-plans/south-kesteven-local-plan> [Accessed 25 Jul. 2025]
- Ref 16.19 North Northamptonshire Council, (2016). North Northamptonshire Joint Core Strategy. [online] Available at: <https://www.northnorthants.gov.uk/planning-strategies-and-plans/north-northamptonshire-local-plan> [Accessed 25 Jul. 2025]
- Ref 16.20 West Northamptonshire Council, (2024). Regulation 18 Local Plan. [online] Available at: <https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire> [Accessed 25 Jul. 2025]
- Ref 16.21 Homes and Communities Agency (HCA) (now Homes England) (2014). Additionality Guide (4th edition).
- Ref 16.22 HM Treasury (2022). The Green Book – Appraisal and Evaluation in Central Government.
- Ref 16.23 HM Treasury (2020). The Magenta Book – Guidance for Evaluation.
- Ref 16.24 National Grid (2012). Options Appraisal – Toolkit for Project Teams. Aviation and Defence Methodologies.

17. Health and Wellbeing

Contents

17.	Health and Wellbeing	17-1
17.1	Introduction	17-1
17.2	Legislation, Policy and Guidance	17-2
17.3	Consultation and Engagement	17-2
17.4	Study Area	17-6
17.5	Baseline Conditions	17-7
	Data Sources	17-7
	Baseline	17-7
	Future Baseline	17-15
17.6	Design and Control Measures	17-16
	Design Measures	17-16
	Control and Management Measures	17-17
17.7	Potential for Significant Effects	17-17
17.8	Proposed Assessment Methodology	17-25
	Proposed Data Sources	17-25
	Proposed Assessment Methodology	17-25
17.9	Assumptions and limitations	17-29
17.10	Conclusion	17-29
	Table 17.1 Engagement with Stakeholders	17-3
	Table 17.2 Population breakdown by Host Authority	17-9
	Table 17.3 Economic Activity by Host Authority	17-10
	Table 17.4 Health Indicators by Host Authority	17-10
	Table 17.5 Index of Multiple Deprivation (2019) by Host Authority	17-12
	Table 17.6 Vulnerable Groups	17-13
	Table 17.7 Population projections for 2022-2032	17-16
	Table 17.8 Impacts, receptors and the potential for significant effect	17-18
	Table 17.9 Sensitivity of receptors	17-26
	Table 17.10 Magnitude of impact	17-27
	Table 17.11 Determination of significance matrix	17-29
	No table of figures entries found.	
	References	17-30

17. Health and Wellbeing

17.1 Introduction

- 17.1.1 The World Health Organisation defines health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’ (Ref 17.1). Factors that have the most significant influence on the physical and mental health of a population are called ‘determinants of health’ and include a wide range of social, economic and environmental factors which then influence the health of individuals and populations.
- 17.1.2 This chapter presents how the health and wellbeing assessment will consider the potential likely significant effects on health and wellbeing receptors that may arise from the construction, operation and maintenance of the Project (as described in **Chapter 4, Description of the Project**). An electromagnetic fields (EMF) report will also be prepared as part of the Project, however this is separate to this chapter and the Environmental Impact Assessment (EIA) process as a whole.
- 17.1.3 This chapter describes the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed in the Environmental Statement (ES) . As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 17.1.4 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 17.1.5 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 17.1.6 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 7 Visual:** which covers effects on residential properties and recreational, tourism and community visual receptors and their impact on human receptors including the ability to enjoy open space and recreational amenities.
 - **Chapter 11 Geology and Hydrology:** which covers contamination sources and potential remediation effects following construction activities.
 - **Chapter 13 Traffic and Transport:** which covers effects on accessibility, active travel, use of Public Rights of Way (PROW) as a result of construction activities and traffic.

- **Chapter 14 Air Quality:** which covers air quality effects following construction activities and traffic and their impact on human receptors.
- **Chapter 15 Noise and Vibration:** which covers noise and vibration effects following construction activities and traffic and their impact on human receptors.
- **Chapter 16 Socio-economic, Recreation and Tourism:** which covers impacts on community land and facilities, commercial property and land, and employment creation, as well as effects on recreational, tourism and community receptors including the ability to access open space and recreational amenities.

17.1.7 This chapter is supported by the following figures associated with **Chapter 16 Socio-economic, Recreation, Tourism:**

- **Figure 16.1 Indices of Multiple Deprivation;** and
- **Figure 16.2 Socio-economic, Tourism and Recreation Receptors.**

17.2 Legislation, Policy and Guidance

17.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project.

17.2.2 Key local policy, and guidance that have informed the scoping process for health and wellbeing associated with the construction, operation, and maintenance of the Project in **Appendix 2A Key Legislation, Appendix 2B National and Regional Planning Policy and Appendix 2C Local Policy.**

17.2.3 The relevant principle guidance and standards that have informed the scoping process are listed below and will, along with other relevant material, also be taken into account as part of the ES assessment:

- The Institute of Environmental Management and Assessment (IEMA) now known as The Institute of Sustainability and Environmental Professionals (ISEP) (2022) Effective Scoping of Human Health in Environmental Impact Assessment (Ref 17.2).
- ISEP (2022) Determining Significance for Human Health in Environmental Impact Assessment (Ref 17.3).
- Highways England (2020) Design Manual for Roads and Bridge Document LA112 (Ref 17.4).
- ISEP (2017) Health in Environmental Impact Assessment: A Primer for a Proportionate Approach (Ref 17.5).
- Public Health England (PHE) The Public Health England Strategy 2020 to 2025 (Ref 17.6).
- PHE (2020) Advice on the content of Environmental Statements accompanying an application under the Nationally Significant Infrastructure Planning Regime (Ref 17.7).

17.3 Consultation and Engagement

17.3.1 The ES will be informed by consultation and engagement with stakeholders, including local planning authorities, National Health Service (NHS) Integrated Care

Partnerships, relevant emergency service authorities, Health and Safety Executive, UK Health Security Agency (UKHSA), and the Office for Health Improvement and Disparities (OHID). In addition, engagement will be undertaken with non-statutory stakeholders, as required, to ensure that specialist local views and expertise can be considered as part of the ES.

- 17.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 17.1**. Pre-scoping engagement with a Public Health Officer has also been undertaken, as set out in **Table 17.1**.

Table 17.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Public Health Officer - West Northamptonshire Council Pre-scoping engagement	Positive engagement on proposed scope and assessment methodology, suggestion provided to have direct engagement with Local Area Partnerships (LAPs) and the updated West Northants Health Impact Assessment Tool and guidance to inform assessment were provided.	The West Northants Health Impact Assessment Tool and guidance has been reviewed and considered for the health and wellbeing scoping process and assessment.
Sport England	Sport England considered the proposal in light of the National Planning Policy Framework (NPPF 2024) particularly where the presumption is that playing fields should not be built on and against its own 'Playing Fields Policy and Guidance Document' Sport England's technical guidance on 'Overhead powerlines' in relation to playing pitches should be considered during the determination of the route of the overhead line.	Impacts on open spaces (including playing fields) have been scoped into the health and wellbeing assessment. This will include any impacts associated with land take, access or changes to the amenity of any open space. The Ordnance Survey (OS) Open Greenspace dataset will be used to identify all open spaces within the Study Area including playing fields.
South Holland District Council	The Council raised concerns about visual and neighbourhood amenity due to towers and sub-stations and the impact of construction traffic on access to educational facilities,	The impact of construction traffic and activities on neighbourhood amenity due to noise, air emissions, visual impacts and increased traffic movements have been scoped into the health and wellbeing assessment and

Stakeholder	Summary of response	Consideration in the Scoping Report
	employment, healthcare and social services. There were also concerns raised about cumulative effects on communities and businesses from multiple projects in the area. The Council expresses interest in the submission of detailed construction and environmental management plans to reduce impacts to vulnerable receptors from noise, dust, light and emissions.	will be assessed using the methodology described in Section 17.8. The ES will assess effects on users of the local road networks from construction traffic. The impact of construction traffic on access to educational facilities, employment, healthcare and social services has been scoped out for the health and wellbeing assessment using the methodology described in Section 17.8, as any disruption caused will be localised and temporary, unlikely to affect access at population level. Cumulative effects from multiple projects in the area on communities and businesses will be assessed in the ES as described in Chapter 5 EIA Approach and Methodology, Section 5.5 on Cumulative Effects. An Outline Code of Construction Practice will be prepared and submitted as part of the application for development consent. An Initial Outline version is provided as Appendix 4A Initial Outline Code of Construction Practice.
Pinchbeck Parish Council	The Parish Council raised concerns about compliance with relevant national planning policy, changes to views and tranquillity as well as impacts on social cohesion and wellbeing. Further concerns raised include negative impacts on	The relevant national planning policies have been considered and are outlined in Chapter 2 Regulatory and Planning Policy Context. Impacts on amenity, tranquillity, PRoW and social cohesion and related wellbeing effects have been

Stakeholder	Summary of response	Consideration in the Scoping Report
	the Parish's landscape, amenity and wellbeing and perceived inadequate consultation and communication with local communities. There was also concern raised about cumulative impacts across multiple overlapping Nationally Significant Infrastructure Projects (NSIPs).	scoped into the health and wellbeing assessment as described in this chapter. Also, uncertainty and the potential impact on mental health associated with uncertainty and stress relating to the Project has been scoped in, ensuring that the impact on the wellbeing of local communities is considered. Further consultation by the Applicant is scheduled to take place in 2026. Cumulative effects from multiple developments will be assessed in the ES as described in Chapter 5 EIA Approach and Methodology, Section 5.5 on Cumulative Effects.
Lincolnshire County Council	The Council expressed an interest in the inclusion of non-statutory consultees in the development of the Project, recommending the inclusion of local skills providers, both public and voluntary sector providers, including: Boston College, Grimsby Institution and Voluntary and Community Services. They also expressed concerns around HGV related congestion and recommend for construction phases to avoid peak visitor time to avoid negative impacts on employment and income associated with the visitor economy. Further, the Council stated that the implications of the	The consultation which resulted in this response included non-statutory consultees. Further consultation by the Applicant is scheduled to take place in 2026. The impacts of construction traffic on neighbourhood amenity for local communities has been scoped into the health and wellbeing assessment as described in this chapter. The potential impact on mental health associated with

Stakeholder	Summary of response	Consideration in the Scoping Report
	overhead line and substation on human health needs to be considered, with either a Health Impact Assessment provided to support the application, or a specific consideration of health impacts (both physical and mental) provided in each chapter of the ES.	uncertainty and stress relating to the perceived impacts of the generation of electromagnetic fields (EMFs) from the overhead line has been scoped into the health and wellbeing assessment as described in this chapter.
	The Council references UK Department of Energy Security and Net Zero Guidance 'Community funds for transmission infrastructure' to ensure community benefits have delivered to affected communities.	Appropriate mitigation measures will be identified and embedded in the Project as outlined in Section 17.8 Proposed Assessment Methodology of this chapter.
Anglian Water	Anglian Water expresses interest in further engagement where there are cumulative impacts with Anglian Water projects, including the Lincolnshire Reservoir project.	Cumulative effects from multiple developments will be assessed in the ES as described in Chapter 5 EIA Approach and Methodology , Section 5.5 on Cumulative Effects.

17.4 Study Area

- 17.4.1 For the purpose of this Scoping Report, the Study Area includes the land within the Scoping Boundary, as illustrated on **Figure 1.2 Scoping Boundary**, which has been divided into five Sections. The Scoping Boundary is based on the new overhead line emerging preferred corridor, the new Weston Marsh substation infrastructure Siting Zone, the new WMEL-A and WMEL-B substation preferred Siting Areas, and an assumed area around the existing ZA overhead line to allow for reconductoring works.
- 17.4.2 Local authority level data has been collected from South Holland, South Kesteven, Melton, Harborough, West Northamptonshire and North Northamptonshire. Given the size of the Scoping Boundary, this level of geography has been used to present the baseline for this scoping assessment. This is presented alongside the corresponding region of the East Midlands and the national comparator of England.
- 17.4.3 The Study Area for the ES assessment will vary by the type of health impact being assessed, for example, some impacts on health determinants, such as access to work and training, affect the population across a wider geographic area and these are considered at local authority level. For most impacts on health determinants, the

Study Area will be defined to include the areas closest to the Project, which are likely to be affected by issues such as loss of land, access and amenity impacts with the potential to give rise to health and wellbeing effects. This will include the lower super output areas (LSOA) that contain populations and/or community receptors within 500 m of the Scoping Boundary.

- 17.4.4 The Study Area will remain flexible to capture any impacts with the potential to influence health and wellbeing outside the Study Area, which may be identified during the course of the assessment. For example, this may include impacts on the wider highway network.

17.5 Baseline Conditions

Data Sources

- 17.5.1 The known or predicted current and future baseline environment described in this section has been informed by the following data sources:
- Ministry of Housing, Communities and Local Government, Indices of Multiple Deprivation 2019 (Ref 17.9).
 - Office of National Statistics (ONS), Census 2021 (2022) (Ref 17.8).
 - OHID, Local Health data (Ref 17.10).
 - Ordnance Survey Data (Ref 17.15).
 - Public Health England, Health Profiles (2022) (Ref 17.12).
 - Sustrans Open data (Ref 17.11).

Baseline

- 17.5.2 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The five Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities.
- 17.5.3 To provide an assessment of the likely significant effects of the Project on health, it is necessary to identify and understand the health and social baseline conditions in the Study Area. This information helps in the determination of sensitivity of populations, alongside the consideration of vulnerable groups identified in the Study Area who are more likely to experience adverse health and wellbeing effects.
- 17.5.4 A Project-wide health profile has been presented below comprising data for each host authority within the Study Area, alongside national comparators.

Section 1

- 17.5.5 Section 1 is in South Holland and is a predominately rural district, characterised by dispersed rural properties, small settlements and market towns. the closest town is Spalding, with the villages of Surfleet, Crossgate, Pinchbeck and Northgate adjacent to the Scoping Boundary. Within the area there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages.

Section 2

- 17.5.6 Section 2 is in South Kesteven which is a large and diverse district encompassing several market towns and rural villages. The closest town is Bourne, with the villages of Dunsby, Haconby, Morton, Stainfield, Hanthorpe, Bulby, Irnham, Swinstead, Corby Glen, Swayfield, North Witham and South Witham within or adjacent to Section 1. Within the area there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages.

Section 3

- 17.5.7 Section 3 is in Melton which is a predominantly rural borough, centred around the historic market town of Melton Mowbray and a network of surrounding villages including, Sewstern, Garthorpe, Holwell, Ab Kettleby, Wartnaby, Ashfordby, Frisby on the Wreake and Twyford within or adjacent to this Section . Within the area there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages.

Section 4

- 17.5.8 Section 4 is in Harborough which is a rural district, the closest and largest town is Market Harborough with the villages Marefield, Lowesby, Cold Newton, Tilton on the Hill, Halstead, Skeffington, Tugby, Rolleston, Noseley, Goadby, Glooston, Stonton Wyville, Cranoe, Slawston, Thorpe Langton, Wilham, Great Bowden, and Little Bowden within or adjacent to this Section . Within the area there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages.

Section 5

- 17.5.9 Section 5 is in West and North Northamptonshire which encompass a diverse mix of urban centres, market towns, and rural communities. The closest towns are Market Harborough and Wellingborough with the villages Weston by Welland, Sutton Bassett, Dingley Braybrooke, Harrington, Orton, Loddington, Mawsley, Great Cransley, Broughton, Pytchley, Orlingbury, Little Harrowden, Hardwick, Mears Ashby, Wilby, Great Doddington, Earls Barton, Castle Ashby and Grendon within or adjacent to this Section . Within the area there are several footpaths, bridleways and local access roads that provide links between rural dwellings and villages.
- 17.5.10 The following sections present the existing local authority level baseline established at scoping.

Population

- 17.5.11 The data in **Table 17.2** (Ref 17.15) sets out the age breakdown of the resident population by host authority Key points are as follows:
- Almost all host authorities have ageing populations, as their proportion of the population aged 65 and over are all above their respective regional and national average, with the exception of North and West Northamptonshire. Of the host authorities, South Holland and Melton have the highest proportion of residents aged 65 and over (24 per cent). This is marginally higher than the East Midlands (20 per cent) and the national average (19 per cent).

- In contrast, the working age population (aged 16-65) in all host authorities is lower or the same as their respective regional averages, and below the national average of 63 percent, except for West Northamptonshire which is higher at 64 percent. Of the host authorities, South Holland, South Kesteven and Melton have the lowest proportion of working age residents.
- The population aged under 16 for each of the host authorities only varies very minimally from the regional and national averages, North Northamptonshire has the highest percentage of young people at 20 per cent and South Holland and Melton have the lowest percentage of young people at 17 per cent.

Table 17.2 Population breakdown by Host Authority

Population breakdown	South Holland	South Kesteven	Melton	Harborough	North Northamptonshire	West Northamptonshire	East Midlands	England
Population (2021)	95,490	143,751	51,756	98,254	360,418	426,707	4,881,559	56,554,891
Population under 16 (%) (2021)	17	18	17	18	20	19	18	19
Population 16 - 64 (%) (2021)	59	59	59	60	62	64	62	63
Population aged 65 and over (%) (2021)	24	23	24	22	18	17	20	19

Economic Activity

17.5.12 The data in **Table 17.3** (Ref 17.8) sets out economic activity across the relevant host authorities, region and England. Key points are as follows:

- The average economic activity rates in South Holland and South Kesteven are broadly in line with the respective regional and national averages. The economic activity rates in Melton, Harborough and North and West Northamptonshire are higher than the regional and national averages.
- Unemployment rates in most host authority areas are broadly in line with the unemployment rates in their respective regional averages and the national average, except for in North and West Northamptonshire where unemployment rates are lower than the other host authorities as well as the regional and national averages.

Table 17.3 Economic Activity by Host Authority

Economic Activity	South Holland	South Kesteven	Melton	Harborough	North Northampton shire	West Northampton shire	East Midlands	England
Economic activity rate (%) (2021)	59	59	60	61	63	63	58	58
Unemployment rate (%) (2021)	4	4	3	3	2	2	4	5

Health Indicators

17.5.13 The data in **Table 17.4** below sets out health indicators for the host authorities. Key points are as follows:

- At the host authority level, the proportion of residents in most areas who consider their health to be 'not good' is broadly in line with the respective regional and national average. However, South Holland has a moderately higher proportion of people not in good health when compared to the East Midlands and England averages, Harborough has a moderately lower proportion of residents that consider their health to be 'not good'.
- The proportion of residents who are disabled under the Equality Act is higher in South Holland and South Kesteven compared to the regional and national averages but only minimally. The proportion of residents who are disabled under the Equality Act is lower compared to the regional and national averages in Harborough and West Northamptonshire but again, only marginally. It is notable that the averages in Harborough across three of the health indicators; general health, disability and Year 6 prevalence of obesity is moderately lower than the regional and national averages.
- It is also notable that the number of deaths reported from respiratory disease is quite considerably higher in North Northamptonshire in comparison to the figures reported for all other host authorities as well as the national and regional average.

Table 17.4 Health Indicators by Host Authority

Health indicators	South Holland	South Kesteven	Melton	Harborough	North Northampton shire	West Northampton shire	East Midlands	England
General Health- Not good (%) (2021) Ref 17.8	21	18	17	15	18	16	19	18
Disability (%) under the	19	19	17	15	17	15	18	17

Health indicators	South Holland	South Kesteven	Melton	Harborough	North Northamptonshire	West Northamptonshire	East Midlands	England
Equality Act) (2021) Ref 17.8								
Year 6 prevalence of obesity (including severe obesity) (10-11 yrs) (2023/24) Ref 17.12	24.5	20.6	19	15.8	23.1	19.2	22.1	22.1
Deaths from Respiratory diseases, all ages (SMR) (2021-23) Ref 17.12	90.2	84.0	89.7	82.6	128.1	108.0	104.2	106.3
Life expectancy at birth (Male) (2021-23) Ref 17.12	78.5	79.9	80.0	81.0	78.7	79.4	78.8	79.1
Life expectancy at birth (Female) (2021-23) Ref 17.12	82.8	83.7	83.8	84.5	82.2	83.4	82.6	83.1

Index of Multiple Deprivation

- 17.5.14 The English Index of Multiple Deprivation (IMD) 2019 (Ref 17.9) measures relative levels of deprivation at different levels, for this baseline the focus has been on Local authority level. There are seven 'domains' of deprivation (income; employment deprivation; health deprivation and disability; education, skills and training deprivation; crime; barriers to housing and services; and living environment (comprising housing quality, air quality and road traffic accidents).
- 17.5.15 **Table 17.5** shows deprivation ratings for each host authority, for overall deprivation and the IMD domain that is considered most relevant to the health assessment. A score of 1 means an area is among the 10 per cent most deprived areas nationally, whilst a score of 10 means it is among the 10 per cent least deprived nationally.
- 17.5.16 As shown **Table 17.5**, all host authorities are within the 50 per cent least deprived areas nationally. Harborough is the least deprived in terms of overall deprivation and health deprivation with a score of 10 for both categories, therefore residents are in one of the 10 per cent least deprived areas nationally.

17.5.17 North Northamptonshire scores are the lowest for both measures, with a score of 5 for overall deprivation and 4 for health deprivation.

Table 17.5 Index of Multiple Deprivation (2019) by Host Authority

IMD (2019)	South Holland	South Kesteven	Melton	Harborough	North Northampton shire	West Northampton shire
Overall deprivation (Rank of average score)	6	8	8	10	5	7
Health deprivation (Rank of average score)	6	7	8	10	4	7

Vulnerable Groups

17.5.18 The term 'vulnerable groups' refers to groups of individuals who are made vulnerable by the situations and environments they are exposed to (as opposed to any inherent weakness or lack of capacity). The Wales Health Impact Assessment Support Unit (WHIASU) Health Impact Assessment guidance (Ref 17.16), widely applied to assessments outside of Wales, and the ISEP guidance on Effective Scoping of Human Health in EIA (2022) (Ref 17.2) include checklists for identifying the health determinants and vulnerable groups relevant to the health and wellbeing assessment being undertaken. The WHIASU and ISEP guidance documents have been used to inform **Table 17.6**, this includes groups of people who may be more likely to be exposed to a change in a health determinant, or to experience health effects as a result of exposure. Consideration of vulnerable groups takes into account:

- how an impact on a health determinant is shown (in scientific literature) to affect a particular section of the community;
- whether the affected community is already facing existing deprivation (social, economic or environmental) that could serve to intensify or change the impact(s) of the Project; and
- characteristics such as age, health conditions, or other physical or mental characteristics that make people more likely to be exposed to adverse impacts resulting from the Project.

Table 17.6 Vulnerable Groups

Vulnerable Group	Social receptors in the Study Area	Description of Vulnerabilities
Children and adolescents	Schools, nurseries, parks and open spaces, community resources.	Children and adolescents are more likely to be pedestrians and require freedom to move between their home, school, and recreational activities. Children and adolescents lack the experience and judgment of adults whilst interacting with traffic and public spaces, due to failure to perceive danger or impulsiveness. Children are more vulnerable than adults to air pollution, noise, odour and other environmental factors, as their immune systems are still developing, with their bodies less able to deal with them or inform them when something is wrong. Children living in deprived areas are particularly susceptible to environmental pollutants as deprived communities in England experience higher emissions of air pollutants than those in more well-off communities.
Older people	Parks and open spaces, community resources, residential areas, bus stations and public footpaths.	As people age, movement and reactions generally become slower and hearing loss becomes more likely. Older people can be more at risk from injury. They may also fear falls and be more anxious about crossing the road safely or moving about the neighbourhood in general. This may lead to barriers to some older people participating in outdoor activities, especially walking, which can adversely affect health. Older people are generally more reliant on health and social care services and other social infrastructure. They are less likely to drive and therefore more likely to be pedestrians or to use public transport. Therefore, this group is more vulnerable to effects on transport and access.
Low-income groups and people who are unemployed and/or have low skills and qualifications	Parks and open spaces, social housing, community resources, residential areas, bus stations, social care facilities, local businesses and public footpaths.	People on low income are more likely to experience poor health because they have fewer resources available to them to stay healthy and experience more stress, which impacts health. Employment is known to have a positive health benefit and therefore unemployed people are more likely to experience poor physical and mental health, this group are more likely to use services in their local area including local businesses (especially shops) and community facilities.
People with poor health status or who are disabled	Parks and open spaces, healthcare facilities, residential areas, footpaths and public realm, bus	Disabled people and those with poor health status are likely to be more vulnerable to changes in health determinants. For example, adverse changes in air quality are more likely to impact a person who is

Vulnerable Group	Social receptors in the Study Area	Description of Vulnerabilities
	stops and social care facilities.	chronically ill with impaired lung function, or a person who has asthma. Noise can cause hypertension and cardio-vascular problems. People who already have these conditions can therefore be more impacted by increased in noise. Additionally, people with developmental and behavioural special needs are likely to have a greater sensitivity to noises and are also likely to be more impacted by increases in noise. People with poor physical or mental health, including anxiety and depression, are likely to be more sensitive to changes in their local environment. Disabled people and those with poor health status are generally more reliant on social care services and other social infrastructure. They are less likely to drive and therefore more likely to be pedestrians or to use public transport services. Therefore, this group is vulnerable to effects on transport and access.
Homeless people	Parks and open spaces, healthcare facilities, footpaths, public realm and bus stops.	People who have experienced homelessness are more likely to have poor physical and mental health compared to the general population. People with no fixed residence are likely to be impacted by changes in footfall to local public spaces such as parks, as well as sheltered areas such as footpaths. People without consistent shelter are more exposed to environmental elements such as poor air quality and noise. Additionally, unhoused people are likely to be more reliant on community facilities and more vulnerable to disruptions in provision of services.
People with drug and/or alcohol addiction	Parks and open spaces, healthcare facilities, footpaths, public realm and bus stops.	People with drug or alcohol addiction are more likely to be homeless when compared to the general population. Drug and alcohol dependence is associated with poor health outcomes and increased mortality, indicating that as a population, they are more sensitive to negative impacts on health determinants.

Healthcare and social infrastructure

- 17.5.19 The baseline text in **Chapter 16 Socio-economic, Recreation and Tourism** makes reference to healthcare and social infrastructure receptors and **Figure 16.2 Socio-economic, Tourism and Recreation Receptors** includes health and social infrastructure located within 500 m of the Scoping Boundary, as well as all relevant receptors for the Health and Wellbeing assessment including (but not limited to) education, health and community receptors.

- 17.5.20 Further health care and social infrastructure receptors may be identified within the Study Area following the use of additional Geographic Information Systems (GIS) data, desk-top research and engagement with relevant stakeholders. These will be reported in the ES.

Promoted recreational routes

- 17.5.21 National Cycle Network routes (NCN), the local cycle network, long-distance paths and national trails have been identified in the Study Area. These are shown in **Figure 16.2 Socio-economic, tourism and recreation receptors**. **Chapter 16 Socio-economics, Recreation and Tourism** considers potential disruption to users of recreational routes including Public Rights of Way (PRoW). The health and wellbeing assessment will focus primarily on effects on promoted recreational routes which is a subset of these. Further information can be found in **Chapter 13 Traffic and Transport**, which includes a baseline of PRoW within the Study Area in **Figure 13.1 Baseline Transport network**.

Open space

- 17.5.22 The Study Area comprises large areas of agricultural land or open countryside interspersed by settlements. Open spaces within the Study Area are shown in **Figure 16.2 Socio-economic, tourism and recreation receptors**.
- 17.5.23 Open spaces have been identified using the Ordnance Survey (OS) Open Greenspace dataset (Ref 17.15), which is a dataset of open greenspaces in urban and rural areas including playing fields, sports' facilities, play areas and allotments. The data set includes both designated open spaces and undesignated open spaces, desk-based analysis will determine which are publicly accessible for the purposes of the health and wellbeing assessment. **Table 16-13** in **Chapter 16 Socio-economics, Recreation and Tourism** lists open spaces within the Scoping Boundary and within 500 m of the Scoping Boundary.

Future Baseline

- 17.5.24 The future baseline relates to known or anticipated changes to the current baseline in the future which would arise in the absence of the Project.
- 17.5.25 **Table 17.7** sets out ONS population projection data (Ref 17.17) for mid-2032 using the year 2022 as a baseline. A 10-year period is considered an appropriate timeframe for establishing a future baseline population dataset as it provides a balanced view of demographic trends while maintaining forecasting reliability, particularly as it also aligns with the proposed Project timeline. Key points are as follows:
- Projected population change is the result of assumptions about future births, deaths and migration, known as components of population change. At the local authority level, population change is influenced by many other factors, such as economic development and housing policies. The population of England is projected to increase by 6.4% between mid-2022 and mid-2032, from 57.1 million in mid-2022 to 60.8 million in mid-2032.
 - Between mid-2022 and mid-2032 the population is projected to increase across all regions as well as in 302 of the 309 local authorities in England (based on 2021 boundaries).

- All host authorities will experience population growth. Harborough is projected to see the greatest overall population growth at 14.4 per cent, which is notably higher than the projected population increase for England overall, at 6.4 per cent.

- 17.5.26 **Table 17.7** shows that in 2032, the percentage growth in the population aged 65 and over in all host authorities is expected to rise. However, growth is at a lower rate than for overall population growth projected for each host authority and overall, for the East Midlands and England in 2032.
- 17.5.27 As of 2022, around 19.7 per cent of the East Midlands population was aged 65 and over, by 2032, this proportion is expected to increase to over 22 per cent, reflecting the national trend of an ageing population.
- 17.5.28 The same cannot be said for population growth for young people aged 15 and under, there will be a small decrease in the percentage of young people in the population in all host authorities. However, the level of decrease for all is lower for all host authorities than for the region and England overall.
- 17.5.29 In 2022, approximately 18.1 per cent of the East Midlands population was aged 15 and under. In 2032 it is expected that there will be a -3.4 per cent decrease in young people due to lower birth rates and a larger share of the population shifting into older age groups.

Table 17.7 Population projections for 2022-2032

Population projections	South Holland	South Kesteven	Melton	Harborough	North Northamptonshire	West Northamptonshire	East Midlands	England
Population growth (%)	10.1	4.8	5.2	14.4	6.9	6.8	6.8	6.4
Population growth 65+ (%)	1.3	2.5	3.1	1.5	1.2	1.1	2.3	1
Population growth 0-15 (%)	-1.7	-2.7	-2.5	-1.4	-2.6	-2.4	-3.4	-5.9

17.6 Design and Control Measures

Design Measures

- 17.6.1 Health and wellbeing will be taken into consideration as part of the iterative design and development of the Project to avoid adverse effects on population health as far as reasonably practicable, enhance potential beneficial effects, and mitigate any potential significant adverse effects on health and wellbeing. The emerging preferred corridor on which the Scoping Boundary has been based has been located to avoid sensitive health features as far as practicable, such residential properties.

- 17.6.2 The design of the Project will be compliant with the guidelines and policies relating to EMFs stated in National Policy Statement (NPS) EN-5 (Ref 17.13), the main component of which are the International Commission on Non-Ionizing Radiation Protection guidelines (1998) (Ref 17.14).

Control and Management Measures

- 17.6.3 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An **Initial Outline Code of Construction Practice** (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect health and wellbeing include (refer to **Appendix 4A** for the full description of each measure):
- GG04 – on employment of Environmental Managers and Environmental Clerks of Works during construction to ensure requirements are met and good practice implemented.
 - GG07 – on requirement for the development of management plans to secure mitigation measures.
 - GG12 - on locating activities that could cause potential nuisance away from sensitive receptors.
 - GG27 - on engagement with the community and local businesses.
 - AS03 – on maintaining access to and from residential, commercial, community and agricultural land uses.
 - S01 - on environmental training of construction workers.
 - S02 – on management of PRoWs and recreational routes crossing working areas.

17.7 Potential for Significant Effects

- 17.7.1 The health and wellbeing assessment will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and the inclusion (Scoped in) or exclusion (Scoped out) of matters in the scope of the health and wellbeing ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 17.7.2 The potential for the Project to result in the likely significant effects identified below takes into account the embedded design, and control and management measures described in Section 17.6.
- 17.7.3 **Table 17.8** identifies the sources of potential impacts on receptors identified in the baseline that could result in a significant effect. Where an impact could give rise to potentially significant effects on population health, these are then scoped into the ES. Impact pathways that are unlikely to give rise to significant effects on receptors identified in the Study Area are proposed to be scoped out of the ES.

Table 17.8 Impacts, receptors and the potential for significant effect

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	The demands of the construction of the Project leading to an increase in temporary employment due to the need for a construction workforce.	Increased employment for the construction workforce.	Wider study area population	Yes – increased employment, income and training opportunities for communities in the wider study area leading to potential positive effects on population health and wellbeing.	Scoped in
Construction	Construction activities and traffic.	Potential temporary changes in neighbourhood amenity due to noise, air emissions, visual impacts and increased traffic movements.	Local residents	Yes – changes to people's feelings about their local environment, affecting quality of life, mental and physical health.	Scoped in
Construction	Potential temporary and permanent closure or diversions of promoted recreational routes and PRoW and impacts on the amenity value of these routes.	Potential reduced opportunities for access for physical activity, and increased severance.	Local residents and users of promoted recreational routes and PRoW	Yes – potential reduction in mental and physical health benefits gained from use of promoted recreational routes, at a population level.	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Construction activities, use of land for construction of the Project.	Potential temporary and permanent land take leading to changes in access to open space.	Local residents and users of open spaces	Yes – potential reduction in mental and physical health benefits associated with access to open space.	Scoped in
Construction	Use of land for construction of the Project.	Potential temporary and permanent land take affecting residential properties, community facilities and businesses.	Local residents, users of community facilities and owners/operators of businesses	No - the construction of the Project will be undertaken so as to avoid temporary or permanent land take affecting residential properties, community facilities and businesses. On this basis, significant effects are not likely to occur.	Scoped out
Construction	Construction traffic	Increased journey times affecting access to community facilities	Local residents	No - disruption due to construction traffic will be localised and temporary and not likely to affect access at population level. Significant effects are not likely to occur.	Scoped out
Construction	Project planning and public consultation	Uncertainty and stress relating to the actual and perceived impacts	Local residents	Yes- potential reduction in mental health associated with uncertainty and stress	Scoped in

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
		on local communities from construction and operation of the Project		relating to the Project during the pre-construction period.	
Construction	Construction activities.	Potential for soil and water contamination due to the emission of harmful substances.	Local residents and owners/operators of businesses	No - the construction of the project will comply with legally required standards to minimise the risk of exposure of the population to harmful substances. Pollution control measures are included in Appendix 4A Initial Outline CoCP . Significant effects are not likely to occur.	Scoped out
Operation and Maintenance	The demands of the operation and maintenance of the Project leading to an increase in permanent employment	Increased employment for the operational and maintenance workforce.	Wider study area population	No – For a project of this nature and scale, it is unlikely that there will be increased employment, income and training opportunities for communities in the wider study area during operation at a level to have a population wide effect.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				Significant effects are not likely to occur.	
Operation and Maintenance	Potential permanent closure or diversions of promoted recreational routes and PRow	Potential reduced opportunities for access for physical activity, and increased severance.	Local residents and users of PRow	No - for this Project, there will be no permanent closures or diversions of promoted recreational routes and PRow during operation and maintenance that would lead to a reduction in mental and physical health benefits gained from use of these, at a population level. Significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Use of land for operation of the Project.	Potential permanent land take leading to changes in access to open space.	Local residents and users of open spaces	No - due to the nature and scale of the Project, it is unlikely that there will be permanent changes to access to open space during operation and maintenance that would lead to a reduction in mental and physical health benefits associated with access to open	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				space. Significant effects are not likely to occur.	
Operation and Maintenance	Use of land for the operation of the Project.	Potential for permanent land take affecting residential properties, community facilities and businesses.	Local residents and owners/operators of businesses	No - the operation and maintenance of the Project will avoid land take affecting residential properties, community facilities and businesses. On this basis, significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Potential permanent changes to the local environment due to presence of the Project.	Potential permanent changes in neighbourhood amenity due to noise, and visual impacts.	Local residents within 500 m of Scoping Boundary	Yes – changes to people’s feelings about their local environment, affecting quality of life, mental and physical health.	Scoped in
Operation and Maintenance	Electromagnetic fields generated by operation of high voltage power lines.	Potential permanent impacts associated with the generation of EMFs	Local residents	No - the Project will be designed to comply with existing National Grid standards and the guidelines and policies detailed in NPS-EN5 including the International Commission on Non-Ionizing Radiation	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
				Protection guidelines for electric and magnetic fields (EMFs) and associated precautionary policy. An EMF report will be prepared as part of the Project. This is separate to the EIA process. A summary of the EMF report will be provided in the ES.	
Operation and Maintenance	Electromagnetic fields generated by operation of high voltage power lines	Uncertainty and stress relating to the perceived impacts of the generation of EMFs.	Local residents	Yes - potential reduction in mental health associated with uncertainty and stress relating to the perceived impacts of the generation of EMFs.	Scoped in
Operation and Maintenance	Operation and maintenance activities	Potential for soil and water contamination due to the emission of harmful substances.	Local residents and owners/operators of businesses	No - the operation and maintenance of the project will comply with legally required standards to minimise the risk of exposure of the population to harmful substances.	Scoped out

Project phase	Source	Impact	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Existence and operation of new infrastructure	Permanent provision of wider societal infrastructure and resources leading to improvements in the determinants of health.	Local residents and owners/operators of businesses	Yes - contribution to improved energy infrastructure leading to potential positive effects on population health and wellbeing.	Scoped in
Operation and Maintenance	Presence of new infrastructure in the landscape	Change to visual amenity of the countryside.	Local residents and visitors to the countryside	Yes - potential reduction in the wellbeing benefits of the use of countryside and open space	Scoped in

17.8 Proposed Assessment Methodology

Proposed Data Sources

- 17.8.1 In addition to the data sources listed in paragraph 17.5.1, further information may be identified as a result of engagement with health sector stakeholders and communities.

Proposed Assessment Methodology

- 17.8.2 The following section summarises the methodology proposed to be used for the health and wellbeing assessment which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology** and the ISEP guidance for the assessment of significance for health effects (Ref 17.3).
- 17.8.3 The assessment of likely significant health effects will follow ISEP's guidance on *"Determining Significance for Human Health in Environmental Impact Assessment"* (2022) (Ref 17.1.3). Certain principles apply in all cases, including applying a population health approach (i.e. entire groups of people as opposed to the health of individuals), considering effects on health inequalities and vulnerable groups, and giving parity to mental and physical health. The assessment will apply the World Health Organisation's definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.
- 17.8.4 The ISEP guidance provides indicative criteria to inform judgements of the significance of health effects, based on the magnitude of impacts on health and the sensitivity of the receptor population. It recommends that the use of these terms is supported by a narrative explaining the rationale for the assessment.
- 17.8.5 The health and wellbeing assessment will include:
- Policy review: a review of the relevant national and local health policy context.
 - Baseline conditions: a profile of the local community will be compiled using publicly available baseline data, focusing on population demographics, socio-economic status and health indicators.
 - Evidence review: a review of publicly available evidence will be undertaken to identify links between the determinants of health, and potential health outcomes.
 - Consultation: discussions with health-sector consultees regarding specific local health issues and priorities, preliminary findings of the health assessment and potential mitigation or enhancement measures.
 - Review of public consultation feedback: identify key health issues and concerns raised by local communities in relation to the construction and operation of the proposed development.
 - Assessment of health effects: qualitative professional judgement based on magnitude of the impact and sensitivity of the receptor population, drawing on baseline information and findings from relevant topic assessments. Includes consideration of health inequalities and vulnerable groups.
 - Mitigation and enhancement: identify measures to be embedded into the Project to reduce adverse health effects and improve health outcomes.

- Feedback into design: assess residual health effects and identify additional mitigation measures where appropriate.

Sensitivity

- 17.8.6 The sensitivity of health effects is driven by a number of indicative factors, which are set out below and are based on guidance set out in ISEP guidance (Ref 17.2). A potential health effect may not meet all of the criteria in a particular category or may exhibit criteria across two or more categories. Therefore, justification for the selection of the sensitivity criteria detailed in **Table 17.9** will be provided in the ES.

Table 17.9 Sensitivity of receptors

Value/Sensitivity	Description
High	• high levels of deprivation (including pockets of deprivation); • reliance on resources shared (between the population and the project); • existing wide inequalities between the most and least healthy; • a community whose outlook is predominantly anxiety or concern; • people who are prevented from undertaking daily activities; • dependants; • people with very poor health status; and/or • people with a very low capacity to adapt.
Medium	• moderate levels of deprivation; • few alternatives to shared resources; • existing widening inequalities between the most and least healthy; • a community whose outlook is predominantly uncertainty with some concern; • people who are highly limited from undertaking daily activities; • people providing or requiring a lot of care; • people with poor health status; and/or • people with a limited capacity to adapt.
Low	• low levels of deprivation; • many alternatives to shared resources; • existing narrowing inequalities between the most and least healthy; • a community whose outlook is predominantly ambivalence with some concern; • people who are slightly limited from undertaking daily activities; • people providing or requiring some care; • people with fair health status; and/or • people with a high capacity to adapt.
Very Low	• very low levels of deprivation; • no shared resources;

Value/Sensitivity	Description
	- existing narrow inequalities between the most and least healthy; - a community whose outlook is predominantly support with some concern; - people who are not limited from undertaking daily activities; - people who are independent (not a carer or dependant); - people with good health status; and/or - people with a very high capacity to adapt.

Magnitude

- 17.8.7 Magnitude of impact is driven by a number of indicative factors, which are set out in **Table 17.10** and are based on guidance set out in ISEP guidance (Ref 17.2). A potential health effect may not meet all of the criteria in a particular category or may exhibit criteria across two or more categories. Therefore, justification for the selection of magnitude criteria will be provided in the ES.

Table 17.10 Magnitude of impact

Magnitude	Description
High	- high exposure or scale; - long-term duration; - continuous frequency; - severity predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/ injury outcomes; - majority of population affected; - permanent change; and/or - substantial service quality implications.
Medium	- low exposure or medium scale; - medium-term duration; - frequent events; - severity predominantly related to moderate changes in morbidity or major change in quality-of-life; - large minority of population affected; - gradual reversal; and/or - small service quality implications.
Low	- very low exposure or small scale; - short-term duration; - occasional events; - severity predominantly related to minor change in morbidity or moderate change in quality-of-life; - small minority of population affected; - rapid reversal; and/or

Magnitude	Description
	• slight service quality implications.
Negligible	• negligible exposure or scale; • very short-term duration; • one-off frequency; • severity predominantly relates to a minor change in quality-of-life; • very few people affected; • immediate reversal once activity complete; and/or • no service quality implication.

Significance of effects

- 17.8.8 Effects resulting from construction, operation or maintenance of the Project will be defined as follows:
- **No Significant Effect (neutral or minor):** a receptor may be affected by the Project, but changes to health determinants would not affect population health.
 - **Significant Beneficial Effect (moderate or major):** there may be positive changes to health determinants that would bring significant population health benefits.
 - **Significant Adverse Effect (moderate or major):** Changes to health determinants would bring significant population health disbenefits.
- 17.8.9 ISEP guidance (Ref 17.3) recommends using a matrix, as shown in **Table 17.11** below, to guide the assessment of significance.
- 17.8.10 Where an effect is identified the assessment of significance will be informed by considering the sensitivity of the receptor (**Table 17.9**) and the magnitude of the impact (**Table 17.10**).
- 17.8.11 The general approach adopted for classifying effects considering the sensitivity of the receptor and the magnitude of an impact is outlined in **Table 17.11**.

Table 17.11 Determination of significance matrix

		Value/Sensitivity of Receptor				
Magnitude of Impact		Very high	High	Medium	Low	Negligible
	Large	Major	Major/ moderate	Major/moderate/ minor	Moderate/ minor	Minor/ negligible
	Medium	Major/moderate	Major/ moderate	Moderate/minor	Minor/ negligible	Negligible
	Small	Major/moderate/ minor	Moderate/ minor	Moderate/minor	Minor/ negligible	Negligible
	Negligible	Minor/negligible	Minor/ negligible	Minor/negligible	Negligible	Negligible

- 17.8.12 Major and moderate effects are typically classed as **significant**, whilst minor and negligible effects are typically classed as **not significant**. The assessment matrix is a tool to assist with professional judgement; there are no defined cut-off points between the categories, and no guidance on which score should be assigned where the matrix provides alternatives. As set out in the ISEP guidance, this is an informed professional judgement of the importance, desirability or acceptability of a change in population health.

17.9 Assumptions and limitations

- 17.9.1 The health and wellbeing assessment will be qualitative and based on professional judgement, taking into account relevant information such as baseline data, impacts identified by other assessment topics and scientific evidence relating to health determinants and outcomes.
- 17.9.2 Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time, which may influence the findings of the assessment. It is assumed that the data collated is accurate.
- 17.9.3 The health and wellbeing assessment is reliant on information from other topics and as such the assumptions and limitations of these topics may also apply to the health and wellbeing assessment.

17.10 Conclusion

- 17.10.1 This scoping chapter has outlined relevant legislation, policy and guidance in relation to the health and wellbeing assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors as reported in **Table 17.8**.
- 17.10.2 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 17.1 World Health Organisation (2021). Health Promotion Glossary of Terms 2021 [online]. Available at: <https://www.who.int/publications/i/item/9789240038349> [Accessed July 2025]
- Ref 17.2 Pyper, R., Lamming, M., Beard, C., Waples, H., Birley, M., Buroni, A., Douglas, M., Turton, P., Hardy, K., Netherton, A., McClenaghan, R., Barratt, T., Bhatt, A., Fenech, B., Dunne, A., Hodgson, G., Gibson, G., Purdy, J., Cave, B. (2022) Institute of Environmental Management and Assessment Guide: Effective Scoping of Human Health in Environmental Impact Assessment. [online]. Available at: <https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-forconsidering-impacts-on-human-health> [Accessed July 2025].
- Ref 17.3 Pyper, R., Waples, H., Beard, C., Barratt, T., Hardy, K., Turton, P., Netherton, A., McDonald, J., Buroni, A., Bhatt, A., Phelan, E., Scott, I., Fisher, T., Christian, G., Ekermawi, R., Devine, K., McClenaghan, R., Fenech, B., Dunne, A., Hodgson, G., Purdy, J., Cave, B. (2022). Institute of Environmental Management and Assessment Guide: Determining Significance for Human Health in Environmental Impact Assessment. [online] Available at: https://www.academia.edu/98691691/IEMA_Guides_to_Effective_Scoping_of_Human_Health_in_Environmental_Impact_Assessment_and_Determining_Significance_For_Human_Health_In_Environmental_Impact_Assessment [Accessed July 2025]
- Ref 17.4 Highways England (2020). Design Manual for Roads and Bridges Document LA112 [online]. Available at: <https://nationalhighways.co.uk/suppliers/design-standards-and-specifications/design-manual-for-roads-and-bridges-dmrb/> [Accessed July 2025].
- Ref 17.5 Cave, B. Fothergill, J., Pyper, R., Gibson, G. and Saunders, P. (2017). Health in Environmental Impact Assessment: A Primer for a Proportionate Approach. Ben Cave Associates Ltd, Institute of Environmental Management and Assessment and the Faculty of Public Health. [online] Available at: <https://www.iema.net/downloaddocument/7010> [Accessed 20 December 2023].
- Ref 17.6 Public Health England (2019). Public Health England Strategy 2020 to 2025 [online]. Available at: <https://www.gov.uk/government/publications/phe-strategy-2020-to-2025> [Accessed July 2025].
- Ref 17.7 Public Health England (2020). Advice on the Content of Environmental Statements accompanying an Application Under the Nationally Significant Infrastructure Planning Regime [online]. Available at: <https://khub.net/documents/135939561/390856715/Advice+on+the+content+of+environmental+statements+accompanying+an+application+under+the+Nationally+Significant+Infrastructure+Planning+Regime.pdf/a86b5521-46cc-98e4-4cadf81a6c58f2e2?t=1615998516658> [Accessed July 2025]
- Ref 17.8 Office of National Statistics (2022). Census 2021 [online]. Available at: <https://www.ons.gov.uk/census> [Accessed July 2025].
- Ref 17.9 Department for Levelling Up, Housing and Communities, (2019). English Indices of Deprivation 2019. [online] Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> [Accessed 21 Jul. 2025]

- Ref 17.10 Office for Health Improvement and Disparities (2019). Local Health [online]. Available at: <https://www.gov.uk/government/collections/local-health-public-healthdata-andmapping-tool-for-small-areas> [Accessed July 2025].
- Ref 17.11 Sustrans' Open Data Portal. Available at: <https://data-sustrans-uk.opendata.arcgis.com/> (Accessed: July 2025)
- Ref 17.12 Public Health England (2022). Public Health Profiles [online]. Available at: <https://fingertips.phe.org.uk/> [Accessed July 2025]
- Ref 17.13 Department for Energy Security & Net Zero (2024). National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/npselec-tricity-networks-infrastructure-en5.pdf> [Accessed July 2025].
- Ref 17.14 International Commission on Non-Ionising Radiation Protection (1998) Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic and Electromagnetic Fields. Health Physics, 74(4) [Accessed July 2025]
- Ref 17.15 Ordnance Survey (2025) OS Open Greenspace. Available at: <https://www.ordnancesurvey.co.uk/products/os-open-greenspace> (Accessed: 18 September 2025)
- Ref 17.16 Wales Health Impact Assessment Support Unit, "Health Impact Assessment - A practical guide," 2021. [Online]. Available: <https://phwwhocc.co.uk/wp-content/uploads/2020/07/Health-Impact-Assessment-A-Practical-guide.pdf>. [Accessed September 2025]
- Ref 17.17 Office for National Statistics (2025) Subnational population projections for England: 2022-based. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2022based> (Accessed: July 2025)

18. Climate Change

Contents

18.	Climate Change	18-1
18.1	Introduction	18-1
18.2	Legislation, Policy and Guidance	18-2
18.3	Consultation and Engagement	18-2
18.4	Study Area	18-3
18.5	Baseline Conditions	18-4
	Data Sources	18-4
	Baseline	18-4
	Future Baseline	18-5
18.6	Design and Control Measures	18-5
	Design Measures	18-5
	Control and Management Measures	18-6
18.7	Potential for Significant Effects	18-7
18.8	Proposed Assessment Methodology	18-15
	Proposed Data Sources	18-15
	Proposed Assessment Methodology	18-15
18.9	Assumptions and limitations	18-18
18.10	Conclusion	18-19
	Table 18.1 Engagement with Stakeholders	18-2
	Table 18.2 Construction emission sources to be scoped in or out	18-9
	Table 18.3 Operational emission sources to be scoped in or out	18-10
	Table 18.4 Carbon budget periods	18-16
	Table 18.5 ISEP guidance levels of significance (Ref 18.2)	18-17
	References	18-20

18. Climate Change

18.1 Introduction

- 18.1.1 This chapter presents how the climate change assessment will consider the potential likely significant effects on climate change receptors that may arise from the construction, maintenance and operation of the Project (as described in **Chapter 4, Description of the Project**). It identifies the climate receptors of relevance and sets out the methodology and datasets to be used within the assessment, presents an overview of the baseline conditions, and identifies the potential likely significant effects to be considered within the assessment, and how these will be assessed in the Environmental Statement (ES). As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.
- 18.1.2 The area considered in this report is the Scoping Boundary as illustrated on **Figure 1.2 Scoping Boundary**.
- 18.1.3 The Project will directly support the government's identified critical national priority (CNP) for the provision of nationally significant low carbon infrastructure, as identified in National Policy Statement (NPS) EN-1 (Ref 18.1) in that it will contribute towards greater efficiency in constructing, operating and connecting low carbon infrastructure to the National Electricity Transmission System, as discussed in **Chapter 4, Description of the Project**, Section 4.5.1.
- 18.1.4 This chapter should be read in conjunction with the following chapters which provide the Project context and approach to EIA:
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 18.1.5 There may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 8 Ecology and Biodiversity** – outputs from the biodiversity assessment and biodiversity net gain report will be used in the land use Greenhouse Gas (GHG) assessment;
 - **Chapter 10 Water and Environment** – vulnerability of the Project to projected future flooding is considered as part of the analysis in this chapter;
 - **Chapter 13 Traffic and Transport** – GHG calculations may use outputs from the traffic and transport assessment; and
 - **Chapter 14 Air Quality** – there is a strong relationship between GHG emissions and air quality, similar inputs will be used in the assessment.

18.1.6 This chapter is supported by **Appendix 18A Climate Change Resilience Screening Assessment**.

18.2 **Legislation, Policy and Guidance**

18.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on climate change associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context**, **Appendix 2A Key Legislation**, **Appendix 2B National and Regional Planning Policy** and **Appendix 2C Local Policy**.

- 18.2.2 Relevant guidance and standards, along with other relevant material, that have informed the scoping process are listed below and will also be accounted for as part of the ES assessment:
- The Institute of Sustainability and Environmental Professionals (ISEP) Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (Ref 18.1);
 - The Publicly Available Specification 2080 (PAS 2080:2023) on carbon management in infrastructure, a global standard for managing infrastructure carbon (Ref 18.3); and
 - Department for Energy Security and Net Zero Emission Conversion Factors 2023 (Ref 18.4).

18.3 **Consultation and Engagement**

- 18.3.1 Given the nature of the Project and its direct contribution towards supporting the UK’s net zero target by connecting low carbon infrastructure to the National Electricity Transmission System, no specific future engagement is currently planned for climate change over and above that proposed as part of statutory consultation. Engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 18.3.2 In preparing this Scoping Report chapter, consideration has been given to stakeholder feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025, as set out in **Table 18.1**.

Table 18.1 Engagement with Stakeholders

Stakeholder	Summary of response	Consideration in the Scoping Report
Environment Agency	The climate change allowance which must be used when assessing floodplain compensation has also changed. The appropriate allowance to assess off-site impacts and calculate floodplain storage	Climate change allowance is a parameter that will be accounted for in the PEIR and ES stage through a Flood Risk Assessment (FRA) as outlined in Chapter 10 Water and Environment .

Stakeholder	Summary of response	Consideration in the Scoping Report
	compensation depends on the land uses in affected areas	

18.4 Study Area

- 18.4.1 The Study Area for the GHG assessment considers GHG emissions arising over the lifecycle of the Project and will be refined for the assessment in the PEIR and ES.
- 18.4.2 The spatial scope of GHG emissions accounting includes direct emissions arising from pre-construction, construction, operation and maintenance within the Order Limits (to be defined in the ES), and indirect emissions resulting from activities associated with the pre-construction, construction, operation and maintenance activities outside of the Order Limits (such as the transport network utilised for material transport, and the embodied carbon associated with the relevant construction materials).
- 18.4.3 When interpreting the requirements of the EIA regulations it is necessary to consider the judgment of the Supreme Court in R (on the application of Finch on behalf of the Weald Action Group) v Surrey County Council with particular attention to potential upstream and downstream direct and indirect effects (Ref 18.4). The principles set out in the Finch case have therefore been considered when considering the scope of this assessment.
- 18.4.4 In the Finch case it was possible to assess the likely downstream impacts because it was inevitable that the oil produced as part of the scheme would be refined and undergo combustion releasing GHG emissions into the atmosphere. This Project would increase capacity in the electricity network, in theory allowing more electricity to be transported and used and more electricity to be generated. However, it is not considered that this Project, as electricity transmission infrastructure, will be the direct or indirect cause of either upstream electricity generation or downstream electricity consumption. Rather, the Project will facilitate the transport of electricity on the network in response to Government policy. Furthermore, it is not considered possible to calculate the upstream or downstream direct or indirect effects. The mix of electricity generation sources cannot be known at the time of undertaking the EIA and will likely change over time, especially in relation to Government policy on decarbonisation of the energy sector. In addition, generation sources of electricity entering the network will likely be varied and subject to their own carbon assessments.
- 18.4.5 The temporal Study Area is also an important aspect of the GHG assessment because of the diminishing nature of the carbon budgets up to 2050. The temporal boundary for GHG assessment constitutes the construction phase (assumed to commence in 2030 for a duration of approximately four years) and the operational phase (assumed to be 80 years from 2034).
- 18.4.6 It is unusual for elements of National Grid's transmission system to be decommissioned and the site reinstated. In general, assets will be replaced towards the end of an assets design life (which will vary depending on the asset and the asset condition throughout its operational life).

18.5 Baseline Conditions

18.5.1 This section of the Chapter comprises an overview of the baseline conditions for the GHG assessment, to establish the type and nature of potentially significant effects.

Data Sources

18.5.2 The information to inform the GHG assessment will be from a combination of Project specific information available at the current design stage alongside publicly available industry benchmarks that can be used to provide a preliminary estimate of life cycle GHG emission impacts. The following data sources are proposed to be used to inform the GHG assessment:

- Bill of material quantities (estimated breakdown of construction materials by volume).
- Construction programme.
- Estimated fuel/energy use for construction activities.
- Number of construction workers on site per day.
- Estimated volumes of earthworks cut/fill.
- Estimated volumes of construction waste and method of disposal.
- Land use change.
- Maintenance regimes.

18.5.3 More detailed information will be obtained and reported in the PEIR and ES.

18.5.4 The GHG emissions for the Project will be calculated by converting ‘activity’ data into carbon emissions through the application of referenced typical emissions conversion factors widely used within the industry. Section 18.8 contains further detail on the assessment methodology. The emissions factors used in the assessment will be informed by the following data sources:

- Greenhouse Gas Reporting: Conversion Factors (published annually by UK Government) (Ref 18.6);
- Inventory of Carbon and Energy database v4 (Ref 18.7); and
- Valuation of energy use and GHG emissions for appraisal: supplementary guidance to the HM Treasury Green Book on Appraisal and Evaluation in Central Government (Ref 18.4).

18.5.5 Data of appropriate quality to satisfy the goal and scope of the assessment will be used. Where limited data is available, for example, due to the fact that some details of the Project may not have been confirmed and where flexibility is required to address uncertainty, appropriate assumptions or benchmarks will be used.

Baseline

18.5.6 The Scoping Boundary has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are based on the administrative boundaries of the local authorities in which works would be required.

- 18.5.7 The Study Area for the GHG assessment includes all five Sections, including approximately 60 km of new overhead line, the new WMEL-A and WMEL-B substation preferred Siting Areas, the Siting Zone for Weston Marsh substation infrastructure and reductoring of approximately 66 km of the existing network. The spatial scope for the GHG assessment includes sources and removals of GHG emissions arising from pre-construction, construction, operation and maintenance of the Project.
- 18.5.8 Aligning with ISEP (2022) guidance (Ref 18.2), the baseline (Do-Minimum (DM) scenario) is the reference against which the impact of the Project will be compared and assessed.
- 18.5.9 The DM scenario comprises the cumulative GHG emissions within the Study Area without implementation of the Project (the current situation where the Project is not delivered). Assumptions are made on the projected cumulative GHG emissions over the study period under this DM scenario.
- 18.5.10 The Scoping Boundary generally comprises predominately arable land, with some managed hedgerows, and trees. As the land use within the Scoping Boundary is mainly arable there are nominal GHG emissions which are associated with land management (including fuel use for machinery use), and the soil types/vegetation present. Given the nominal emissions it is proposed that the baseline will be considered as zero GHG emissions, being a worst-case analysis as a precautionary approach.

Future Baseline

- 18.5.11 The future baseline relates to known or anticipated changes to the current baseline in the future which should be considered in the assessment.
- 18.5.12 The future baseline for the assessment of the impact of the Project on climate takes account of emissions caused by not implementing the Project (the 'Baseline' as described above). It is assumed that the existing land use identified in the Scoping Boundary continues and no other projects/schemes are developed, therefore the future baseline will include operational emissions associated with land use activities over the study period, which will be considered as zero GHG emissions, being a worst case analysis as a precautionary approach.
- 18.5.13 The future baseline will also qualitatively consider the impact of the increasing capacity restrictions of the existing transmission network, which would be insufficient to accommodate the connection of the proposed renewable power sources. As a result, potentially more carbon intensive sources of generation would likely be relied upon resulting in additional GHG emissions.

18.6 Design and Control Measures

Design Measures

- 18.6.1 The Project has been routed in accordance with the Holford Rules (Ref 18.8), to consider options to reduce the overall route length where possible, which therefore may lead to a reduction in the quantity of materials (and associated embodied carbon) required for construction. The detailed design process for the Project will be iterative and would seek to minimise GHG emissions associated with the design of assets and their construction, operation and maintenance.

- 18.6.2 A number of measures are under consideration subject to the relevant assessments being undertaken and their needs identified. These considerations include:
- Circular economy principles will be considered at the design stage with the intention to implement measures to design out waste and integrate circular economy principles. These will include consideration of pre-construction, construction, operation, and end-of-life processes and materials will be selected to minimise waste over the whole life cycle of the Project. More information can be found in **Chapter 4 Description of the Project** under 'Approach to materials and waste'.
 - The design of the Project shall, where practicable, maximise the potential for reuse of material recovered from site. Alternatively, near-site sources of material will be identified to minimise transportation and ground treatment emissions.
 - Where appropriate the Project will endeavour to use materials with the highest recycled content, where this leads to lower whole life carbon emissions and encourage their use through procurement exercises.
 - The Project will consider a range of measures to reduce energy consumption (and associated emissions) during both construction and operation, as set out in **Chapter 4 Description of the Project** under 'Approach to energy consumption'.
 - The Project will continue to integrate carbon as an important consideration within the design and decision-making process and continue to work with partners across the industry on lower carbon alternatives.
 - Consideration of lower carbon options for goods transportation, for example through considering alternative options to Heavy Goods Vehicle delivery to site and alternative fuel vehicles.

Control and Management Measures

- 18.6.3 A range of standard measures for the Project would be adopted throughout the duration of the construction phase. An **Initial Outline Code of Construction Practice** (CoCP) is provided in **Appendix 4A**. Measures relevant to the control and management of impacts that could affect the GHG assessment may include, but are not limited to (refer to **Appendix 4A** for the full description of each measure):
- CC01 - on the development and implementation of a Carbon Efficiency Plan by the contractor(s).
 - CC02 - on measures to be included in the contractor(s) Carbon Efficiency Plan.
 - CC03 - on consideration of the impacts of extreme weather events and related conditions during construction.
 - CC04 - on using weather forecasting to inform short to medium term planning of activities and measures to manage related risks.
 - CC05 – on implementing an early warning system for wildfire detection and evacuation procedures.
 - GG04 - on the appointment of Environmental Managers and Environmental Clerks of Works during construction, to ensure compliance with requirements and implementation of good practice.
 - GG14 – on vehicles emission standards and maintenance.

- GG21 – prohibiting bonfires and the burning of wastes.
- GG22 – on construction lighting.
- GG23 – requiring a Site Waste Management Plan (SWMP).
- LV01 - on retention and replacement of vegetation.
- LV03 – requiring a five-year aftercare period for proposed vegetation.
- TT02 - requiring preparation, implementation and monitoring of a Construction Traffic Management Plan (CTMP).

18.7 Potential for Significant Effects

- 18.7.1 The climate change assessment will consider the construction, operation and maintenance of the Project. A description of each of these stages is set out in **Chapter 4 Description of the Project**. The potential for significant effects and inclusion (Scoped in) and exclusion (Scoped out) of matters in the scope of the climate change ES assessment is set out below and has been determined using the approach described in **Chapter 5 EIA Approach and Methodology**.
- 18.7.2 The potential for the Project to result in the likely significant effects identified below, takes into account the embedded design, and control and management measures described in Section 18.6.
- 18.7.3 A GHG assessment will be considered as part of this chapter. GHGs are gases in the earth's atmosphere that trap heat. Increased GHGs in the earth's atmosphere are the cause of global warming and climate change. The GHG assessment will identify the likely GHG emissions associated with construction, operation and maintenance (i.e. whole lifecycle GHG emissions) in comparison with the current and future baseline. It will also identify mitigation measures to reduce GHG emissions through the life cycle of the Project. The term 'carbon' is used interchangeably to refer to GHG emissions.
- 18.7.4 The single receptor for the GHG assessment is the global atmosphere and all net emissions of GHGs to the atmosphere will contribute to climate change. The sources of GHG emissions are varied but there is only one impact pathway; GHG emissions released into the atmosphere contribute to global warming by absorbing heat that would otherwise be radiated into space.
- 18.7.5 Table 18.2 and Table 18.4 provide a summary of the potential emissions sources identified through the Project lifecycle that could give rise to a potentially significant effect on the global atmosphere and provides justification for scoping into or out of the GHG assessment.
- 18.7.6 A precautionary approach has been taken and where there is no strong evidence base, insufficient baseline or the significance is uncertain at this stage the impact has been scoped into the ES. Where there is a clear evidence base that the effect from the impact will not be significant, either alone or in combination with other plans and projects, the impact has been scoped out of the ES.
- 18.7.7 The following elements of a climate change assessment have been scoped out:
- Climate Change Resilience (CCR) - this looks to identify the changes in climate and weather events expected in the future with regards to the operational life of the Project and assesses how the Project may be exposed to additional vulnerability arising from these changes. **Appendix 18A Climate Change**

Resilience Screening Assessment sets out a screening assessment for the current stage of the Project to inform this Scoping Report. The Screening Assessment sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone CCR assessment from the EIA based on proposed Design, Control and Management Measures. The vulnerability of the Project to future flooding will be considered as part of the Flood Risk Assessment (FRA) and associated analysis presented in **Chapter 10 Water Environment**. Further embedded design measures will be developed as the Project design evolves through engagement with the engineering design team, and measures will be incorporated into the future development of Project design principles. On this basis, no further assessment of the Project's vulnerability to climate change is required in the ES.

- In-Combination Climate Change Impact (ICCI) assessment - this looks to consider where the future changed climate may increase environmental impacts from the Project on all environmental receptors, beyond those impacts arising from present climate conditions. It is proposed to scope out a standalone ICCI assessment in the ES and instead, each environmental chapter will take account of projected future climate change within their future baseline.

Table 18.2 Construction emission sources to be scoped in or out

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
Construction (Product)	A1-3	Raw material supply, transport and manufacture. The product stage captures the GHG emissions attributable to cradle to gate processes: raw material extraction and supply, transport, and manufacturing. The GHG emissions resulting from these processes are often referred to as embodied carbon.	A1-A3 emissions (i.e. from raw material extraction, product processing, and final product manufacture, its energy use, and waste management within these processes, transportation within the supply chain, and manufacture) will be quantified to understand the emissions associated with the construction of the Project, for example, the use of steel or concrete in tower design.	Scoped in
Construction process	A4-5	Transport to works site and construction /installation processes: This construction stage captures the GHG emissions associated with the transportation of the materials and components from the factory gate to the project site. GHG emissions associated from any on-site construction-related activities must be considered.	A4 and A5 emissions will be quantified to understand the emissions associated with the transportation of materials required for the construction of the Project and construction activities undertaken.	Scoped in
Supplementary information beyond the infrastructure lifecycle	D	Boundary of benefits and loads beyond the infrastructure life cycle: Land use change	A qualitative assessment will be provided to understand the potential impact of removal of any vegetation due to construction of the Project.	Scoped in

Table 18.3 Operational emission sources to be scoped in or out

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
Operation (Installed products and materials) and Maintenance	B1	Use This use stage captures carbon emitted directly from the fabric of products and materials once they have been installed as part of the project and it is in normal use. This includes GHG emissions from the use of sulphur hexafluoride (SF₆) in switch gear equipment installed as part of the Project.	The use of SF ₆ within switchgear equipment is a potential source of GHG emissions during operation of the Project. It is anticipated that associated GHG emissions will be estimated as part of the GHG assessment.	Scoped in
	B2	Maintenance of the built asset components and systems over the Project design life.	The Project is not designed with the expectation of any significant plant maintenance activities, or refurbishment being required. Therefore emissions due to these activities are expected to be minimal and would not result in significant effects. As such, this matter is proposed to be scoped out of the assessment.	Scoped out
	B3-4	Repair and Replacement B3 and B4 captures the GHG emissions associated with repair and replacement of the built asset components and systems over the Project design life.	B3 and B4 emissions will be quantified using the same method as the construction works and supply chain carbon emissions. At this stage it is assumed this will cover the new overhead line, reconductoring and proposed substations.	Scoped in

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
			The following list provides a summary of key asset components and replacement requirements (see Chapter 4 Description of the Project for further information): • Overhead Lines: approximately 80 years for overhead line circuits depending on condition/environment/refurbishments/transmission network requirements and approximately 25-40 years for insulators; • Tower foundations: approximately 80 years; • Conductors: approximately 40-60 years; and • Substations: routine site visits required for inspection and maintenance.	
	B5	Refurbishment	It is unusual for elements of National Grid's transmission system to be decommissioned and the site reinstated. In general, assets will be replaced towards the end of an assets design life (which will vary depending on the asset and the asset condition throughout its operational life). As described in Chapter 4 Description of the Project, paragraphs	Scoped out

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
			4.9.5-4.9.11, minor maintenance works are expected to take place, for which carbon emissions will be negligible and would not result in significant effects. As such, this matter is proposed to be scoped out of the assessment.	
	B6-7	Operational energy use and operational water use This use stage captures the GHG emissions associated with regulated energy consumption including heating, cooling, ventilation, domestic hot water, lighting, and auxiliary systems as projected over the life cycle of the project.	Minimal operational energy use or water use is expected and therefore, emissions would not result in significant effects. As such, this matter is proposed to be scoped out of the assessment. This follows the approach stated in ISEP guidance (Ref 18.2), which states that <i>“Where expected emissions are less than 1% of total emissions, and where all such exclusions total a maximum of 5% of total emissions; all exclusions should be clearly stated”</i> .	Scoped out
	B8	Other operational processes This use stage captures the GHG emissions associated with other operational processes. For this Project, it captures indirect emissions associated with transmission and distribution (T&D).	When electrical currents travel on a network, some energy is dissipated in the form of heat, and is “lost” due to the electrical resistance in the network. This energy is known as network losses. A portion of the electricity purchased from the power generators will be consumed during its transmission and distribution to end-customers.	Scoped in

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
			A qualitative assessment of emissions from network losses will be included. It is not considered feasible to quantify these losses and the nature of the Project is such that it largely transmits rather than uses energy.	
	B9	Users' utilisation of infrastructure This use stage captures the activities associated with user's utilisation of the infrastructure.	The Project is not expected to have any direct and quantifiable impact on GHG emissions from electricity use that is distinct from wider national trends on grid decarbonisation. As such, significant effects are not likely and this matter is proposed to be scoped out of the assessment.	Scoped out
End of life	C1-4	Deconstruction, Transport, Waste processing for recovery and disposal	End of life (C1-C4) impacts will not be considered due to the long design life of the Project. It is unusual for elements of National Grid's transmission system to be decommissioned and the site reinstated. As such, significant effects are not likely and this matter is proposed to be scoped out of the assessment.	Scoped out
Supplementary information beyond the infrastructure lifecycle	D	Benefits and loads beyond the system boundary: Exported utilities (i.e. electric energy)	Reduction in GHG emissions from non-renewable energy generation sources once the proposed renewable energy generation can connect to the reinforced network.	Scoped in

Project phase and PAS 2080 Boundary Stage	PAS 2080 Module	Module Description/Pathway	Justification for inclusion in/exclusion from the assessment	Proposed to be scoped in/out
			A qualitative assessment will be provided as there is no practical mechanism to quantify the carbon impact without carrying out a time-based analysis of relative grid carbon emissions factors over the operational life of the Project, seeking to identify over what period electricity will be supplied to UK at grid intensities above/below the grid average.	
	D	Benefits and loads beyond the system boundary: Ongoing land use emissions and sequestration	A qualitative assessment will be provided to understand the potential impact of landscaping and habitat creation proposed as part of the design (which has the potential to change GHG sequestration).	Scoped in

18.8 Proposed Assessment Methodology

Proposed Data Sources

- 18.8.1 The data sources listed in Section 18.5 will be used to provide further information for the assessment.

Proposed Assessment Methodology

- 18.8.2 The following section summarises the methodology proposed to be used for the climate change assessment which builds on the general assessment methodology presented in **Chapter 5 EIA Approach and Methodology**.
- 18.8.3 The methodology is based on the principle that the environmental effects will be determined by identifying potential receptors, assigning receptor value, assessing the magnitude of change on the receptor and then identifying the significance of the effect. This section provides a summary of the EIA methodology specifically relevant to the GHG assessment.
- 18.8.4 The GHG assessment will quantify and report the GHG emissions anticipated to be generated or avoided by the Project. This will be reported in tonnes of carbon dioxide equivalent (tCO₂e), a single metric of the global warming potential of the main GHGs. This approach is consistent with the principles set out in ISEP guidance (Ref 18.1).
- 18.8.5 Expected GHG emissions arising from the Project will be quantified using a calculation– based methodology as per the following equation and aligned with the GHG Protocol:
- $$\text{Activity data} \times \text{GHG emissions factor} = \text{GHG emissions}$$
- 18.8.6 The methodology focuses on assessing the impact of the Project on GHG emissions by quantifying the GHG emissions arising from each lifecycle stage. Emissions associated with the Project will be compared to the baseline and future baseline DM scenario (as described under ‘Baseline Conditions’ above). If relevant GHG activity data are unavailable, the assessment may be more qualitative and/or assumptions and estimations developed. Any assumptions, inclusions and exclusions that inform the GHG emissions calculation will be clearly described.
- 18.8.7 The significance criteria for the GHG assessment will take account of the Project’s GHG emissions in the context of policy, and specifically the UK’s target of net zero by 2050. This will consider the Project’s net GHG emissions, but also whether the Project contributes to reducing GHG emissions consistent with a trajectory towards net zero by 2050.
- 18.8.8 The net GHG emissions associated with the Project will also be contextualised against appropriate existing national carbon budgets where practicable to understand its relative contribution to climate change. Where possible, this will also be contextualised against industry specific carbon budgets.
- 18.8.9 The assessment process will include work with the wider design team to identify opportunities to reduce the whole-life carbon of the Project.

Sensitivity

- 18.8.10 The global climate is the receptor for the purposes of the GHG assessment. The sensitivity of the climate to GHG emissions is ‘high’. The rationale is as follows:
- GHG emission impacts could compromise the Climate Change Committee’s (CCC) sectoral construction and net zero pathways and therefore the ability to meet its future carbon reduction trajectory.
 - GHG emission impacts could compromise the UK’s ability to reduce its GHG emissions and therefore the ability to meet its future legally binding carbon budgets.
 - The extreme importance of limiting global warming to below 2 °C above industrial levels, while pursuing efforts to limit such warming to 1.5 °C as set out in the Paris Agreement and a recent report by the Intergovernmental Panel on Climate Change highlighted the importance of limiting global warming below 1.5 °C (Ref 18.9).
 - Disruption to global climate is already having diverse and wide-ranging impacts to the environment, society, economic and natural resources. Known effects of climate change include increased frequency and duration of extreme weather events, temperature changes, rainfall and flooding, and sea level rise and ocean acidification. These effects are largely accepted to be negative, profound, global, likely, long term to permanent, and are transboundary and cumulative from many global actions.

Magnitude

- 18.8.11 The estimated GHG emissions from the Project will be considered in the context of the UK carbon budgets (Ref 18.10), summarised in Table 18.4 below.
- 18.8.12 The UK carbon budgets are in place to restrict the amount of GHG emissions the UK can legally emit in a five-year period. The UK is currently in the Fourth carbon budget period, which runs from 2023 to 2027. The Fourth and Fifth Carbon Budgets reflect the previous 80% reduction target by 2050. The Sixth Carbon Budget aligns with the legislated 2050 net zero commitment.

Table 18.4 Carbon budget periods

Carbon Budget and Period	Carbon Budget Limit	Reduction below 1990 levels
Fourth (2023-2027)	1,950 MtCO _{2e}	50% by 2025
Fifth (2028-2032)	1,725 MtCO _{2e}	68% by 2030*
Sixth (2033-2037)	965 MtCO _{2e}	78% by 2035

* Originally 57% when Fifth Carbon Budget was enshrined in law, was increased to 68% as the UK’s National Determined Contribution ahead of the United Nations’ COP26 in November 2021 (Department for Business, Energy, and Industrial Strategy (BEIS) (now superseded by the Department of Energy Security and Net Zero), 2022) (Ref 18.11).

- 18.8.13 It is noted that the contribution of most individual projects to national level budgets will be small, so the UK context will have limited value. It is proposed that the GHG assessment, therefore, uses the ISEP guidance (Ref 18.2) to assess the significance of effects with the UK carbon budgets being used to provide context to the GHG emissions.

Significance of effects

- 18.8.14 ISEP guidance (Ref 18.2) provides criteria for assessing the significance of GHG emissions effects. Five levels of significance are presented which focus on how the Project makes a relative contribution towards achieving a science based 1.5°C aligned transition towards net zero and the levels of mitigation applied. The different levels of significance are plotted against the UK's net zero compatible trajectory as presented in Table 18.5 to determine the Project's significance.

Table 18.5 ISEP guidance levels of significance (Ref 18.2)

Significance level	Effects	Description	Example in the guidance
Significant adverse	Major adverse	A project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory, or accepted aligned practice or area-based transition targets. It is down to the practitioner to differentiate between the 'level' of significant adverse effects e.g. 'moderate' or 'major' adverse effects.	The project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.
Significant adverse	Moderate adverse	The project's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type.	A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero.
Not significant	Minor adverse	A project that is compatible with the budgeted, science-based 1.5°C trajectory (in terms of rate of emissions reduction) and which	The project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design

Significance level	Effects	Description	Example in the guidance
		complies with up– to–date policy and ‘good practice’ reduction measures to achieve that. It may have residual emissions but is doing enough to align with and contribute to the relevant transition scenario, keeping the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects.	standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK’s trajectory towards net zero.
Not significant	Negligible	A project that achieves emissions mitigation that goes substantially beyond the reduction trajectory, or substantially beyond existing and emerging policy compatible with that trajectory and has minimal residual emissions. This project is playing a part in achieving the rate of transition required by nationally set policy commitments.	The project’s GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well ‘ahead of the curve’ for the trajectory towards net zero and has minimal residual emissions.
Not significant	Beneficial	A project that causes GHG emissions to be avoided or removed from the atmosphere. Only projects that actively reverse (rather than only reduce) the risk of severe climate change can be judged as having a beneficial effect.	The project’s net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared to the without–project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact.

18.9 Assumptions and limitations

- 18.9.1 The GHG assessment will be undertaken using the best available information at the time of assessment. A reasonable worst case assessment will be developed using appropriate industry benchmarks, and conservative assumptions on materials,

design, assembly, earthworks and use of components to provide a robust assessment of likely carbon emissions.

- 18.9.2 Assumptions will be made about design and construction information to inform the assessment of GHG emissions. In general, any assumptions made will seek to reflect a reasonable worst case (i.e. seeking not to under-report GHG emissions arising from the Project).
- 18.9.3 Assumptions/judgements in each case will be made from either:
- emerging design detail;
 - engineering specialist knowledge;
 - environmental specialist knowledge;
 - climate change/carbon specialist knowledge;
 - manufacturer specifications; or
 - proxy engineering data from previous comparable projects.
- 18.9.4 The methodology used to calculate the UK carbon budgets is different to that used for the calculation of lifecycle emissions for the Project and therefore caution must be taken when making a direct comparison. However, for the purposes of identifying the extent to which the Project may impact the ability of the UK Government to meet its carbon budgets it is necessary to make this comparison to put the Project into context. Additionally, the GHG emissions to be calculated for the Project will be best estimations based on the design information available at the time of the assessment and the carbon factors utilised.
- 18.9.5 A comprehensive list of assumptions and limitations will be provided within the ES once the assessment has been undertaken.

18.10 Conclusion

- 18.10.1 This Scoping Report chapter has outlined the proposed scope for further assessment in relation to the climate change assessment for the Project. The data sources that will be used to define the current and future baselines have been presented, and the impact control and management measures that will be implemented. The potential for significant effects has been identified, as well as the associated source, impact and receptors.
- 18.10.2 In accordance with ISEP guidance, the GHG emissions from construction and operation will be assessed against the Paris Agreement's goal of achieving net zero by 2050.
- 18.10.3 A standalone CCR assessment has been scoped out of the ES as per **Appendix 18A Climate Change Resilience Screening Assessment**. A standalone ICCI assessment has also been scoped out of the ES and instead each environmental chapter will take account of projected future climate change within their baseline.
- 18.10.4 A summary of the proposed scope of the assessment is provided in **Chapter 20 Summary**.

References

- Ref 18.1 Department for Energy and Net Zero (2023) Overarching National Policy Statement for energy (EN-1)
- Ref 18.2 Institute of Sustainability and Environmental Professionals (2022). Assessing Greenhouse Gas Emissions and Evaluating their Significance.
- Ref 18.3 British Standards Institute (2023) PAS 2080:2023 Carbon Management in Infrastructure [online]. Available at: https://www.bsigroup.com/siteassets/pdf/en/insights-and-media/insights/brochures/pas_2080.pdf (Accessed: 14 July 2025).
- Ref 18.4 R (on the application of Finch on behalf of the Weald Action Group) (Appellant) v Surrey County Council and others (Respondents) (2024). UK Supreme Court, Environment/Planning, UKSC/2022/0064.
- Ref 18.5 Department for Energy Security and Net Zero (2023) 'Valuation of energy use and greenhouse gas (GHG) emissions' [online]. Available at: <https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal> (Accessed 14 July 2025).
- Ref 18.6 HM Government (2025) Greenhouse gas reporting: conversion factors 2025. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025> (Accessed: 14 July 2025).
- Ref 18.7 Circular Ecology (2024) 'Embodied Carbon Footprint Database v4', Circular Ecology. Available at: <https://circularecology.com/embodied-carbon-footprint-database.html> (Accessed: 14 July 2025).
- Ref 18.8 National Grid (1959) 'The Holford Rules'. London: National Grid [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> (Accessed: 14 July 2025).
- Ref 18.9 Intergovernmental Panel on Climate Change (2023) AR6 Synthesis Report: Climate Change 2023 [online]. Available at: <https://www.ipcc.ch/report/ar6/syr/> (Accessed: 14 July 2025).
- Ref 18.10 HM Government (2021) Guidance: Carbon budgets [Online]. Available at: Carbon Budgets - <https://www.gov.uk/guidance/carbon-budgets> (Accessed: 14 July 2025)
- Ref 18.11 BEIS (2022) United Kingdom of Great Britain and Northern Ireland's Nationally Determined Contribution [Online]. Available at: [UK's 2030 Nationally Determined Contribution \(NDC\) emissions reduction target under the Paris Agreement - GOV.UK](#) (Accessed: 14 July 2025).

19. Major Accidents and Disaster

Contents

19.	Major Accidents and Disasters	19-5
19.1	Introduction	19-5
19.2	Legislation, Policy and Guidance	19-6
	Guidance and Advice Notes	19-6
19.3	Consultation and Engagement	19-7
19.4	Study Area	19-7
19.5	Baseline Conditions	19-7
	Baseline	19-7
	Accident and Disaster Categories	19-8
	Potential Environmental Receptors	19-9
	Nearby Major Accident Hazard Installations	19-10
	Natural Hazards and Disasters	19-10
	Wildfire	19-12
19.6	Scoping Methodology	19-12
	Establishing the Proposed Scope of Assessment	19-12
19.7	Potential for Significant Effects	19-13
19.8	Proposed Assessment Methodology	19-13
19.9	Assumptions and Limitations	19-14
19.10	Conclusion	19-14
	Table 19.1 Major accidents and disaster groups and categories	19-8
	Table 19.2 Signpost to chapters with relevant receptors	19-9
	Image 19.1 Scoping decision process flow (Ref 19.1)	19-13
	References	19-15

19. Major Accidents and Disasters

19.1 Introduction

- 19.1.1 This chapter considers the potential risk of a major accident or disaster causing a significant environmental effect that may arise relating to the construction, operation, or maintenance of the Project (as described in **Chapter 4, Description of the Project**).
- 19.1.2 The Scoping Boundary is illustrated on **Figure 1.2 Scoping Boundary**.
- 19.1.3 This chapter should be read in conjunction with the following chapters which provide the Project context and the proposed approach to the Environmental Impact Assessment (EIA):
- **Chapter 2 Regulatory and Planning Policy Context;**
 - **Chapter 3 Main Alternatives Considered;**
 - **Chapter 4 Description of the Project;** and
 - **Chapter 5 EIA Approach and Methodology.**
- 19.1.4 In addition, there may be interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters and associated appendices:
- **Chapter 10 Water Environment** – covers the flood risk of the area;
 - **Chapter 11 Geology and Hydrogeology** – covers the ground conditions of the area;
 - **Chapter 14 Air Quality** – covers the air quality baseline of the area; and
 - **Chapter 18 Climate Change** – provides an overview of the climatic conditions and trends in the area.
- 19.1.5 This chapter is supported by **Appendix 19A Major Accidents and Disasters Scoping Table** which identifies hazards and provides justification as to whether each is to be included in the Environmental Statement (ES) (scoped in) or not (scoped out) on the basis of being likely to give rise to significant environmental effects or not, respectively.
- 19.1.6 This assessment for major accidents and disasters is guided by a Primer published by Institute of Sustainability and Environmental Professionals (ISEP) (formerly Institute of Environmental Management and Assessment (IEMA)) (2020) called, 'Major Accidents and Disasters in EIA' (Ref 19.1) ('the Primer'). The Primer defines the following:
- **Major accident:** events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the Client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome

(e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events.

- **Disaster:** may be a natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident.

19.1.7 This chapter considers two aspects: the vulnerability of the Project to a major accident/disaster, and the potential for the Project to cause a major accident.

19.1.8 This chapter:

- identifies whether there are any major accidents and disasters topics and events that are proposed to be scoped into the EIA and therefore reported within the ES to be submitted with the application for development consent;
- identifies those major accident and disaster topics and events that are proposed to be scoped out of further assessment, with a justification provided; and
- defines the approach and methodology for identifying potential major accidents and disasters and their assessment, in the context of the Project.

19.2 Legislation, Policy and Guidance

19.2.1 **Chapter 2 Regulatory and Planning Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of potential effects on all environmental topic chapters associated with the construction, operation, and maintenance of the Project is provided in **Chapter 2 Regulatory and Planning Policy Context**, **Appendix 2A Key Legislation**, **Appendix 2B National and Regional Planning Policy** and **Appendix 2C Local Policy**.

19.2.2 The requirement to consider major accidents and disasters as part of the EIA process is set out in Schedule 4 paragraph 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as ‘the EIA Regulations’) which state:

“A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned... Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies”.

Guidance and Advice Notes

19.2.3 The following core guidance documents provide the technical framework for applying a risk management process when dealing with major accidents and disasters in EIA’s, in addition to other useful documents which relate to the assessment of risk:

- ISEP (formally IEMA), 2020, ‘Major Accidents and Disasters in EIA: An IEMA Primer’ (Ref 19.1).
- The International Standards Organizations ISO 31000: 2018 Risk Management – Principles and Guidelines (Ref 19.2).

- Department for Environment, Food & Rural Affairs (Defra), 2011, 'Guidelines for Environmental Risk Assessment and Management' (Ref 19.3).

19.3 Consultation and Engagement

- 19.3.1 The ES will be informed by consultation and engagement with stakeholders, including local authorities and the Health and Safety Executive (HSE). In addition, engagement will be undertaken with non-statutory stakeholders as required to ensure that specialist local views and expertise can be considered as part of the ES.
- 19.3.2 In preparing this Scoping Report chapter, consideration has been given to feedback received following Non-Statutory Consultation held between 11 June and 6 August 2025.
- 19.3.3 No feedback relating specifically to environmental effects from major accidents and disasters as defined this chapter were received. Responses regarding flood risk have been considered in **Chapter 10 Water Environment**.

19.4 Study Area

- 19.4.1 There is no specific regulatory guidance or standardised methodology to define the Study Area, therefore distances are based on professional judgement. All distances provided are from the Scoping Boundary illustrated in **Figure 1.2 Scoping Boundary** and include:
- Environmental receptors identified in the technical chapters of this Scoping Report: **Chapters 6-18**.
 - Manmade features:
 - nuclear sites;
 - airports, airfields, airstrips and ports within 5 km;
 - Control of Major Accident Hazard (COMAH) facilities within 3 km;
 - major accident hazard pipelines within the Scoping Boundary;
 - rail infrastructure within the Scoping Boundary; and
 - transmission (gas, electrical, oil/fuels) crossing, and within the Scoping Boundary.
 - Natural features with the potential to create risks within:
 - seismic activity within 5 km; and
 - flood risk and unstable ground conditions within 1 km.

19.5 Baseline Conditions

Baseline

- 19.5.1 The baseline relevant to major accidents and disasters primarily comprises:

- features external to the Project that present a potential source of hazard to the Project itself;
- sensitive environmental receptors at risk of significant effect from the Project; and
- identified major accident and disaster risks that currently exist within the local area that could affect the Project or be exacerbated by the Project.

19.5.2 The baseline conditions described for major accidents and disaster events are derived from the following desk study sources:

- technical chapters of this Scoping Report: (Chapters 6-19);
- National Risk Register 2020 (Ref 19.4);
- British Geological Survey 'Onshore GeoIndex' (Ref 19.5);
- The Mining Remediation Authority Interactive Map (Ref 19.6);
- Health and Safety Executive's Planning Advice Web App (Ref 19.7);
- COMAH 2015 Public Information Search (Ref 19.8); and
- Google street view maps covering the Scoping Boundary.

19.5.3 The baseline conditions are split into three areas:

- potential environmental receptors: receptors that could be vulnerable to a major accident or disaster as a result of the Project;
- nearby major accident installations: potential linkages with other projects that could increase the risk of a major accident within the Study Area; and
- natural hazards and disasters: a review of existing baseline data relating to natural hazards/disasters, such as flooding or drought, that inform the likelihood of a natural disaster occurring within the Study Area.

Accident and Disaster Categories

19.5.4 Within the Study Area, the potential major accidents and disaster groups and categories considered are those listed in **Table 19.1**.

Table 19.1 Major accidents and disaster groups and categories

Groups	Categories
Natural Events	Geophysical
	Hydrology
	Climatological and meteorological
	Biological
Technological or manmade hazards	Societal
	Industrial and urban accidents
	Transport accidents
	Pollution accidents

Groups	Categories
	Utility failures
	Malicious attacks
	Engineering accidents and failures
	Human error
	Sabotage/arson
	Explosion

Potential Environmental Receptors

- 19.5.5 All potential receptors that could be affected by a major accident or disaster have been described and outlined within the specific environmental topic chapters. **Table 19.2** signposts the technical chapters and the potential receptors relevant to major accidents and disasters. No additional receptors have been identified outside those set out within the technical chapters.

Table 19.2 Signpost to chapters with relevant receptors

Stakeholder	Consideration in the Scoping Report
Chapter 6 and 7 Landscape and Visual	Designated Sites
Chapter 8 Ecology and Biodiversity	Ecological receptors
	Notable Habitats
	Designated Sites
Chapter 9 Historic Environment	Designated heritage assets
	Non-designated heritage assets
Chapter 10 Water Environment	Water resources
	Watercourses and waterbodies
Chapter 11 Geology and Hydrogeology	Soil and contamination
	Groundwater
Chapter 12 Agriculture and Soils	The best and most versatile (BMV) Agricultural Land
Chapter 13 Traffic and Movement	Roads
	Cycle routes
	Public rights of way
Chapter 14 Air Quality	Residential receptors
Chapter 15 Noise and Vibration	Residential and other noise sensitive receptors
Chapter 16 Socio-economics, Recreation and Tourism	Commercial receptors
	Recreational routes
	Aviation infrastructure

Stakeholder	Consideration in the Scoping Report
Chapter 17 Health and Wellbeing	Communities

Nearby Major Accident Hazard Installations

- 19.5.6 There are no sites that fall under the COMAH Regulations 2015 within proximity to the Project (Ref 19.8). The closest COMAH site is Scott Bader UK Limited, located approximately 2 km east of the Scoping Boundary for Section 5.

Natural Hazards and Disasters

- 19.5.7 The Primer (Ref 19.1) outlines examples of natural hazards in the UK. These have been used to guide the baseline data collection and assist with determining the likelihood of the identified risk. The main natural hazards that can disrupt infrastructure in the UK are outlined below.

Flooding

- 19.5.8 All of the 11 km of Scoping Boundary within Section 1 (from Weston Marsh to South Forty Foot Drain), and the eastern 5.5 km of the Scoping Boundary in Section 2 (from South Forty Foot Drain to east of Haconby) is located in Flood Zone 2 and 3. Sections 1 and 2 contain Flood Zones associated with waterbodies (River Welland and South Forty Foot Drain and their tributaries). There are narrow flood zones associated with watercourses that the new overhead line would need to cross that would likely be spanned by conductors. Also, the final southern end of the reconductoring, where the Project will connect to the existing Grendon substation, is located in the Flood Zone that is associated with the hydrological catchments of the River Nene.
- 19.5.9 With regard to flood risk and drainage, future baseline conditions will be forecasted, drawing on current best practice guidelines. These will consider the likely impacts of climate change on river flows, rainfall intensities, and tidal flood levels/storm surges. Further information on the baseline conditions for flooding for the Project can be found in **Chapter 10 Water Environment**.
- 19.5.10 For the assessment of the impact of climate change on the future physical environment, the UK guidance and projection of sea level rise and changing storm conditions are applied to the baseline as described below.
- 19.5.11 Guidance on changes in future wind and wave conditions has been provided by the Environment Agency (Ref 19.9). The guidance states that wind speeds and wave height should be increased by 5% between 1990 and 2055, then by 10% for 2056 to 2115.
- 19.5.12 UK Climate Projections 2018 (UKCP18) (Ref 19.10) provides the most up-to-date assessment of climate change up to and beyond 2100. Sea level is rising over the whole of the England coastline. Sea level rise data along the UK coastline is available to download from the Met Office UKCP18 website at the grid square (latitude(N) 52.94: longitude(E) 0.08). Sea levels are predicted to reach approximately 1 metre under the Representative Concentration Pathway (RCP) 8.5 high emission scenario by 2100. Increases in coastal flooding hazards are attributed to the sea level rise throughout the century which would threaten communities on sea cliffs and coastal plains around much of the east and south coast of England.

Climate

- 19.5.13 Data sourced from the UK Met Office confirmed the highest daily maximum temperature in the UK to be 40.3°C, recorded in Coningsby, Lincolnshire in July 2022. The lowest daily minimum temperature on record in the UK is -27.2°C recorded in Altnaharra, Scotland in December 1995.
- 19.5.14 Further climate information was sourced from the Met Office to help understand the climate of the Midlands and eastern England where the Project is located:
- Midlands January mean daily minimum temperatures varying from just below 0 °C to about 1.5 °C;
 - Midlands July mean daily maximum temperatures exceed 22 °C in the south and east;
 - The average number of days with air frost in the Midlands varies from about 40 a year in the lower Severn valley to over 60 a year in the Peak District and sheltered areas of the Welsh Marches;
 - Eastern England mean daily maximum temperatures are between 6°C to 8°C (winter) and 20°C to 23°C (summer); and
 - Eastern England days of air frost per year ranges from 30 (coastal areas) to 55 (well inland).
- 19.5.15 The more sheltered areas of the South and East Midlands, including parts of Northamptonshire, the lower Trent valley and the Avon valley, receive less than 600 mm of rain per year. In eastern England, Lincolnshire receives less than 700 mm per year. Across the east and south Midlands, there is on average 30 to 35 rain days (rainfall greater than 1 mm) in winter and 20 to 25 days in summer. Eastern England on average, has 30 rain days (rainfall greater than 1 mm) in winter (December to February) and less than 25 days in summer (June to August).
- 19.5.16 The occurrence of snow is linked closely to temperature, with falls rarely occurring if the temperature is higher than 4°C, as temperatures below this are generally required for snow to lie for any length of time. The Met Office data indicates that snow falls around 20 days per year in low lying areas of the Midlands, with the south east of East England has under 20 days per year, while higher ground has over 30 days.
- 19.5.17 The National Risk Register (Ref 19.14) states that the UK is likely to experience a trend towards warmer winters and hotter summers. This would also lead to changing rainfall patterns, leading to heavier rainfall. Other extreme weather events, such as storms and heavy snowfalls could also be expected, as a result of climate change. The National Risk Register expects extreme weather events to become more frequent.

Storms and high winds

- 19.5.18 Being one of the most sheltered parts of the UK, the Midlands and east of England usually experience mean wind speeds of around 10 knots. Gales (a mean windspeed of 34 knots or more over 10 consecutive minutes) only occur on average, two days a year in the Midlands but exposed areas, especially in the west and north, usually experience about 5 gales per year. On average gales occur two days a year in Lincolnshire (Ref 19.13).

- 19.5.19 Extreme storms are very rare in the UK; however, lower magnitude storms that predominantly occur during winter still give rise to challenges. UK data from the past four decades has not shown any significant trends in storminess based on maximum gust speeds to determine thresholds. There is high uncertainty in climate projections of wind due to the complexity and challenges within climate models to simulate wind.

Land Instability

- 19.5.20 The Project is located in areas that are predominantly rural, with large parts of the land under arable use.
- 19.5.21 Earthquakes in the UK are moderately frequent but are unlikely to be powerful enough to inflict severe damage. The British Geological Society (BGS) acknowledges that although the UK is distant from the nearest tectonic plate boundary, the Mid-Atlantic Ridge, earthquakes in the UK occur as crustal stresses within the tectonic plates, as they are relieved by movement occurring on pre-existing fault planes. One of the driving forces is regional compression, caused by the motion of the Earth's tectonic plates and uplift, resulting from the melting of the ice sheets that covered many parts of the UK thousands of years ago. The Scoping Boundary is in an area of low seismicity. BGS data indicates that the Project would be located in areas with a Peak Ground Acceleration of 0.00 to 0.02 g over a 95 year return period. This is the lowest of the nine BGS seismicity categories for the UK (Ref 19.11)

Wildfire

- 19.5.22 The UK has a temperate climate that is not usually associated with wildfires; however, wildfires do occur annually. Wildfires generally start from human error, such as discarded cigarettes or barbecues, when ground conditions are dry after extended periods of hot, dry weather, when vegetation may have increased susceptibility to fire.

19.6 Scoping Methodology

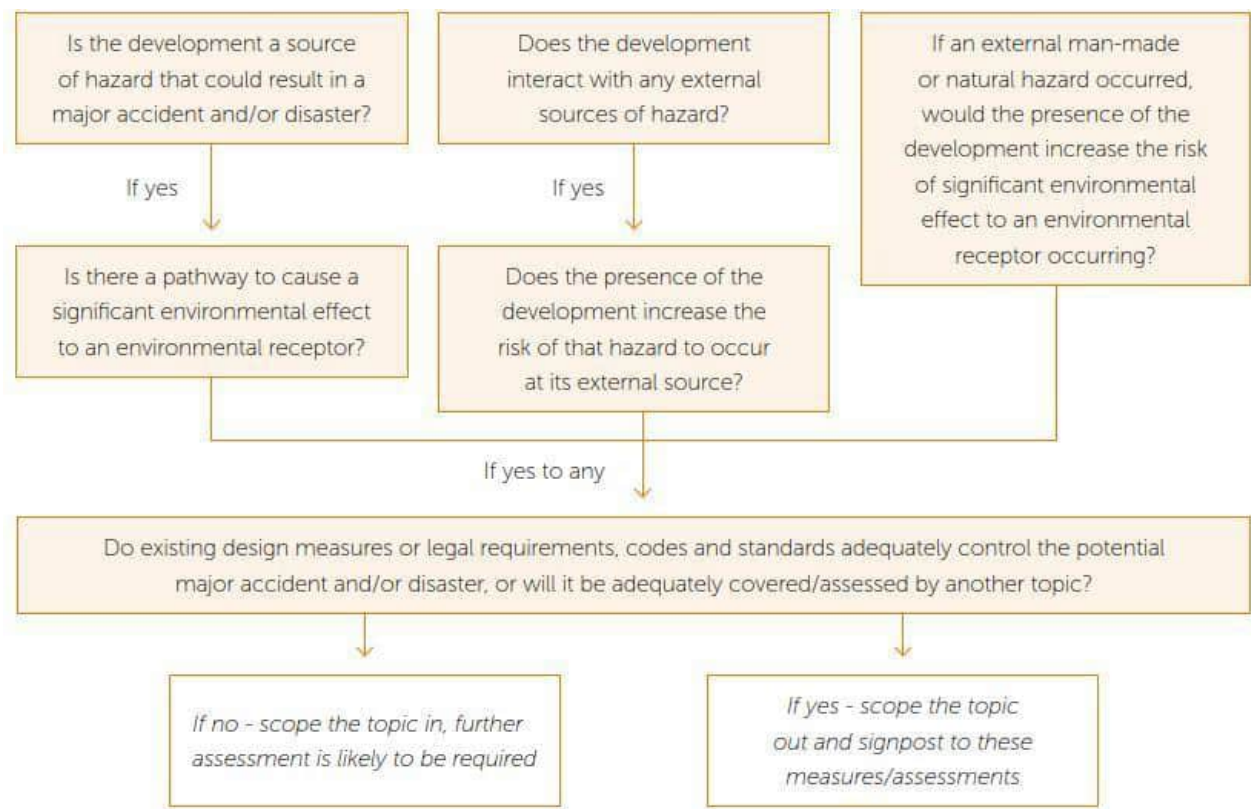
- 19.6.1 To understand the initial risk with regards to major accidents and disasters an initial scoping exercise has been undertaken to identify and review the sources outlined in this chapter, and the results of this scoping exercise are included in **Appendix 19A Major Accidents and Disasters Scoping Table**. The appendix outlines the potential vulnerability of the Project to the natural, man-made and technological risks and hazards, as well as the major accidents and disasters that could occur as a result of the Project. Each hazard is assessed to identify the risk or interaction that could result in a major accident or disaster.

Establishing the Proposed Scope of Assessment

- 19.6.2 This scoping exercise focuses on identifying the potential impact sources (the Project itself or other existing hazard sources) and the impact pathways that exist between these and potential receptors, that could lead to a significant environmental effect occurring. It then considers whether existing legal requirements and codes and standards are sufficient to control risks. Potential impact sources associated with construction, operation and maintenance that fall within the scope for health and safety legislation and are not considered.

- 19.6.3 Each hazard was screened in turn to identify whether it could result in a major accident or disaster, or whether it could interact with any external source of hazard. The potential for the Project to result in the potential significant effects described in this section takes account of the embedded and control and management measures described in the **Appendix 4A Initial Outline Code of Construction Practice**.
- 19.6.4 Details of each stage of the scoping exercise are set out in the methodology set out within the Primer (Ref 19.1) in **Image 19.1**.

Image 19.1 Scoping decision process flow (Ref 19.1)



19.7 Potential for Significant Effects

- 19.7.1 The scoping exercise presented in **Appendix 19A Major Accidents and Disasters Scoping Table** has not identified any hazards/events that would have the potential to result in significant effects and therefore none are proposed to be scoped into the ES.

19.8 Proposed Assessment Methodology

- 19.8.1 During the development of the Project new sources of hazards or events could emerge and these would be considered using a staged approach as set out below:
- identify the potential risk events related to the major event types;
 - screen the risk events;
 - define the reasonable worst consequence should the event occur;
 - identify all cross-disciplinary impacts;

- identify mitigation measures, management and, if possible, prevention;
- assess the likelihood; and
- determine the risk has been mitigated to as low as reasonably practical and identify any residual risks and their significance.

19.8.2 In the event of a hazard being identified that could give rise to potentially significant environmental effects, it would be considered appropriately in the ES. This would include a detailed methodology for the assessment of the relevant major accidents and disasters, based on the guiding principles outlined above. Any limitations of the assessment of major accidents and disasters would also be clearly presented.

19.9 Assumptions and Limitations

19.9.1 Major accidents and/or disasters associated with construction, operation and maintenance activities that fall within the scope for health and safety legislation and Construction Design and Management (CDM) regulations are not considered further, as they are already inevitably subject to appropriate management.

19.10 Conclusion

19.10.1 **Appendix 19A Major Accidents and Disasters Scoping Table** summarises the hazards/events identified as part of this scoping exercise and provides justification in concluding that they are proposed to be scoped out of the assessment in **Table 19A.1**. No hazard/event is proposed to be scoped into the ES. The scoping assessment has shown that the vulnerability of the Project to major accidents and disasters can be mitigated or reduced by the processes and standards in place. It also outlines that the Project is unlikely to generate any potential significant effects on the environment if a major accident or disaster were to occur.

References

- Ref 19.1 Institute of Environmental Management and Assessment (IEMA) (2020). Major Accidents and Disasters in EIA: An IEMA Primer [online]. Available at: <https://www.isepglobal.org/content/major-accidents-and-disasters-in-eia-an-iema-primer-october-2020/> [Accessed: 18 July 2025].
- Ref 19.2 The International Standards Organizations (ISO) (2018). ISO 311000: 2018 Risk Management – Principles and Guidelines [online]. Available at: <https://www.iso.org/standard/65694.html> [Accessed: 18 July 2025].
- Ref 19.3 Department of Food, Environment and Rural Affairs (DEFRA) (2011). Guidelines for Environmental Risk Assessment and Management Green Leaves III [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69449/pb13670-green-leaves-iii-summary-111107.pdf [Accessed: 18 July 2025].
- Ref 19.4 Cabinet Office (2020). National Risk Register [online] Available at: CCS's National Risk Register 2020 (publishing.service.gov.uk) [Accessed: 18 July 2025].
- Ref 19.5 British Geological Survey (BGS) (N/A) Onshore GeoIndex [online] Available at: <https://mapapps2.bgs.ac.uk/geoindex/home.html> [Accessed 15 July 2025].
- Ref 19.6 Mining Remediation Authority (N/A). Mining Remediation Authority Interactive Map [online] Available at: <https://datamine-cauk.hub.arcgis.com/> [Accessed: 15 July 2025].
- Ref 19.7 Health and Safety Executive (N/A). Health and Safety Executive's Planning Advice Web App [online] Available at: <https://www.hse.gov.uk/landuseplanning/planning-advice-web-app.htm> [Accessed: 15 July 2025].
- Ref 19.8 Health and Safety Executive (2015). COMAH 2015 Public Information Search. [online]. Available at: <https://notifications.hse.gov.uk/COMAH2015/Search.aspx> [Accessed: 18 July 2025].
- Ref 19.9 Environment Agency (2021). Flood Risk Assessments: Climate Change Allowances [online]. Available at: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances#sea-level-allowances> [Accessed: 23 July 2025].
- Ref 19.10 Met Office (2018). UKCP User Interface (UI) Products. [online] Available at: https://ukclimateprojections-ui.metoffice.gov.uk/products/form/LS3_Subset_01 [Accessed: 23 July 2025].
- Ref 19.11 British Geological Society (BGS) (2022). Seismic Hazard in the UK. [online] Available at: <http://www.earthquakes.bgs.ac.uk/hazard/UKhazard.html> [Accessed: 23 July 2025].
- Ref 19.12 Act of Parliament (2017) Town and Country Planning (Environmental Impact Assessment) Regulations: Statutory Instrument 2017 no. 571, HMSO, UK.
- Ref 19.13 Met Office (2016). Descriptions of regional climates in the UK [online] Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/regional-climates/index> [Accessed: 23 July 2025].

Ref 19.14 HM Government (2023) National Risk Register. [online] Available at: CCS's National Risk Register 2023 (publishing.service.gov.uk). [Accessed 18 July 2025].

20. Summary

Contents

20.	Summary	20-1
	Table 20.1 Proposed scope of the Landscape assessment	20-2
	Table 20.2 Proposed scope of the Visual assessment	20-9
	Table 20.3 Proposed scope of the Ecology and Biodiversity assessment	20-12
	Table 20.4 Proposed scope of the Historic Environment assessment	20-21
	Table 20.5 Proposed scope of the Water Environment assessment	20-24
	Table 20.6 Proposed scope of the Geology and Hydrogeology assessment	20-29
	Table 20.7 Proposed scope of the Agriculture and Soils assessment	20-34
	Table 20.8 Proposed scope of the Traffic and Transport assessment	20-38
	Table 20.9 Proposed scope of the Air Quality assessment	20-42
	Table 20.10 Proposed scope of the Noise and Vibration assessment	20-44
	Table 20.11 Proposed scope of the Socioeconomics, Recreation and Tourism assessment	20-47
	Table 20.12 Proposed scope of the Health and Wellbeing assessment	20-53
	Table 20.13 Proposed scope of the Climate Change assessment	20-58
	Table 20.14 Proposed scope of the Major Accidents and Disasters assessment	20-61

20. Summary

- 20.1.1 This chapter provides a summary of the proposed scope of the Environmental Statement (ES) as described in detail in **Chapters 6 – 19** of this EIA Scoping Report. **Table 20.1** to **Table 20.14** provide summaries of the matters considered for each environmental aspect included in this report and whether it is proposed to be **Scoped in** or out of the EIA.

Table 20.1 Proposed scope of the Landscape assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Norfolk Coast National Landscape	No – North Norfolk Coast is the National Landscape in closest proximity to the Project, there would be no discernible change due to separation distance of over 30 km.	Scoped out
Construction	All RPGs.	No – in relation to construction of the new overhead line and substations. No direct change anticipated through careful siting of construction works in line with the Initial Outline CoCP (refer to Appendix 4A Initial Outline Code of Construction Practice (CoCP)). Indirect change will be limited by screening from existing boundary vegetation and will be temporary and of short duration.	Scoped out
Construction	All RPGs.	No – in relation to reconductoring. Construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	Scoped out
Construction	All locally designated landscapes (SLAs).	No – in relation to construction of the new overhead line and substations, there are no SLAs	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		located within the Study Area. In relation to reconductoring, construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	
Construction	NLCA 46: The Fens, NLCA 75: Kesteven Uplands, and NLCA 74: Leicestershire and Nottinghamshire Wolds	Yes – in relation to construction of the new overhead line and substations. Potential for direct effects on landscape elements and features and indirect effects on perceptual attributes across wide area.	Scoped in (summary assessment based on local character units)
Construction	All other NLCA	No – in relation to construction of the new overhead line and substations. All other NLCA are located greater than 3km from the new overhead line and substations, limiting potential for discernible change.	Scoped out
Construction	All NLCA	No – in relation to reconductoring. Construction will occur along an existing overhead line, will be temporary, with only limited and localised influence for a short duration.	Scoped out
Construction	Rutland units:	No – in relation to construction of the new overhead line and	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
	Vale of Catmose LCA; Cottesmore Plateau LCA; and Clay Woodlands LCA. Melton unit: Vale of Belvoir LCA.	substations. These LCAs are located outside of the Scoping Boundary and therefore no direct change will occur. Only small parts are within the Study Area. Potential change to perceptual attributes will be limited in extent and duration and will not result in discernible change.	
Construction	Melton unit: Melton LCA.	No – in relation to construction of the new overhead line and substations. This LCA covers the urban area of Melton Mowbray defined by settlement and development. Construction will not occur within this LCA and will not alter the existing perceptual attributes.	Scoped out
Construction	All remaining local character units (LCTs and LCAs) within the assessment Study Area and ZTV.	Yes - in relation to construction of the new overhead line and substations. There is potential for localised direct effects on landscape features and more widespread indirect effects on perceptual attributes and overall impression of character.	Scoped in
Construction	All local landscape units (LCTs and LCAs).	No – in relation to reconductoring. construction will occur along an existing overhead line and be undertaken in accordance with the	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		Initial Outline CoCP (refer to Appendix 4A: Initial Outline Code of Construction Practice (CoCP)). Any change will be temporary and of a short duration and will be localised, with only limited influence on landscape character.	
Operation	Norfolk Coast National Landscape.	No – no discernible change due to separation distance of over 30 km.	Scoped out
Operation	Grimsthorpe Castle RPG.	Yes – in relation to introduction of the new overhead line. There is potential for long-term indirect change to perceptual aspects and in relation to designed vistas from the castle and grounds which may locally alter the impression of the landscape. No – in relation to the substations, as the nearest proposed substation is located approximately 4.5 km from the RPG.	Scoped in for new overhead line. Scoped out for substations.
Operation	Stapleford Hall RPG.	No – in relation to introduction of the new overhead line and substations. This RPG is located approximately 2 km from Scoping Boundary. Potential indirect change limited by distance, local topography and vegetation.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Operation	All RPGs.	No – in relation to reconducted overhead line. Reconducted overhead line will appear similar to existing with very little or no change from the baseline.	Scoped out
Operation	All locally designated landscapes (SLAs).	No – in relation to the new overhead line and substations, there are no SLAs located within the Study Area. In relation to reconducting, the reconducted overhead line will appear similar to existing with very little or no change from the baseline.	Scoped out
Operation	NLCA 46: The Fens, NLCA 75: Kesteven Uplands, and NLCA 74: Leicestershire and Nottinghamshire Wolds	Yes – in relation to introduction of the new overhead line and substations. Potential for direct effects on landscape elements and features and indirect effects on perceptual attributes across wide area.	Scoped in (summary assessment based on local character units)
Operation	All other NLCA	No – in relation to introduction of the new overhead line and substations. All other NLCA are located greater than 3km from the new overhead line and substations, limiting potential for discernible change.	Scoped out
Operation	All NLCA	No – in relation to reconducted overhead line. Reconducted	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		overhead line will appear similar to existing with very little or no change from the baseline.	
Operation	Rutland units: Vale of Catmose LCA; Cottesmore Plateau LCA; and Clay Woodlands LCA. Melton unit: Vale of Belvoir LCA.	No – in relation to introduction of the new overhead line and substations. Only small parts of these LCAs are within the Study Area. No direct change will occur. Change to perceptual attributes limited and localised, very little or no alteration of baseline.	Scoped out
Operation	Melton unit: Melton LCA.	No – in relation to introduction of the new overhead line and substations. This LCA is located outside the Scoping Boundary therefore no direct change will occur. Existing character defined by settlement and development which will not be influenced by the new overhead line located outside this LCA.	Scoped out
Operation	All remaining local character units (LCTs and LCAs) within the assessment Study Area and ZTV.	Yes - in relation to introduction of the new overhead line and substations. Potential for localised direct change and more widespread indirect change to perceptual attributes and overall impression of character.	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Operation	All local landscape units (LCTs and LCAs).	No – in relation to reconducted overhead line. Reconducted overhead line will appear largely the same as existing with very little or no change from the baseline.	Scoped out
Construction, Operation and Maintenance	All identified landscape designations and landscape character units outside the final Study Area (3 km from Order Limits) and/or outside the ZTV/ extent of potential visibility.	No – in relation to all Project components. There is no potential for change on receptors outside the ZTV, and little potential for impacts on those greater than 3 km from the Project.	Scoped out
Maintenance	All identified landscape receptors.	No – in relation to periodic maintenance works for all Project components. Any change would be limited and localised and occur in context of overhead lines and substations, would be temporary and of a short duration.	Scoped out

Table 20.2 Proposed scope of the Visual assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in/out
Construction	Residential receptors and users of outdoor recreational facilities, including PRow, in and around settlement areas within the assessment Study Area (3 km from Order Limits) and with potential visibility of construction.	Yes – in relation to construction of the new overhead line and substations. Potential for temporary alteration to views and visual amenity, particularly for receptors in close proximity to construction activity.	Scoped in
Construction	Users of nationally or regionally promoted long distance recreational routes and users of recreational watercraft within the assessment Study Area and with potential visibility of construction.	Yes - in relation to construction of the new overhead line and substations. Potential for temporary alteration to views and visual amenity, particularly from sections of routes in close proximity to construction activity.	Scoped in
Construction	Users travelling on roads and railway lines.	No – in relation to construction of the new overhead line and substations. Road and rail users generally travelling at speed, largely limiting visibility to glimpsed views of temporary activity, with significant effects unlikely.	Scoped out
Construction	All potential visual receptors outside the assessment Study Area and/or with no potential visibility of construction.	No – in relation to construction of the new overhead line and substations. - While there is potential for localised views of aspects of construction, the separation distance is such that effects will not be significant.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in/out
Construction	All potential visual receptors.	No – in relation to reconductoring. Reconductoring works will occur along an existing overhead line and will be temporary and of short duration with limited and localised influence on views and visual amenity. Application of measures set out in the Initial Outline CoCP (refer to Appendix 4A Initial Outline Code of Construction Practice (CoCP)) will help ensure change is minimised.	Scoped out
Operation	Residential receptors and users of outdoor recreational facilities, including PRow, in and around settlement areas within the 3 km assessment Study Area and with potential visibility of the Project.	Yes – in relation to introduction of the new overhead line and substations and associated lighting. Potential for alteration to views and visual amenity, particularly where new structures are visible in the foreground or across a wide extent.	Scoped in
Operation	Users of nationally or regionally promoted long distance recreational routes and users of recreational watercraft within the 3 km assessment Study Area and with potential visibility of the Project.	Yes - in relation to introduction of the new overhead line and substations and associated lighting. Potential for alteration to views and visual amenity, particularly where new structures are visible in the foreground or running parallel to sections of the routes.	Scoped in
Operation	Users travelling on roads and railway lines.	No – in relation to introduction of the new overhead line and substations and associated lighting. Road and rail users generally of lower sensitivity and often travelling at speed limiting visibility to glimpsed views.	Scoped out
Operation	All potential visual receptors outside the assessment Study Area and/or with no potential visibility of the Project.	No – in relation to introduction of the new overhead line and substations and associated lighting. No potential change for receptors with no visibility of the Project. While there is potential	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in/out
		for localised views of the Project from beyond 3 km, the separation distance is such that effects will not be significant.	
Operation	Residents in individual properties within 150m RVAA Study Area.	Yes – in relation to introduction of the new overhead line and substations and associated lighting. Potential for alteration to residential visual amenity, particularly where new structures are visible in the foreground of principal views.	Scoped in
Operation	Residents in individual properties outside 150m RVAA Study Area.	No – in relation to introduction of the new overhead line and substations and associated lighting. No potential for alteration to residential visual amenity due to offset distance. Visual effects from residential receptors covered above under settlement areas.	Scoped out
Operation	All potential visual receptors.	No – in relation to reconducted overhead line. Reconducted overhead line will appear largely the same as existing with very little or no change from the baseline.	Scoped out
Maintenance	All potential visual receptors.	No – in relation to periodic maintenance works for all Project components. Any change would be limited and localised and occur in context of overhead lines and substations, and would be temporary and of a short duration.	Scoped out

Table 20.3 Proposed scope of the Ecology and Biodiversity assessment

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
Construction and maintenance	Statutory and non-statutory designated sites (without mobile qualifying criteria) located greater than 2 km from Scoping Boundary.	Yes – during construction, there is a risk of habitat degradation resulting from pollution for sites that are hydrologically connected to the Project. No likely significant effects identified for other impact pathways for this feature.	Scoped in for construction impacts only from new overhead line, substations and reconductoring (habitat degradation from pollution only). Scoped out for maintenance impacts from new overhead line and substations.
Construction and maintenance	Statutory designated sites within 10 km and up to 30 km from Scoping Boundary for those sites used by birds or bats associated with Internationally designated sites.	Yes – there will be no direct loss of habitat from statutory designated sites. However, it is possible that habitats utilised by birds or other species associated with nearby designated sites (i.e. FLL) could be lost. Surveys will investigate use of these habitats by such species and inform any requirement for mitigation or necessity for design adjustments. In addition, sites that are designated for habitats sensitive to pollution will be assessed.	Scoped in for construction (all impacts from new overhead line, substations and reconductoring) and maintenance (temporary habitat loss, disturbance, degradation and fragmentation from new overhead line and substations only).
Construction and maintenance	Non-statutory designated sites up to 2 km from Scoping Boundary.	Yes – the construction of overhead line infrastructure, supporting structures, and associated tracks have the	Scoped in for construction (all impacts from new overhead line, substations and reconductoring) and maintenance (temporary

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		potential for direct habitat loss within non-statutory designated sites. Until the route corridor and working methods are confirmed this impact pathway will be included on a precautionary basis. Permanent habitat loss of a non-statutory designated site could occur as a result of the construction of the overhead line infrastructure such as the siting of a tower, or the required clearance below the overhead line/conductors. No permanent habitat loss or fragmentation is anticipated during maintenance works.	habitat loss, disturbance and fragmentation from new overhead line and substations only).
Construction and maintenance	Priority and notable habitats within Scoping Boundary Ancient woodland and ancient and veteran trees up to 2 km from Scoping Boundary.	Yes – semi-natural woodland (if present), hedgerows, lowland meadow, coastal and floodplain grazing marsh, arable field margins, and other notable habitats could be impacted by tower locations, supporting structures and access routes. Permanent habitat loss of notable habitats could occur as a result of the construction of overhead line infrastructure such	Scoped in for construction (all impacts from new overhead line, substations and reconductoring) and maintenance (temporary habitat loss, disturbance and fragmentation from new overhead line and substations only).

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		as the siting of a tower, or the required clearance below the overhead line/conductors. However, a combination of routeing, micro-siting, and habitat re-instatement and replacement will be employed as mitigation and reduce these impacts, where possible. No permanent habitat loss or fragmentation is anticipated during maintenance works.	
Construction and maintenance	Protected and notable species (all listed within Section 8.6 of Chapter 8) up to 2 km from Scoping Boundary.	Yes - habitats with potential to support protected and notable species to be potentially impacted by overhead line infrastructure, supporting structures, and associated access tracks. Permanent habitat losses may reduce the extent of habitat available to protected or notable species. Mitigation measures will include habitat avoidance, reinstatement and compensation. Habitat connectivity may be impacted in the short term but will be minimised where possible to avoid key habitats. Where	Scoped in for construction (all impacts from new overhead line, substations and reconductoring) and maintenance (temporary habitat loss, disturbance, fragmentation and degradation from new overhead line and substations only).

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		unavoidable fragmentation or habitat degradation is unavoidable this will be a temporary effect until habitat re-instatement is established. No permanent habitat loss or fragmentation is anticipated during maintenance works.	
Construction and maintenance	Great crested newt, Non-breeding birds, Breeding birds, Bats, Badger, Hazel dormouse, Terrestrial invertebrates, Reptiles, and Other mammals (including only brown hare, hedgehog, polecat) up to 2 km from Scoping Boundary.	Yes - potential exists for works to impact protected and notable species which may be relatively isolated along the route corridor depending on the access routes (haul road) and result in direct mortalities. If the route corridor cannot avoid suitable habitat, mitigation options include a works Ecological Method Statement and or Natural England mitigation licence to avoid direct mortalities.	Scoped in for construction (new overhead line, substations and reconductoring) and maintenance (new overhead line and substations only).
Construction and maintenance	Riparian mammals (otter, beaver and water vole) and other aquatic species. Aquatic invertebrates up to 2 km from Scoping Boundary.	Yes - increased levels of incidental mortality may undermine the conservation status of protected or notable species. It is expected that direct impacts on watercourses (and therefore water vole, otter and other aquatic species) can be	Scoped in for construction (new overhead line, substations and reconductoring) and maintenance (new overhead line and substations only).

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		avoided through appropriate design and routing of access requirements. However, until routing and design can be confirmed, there is a potential requirement for mitigation and/or licensing and these features are Scoped in.	
Construction and maintenance	Great crested newt, Non-breeding birds (intertidal), Non-breeding birds (terrestrial), Breeding birds, Bats, Badger, Otter, Beaver, Water vole, Hazel dormouse, Terrestrial and aquatic invertebrates, and Reptiles. Other mammals (including only brown hare, hedgehog, polecat) up to 2 km from Scoping Boundary.	Yes - trees, hedgerows and other habitats within the Scoping Boundary may be suitable for protected or notable species. Disturbance above a tolerable threshold may affect the extent of habitat that is available to protected or notable species. If the route corridor cannot avoid disturbance impacts, then mitigation (i.e. works under an Ecological Method Statement or Natural England EPSML/development licence) could be required.	Scoped in for construction (new overhead line, substations and reconductoring) and maintenance (new overhead line and substations only).

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
Construction and maintenance	Designated sites and notable habitats (ancient woodland and ancient and veteran trees) within 200 m of roads that may be affected by the Project.	Yes – should screening of construction traffic flows show vehicle trips exceed the Institute of Air Quality Management (IAQM) criteria then habitat degradation can occur. Changes in air quality during maintenance are not predicted to lead to significant effects upon ecological features (for the reasons presented in Chapter 14 Air Quality, Table 14.5, where it is proposed to scope this matter out).	Scoped in for all impacts during construction (new overhead line, substations and reconductoring). Scoped out for all impacts during maintenance (new overhead line and substations only).
Construction and maintenance	Designated sites up to 10 km and protected and notable habitats and species up to 2 km from Scoping Boundary.	Yes - potential for pollution or other indirect impacts during construction resulting in degradation of habitats, including those used by protected and notable species. This will be mitigated through implementation of the CEMP. Changes in water quality (Chapter 10 Water Environment) and dust (Chapter 14 Air Quality) during maintenance are not predicted to lead to significant effects upon	Scoped in for all impacts during construction (new overhead line, substations and reconductoring). Scoped out for all impacts during maintenance (new overhead line and substations only).

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		ecological features and therefore are Scoped out.	
Construction and maintenance	Designated sites up to 10 km and protected and notable habitats. and species up to 2 km from Scoping Boundary.	Yes – potential for spread of invasive non-native species during works and movement around the site. Introduction of INNS can be detrimental to native habitats and species present.	Scoped in for all impacts during construction (new overhead line, substations and reconductoring) and maintenance (new overhead line and substations only).
Construction and maintenance	Designated sites and protected and notable habitats and species.	Yes - potential for degradation of existing habitat quality, which could impact designated or otherwise notable habitat and protected and notable species.	Scoped in for all impacts during construction (new overhead line, substations and reconductoring) and maintenance (new overhead line and substations only).
Operation (new overhead line section)	Breeding and non-breeding birds.	Yes - there is potential for a bird to fly into the overhead line and be killed either from the impact with the line, from hitting the ground, or from injuries sustained in the process. Birds that perch or nest on towers can be electrocuted by causing a short circuit, either by touching two live wires, or a live and an earthed component.	Scoped in for new overhead line section during operation.
Operation (new overhead line section)	Protected and notable species.	Yes – infrastructure could result in a degree of habitat fragmentation to terrestrial and potentially aquatic habitat.	Scoped in for new overhead line section during operation.

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
Operation (new overhead line section)	Nesting birds (kestrel, hobby and peregrine).	No – the towers would be most likely to benefit nesting corvids and certain birds of prey (principally kestrel, hobby and peregrine) and may contribute to regional or local population gains for these species.	Scoped out for new overhead line section during operation
Operation (new overhead line section)	Statutory designated sites: Upper Nene Valley Gravel Pits SPA / Ramsar, The Wash SPA / Ramsar, Rutland Water SPA / Ramsar, and Nene Washes SPA / Ramsar. Non-breeding birds ¹ .	Yes - where this occurs there may be local depletions of prey species, particularly other birds. Any local or regional population decreases arising from this impact might adversely affect the conservation objectives of sites designated for qualifying ornithological interest features, although impacts on bird populations more generally are unlikely to be significant. Where this occurs near designated sites, there may be an impact on the populations of qualifying features, adversely affecting the integrity and function of the site	Scoped in for new overhead line section during operation (for designated sites only).
Operation (new overhead line section)	Breeding and non-breeding birds.	Yes - effects of EMF on wildlife, especially birds, bats and insects	Scoped in for new overhead line section during operation.

¹ This potential for effect is listed for “non-breeding” birds, because the duration and timing of breeding seasons varies for each species. Therefore, the breeding season of one species might overlap the non-breeding period of another.

Project phase	Feature	Potential for significant effect	Proposed to be Scoped in or out
		can lead to negative impacts relating to navigation and migration, reduced reproduction and survival rates and behavioural changes such as altered foraging habits.	
Operation and maintenance (reconductoring)	All identified features	No - scoped out for reconductoring as the operational and maintenance phase for the reconductoring section will be the same as the current baseline and therefore, no significant effects are anticipated.	Scoped out (all impacts) during operation and maintenance
Operation (substations)	Protected and notable species	Yes - there is potential for operational lighting at the substation locations to result in the accidental disturbance of protected or notable species. This potential impact is therefore scoped in until further details on lighting requirements for the substations are known.	Scoped in (lighting) during operation

Table 20.4 Proposed scope of the Historic Environment assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Non-designated heritage assets	Yes – the Project has the potential to result in a physical impact on heritage assets through their truncation, removal or alteration from intrusive construction activities.	Scoped in
	Historic landscapes		
Construction	Designated heritage assets	No – the project will be designed to avoid all direct impacts upon designated assets from intrusive construction activities.	Scoped out
Construction	Designated heritage assets	Yes – presence of construction facilities within the landscape has the potential to result in significant effects on designated and non-designated heritage assets and historic landscapes from temporary changes to their setting.	Scoped in
	Non-designated heritage assets		
	Historic landscapes		
Construction	Designated heritage assets	Yes – machinery, noise, vibration, dust, and light have the potential to result in significant effects on designated and non-designated heritage assets and historic landscapes from changes to their setting.	Scoped in
	Non-designated heritage assets		
	Historic landscapes		
Operation and maintenance	Designated heritage assets	Yes – presence of the Project in the landscape (new overhead	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
	Non-designated heritage assets	line) has the potential to result in significant effects on designated, non-designated heritage assets and historic landscapes from changes to their setting.	
	Historic landscape		
Operation and maintenance	Designated heritage assets	No – changes in the appearance of the existing overhead line from reconductoring would be minimal and would be unlikely to result in significant effects on their setting.	Scoped out
	Non-designated heritage assets		
	Historic landscape		
Operation and maintenance	Designated heritage assets	No – given the scale and size of the footprint of individual towers, significant effects arising from changes to/limitation of access and use of heritage assets are unlikely to occur.	Scoped out
	Non-designated heritage assets		
	Historic landscapes		
Operation and maintenance	Designated heritage assets	Yes – presence of maintenance structures within the landscape has the potential to result in significant effects on designated and non-designated heritage assets and historic landscapes from changes to their setting.	Scoped in
	Non-designated heritage assets		
	Historic landscapes		
Operation and maintenance	Designated heritage assets	No – vehicular traffic and maintenance activities visits required for the Project would not constitute an impact of sufficient magnitude to cause significant	Scoped out
	Non-designated heritage assets		

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
	Historic landscapes	effects to either designated or non-designated heritage assets, nor historic landscapes.	

Table 20.5 Proposed scope of the Water Environment assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	Yes – from pollution from silt, and other construction materials; and potential reduction in channel flow capacity due to siltation. Although measures outlined in Chapter 10 Water Environment (Section 10.6) would act to manage work site runoff to ensure water features are not polluted, nor their flow capacities reduced, the scale of the proposed works (especially at substation sites) means that the potential for a significant effect cannot be ruled out at this stage.	Scoped in
Construction	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	Yes – from pollution from hydrocarbons, chemicals and other construction materials. Although measures outlined in Chapter 10 Water Environment (Section 10.6) would act to manage work site runoff to ensure water features are not polluted, the scale of the proposed works (especially at substation sites) means that the potential for a significant effect cannot be ruled out at this stage.	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction -	Watercourses	Yes – the Project will cross numerous watercourses, with potential for temporary physical disturbance and impacts on flow regimes. Watercourses should be buffered from the location of new towers.	Scoped in
Construction -	People, existing property, and infrastructure.	Yes – increased fluvial flood risk to people, existing property and infrastructure. Parts of the overhead line and substations proposed within the floodplain to the east of the study area, temporary works in floodplain cannot be avoided.	Scoped in
Construction	People, existing property, and infrastructure.	Yes – impacts on other forms of flood risk (e.g. surface water). The Project interacts will interact with numerous minor watercourses and areas at risk from different forms of flooding.	Scoped in
Construction -	Watercourses.	No – from impact on flood conveyance arising from scaffolding structures on riverbanks. Installations will be temporary with an anticipated relatively small footprint and can be managed through good practice mitigation and regulatory permitting process (e.g. FRAP or	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		Land Drainage Consent). Effects on flood conveyance will be localised.	
Construction	Watercourses, standing water bodies and any surface water abstractions.	No – from impact from any dewatering for substation construction. Relatively low levels of permeability and low BFI values for most gauged watercourses suggest the risk is low. Construction works would also be temporary.	Scoped out
Operation	People, existing property, and infrastructure.	Yes - permanent new impermeable surfaces associated with the overhead line infrastructure could increase surface water flood risk.	Scoped in
Operation	Surface water receptors such as watercourses, standing water bodies, and surface water abstractions etc.	No – in relation to potential water pollution risks, there are no significant sources of potential pollution associated with overhead line infrastructure once construction is complete.	Scoped out
Operation	Watercourses	Yes – from physical disturbance and change to flow regime. There is currently uncertainty as to the location of new towers and a number of factors to balance and avoid water features by	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		assumed off set distances may not always be possible.	
Operation	People, property and infrastructure	Yes – from increased fluvial flood risk. The footprint of the towers, which are likely to be a lattice design could cause increased flood risk from loss of floodplain storage/disruption to flow paths.	Scoped in
Operation	People, property and infrastructure.	Yes – from increased fluvial flood risk. Although the WMEL-A and WMEL-B substations are located in Flood Zone 1, there is a risk from surface water flooding. Both substation locations are impacted by a surface water flow path which will therefore need to be considered further so that flood risk to the development / surrounding land is not increased. The Weston Marsh substation infrastructure is located entirely within an extensive area of Flood Zone 3. This will need to be considered further so that flood risk to the development / surrounding land is not increased.	Scoped in
Operation	Watercourses.	Yes – from increased surface water pollution risk. Operational	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		works have the potential to increase water pollution risk if suitable Drainage Strategies are not implemented. Any foul drainage will also need to be appropriately managed.	
Maintenance	Watercourses, standing water bodies, and any surface water abstractions.	No – from pollution of watercourses and physical disturbance. The nature and scale of the maintenance activities would not cause pollution of the water environment and any physical disturbance would be highly localised. Good practice methods and mitigation measures to be applied to all maintenance works.	Scoped out

Table 20.6 Proposed scope of the Geology and Hydrogeology assessment

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Adjacent land users, construction workers Aquifers Groundwater abstractions Springs	Yes - from harm to human health through exposure to contamination, including dust and vapours; and deterioration in chemical quality of the land and aquifers. Initial consideration of the Study Area indicates a generally low risk of potential contamination, but isolated areas of existing contamination cannot be discounted.	Scoped in
Construction	Aquifers Groundwater abstractions Springs GWDTEs	Yes – from physical effects on aquifers, such as depletion of the aquifer and increased solids / turbidity; and deterioration in chemical quality of aquifers. Due to the nature of the Project and the potential for shallow groundwater, there is likely to be some level of dewatering required, so the effect is scoped in for further consideration/assessment.	Scoped in
Construction	Soil / land quality Aquifers Groundwater abstractions Springs GWDTEs	Yes – from deterioration in chemical quality of the land and aquifers. Some level of risk of inadvertent release of contamination is inherent in the construction activities associated with the Project. However, environmental controls should be such that any accidental leaks / spills are minimised as far as reasonably possible.	Scoped in
Construction	Adjacent land users, construction workers	Yes – from explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures. Potential for localised areas of gas generating soils cannot be discounted, so the	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
		effect should be given consideration on a precautionary basis.	
Construction	Structures	No – from explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures. Although there is potential for localised areas of gas generating soils, this is considered to be a matter of engineering design and will be addressed as an ‘embedded engineering measure’.	Scoped out
Construction	Soil/ land quality (aspects related to land contamination, other effects for these receptors fall under Chapter 12 Agriculture and Soils) Groundwater within aquifers of differing sensitivities, including principal aquifers and groundwater Source Protection Zones (SPZ)	Yes – from deterioration in chemical quality of the land and aquifers. Initial consideration of the Study Area indicates a potential for dissolution. There is generally a low potential for contamination, but isolated areas of existing contamination cannot be discounted. Therefore, there is a risk that construction activities could introduce contamination pathways.	Scoped in
Construction	Geological conservation sites	No - at present no such sites have been identified within the Study Area. On this basis, significant effects as a result of damage to designated geological conservation sites are not likely to occur.	Scoped out See Note ¹
Construction	Adjacent land users, construction workers Groundwater aquifers, Surface water bodies	No – disturbance of unstable ground from historical mining, leading to potential emergence of sink holes will be addressed by the engineering/geotechnical study and design,	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
		following applicable standards to ensure no likely significant environmental effects.	
Construction	Adjacent land users, construction workers Groundwater aquifers, Surface water bodies	Yes - from harm to human health and aquifers from disturbance of historical mining, as part of Section 3 is located within a Coal Mining Reporting Area (Section 3 and WMEL-B Substation).	Scoped in
Operation and Maintenance	Future land users, adjacent land users Aquifers Groundwater abstractions Springs GWDTEs	No – from harm to human health through exposure to contamination, including dust and vapours; and deterioration in chemical quality of the land and aquifers. Whilst some ground disturbance may be necessary during maintenance, this is likely to be restricted to land previously disturbed during construction. Earthworks and materials movement would be controlled by National Grid standard operational and maintenance procedures. Having regard to the nature of the operational and maintenance phases, significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Aquifers Groundwater abstractions Springs GWDTEs	Yes – from potential changes to shallow groundwater flow and levels at the site and downstream and to hydraulically connected habitats as a result of permanent below ground structures (e.g. piling) and surface structures intercepting recharge (e.g. hardstanding). Particularly in relation to substations due to the relatively larger area of impermeable surfacing and presence of engineered drainage. Effects on flows and levels from other aspects of the	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
		Project, such as tower foundations and permanent accesses, are not expected to be significant, but this should be verified through assessment.	
Operation and Maintenance	Aquifers Groundwater abstractions Springs GWDTEs	No – from physical effects on aquifers, such as depletion of the aquifer and increased solids / turbidity. There are not expected to be any permanent dewatering requirements during the operation and maintenance phase of the Project. On this basis, significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Proposed Structures	No – from structural damage caused by aggressive ground conditions. This is considered to be a matter of engineering design (i.e. addressed as an ‘embedded engineering measure’ as previously described) and is not to be considered further within the ES.	Scoped out
Operation and Maintenance	Workers (i.e. manual access to carry out operational activities).	Yes – from explosion or asphyxiation as a result of ingress and accumulation of ground gas within structures. There is potential for localised gas generating ground in proximity of proposed substations and possible mine gas.	Scoped in
Operation and Maintenance	Maintenance workers, future land users, adjacent land users	No – from harm to human health via exposure to contamination, including dust and vapours. Initial consideration of the Study Area indicates a generally low risk of potential contamination and National Grid standard operational and maintenance procedures will be implemented.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
		This is considered sufficient to ensure no likely significant effects during operation and maintenance.	
	Soil/ land quality Aquifers Groundwater abstractions Springs GWDTEs	Yes – from deterioration in chemical quality of the land and aquifers. Initial consideration of the Study Area indicates a generally low risk of potential contamination but isolated areas of existing contamination cannot be discounted.	Scoped in
Operation and Maintenance	Soil / land quality Aquifers Groundwater abstractions Springs GWDTEs	Yes – from deterioration in chemical quality of the land and aquifers via maintenance purposes. Although National Grid standard operational and maintenance procedures will be implemented, there is a risk of inadvertent and/or accidental release or spillage of contamination during operation.	Scoped in

¹- Note that this is provisional and is subject to confirmation of the absence of locally designated sites in the Scoping Boundary and Study Area, which will be carried out as part of further baseline characterisation to support the ES. Therefore, the proposed assessment methodology in Section 11.7 includes a methodology for how effects on geological conservation receptors would be assessed, should it be necessary to scope this effect back into the assessment following further baseline characterisation.

Table 20.7 Proposed scope of the Agriculture and Soils assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Agricultural land/BMV land (as defined by the ALC system)	Yes - a very large proportion of land within the Scoping Boundary is predicted to be BMV land and therefore the Project could result in an unavoidable temporary or permanent loss of agricultural land which is likely to include BMV land. ALC surveys are to be undertaken in areas where soils will be disturbed and BMV land is predicted. The assessment will inform good practice soil handling measures that will be detailed in the SMP.	Scoped in
Construction	Soil	Yes - the Project would potentially result in soil quality being adversely affected during construction. Due to the presence of soils with low resilience to structural damage (particularly clayey soils), a significant effect on soils cannot be ruled out although good practice soil handling measures would be implemented through a SMP during construction.	Scoped in
Construction	Agricultural land holdings	Yes - a very large proportion of the land within the Scoping Boundary is predicted to be BMV land, the	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		impact on which has the potential to result in a significant adverse effect on agricultural productivity and thus agricultural land holdings. The temporary acquisition of land to accommodate construction activities will result in temporary disruption and severance to agricultural land holdings and the permanent loss of some land from agricultural land holdings, resulting in reduction in the operational capacity and loss of income to farm businesses (which would be addressed through compensation agreements, which lie out with the scope of the ES).	
Operation and maintenance	Agricultural land/BMV land (as defined by the ALC system)	No – the construction phase assessment will account for both temporary and permanent loss of agricultural land, and therefore no further significant effects are anticipated. Periodic vehicle access for routine maintenance and emergency repairs may require temporary access tracks and small compound areas, but based on the Applicant's experience of similar projects these are likely to be limited in extent. All soil handling would be undertaken	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		in line with published good practice, such as the measures described in AS01 of Appendix 4A Initial Outline Code of Construction Practice which will be part of the SMP and be required, and therefore no likely significant effects are expected. The ISEP guidelines (Ref 12.3) recognises temporary work to be low magnitude.	
Operation and maintenance	Soil	No – the construction phase assessment will account for both temporary and permanent loss of agricultural land, and the majority of land required for construction would be returned to its pre-construction land use; therefore, no further significant effects are anticipated during the operation and maintenance phases. Maintenance activities may impact soil function and quality, but at a much smaller scale than construction. Any disturbance to soils during maintenance would be undertaken in accordance with good practice soil handling methods, such as the measures described in measure AS01 of Appendix 4A Initial Outline Code	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		of Construction Practice in relation to the SMP, and, therefore, no likely significant effects are expected. The ISEP guidelines (Ref 12.3) recognises temporary work to be low magnitude.	
Operation and maintenance	Agricultural land holdings	No - the majority of land required for construction would be returned to its pre-construction land use on completion of construction. Any impacts on farm businesses from periodic vehicle access for routine maintenance and emergency repairs would be limited and would not result in significant effects. Financial agreements for access would lie outside the scope of the ES.	Scoped out

Table 20.8 Proposed scope of the Traffic and Transport assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Road users	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on road users as a result of construction traffic and road closures/diversions leading to potential Severance, Driver Delay and Highway Safety effects.	Scoped in
Construction	Public transport users (bus)	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on public transport users as a result of construction traffic and road closures/diversions leading to potential Public Transport Delays.	Scoped in
Construction	Pedestrians and cyclists	Yes - whilst short-term and temporary in nature, it is considered that there is still potential for significant effects on pedestrians and cyclists as a result of construction traffic leading to Traffic Severance, Pedestrian Delay, Pedestrian and Cycle Amenity effects, and Fear and Intimidation. There is also PRow or designated pedestrian and cycle route closures/diversions potentially leading to Increased Journey Time.	Scoped in
Construction	Road users	Yes – whilst short-term and temporary in nature, and generally planned for off peak times when the road network is less busy; the frequency of abnormal load deliveries, construction routes and traffic management requirements are not defined at this stage, and it is therefore considered that effects on road users from abnormal loads should be Scoped in at this stage.	Scoped in

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	General public	No - there is low potential for significant effects on the general public as a result of a road traffic accident leading to a Hazardous Load spill. The only bulk hazardous material expected to be delivered during construction is fuel for construction plant. These are likely to be infrequent and delivered to several construction sites along the route rather than a single central site. Therefore, in addition to the low numbers, deliveries are also spread over a large area of the network resulting in a likely very low increase in loads on any one route. No likely significant effect is anticipated therefore hazardous loads is scoped out.	Scoped out
Construction	Railway users	No – methods will be employed when installing overhead line to avoid any potential impacts on the railway. This may include overnight blockades/temporary closures to install protection/temporary works. The new overhead line would cross the rail network in only 2 locations, once over the Peterborough to Lincoln Railway Line (in Section 1 near Pinchbeck) and once over the East Coast Mainline (in Section 2 near Corby Glen). Tower locations will be designed to avoid the rail line meaning that only short-term temporary scaffolding over the rail line would be required while the conductors are pulled into place over them, no extensive works or permanent structures would be required on or over the rail line. The proposed method and timing would be developed in consultation with Network Rail to ensure significant effects on the rail network are avoided. A similar approach would be employed for reconductoring	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		where the existing overhead line crosses rail infrastructure at two further locations, and one test track.	
Construction	Navigable waterway users	No – there are four navigable waterways that could potentially be crossed by the new overhead lines and one navigable waterway that is crossed by the existing overhead line. Where navigable waterways are to be crossed by construction traffic, measures to be applied include the use of temporary culverts or temporary spanned bridges. Once the temporary culvert is installed, the area above the temporary culvert will be backfilled and construction mats placed over the backfilled area to permit the passage of plant, equipment, materials, and people. Specific detailed designs for each navigable waterway crossing, consistent with the principles set out in Appendix 4A Initial Outline Code of Construction Practice will be subject to appropriate consent by the relevant regulatory body. Significant effects are not likely to occur.	Scoped out
Operation	Road users, public transport users (Bus), pedestrians and cyclists	No - during operation (inc. maintenance) of the Project, traffic generated would be associated with routine maintenance and occasional repair, inspection activities, and a small number of operational staff. The impact of operational traffic from OHL projects would be expected to be substantially lower than 10% of existing traffic and movements are not anticipated to have a material effect on the transport network and receptors. This approach has been successfully undertaken by National Grid on similar OHL projects, and is also	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		suitable for this Project. Traffic and transport effects during operation (inc. maintenance) are therefore proposed to be scoped out.	
Operation	Pedestrians and cyclists	Yes - there is potential for significant effects on pedestrians and cyclists, as a result of permanent PRow closures/diversions associated with the substations leading to potential Increased Journey Time.	Scoped in
Operation and maintenance	Railway users	No – maintenance vehicles would only cross railway lines using existing highway crossing points e.g. bridges, underpasses or level crossings, therefore no impacts are anticipated. Traffic and transport effects during operation (inc. maintenance) are therefore proposed to be Scoped out.	Scoped out

Table 20.9 Proposed scope of the Air Quality assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Ecological and human receptors	Yes – potential for significant effects at ecological and human receptors, from deterioration in local air quality (PM10 and PM2.5), caused by dust, due to proximity of proposed construction activities to sensitive receptors.	Scoped in
Construction	Ecological and human receptors	Yes - potential for temporary deterioration in local air quality (NO ₂ , NO _x , PM ₁₀ and PM _{2.5}) at local human and ecological receptors, when the use of NRMM including generators occurs.	Scoped in
Construction	Ecological and human receptors	Yes - potential for deterioration in local air quality (NO₂, NO_x, PM₁₀ and PM_{2.5}) at local human and ecological receptors. This will be scoped out if the EPUK/IAQM indicative criteria are not met, as there would be no potential for significant effects. It will be scoped in if the EPUK/IAQM indicative criteria are met or exceeded. The assessment of emissions from diverted traffic and road closures would also be scoped out if the EPUK/IAQM indicative criteria are not met, as there would be no potential for significant effects. It will be scoped in if the	Scoped in (if the EPUK/IAQM indicative criteria are met or exceeded)

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		EPUK/IAQM indicative criteria are met or exceeded.	
Operation and maintenance.	Ecological and human receptors.	No – significant effects are not likely to occur from operational dust sources, vehicle emissions, generators and NRMM. The only vehicle trips associated with the operational phase will be for maintenance and these would be minimal across an annual period. The predicted volumes of traffic would not meet the EPUK/IAQM indicative criteria. Therefore, vehicle emissions during operation and maintenance are proposed to be scoped out. No significant effects are likely to occur from dust sources, generators and NRMM due to the infrequent, temporary and transient nature of any maintenance works and incorporation of best practice measures and NRMM standards. Therefore, no significant operation or maintenance effects are predicted.	Scoped out

Table 20.10 Proposed scope of the Noise and Vibration assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction noise.	Noise Sensitive Receptors within the Study Area	Yes – there is the potential for effects due to construction noise within the Study Area. There is a greater likelihood of significant adverse effects from construction noise at static sites, such as construction compounds where the duration of works may be medium to long term. Furthermore, any activities required to be undertaken outside of normal working hours (for example, any night-time working associated with trenchless crossing locations), or where certain operations cannot be stopped once started.	Scoped in
Construction vibration on human receptors.	Structures within the Study Area	Yes – whilst construction vibration is not anticipated to result in damage to buildings or structures during the works, an assessment is required to ensure that appropriate mitigation measures are put in place should the potential for damage to structures be identified. This would be reviewed during the iterative design process and potential areas of concern would be highlighted.	Scoped in
Construction vibration on structures.	Humans within Vibration Sensitive Receptors in the Study Area	Yes – there is the potential for effects on human receptors due to construction vibration at Vibration Sensitive Receptors within the Study Area.	Scoped in
Construction traffic noise.	Noise Sensitive Receptors within the Study Area	Yes – there is the potential for significant effects at Noise Sensitive Receptors close to construction traffic routes.	Scoped in
Construction traffic vibration.	Vibration Sensitive Receptors within the Study Area	No – vibration from traffic on public highway is caused by irregularities in the road surface. Where the road surface is well maintained, as per TT01 of Appendix 4A Initial Outline Code of Construction Practice , and free from irregularities, such as potholes, significant vibration effects would not be expected, even at relatively short distances.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Operational noise from overhead lines.	Noise Sensitive Receptors within the Study Area	No – the proposed overhead line system is a 'triple Araucaria' conductor bundle, which is regarded as practically quiet during both typical dry and wet weather conditions and would not lead to significant adverse effects at nearby Noise and/or Vibration Sensitive Receptors. In addition, tower fittings, such as insulators, dampers, spaces, and clamps, shall be designed and procured in accordance with a series of National Grid Technical Specifications and must be type registered (rigorously tested) to ensure the fitting conforms to the specification. These processes reduce the potential for audible noise and tones to occur from all types of fittings, including insulators. Therefore, operational noise from the overhead lines and towers is not likely to be significant at nearby Noise Sensitive Receptors under any weather conditions. If an alternative type of conductor is considered later in developing the design the potential for significant noise effects will be considered appropriately in the ES.	Scoped out
Operational noise from substation transformers and associated cooling plant.	Noise Sensitive Receptors within the Study Area	Yes – there is the potential for significant effects at Noise Sensitive Receptors close to substations, particularly from those elements which operate on a 24-hour basis (for example, transformers generally run continuously).	Scoped in
Operational noise from substation switchgear	Noise Sensitive Receptors within the Study Area	No – switchgear noise is generated, in the main, by the operation of circuit breakers, for which the noise emissions are 'impulsive' in character (i.e. of short duration.) Modern switchgear operates with a dull 'thud'. Switchgear would	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
and auxiliary plant.		operate infrequently and is therefore proposed to be Scoped out. Auxiliary plant may comprise standby diesel generators and air compressors to provide emergency back-up power to cooling plant. When present and operating, these would generate noise. However, they do not run continuously and would be housed in a building or outdoor acoustic enclosure. Noise from such assets is therefore not considered significant, given its emergency function and as such is proposed to be scoped out.	
Operational vibration.	Vibration Sensitive Receptors within the Study Area	No – substation plant would include vibration isolation measures within the design (see Chapter 15 Noise and Vibration , Section 15.6). With these measures in place, operational vibration due to substation plant is not expected to result in any vibration impact at Vibration Sensitive Receptors. There are no other sources of operational vibration proposed as part of the Project and as such, is proposed to be scoped out.	Scoped out
Maintenance noise and vibration.	Noise and/or Vibration Sensitive Receptors within the Study Area	No – maintenance of the overhead lines, and substations would be infrequent, localised and short term in duration. Maintenance activities would follow standard measures to reduce noise and vibration where required and as such, is proposed to be scoped out.	Scoped out

Table 20.11 Proposed scope of the Socioeconomics, Recreation and Tourism assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction	Local labour market	Yes - the Project will generate beneficial direct and indirect temporary employment, training and apprenticeship opportunities both on site and indirectly in the supply chain during the construction phase, which could be significant.	Scoped in
Operation and maintenance	Local labour market	No - the scale of operational and maintenance employment generated by the Project is likely to be very limited.	Scoped out
Construction	Users of recreational routes and PRoW of significance in the local area	Yes - disruption to recreational routes and PRoW of significance in the local area during the construction phase will be avoided as far as possible and considered with a PRoWMP. However, there is the potential for significant effects during construction due to the possible need for temporary or permanent suitable diversions to be agreed with relevant bodies.	Scoped in
Operation and maintenance.	Users of recreational routes and PRoW of significance in the local area	No - any temporary, long-term or permanent effects on recreational routes and PRoW of significance in the local area	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		would arise during the construction period and would therefore be assessed as construction effects. Any long-term impacts would be reflected in the construction assessment conclusions accordingly. No significant effects on recreational routes and PRow of significance in the local area are anticipated during operation. Disruption to recreational routes and PRow of significance in the local area during maintenance will be avoided as far as possible, managed with a PRowMP, and it is not considered that there is the potential for significant effects.	
Construction	Development land, utilities and renewables infrastructure	Yes - the Project has been designed to avoid development land, utilities and renewables infrastructure as far as possible, however there may be the potential for land take which could result in the potential for significant effects.	Scoped in
Operation and maintenance.	Development land, utilities and renewables infrastructure	No - any temporary or permanent effects on development land, utilities and renewables infrastructure would arise during the construction period and	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		would therefore be assessed as construction effects. . Any long-term impacts would be reflected in the construction assessment conclusions accordingly. No significant effects on development land are anticipated during operation. Disruption to development land during maintenance will be avoided as far as possible and it is not considered that there is the potential for significant effects.	
Construction	Open space	Yes - the Project has been designed to avoid open space as far as possible, however there may be the potential for land take which could result in the potential for significant effects and so this has been scoped in for further consideration at this stage. In the event of permanent loss of open space, mitigation measures such as replacement land will be considered.	Scoped in
Operation and maintenance.	Open space	No – any temporary, long-term or permanent effects on open space would arise during the construction period and would therefore be assessed as construction effects. Any long-	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		term impacts would be reflected in the construction assessment conclusions accordingly. No significant effects on open space are anticipated during operation. Disruption to open space during maintenance will be avoided as far as possible and it is not considered that there is the potential for significant effects.	
Construction	Affected communities, community facilities, visitor attractions and businesses (indirect)	Yes - The Project has been designed to avoid effects on these receptors as far as possible. However, there is the potential for direct and indirect temporary effects to arise from construction activities (amenity and severance) that may give rise to significant effects.	Scoped in
Operation and maintenance.	Affected communities, community facilities, visitor attractions and businesses (indirect)	No - access to these receptors will be reinstated post construction and their ongoing use will be unaffected during operation and maintenance activities. Therefore, significant effects are not likely to occur.	Scoped out
Construction, operation, and maintenance.	Affected communities, community facilities, visitor attractions and businesses (direct)	No - the Project has been designed to avoid direct impacts on these receptors and therefore, significant effects are not likely to	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		occur. Should this position change between Scoping and PEIR or ES stage, any communities, community facilities, visitor attractions and businesses likely to be directly impacted, would be included in further assessment as appropriate. Indirect effects which may occur during construction such as disruption to access and noise will be managed through the Construction Traffic Management Plan (CTMP) and CEMP.	
Construction	Tourism accommodation	Yes - impact of the construction workforce on bedspace availability is scoped in due to the potential scale of employment generated during the construction phase and the cumulative impact of other projects in the region.	Scoped in
Operation and Maintenance	Tourism accommodation	No - the scale of operational employment generated is likely to be very limited. Therefore, tourism accommodation availability will be unaffected during operation and maintenance activities.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction, operation and maintenance.	Residential properties	No - the emerging preferred corridor for the Project and substation siting areas avoids acquisition or over-sail of residential properties. Indirect effects which may occur during construction such as disruption to access and noise will be managed through the CTMP and CEMP.	Scoped out
Construction, operation and maintenance.	Aviation infrastructure	Yes - the Project has been designed to avoid effects on these receptors as far as possible. However, there is the potential for aviation infrastructure to be directly or indirectly impacted and so this has been scoped in for further consideration at this stage. An assessment of the effects of the Project on users of airfields as socio-economic receptors will be presented in the ES when information from specialist aviation consultation is available.	Scoped in

Table 20.12 Proposed scope of the Health and Wellbeing assessment

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
Construction	Wider study area population.	Yes – increased employment, income and training opportunities for communities in the wider study area leading to potential positive effects on population health and wellbeing.	Scoped in
Construction	Local residents	Yes – changes to people’s feelings about their local environment, affecting quality of life, mental and physical health.	Scoped in
Construction	Local residents and users of promoted recreational routes and PRoW	Yes – potential reduction in mental and physical health benefits gained from use of promoted recreational routes, at a population level.	Scoped in
Construction	Local residents and users of open spaces	Yes – potential reduction in mental and physical health benefits associated with access to open space.	Scoped in
Construction	Local residents, users of community facilities and owners/operators of businesses	No – the construction of the Project will be undertaken so as to avoid temporary or permanent land take affecting residential properties, community facilities and businesses. On this basis, significant effects from potential	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
		temporary and permanent land take are not likely to occur.	
Construction	Local residents	No – disruption due to construction traffic will be localised and temporary and not likely to affect access at population level. Significant effects from increased journey times affecting access to community facilities are not likely to occur.	Scoped out
Construction	Local residents	Yes - potential reduction in mental health associated with uncertainty and stress relating to the Project during the pre-construction period.	Scoped in
Construction	Local residents and owners/operators of businesses	No – the construction of the project will comply with legally required standards to minimise the risk of exposure of the population to harmful substances. Pollution control measures are included in Appendix 4A initial Outline CoCP . Significant effects from potential soil and water contamination due to the emission of harmful substances are not likely to occur.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Wider study area population.	No – For a project of this nature and scale, it is unlikely that there will be increased employment, income and training opportunities for communities in the wider study area during operation at a level to have a population wide effect. Significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Local residents and users of PRoW	No - for this Project, there will be no permanent closures or diversions of promoted recreational routes and PRoW during operation and maintenance that would lead to a reduction in mental and physical health benefits gained from use of these, at a population level. Significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Local residents and users of open spaces	No - due to the nature and scale of the Project, it is unlikely that there will be permanent changes to access to open space during operation and maintenance that would lead to a reduction in mental and physical health benefits associated with access to open space. Significant effects are not likely to occur.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Local residents and owners/operators of businesses	No - the operation and maintenance of the Project will avoid land take affecting residential properties, community facilities and businesses. On this basis, significant effects are not likely to occur.	Scoped out
Operation and Maintenance	Local residents within 500 m of Scoping Boundary.	Yes – changes to people’s feelings about their local environment due to presence of the Project, affecting quality of life, mental and physical health.	Scoped in
Operation and Maintenance	Local residents	No – in relation to potential permanent impacts associated with the generation of EMF. The Project will be designed to comply with existing National Grid standards and the guidelines and policies detailed in NPS-EN5 including the International Commission on Non Ionizing Radiation Protection guidelines for electric and magnetic fields (EMFs) and associated precautionary policy. An EMF report will be prepared as part of the Project. This is separate to the EIA process. A summary of the EMF report will be provided in the ES.	Scoped out

Project phase	Receptor	Potential for significant effect	Proposed to be scoped in/out
Operation and Maintenance	Local residents	Yes - potential reduction in mental health associated with uncertainty and stress relating to the perceived impacts of the generation of EMF.	Scoped in
Operation and Maintenance	Local residents and owners/operators of businesses	No - the operation and maintenance of the project will comply with legally required standards to minimise the risk of exposure of the population to harmful substances. Significant effects from potential soil and water contamination due to the emission of harmful substances are not likely to occur.	Scoped out
Operation and Maintenance	Local residents and owners/operators of businesses	Yes - contribution to improved energy infrastructure leading to potential positive effects on population health and wellbeing.	Scoped in
Operation and Maintenance	Local residents and visitors to the countryside	Yes - potential reduction in the wellbeing benefits of the use of countryside and open space	Scoped in

Table 20.13 Proposed scope of the Climate Change assessment

Project Phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Pre-construction	Global atmosphere (effect from GHG emissions)	No - emissions associated with pre- construction are considered to be very small and therefore not likely to be material to the assessment.	Scoped out
Construction	Global atmosphere (effect from GHG emissions)	Yes - the Project could give rise to significant effects on climate change arising from GHG emissions during construction.	Lifecycle Stage Modules Scoped in: A1 Raw Material Supply, A2 Transport, A3 Manufacture, A4 Transport to Works Site A5 Construction /Installation processes, D Benefits and Loads Beyond the System Boundary (Land use change).
Operation	Global atmosphere (effect from GHG emissions)	Yes - the Project could give rise to significant effects on climate change arising from GHG emissions during operation.	Lifecycle Stage Modules Scoped in: B1 Use, B3 Repair, B4 Replacement, B8 Other operational processes (emissions associated with network losses),

Project Phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
			D Benefits and Loads Beyond the System Boundary (Reduction in GHG emissions from non-renewable energy generation sources once the proposed renewable energy generation can connect to the reinforced network).
Operation	Global atmosphere (effect from GHG emissions)	No – emissions during the activities of these Lifecycle Stage Modules are expected to be minimal and would not result in significant effects.	Lifecycle Stage Modules scoped out: B2 B5 B6-7 B9
End of Life	Global atmosphere (effect from GHG emissions)	No – end of life impacts will not be considered due to the long design life of the Project. It is unusual for elements of National Grid's transmission system to be decommissioned and reinstated. As such, significant effects are not likely.	Lifecycle Stage Modules scoped out: C1-4
Construction, operation and maintenance.	Principal Project Infrastructure (a portfolio of assets defined in Chapter 4 Description of the Project); human health receptors and environmental receptors	No - a Climate Change Resilience (CCR) Screening Assessment has been undertaken in Appendix	Scoped out

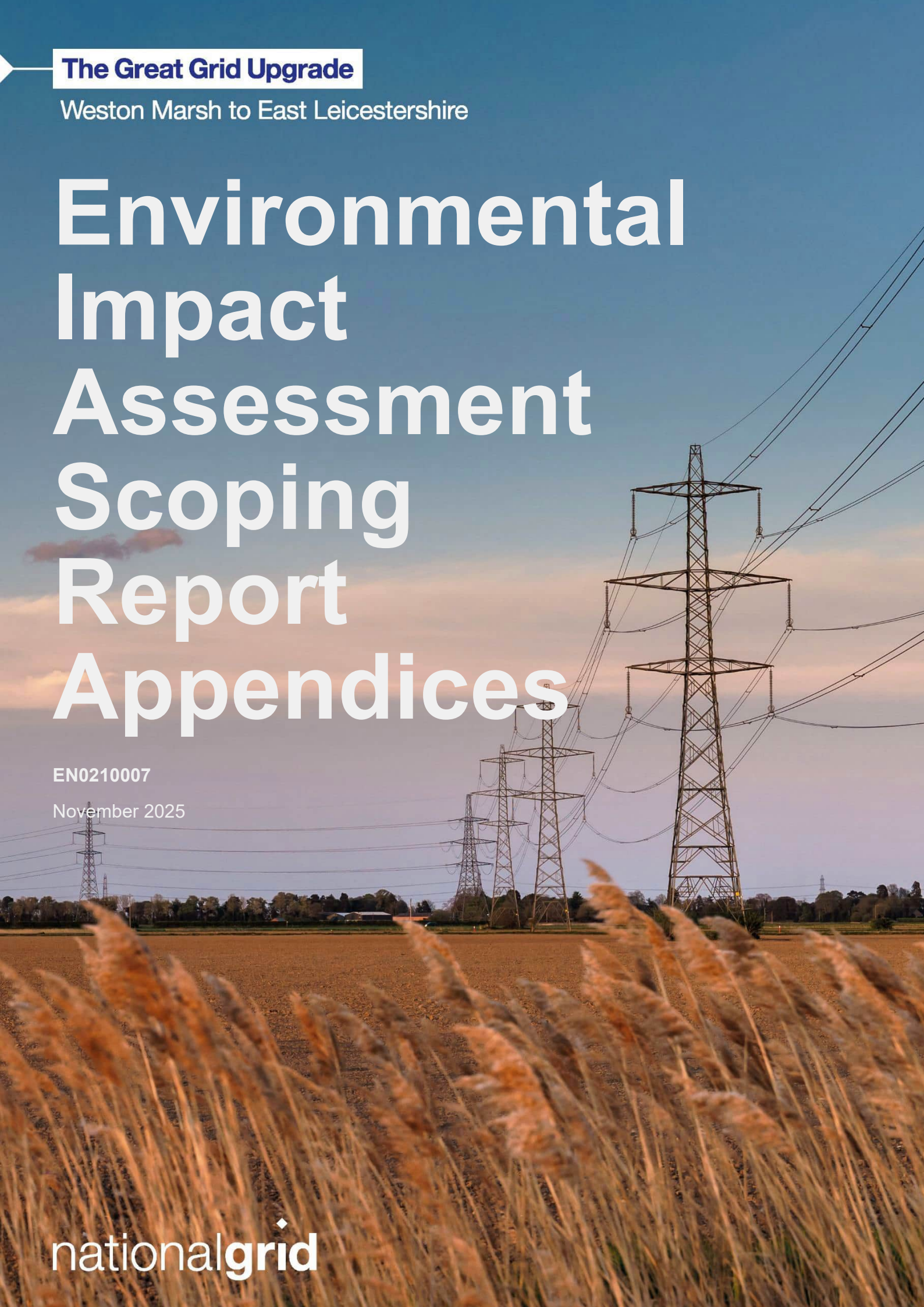
Project Phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
		18A. This concludes that taking account of the design and control measures, significant adverse effects on the environment are not likely as a result of the Project's vulnerability to climate change and no further assessment is required in the ES.	

Table 20.14 Proposed scope of the Major Accidents and Disasters assessment

Project phase	Receptor	Potential for significant effect	Proposed to be Scoped in or out
Construction, operation and maintenance.	The Project	No – as set out in Appendix 19A Major Accidents and Disasters Scoping Table , the Project is not potentially vulnerable to a major accident or disaster.	Scoped out
Construction, operation and maintenance.	Receptors listed in Table 19.2	No - as set out in Appendix 19A Major Accidents and Disasters Scoping Table , the Project will not exacerbate existing hazards.	Scoped out

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com



The Great Grid Upgrade

Weston Marsh to East Leicestershire

Environmental Impact Assessment Scoping Report Appendices

EN0210007

November 2025

nationalgrid

EIA Scoping Report Appendices Contents

1A	Competency Expert Statement	1A-1
1B	Glossary and Abbreviations	1B-1
2A	Key Legislation	2A-1
2B	National and Regional Policy	2B-1
2C	Local Policy	2C-1
4A	Initial Outline Code of Construction Practice	4A-1
8A	Ecology Survey Strategy	8A-1
9A	Designated Heritage Asset Gazetteer	9A-1
9B	Heritage Survey Strategy	9B-1
10A	WFD Screening and Scoping Assessment	10A-1
12A	Agriculture and Soils Survey Strategy	12A-1
18A	Climate Change Resilience Screening Assessment	18A-1
19A	Major Accidents and Disasters Scoping Table	19A-1

1A. Competency Expert Statement

Contents

1A.	Competency Expert Statement	1A-1
1A.1	Introduction	1A-1
Table 1A.1 Credentials of the experts responsible for the WMEL scoping documents		1A-1

1A. Competency Expert Statement

1A.1 Introduction

- 1A.1.1 The Scoping Report and supplementary materials produced for the Weston Marsh to East Leicestershire (WMEL) Project have been prepared by a team of competent experts. The team is made up of technical specialists working at leading consultancies who have extensive experience in Environmental Impact Assessment (EIA) processes for a variety of major projects. The individual experts can demonstrate their competence through degree level qualifications, members of relevant professional institutions and practical experience in undertaking EIAs.
- 1A.1.2 **Table 1A.1** outlines the team, their qualifications and membership of relevant professional institutions.

Table 1A.1 Credentials of the experts responsible for the WMEL scoping documents

Discipline	Credentials
Landscape and Visual John Devenny (AECOM)	• 20 years' experience in landscape and visual impact assessment and design • MA (Hons) Landscape Architecture • Chartered member of the Landscape Institute
Ecology and Biodiversity John Simmons (AECOM)	• 21 years' experience in ecological consultancy • BSc (Hons) Biology • Member Chartered Institute of Ecology and Environmental Management • Chartered Ecologist • Chartered Environmentalist
Cultural Heritage Jim Keyte (Arup)	• 26 years' experience in Historic Environment survey, management and assessment • BSc Heritage Conservation, PGDip Archaeological Resource Management • Member Chartered Institute for Archaeologists, Member Institution for Environmental Sciences, Chartered Environmentalist
Water Environment Owen Tucker (AECOM)	• 21 years' experience in water science and environmental management • BSc (Hon) Geography • MSc (by research) Geography • Chartered Environmentalist

Discipline	Credentials
	Member Chartered Institute of Water and Environmental Management
Geology Louise Taplin (Arup)	35 years' experience in land contamination assessment including 20 years in environmental impact assessment - BSc Geology - MSc Geochemistry - Fellow of the Geological Society, Chartered Geologist and Chartership Assessor for the Geological Society - Chartered Environmentalist and Member of the Institution of Environmental Sciences - Practitioner Member of the Institute of Sustainability and Environmental Professionals
Hydrogeology Natasha Wilkinson (Arup)	19 years' experience in hydrogeology, water resources and environmental impact assessment. - BA (Hons) Geography - MSc Hydrogeology - Fellow of the Geological Society and Chartered Geologist (CGeol)
Agriculture and Soils Euan Brierley (AECOM)	35 years' experience in environmental land management, including 10 years in environmental impact assessment - BSc Ecological Science with honours in Forestry - PhD Soil Science - Chartered Forester
Traffic and Transport Robert Blair (Arup)	32 years' experience in highways and transport including Transport Assessments and environmental impact assessments - BEng (Hons), Civil Engineering - Chartered Engineer, Member of the Chartered Institute of Highways and Transportation
Air Quality James Bellinger (Arup)	15 years' experience in air quality, including environmental impact assessment and development consent order expert witness process - Geography BSc - Environmental Technology – Environmental Analysis and Assessment MSc - Chartered Environmentalist (CEnv) - Chartered Scientist - Institute of Environmental Sciences (MIES) – Member - Institute of Air Quality Management (MIAQM) – Member - Practitioner Member of the Institute of Sustainability and Environmental Professionals

Discipline	Credentials
Noise and Vibration Fiona Rogerson (Arup)	20 years' experience in noise and vibration assessment and mitigation/management. - BEng (Hons) Electroacoustics - Member of Institute of Acoustics (MIOA)
Socio-Economics, Recreation and Tourism Bob Perkins (AECOM)	26 years consultancy experience covering socio-economic impact assessment of nationally significant infrastructure projects - BA (Hons) Geography, PG Dip Regeneration - Member Institute of Economic Development (MIED)
Health and Wellbeing Jenny Dunwoody (Arup)	22 years' experience in health and environmental impact assessment. - BSc (Hons) Environmental Conservation and Management, PG Dip Environmental Monitoring and Assessment - Chartered Environmentalist and full member of the Institute of Sustainability and Environmental Professionals (ISEP)
Climate Change Ian Davies (AECOM)	25 years' experience in greenhouse gas and climate consultancy including EIA assessment and DCO expert witness for major infrastructure projects. - BA Hons (Environmental and Social Values) - Member of the ISEP - Chartered Environmentalist (CEnv)
Major Accidents And Disasters Ian Meyrick (Arup)	11 years' experience in environmental consulting, including impact assessment. - MSc Environmental Management - Practitioner membership of ISEP
Town Planning Cassie Fountian (Arup)	30 years' experience in major infrastructure development and Development Consent Order consenting - BA (Hons) in Urban Studies - Diploma in Town and Regional Planning - Chartered Town Planner
EIA Lead Chris Stocks (Arup)	25 years' experience in environmental assessment and management including 18 in years' managing and leading EIA for major infrastructure projects - BSc (Hons) Environmental Chemistry - PhD Chemical Engineering - Chartered Water and Environmental Manager - Chartered Wastes Manager - Chartered Environmentalist

Discipline	Credentials
EIA Coordinator Ian Meyrick (Arup)	• 11 years' experience in environmental consulting, including impact assessment. • MSc Environmental Management • Practitioner membership of ISEP

1B. Glossary and Abbreviations

Contents

1B.	Glossary and Abbreviations	1B-1
1B.1	Glossary	1B-1
1B.2	Abbreviations	1B-15
Table 1B.1 Glossary		1B-1
Table 1B.2 Abbreviations		1B-15

1B. Glossary and Abbreviations

1B.1 Glossary

Table 1B.1 Glossary

Term	Definition
Abnormal Indivisible Loads (AIL)	Large loads to be delivered to the construction site which by their nature cannot be broken into smaller multiple deliveries.
Above Ordnance Datum (AOD)	An Ordnance Datum or OD is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as AOD. Usually mean sea level is used for the datum.
Acoustic environment	The sound with contribution from all sources, as modified by the current environment and associated conditions. This is related to the ambient sound, which is the totally encompassing sound in a given situation at a given time, usually composed of sound from many sources near and far.
Acute health effect	An adverse health effect that manifests itself immediately or shortly after exposure to a causative factor (e.g., soil contamination). Associated with short-term exposures.
Additional mitigation measures	Additional mitigation measures comprise measures over and above any embedded and good practice standard mitigation measures, for which the EIA has identified a requirement to further reduce significant environmental effects, for example landscape planting. All additional mitigation measures will be described within the ES and secured through the DCO or through statutory agreements.
Agricultural Land Classification (ALC)	A standardised method for classifying agricultural land according to its versatility, productivity, and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5). ALC is determined using the MAFF Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land, 1988.
Air Insulated Switchgear (AIS)	An air insulated switchgear composing electrical disconnect switches or circuit breakers used to control, protect and isolate electrical equipment.
Air Quality Management Areas (AQMAs)	If a local authority finds any places where the Air Quality Objectives (AQO) are not likely to be achieved, it must declare an AQMA there. This area could be just one or two streets, or it

Term	Definition
	could be much bigger. Then the local authority will put together a plan to improve the air quality - a Local Air Quality Action Plan (AQAP).
Air Quality Objectives (AQO)	The AQOs are policy targets often expressed as a maximum ambient concentration not to be exceeded, either without exception or with a permitted number of exceedances, over a specified averaging period.
Air Quality Standards (AQS)	The AQS Regulations report limit values at differing averaging periods for certain pollutants. There are limits provided for the protection of human health for SO ₂ , NO ₂ , Benzene, CO and Pb. Target values have been set for the concentration of PM _{2.5} .
Annex 1 Habitat	Annex 1 Habitat refers to a habitat as defined under the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Archaeological Interest	A heritage asset with value from the potential to hold evidence about the past that can be retrieved through specialist investigation.
Architectural/Artistic Interest	A heritage asset with value from contemporary appreciation of a heritage asset's aesthetics.
Area of Outstanding National Beauty (AONB)	An AONB (now 'National Landscape' since November 2023) is land protected by the Countryside and Rights of Way Act 2000. It protects the land to conserve and enhance its natural beauty.
Artificial ground	Deposits that have accumulated or been placed through human activity.
Associated development	Development which is associated with a Nationally Significant Infrastructure Project (NSIP), as defined in the Planning Act 2008. It should be subordinate to, and necessary for, the construction and/or the effective operation of the NSIP that is the subject of the application for development consent.
Background sound/noise level	The A weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels. This represents the underlying sound level in the absence of contributions from the sound source under assessment relating to the residual sound level but characterised by LA90,T.
Baseline	The situation prevailing before the Project is commenced (the current baseline), and also to the situation that would prevail in the future without the Project (the projected future baseline).
Best and Most Versatile (BMV) agricultural land	Defined as land of excellent (ALC Grade 1), very good (Grade 2) and good (Subgrade 3a) agricultural quality. BMV agricultural land is afforded a degree of protection against development within planning policy.
Biodiversity Net Gain (BNG)	BNG is a way of creating and improving natural habitats. BNG makes sure development has a measurably

Term	Definition
	positive impact ('net gain') on biodiversity, compared to what was there before development.
Birds of Conservation Concern	Quantitative criteria are used to assess the population status of bird species found in the UK, which are placed on the red, amber or green list. With those on the red list being at most risk.
Bronze Age	-2,600 to -700 BCE
Cable Sealing End Compound (CSEC)	Cable sealing end compounds are where high-voltage underground cables join onto an overhead line. The transition from one end to the other requires termination points, known as sealing end compounds.
Chartered Institute for Archaeologists (CIfA)	The leading professional body representing archaeologists working in the UK and overseas.
Chartered Institute of Ecology and Environmental Management	The leading professional membership body representing and supporting ecologists and environmental managers in the UK, Ireland and abroad.
Chronic health effect	An adverse health effect that occurs as a result of long-term regular or continuous exposure to a causative factor (e.g., soil contamination).
Code of Construction Practice (CoCP)	A written code of standards and procedures that developers and contractors must adhere to.
Construction Environmental Management Plan (CEMP)	The purpose of the CEMP is to outline how construction of the Project will avoid, minimise or mitigate effects on the environment and surrounding area. The CEMP will detail the implementation of measures in accordance with environmental commitments outlined in the ES.
Corridor	A broad area, within which a new overhead line could be routed.
Corridor Preliminary Routeing and Siting Study (CPRSS)	The CPRSS reports the process undertaken as part of the Options Identification and Selection Stage (Stage 2) to identify an emerging preferred corridor, siting zones and siting areas within which the required infrastructure for the Project may be located.
Cumulative effects	There are two types of cumulative effect, intra-project effects and inter-project effects. The former occur as a result of a single receptor being affected by more than one source of effect from the Project. The latter occur as a result of a number of developments, including effects which individually might not be of significance, but when considered together could create a significant cumulative effect on a shared receptor when considered together with the Project.
Decibel (dB)	Noise is conventionally measured in decibels (dB). The ratio between the quietest audible sound and the loudest tolerable sound is a million to one in terms of the change in sound pressure. Due to this wide range, a scale based on logarithms

Term	Definition
	is used in noise level measurement. The scale used is the dB scale which extends from 0 to 140dB corresponding to the intensity of the sound pressure level.
Design (or embedded) measures	Design (or embedded) measures are those that are intrinsic to and built into the design. Design measures may include, for example, working within the existing topography to reduce tower visibility and reducing habitat loss by minimising land take. They can also include the avoidance of designated sites through sensitive routeing, siting and design. The embedded mitigation measures which form an intrinsic part of the Project design would be described and considered in place when assessing effects within the ES.
Development Consent Order (DCO)	Where the Secretary of State (SoS) proposes to grant consent for a NSIP, this will be through a DCO which is normally made as a statutory instrument – a form of secondary legislation. The DCO not only provides planning consent for the Project but may also incorporate other consents and include authorisation for the compulsory acquisition of land.
Direct effects	Direct effects are those that result directly from the Project.
Double tee	A connection from both circuits on either side of the same structure, creating a third and fourth circuit on another structure.
Driver delay	Traffic delays to non-development traffic.
Dust	Generic term used to describe larger non-respirable airborne particulates (typically those which are deposited rapidly and normally associated with soiling/markings of property, cars, vegetation etc.).
Early Medieval	410 to 1066 CE.
Effects	For the purposes of the EIA, the term ‘effects’ are the consequences of changes (e.g., habitat becomes degraded by changes in drainage pattern).
Electricity transmission system	The electricity transmission system is made up largely of 400kV, 275kV and 132kV assets connecting separately owned generators and interconnectors with the demand for electricity fed directly from the transmission system, and distribution systems. The ‘transmission’ classification applies to assets at 132kV or above in Scotland or offshore. In England and Wales, it relates to assets at 275kV and above. The electricity transmission system is designed to make sure there is sufficient transmission capacity to ensure that the system can be operated in an economic and efficient way by the NESO, ensuring power can be moved from where it is generated to demand centres across Britain. This planning and development of the electricity transmission system is governed by the Security and Quality of Supply Standard (SQSS), which ensure that the network is developed and operated securely

Term	Definition
	and is resilient to any foreseeable network faults and disruption.
Electromagnetic fields (EMF)	Electric fields are created by differences in voltage: the higher the voltage, the stronger the resultant field will be. Magnetic fields are created when electric current flows: the greater the current, the stronger the magnetic field. An electric field will exist even when there is no current flowing. If current does flow, the strength of the magnetic field will vary with power consumption, but the electric field strength will be constant.
Environmental Impact Assessment (EIA)	An EIA is a tool for systematically examining and assessing the impacts and effects of a development on the environment. The objective of the EIA is to identify any likely significant effects which may arise from the Project and identify measures to prevent, reduce or offset any adverse effects.
Environmental Statement (ES)	The outcome of the EIA process is reported within a document called an ES.
Fear and intimidation	In the context of traffic and transport, these may be experienced by people as a result of an increase in traffic volume and its proximity or the lack of protection caused by such factors as narrow pavement widths.
Flood Risk Assessment (FRA)	The FRA will assess the flood risk both to and from the Project and demonstrate how that flood risk will be managed over the Project's lifetime.
Future baseline	This is the theoretical situation that would exist in the absence of the Project. This is based upon extrapolating the current baseline using technical knowledge of likely changes over the identified period (for example anticipated habitat change over time, climate change projections, traffic and waste volume growth over time, etc.).
Gas Insulated Switchgear (GIS)	Gas insulated switchgear (usually sulphur hexafluoride (SF ₆)) composing electrical disconnect switches or circuit breakers used to control, protect and isolate electrical equipment.
Good practice measures	Actions that would occur with or without input from the mitigation measures in the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements or actions that are considered to be standard practice used to manage commonly occurring environmental effects. These are referred to as 'tertiary measures' in accordance with the ISEP guidelines and would also be embedded within the design of the Project.
Graduated Swathes	Indicate the broad areas where the components of the new overhead lines forming part of the Project are likely to be located.
Ground dissolution (of limestone)	A reduction in the solid mass of rock as a result of groundwater dissolving it. This loss of mass can cause ground instability at the surface.

Term	Definition
Ground gas	A general term to include all gases occurring and generated within the ground whether originating from Made Ground or from natural soil or rock. Typically used to mean only potentially hazardous ground gases, such as carbon dioxide, methane, hydrogen sulphide and carbon monoxide.
Habitat of Principal Importance (HPI)	HPI are covered under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The term is interchangeable with 'UK Priority BAP Habitat', 'Section 41 habitat' and 'NERC s41 habitat'.
Habitats Regulations Assessment (HRA)	A HRA refers to the several distinct stages of Assessment which must be undertaken in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) to determine if a plan or project may affect the protected features of a habitats site before deciding whether to undertake, permit or authorise it.
Heavy Duty Vehicle (HDV)	Goods vehicles + buses >3.5 t gross vehicle weight.
Heavily Modified Water Body	Significant water bodies that have changed water category due to modifications.
Heritage Significance	The significance of a heritage asset is the product of the value it holds for this and future generations as a result of its historic, archaeological, architectural or artistic interests.
Historical Interest	A heritage asset with value from its association with past events or past people; or where a heritage asset is illustrative of a particular asset type, theme, or period.
Holford Rules	A series of guidelines/rules for the routeing and design of new overhead lines or overhead line extensions. The guidelines were initially developed in 1959 and have been reviewed on a number of occasions by National Grid and by the other UK transmission licence holders. The guidelines provide a set of design criteria that have stood the test of time and became accepted industry best practice in overhead line routeing. The guidelines now form an important part of national planning policy relating to the development of electricity networks, as set out in National Policy Statement EN-5
Horlock Rules	A series of guidelines/rules for the siting and design of new substations, or substation extensions, including consideration of line entries and SECs. The guidelines were initially developed in 2003 and have been reviewed on a number of occasions by National Grid, with a revised version issued in 2009. The Horlock Rules provide a set of principles which avoid, or reduce the environmental impacts associated with the development of new substation infrastructure.
Impacts	For the purposes of the EIA and this Scoping Report, the term 'impacts' is used to describe the changes that arise as a result of the Project (e.g., changes in drainage pattern).

Term	Definition
Index of Multiple Deprivation (IMD)	The IMD is the official measure of relative deprivation for small areas (neighbourhoods) in England. The IMD are calculated based on the following factors: income deprivation, employment, health and disability, education, skills and training, barriers to housing and services, crime and living environment.
Indirect and secondary effects	Indirect and secondary effects are those which are not caused immediately by the Project but arise as a consequence of it. As such they would normally occur later in time or at locations farther away than direct effects. An example would be where water or gas pipes are damaged as a result of the Project, and the consequences of that damage is fire or flood risk to other receptors.
Institute of Air Quality Management (IAQM)	The professional body for air quality practitioners.
Inter-project effects	Arise as a result of the Project in combination with other large-scale developments or projects.
Internal Drainage Board (IDB)	A public body that manages water levels in an area, known as an internal drainage district, where there is a special need for drainage. IDBs undertake works to reduce flood risk to people and property, and manage water levels for agricultural and environmental needs within their district.
Intra-project effects	Effects that occur as a result of two or more impacts acting together (i.e., combined, to result in a new or changed effects on a single receptor).
Iron Age	-800 BCE to 43 CE.
Institute of Sustainability and Environmental Professionals (ISEP)	ISEP (formally the Institute of Environmental Management and Assessment (IEMA)), a professional body for practitioners working in the fields of environmental management and assessment.
Joint Nature Conservation Committee (JNCC)	The JNCC are the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation.
Kilometre	A unit of measurement.
Kilovolts (kV)	A unit of electromotive force, equal to 1,000 volts.
Landscape and Ecology Management Plan (LEMP)	A LEMP details the immediate long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site.
Landscape Character Area (LCA)	Discrete geographical areas of a particular landscape type with a broadly consistent character, which might include: pattern of topography, land use, vegetation cover, geology, cultural and ecological features, pattern of evolution, visual and perceptual qualities and habitats.

Term	Definition
Landscape Character Type (LCT)	Generic, typically homogenous types of landscape that may occur in different parts of the country. They have similar geology, topography, drainage patterns, vegetation, land use, patterns of settlement and aesthetic character.
Light Duty Vehicle (LDV)	Cars and small vans <3.5 t gross vehicle weight.
Listed Building	A building or structure of special historical or architectural/artistic interest. Designated by the Department for Digital, Culture, Media and Sport. All buildings built before 1700 which survive in anything like their original condition are likely to be listed, as are most buildings built between 1700 and 1850.
Local Geological Sites (LGS)	A non-statutory designation for regionally important geological and geomorphological sites that have been identified as being of importance locally.
Local Wildlife Site (LWS)	Non-statutory nature conservation sites of local value.
Lower Layer Super Output Area (LSOA)	LSOAs are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales.
Lowest Observed Adverse Effect Level (LOAEL)	This is the level above which adverse effects on health and quality of life can be detected.
Medieval	1066 to 1540 CE.
Mesolithic	-10,000 to -4,000 BCE.
Modern	1901 to present.
National Cycle Network (NCN)	The NCN is a UK-wide network of signed paths and routes for walking, cycling, wheeling and exploring outdoors.
National Energy System Operator (NESO)	Body required to support and guide the future development of the electricity transmission system in Britain.
National Grid Electricity Transmission (NGET) ('National Grid')	National Grid operate the national electricity transmission network across Great Britain and own and maintain the network in England and Wales, providing electricity supplies from generating stations to local distribution companies. National Grid does not distribute electricity to individual premises, but its role in the wholesale market is vital to ensuring a reliable, secure and quality supply to all.
National Landscape	A National Landscape is the new name for an AONB, designated under the provisions of Part IV of the Countryside and Rights of Way Act 2000.
National Policy Statement (NPS)	Government planning policy relating to the development of NSIPs is set out in the relevant NPS. NSIPs should be developed in accordance with the relevant NPS. In the case of new transmission routes, the relevant energy-related NPS are EN-1: Overarching NPS for Energy and EN-5: NPS for Electricity Networks Infrastructure.

Term	Definition
Nationally Significant Infrastructure Project (NSIP)	NSIPs are developments (relating to energy, transport, water, or waste) which are identified in the Planning Act 2008 and require a type of consent known as “development consent”.
National Site Network (NSN)	The national site network includes all existing and future SACs and SPAs following the replacement of the EU Habitats and Wild Birds Directives with UK regulation.
Natural Capital (NC)	The total stock of natural resources and services provided by natural assets which benefit people.
Natural Superficial Deposits	Geologically recent deposits that consist of various sediments (clay, sand, gravel etc.) and sit on top of the bedrock.
Neolithic	-4,000 to -2,200 BCE.
Nitrate Vulnerable Zones (NVZ)	Areas covering approximately 62% of England designated as a result of the EU's Nitrates Directive in order to reduce the level of nitrates in surface and groundwater. Farmers with land in nitrate vulnerable zones have to follow mandatory rules to tackle nitrate loss from agriculture.
Nitrous Dioxide (NO ₂)	Reddish brown gas (in high concentrations), respiratory irritant and precursor to photochemical processes which produce other pollutants, photochemical smog and contribute to global warming.
Nitrogen Oxides (NO _x)	Total oxides of nitrogen.
Non-Road Mobile Machinery (NRMM)	A broad category which includes mobile machines, and transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on roads.
Options appraisal	A robust and transparent process used to compare options and to assess the positive and negative effects they may have across a wide range of criteria including environmental, socio-economic, technical and cost factors. The outcome is to identify a Strategic Proposal for the Project.
Options Identification and Selection	Work undertaken to determine the preferred corridor and preliminary routeing and siting options for the Project. It is intended to demonstrate how National Grid’s statutory duties, licence obligations, policy considerations, environmental, socio-economic, technical, cost, and programme issues have been considered and provide information on the approach to the identification and appraisal of route corridors and siting locations.
Overhead line	Conductor (wire) carrying electric current, strung from tower to tower.
Palaeolithic	-1,000 000 to -10,000 BCE.
Particulate matter (PM ₁₀ and PM _{2.5})	PM is the term used to describe condensed phase (solid or liquid) particles suspended in the atmosphere. Their potential

Term	Definition
	for causing health problems is directly linked to the size of the particles. PM ₁₀ is particulate matter with a diameter of 10 microns or less (also referred to as micrometres or 1/1000th of a meter). PM _{2.5} is particulate matter 2.5 microns or less in diameter.
Pathway (for contamination)	A route or means by which a receptor could be, or is, exposed to or affected by a contaminant.
Pedestrian amenity	The effect on the relative pleasantness of a pedestrian journey as a result of changes in traffic flow, traffic composition and pavement width/separation from traffic.
Pedestrian delay	The ability of people to crossroads as a result of changes in traffic volume, composition and speed, the level of pedestrian activity, visibility and general physical conditions.
Permanent effects	These are effects that will remain even when the Project is complete, although these effects may be caused by environmental changes that are permanent or temporary.
Phytotoxic	Displaying toxicity towards plants.
Polybrominated diphenyl ethers (PBDE)	Polybrominated diphenyl ethers are a group of man-made organobromine compounds.
Post Medieval	1540 to 1901.CE
Power control devices	Power control devices are designed to increase or decrease the apparent reactance of a line, thereby pushing power away from or pulling more power towards the circuit on which they are installed.
Preliminary Environmental Information Report	A report that compiles and presents the Preliminary Environmental Information gathered for a project.
Project Need Case	Sets out the reasons why the Project is required.
Public Rights of Way (PRoW)	These are designated routes under the CROW Act 2000, which the public can use at any time.
Radon	A naturally occurring radioactive chemical element, which occurs as a gas.
Ramsar sites	Wetlands of international importance designated under the Ramsar Convention.
Rating level	The specific sound level, with the addition of character corrections to consider certain acoustic features that could potentially increase the significance of impact. If no acoustic features are present then the rating level is equal to the specific sound level.
Receptor	A component of the natural or man-made environment such as water or a building that is affected by an impact.
Reconductoring	The upgrading of existing electricity transmission lines by replacing old conductors with new, more efficient ones.

Term	Definition
Registered Battlefield	Register of nationally significant military engagements maintained and designated by Historic England.
Registered Park and Garden (RPG)	Register of historic parks, gardens, grounds, and planned open spaces maintained and designated by Historic England.
River Basin Management Plan (RBMP)	A regional plan that sets out how organisations, stakeholders and communities would work together to improve the water environment and fulfil the requirements of the Water Framework Directive.
Road links	A linear spatial object that describes the geometry and connectivity of a road network between two points in the network.
Rochdale Envelope	The 'Rochdale Envelope' or 'Design Envelope' approach is employed where the nature of a proposed development means that some details of a project have not been confirmed (for instance, the precise dimensions of structures) when an application is submitted, and flexibility within clearly defined parameters is therefore sought to address uncertainty.
Romano-British	43 to 410 CE.
Root Protection Area (RPA)	A notional area of tree root spread (as calculated per BS5837) considered as the minimum volume necessary to ensure tree health and function.
S41 of NERC Act	Section 41 of the NERC Act 2006 lists species of principal importance in England for the purpose of conserving biodiversity.
Schedule 1 Species	Bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), for which it is an offence to intentionally or recklessly disturb birds and their young at, on or near an 'active' nest.
Scheduled monument	Nationally important archaeological sites. Designated by the Department for Digital, Culture, Media and Sport. These can be above or below-ground and do not need to be ancient.
Scoping Opinion	A Scoping Opinion is requested from the Planning Inspectorate on behalf of the SoS and sets out the information to be provided in the ES, which will be submitted as part of the application for development consent. Before adopting a Scoping Opinion, the Planning Inspectorate on behalf of the SoS must consult the consultation bodies. The Planning Inspectorate may also consult the relevant non-prescribed consultation bodies (to be identified in accordance with the Planning Inspectorate advice page, Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation).
Scoping Boundary	A Scoping Boundary has been defined to represent the potential area within which the components of the Project would be located.

Term	Definition
Security and Quality of Supply Standard (SQSS)	The SQSS sets out a coordinated set of criteria and methodologies that the Transmission Licences shall use in the planning and operation of the national electricity transmission system.
Setting	The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate an asset, or may be neutral.
Severance	The separation of people from places and other people and places or impede pedestrian access to essential facilities.
Significant Observed Adverse Effect Level (SOAEL)	This is the level above which significant adverse effects on health and quality of life occur.
Site of Importance for Nature Conservation (SINC)	Non-statutory nature conservation sites, these are equivalent to LWS.
Site of Special Scientific Interest (SSSI)	An area of land designated by Natural England as of special interest by reason of its flora, fauna, geological or physiographical features.
Siting Area	An area of land within which a new substation could be sited.
Siting Zone	An area of land within a study area, within which multiple Siting Areas could be located.
Source (of contamination)	A substance that is in, on or under the land and that has the potential to cause harm or to cause pollution of Controlled Waters.
Source Protection Zone (SPZ)	Zones defined by the Environment Agency to protect groundwater sources such as wells, boreholes and springs from potential contamination.
Special Areas of Conservation (SAC)	Protected areas in the UK designated under the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales.
Special Protection Areas (SPA)	Protected areas for birds in the UK classified under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales.
Species of Principal Importance (SPI)	Covered under Section 41 of the NERC Act 2006. The term is interchangeable with 'UK Priority BAP Species', 'Section 41 species' and 'NERCs41 species'.
Specific sound level	The equivalent continuous A-weighted sound pressure level produced by a specific sound source (i.e., the sound source under assessment in accordance with BS 4142:2014) at the assessment location over a given reference time interval, Tr.

Term	Definition
Strategic Proposal	The outcome of the strategic options appraisal; the Strategic Proposal is then taken forward to the Options Identification and Selection stage.
Strategic Road Network (SRN)	The SRN is made up of motorways and trunk roads (the most significant 'A' roads).
Substation	Electrical equipment in an electric power system through which electrical energy is passed for transmission, transformation, distribution or switching.
Sulphur hexafluoride (SF ₆)	Sulphur hexafluoride is a highly effective electrical insulator used in high-voltage electrical applications. It's a greenhouse gas that has a global warming impact of 22,800 times that of carbon dioxide.
Sustainable Drainage Systems	Measures designed to control surface runoff close to its source, including management practices and control measures such as storage tanks, basins, swales, ponds and lakes. Sustainable drainage systems allow a gradual release of water and thereby reduce the potential for downstream flooding.
Temporary effects	These are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes.
Tower	Overhead line structure used to carry overhead electrical conductors, insulators and fittings.
Transboundary effects	Transboundary effects are those effects that would affect the environment in another state within the European Economic Area (EEA).
Tree Preservation Order (TPO)	A statutory designation protecting trees, administered by the relevant local planning authority.
Underground Cable	An insulated conductor carrying electric current designed for underground installation.
Vibration	Vibration is an oscillatory motion. The magnitude of vibration can be defined in terms of displacement, i.e., how far from the equilibrium something moves, velocity (how fast something moves), or acceleration (the rate of change of velocity).
World Heritage Site (WHS)	A natural or man-made site, area, or structure recognised as being of outstanding international importance and therefore as deserving special protection. Sites are nominated to and designated by the World Heritage Convention.
ZA	There is a National Grid code applied to identify each transmission line. The existing "ZA" overhead line goes from Staythorpe near Newark to Elstree near Watford. The section of the ZA (as used in this Scoping Report) is the existing Cottam – Grendon – Staythorpe overhead line.
Zone of Influence (Zol)	An identified geographical area around the Project where there is a potential for impacts to occur.

Term	Definition
Zone of Theoretical Visibility (ZTV)	The likely (or theoretical) extent of visibility of a development, usually shown on a map.

1B.2 Abbreviations

Table 1B.2 Abbreviations

Abbreviations	Full Term
AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
ABST	Advanced Bat Survey Techniques
AC	Alternating Current
ACoW	Arboricultural Clerk of Works
ADS	Archaeological Data Service
AEP	Annual Exceedance Probability
AGLV	Areas of Great Landscape Value
AIA	Arboricultural Impact Assessment
AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear
ALC	Agricultural Land Classification
ANC	Association of Noise Consultants
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
APIS	Air Pollution Information System
AQAL	Air Quality Assessment Level
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Standard
ASNW	Ancient Semi-Natural Woodland
ASR	Annual Status Report
ASTI	Accelerated Strategic Transmission Investment
ATCs	Automatic Traffic Counts
AVR	Accurate Visual Representations
BAP	Biodiversity Action Plan
BCT	Bat Conservation Trust
BESS	Battery Energy Storage System
BFI	Base Flow Index
BGS	British Geological Survey
BMV	Best and Most Versatile (land)

Abbreviations	Full Term
BNG	Biodiversity Net Gain
BNL	Basic Noise Level
BoCC	Birds of Conservation Concern
BPM	Best Practicable Means
BRAG	Blue Red Amber Green
BS	British Standards
BTO	British Trust for Ornithology
CA	Conservation Area (Note: Countryside Agency if required to be used in full)
CAMS	Catchment Abstraction Management Strategy
CCC	Climate Change Committee
CCGT	Combined Cycle Gas Turbine
CCR	Climate Change Resilience
CDM	Construction Design and Management
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute for Archaeologists
CIHT	Chartered Institution of Highways and Transportation
CIRIA	Construction Industry Research and Information Association.
CJEU	Court of Justice for the European Union
CLAIRE	Contaminated Land: Applications in Real Environments
CoCP	Code of Construction Practice
COMAH	Control of Major Accident Hazard
CNP	Critical National Priority
CoPA	Control of Pollution Act
COPD	Chronic Obstruction Pulmonary Disease
CPRSS	Corridor Preliminary Routeing and Siting Study
CRoW (Act)	Countryside and Rights of Way Act, 2000
CRT	Canals and Rivers Trust
CRTN	Calculation of Road Traffic Noise
CSNP	Centralised Strategic Network Plan
CSS	Countryside Stewardship Scheme
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Site

Abbreviations	Full Term
CWTP	Construction Worker Travel Plan
dB	Decibel
DC	Direct Current
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DfT	Department for Transport
DLL	District Level Licence
DM	Do-Minimum
DMP	Dust Management Plan
DrMP	Drainage Management Plan
DMRB	Design Manual for Roads and Bridges
DNO	Distribution Network Operator
DTM	Digital Terrain Model
DrWPA	Drinking Water Protected Areas
EA	Environment Agency
EC	European Commission
EclA	Ecological Impact Assessment
ECML	East Coast Main Line
ECoW	Environmental Clerk of Works
eDNA	Environmental DNA
EG	Environmental Gain
EIA	Environmental Impact Assessment
EMFs	Electric and Magnetic Fields
EMS	Environmental Management System
EN-1	Overarching National Policy Statement for Energy
EN-5	National Policy Statement for Electricity Networks Infrastructure
EnvCoWs	Environmental Clerk of Works
EPA	Environmental Protection Act
EPR	Environmental Permitting Regulations
EPS	European Protected Species
EPSML	European Protected Species Mitigation Licence
EqIA	Equalities Impact Assessment
ES	Environmental Statement

Abbreviations	Full Term
ESO	Electricity System Operator
EU	European Union
FCD	Field Capacity Days
FLL	Functionally Linked Land
FRA	Flood Risk Assessment
FRAP	Flood Risk Activity Permit
FWRA	Foundation Works Risk Assessment
FZ	Flood Zone
GCN	Great Crested Newt
GCR	Geological Conservation Review
GDP	Gross Domestic Product
GEP	Good Ecological Potential
GGP	Great Grid Programme
GHG	Greenhouse Gas
GI	Geotechnical Investigation
GIS	Gas Insulated Switchgear/Geographic Information System (note context)
GLNP	Greater Lincolnshire Nature Partnership
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GLVIA3	Guidelines for Landscape and Visual Impact Assessment Third Edition
GPS	Geographic Positioning System
GVA	Gross Value Added
GW	Gigawatt. One billion (10 ⁹) watts
GWDTE	Groundwater Dependant Terrestrial Ecosystems
HA	Highways Agency
ha	Hectare
HCA	Homes & Communities Agency
HDD	Horizontal Directional Drilling
HDV	Heavy Duty Vehicle
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HLA	Historic Landscape Assessment
HLC	Historic Landscape Characterisation
HLCA	Historic Landscape Character Area
HM	His Majesty's

Abbreviations	Full Term
HMWB	Heavily Modified Water Body
HND	Holistic Network Design
HPI	Habitat of Principal Importance
HRA	Habitats Regulations Assessment
HSI	Habitat Suitability Index
HVDC	High Voltage Direct Current
Hz	Hertz
IAQM	Institute of Air Quality Management
ICCI	In-Combination Climate Change Impact
ICE	Inventory of Carbon and Energy
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IDB	Internal Drainage Board
IHBC	Institute of Historic Building Conservation
IMD	Index of Multiple Deprivation
INNS	Invasive Non-Native Species
IoQ	Institute of Quarrying
IPC	Infrastructure Planning Commission (replaced by the Planning Inspectorate)
IROPI	Imperative Reasons of Overriding Public Interest
ISEP	Institute of Sustainability and Environmental Professionals
ISO	International Standards Organisation
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
km	Kilometre
kV	Kilovolt
kV/m	kilovolts per metre
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Areas
LCRM	Land Contamination Risk Management
LCS	Lincolnshire Connection Substations
LCT	Landscape Character Type
LDF	Local Development Framework
LDP	Local Development Plan
LDV	Light Duty Vehicle
LEMP	Landscape Ecological Management Plan

Abbreviations	Full Term
LEP	Local Enterprise Partnership
LERC	Local Environmental Records Centres
LGS	Local Geological Sites
LI	Landscape Institute
LLFA	Lead Local Flood Authorities
LNR	Local Nature Reserve
LHA	Local Highway Authority
LOAEL	Lowest Observed Adverse Effect Level
LoD	Limit of Deviation
LPA	Local Planning Authority
LRERC	Leicestershire and Rutland Environmental Records Centre
LSE	Likely Significant Effect
LSOA	Lower Super Output Areas
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
m	metre/million
MCAA	Marine and Coastal Access Act
MAFF	Ministry of Agriculture, Fisheries and Food
MAGIC	Multi-Agency Geographic Information for the Countryside
MCZ	Marine Conservation Zones
MMO	Marine Management Organisation
MoRPh	Modular River Survey
MP	Member of Parliament
MPS	Minerals Policy Statement
MW	Megawatt. One million (10^9 / 1,000,000) watts
NAFRA	National Flood Risk Assessment
NAQO	National Air Quality Objective
NAQS	National Air Quality Strategy
NB	Note well (Nota Bene)
NBGRC	Nottinghamshire Biological and Geological Record Centre
NBIS	Norfolk Biodiversity Information Service
NBN	National Biodiversity Network
NBRC	Northamptonshire Biodiversity Records Centre
NC	Natural Capital

Abbreviations	Full Term
NCA	National Character Area
NCN	National Cycle Network
NCR	National Cycle Route
NERC	Natural Environment and Rural Communities Act
NETS	National Electricity Transmission System
NFM	Natural Flood Management
NGET	National Grid Electricity Transmission
NGR	National Grid Reference
NHLE	National Heritage List for England
NIA	Noise Important Areas
NIC	National Infrastructure Commission
NMP	National Mapping Programme
NMU	Non-Motorised User
NNR	National Nature Reserve
NO	Nitrogen Monoxide
NO ₂	Nitrogen Dioxide
NOA	Network Options Assessment
NO _x	Nitrogen Oxides
NPG	Northern Power Grid
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPS	National Policy Statement
NRFA	National River Flow Archive
NRMM	Non-Road Mobile Machinery
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
NSN	National Site Network
NSR	Noise Sensitive Receptor
NTL	Normal Tide Limit
NTS	Not to Scale / Non-Technical Summary (note context)
NVC	National Vegetation Classification
NVQ	National Vocational Qualification
NVZ	Nitrate Vulnerable Zones
OD	Ordnance Datum

Abbreviations	Full Term
OELS	Organic Entry Level Stewardship
OFWAT	Water Services Regulation Authority
OHID	Office for Health Improvement and Disparities
OHL	Overhead Line
ONS	Office of National Statistics
OS	Ordnance Survey
OWF	Offshore Wind Farm
PA	Planning Act
PADSS	Principal Areas of Disagreement Summary Statements
PAS 2080	Publicly Available Specification 2080
PAWS	Plantations on Ancient Woodland Sites
PD	Permitted Development
PEIR	Preliminary Environmental Information Report
PFOS	Perfluorooctane sulphonate
PHE	Public Health England
PIC	Personal Injury Collision
PINS	Planning Inspectorate
PM ₁₀ and PM _{2.5}	Particulate matter
PPE	Personal Protective Equipment
PRoW	Public Right of Way
PRF	Potential Roost Features
pSAC	Proposed Special Area of Conservation
pSPA	Proposed Special Protection Area
PSR	Primary Surveillance RADAR
PTES	Protected Trust for Endangered Species
PV	Photovoltaic
RADAR	Radio Detection and Ranging
RAF	Royal Air Force
RAMS	Risk Assessment and Method Statement
RBD	River Basin Districts
RBMP	River Basin Management Plan
RCA	River Condition Assessment
RIGS	Regionally Important Geological Site
RLCT	Regional Landscape Character Types

Abbreviations	Full Term
RNR	Roadside Nature Reserves
RoFSW	Risk of Flooding from Surface Water
RPA	Root Protection Area
RPG	Registered Parks and Gardens
RSPB	Royal Society for the Protection of Birds
RVAA	Residential Visual Amenity Assessment
SAC	Special Area of Conservation
SEC	Sealing End Compounds
SEI	Site of Ecological Importance
SFRA	Strategic Flood Risk Assessment
SF ₆	Sulphur Hexafluoride
SGT	Supergrid Transformer
SINC	Site of Importance for Nature Conservation
SLA	Special Landscape Area
SMP	Soil Management Plan
SMR	Standardized Mortality Rate
SNCI	Site of Nature Conservation Importance
SOAEL	Significant Observed Adverse Effect Level
SOR	Strategic Optioneering Report
SoS	Secretary of State
SPA	Special Protection Area
SPI	Species of Principal Importance
SPZ	Source Protection Zone
SQSS	Security and Quality of Supply Standard
SRN	Strategic Road Network
SSS	Substation Siting Study
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
SWMP	Site Waste Management Plan
TA	Transport Assessment
TAN	Technical Advice Note
tCO _{2e}	Tonnes of Carbon Dioxide equivalent
TGN	Technical Guidance Note
TMP	Traffic Management Plan

Abbreviations	Full Term
T&D	Transmission and Distribution
TPO	Tree Preservation Order
Ccc/UGC	Underground Cabling
UAV	Unmanned Aerial Vehicle
UK	United Kingdom
UKBAP	United Kingdom Biodiversity Action Plan
UKCEH	United Kingdom Centre for Ecology and Hydrology
UKHAP	United Kingdom Habitat Action Plan
UKHSA	United Kingdom Health Security Agency
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UXO	Unexploded Ordnance
VP	Vantage Point
WC	Wetness Class
WeBS	Wetland Birds Survey
WFD	Water Framework Directive
WHO	The World Health Organisation
WSI	Written Scheme of Investigation
WMEL	Weston Marsh to East Leicestershire
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility

2A. Key Legislation

2B. National and Regional Policy

2C. Local Policy

Contents

2A	Key Legislation	2A-1
2A.1	Overview	2A-1
2B	National and Regional Policy	2B-1
2B.2	Overview	2B-1
	References	2B-100
2C	Local Policy	2C-1
2C.1	Overview	2C-1
	References	74

Table 2A.1	Key Legislation	2A-2
Table 2B.1	Schedule of potentially important and relevant national and regional planning policies	2B-2
Table 2C.1	Local Policy of relevance to the Project	2C-2

2A Key Legislation

2A.1 Overview

- 2A.1 The Environmental Impact Assessment Scoping Report outlines the key legislation and local and national policy in **Chapter 2 Regulatory and Planning Policy Context**. A wider list of potentially relevant environmental legislation is set out below in **Table 2A.1**. The list will be updated and amended throughout evolution of the project design and for the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES). Relevant guidance is set out in topic chapters.
- 2A.2 General legislation, which applies to more than one topic, is listed first, followed by topic-specific legislation. Each technical chapter in the Scoping Report references the key legislation relevant to the topic, and key legislation is set out in more detail in **Chapter 2 Regulatory and Planning Policy Context**.
- 2A.3 This document presents key legislation only. Relevant policies are presented in **Appendix 2B National and Regional Policies** and **Appendix 2C Local Policy**.

Table 2A.1 Key Legislation

Topic Chapter	Name	Reference
All Topics	Planning Act 2008	Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents
	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017	Available at: https://www.legislation.gov.uk/uksi/2017/572/contents/made
	Marine and Coastal Access Act 2009	Available at: https://www.legislation.gov.uk/ukpga/2009/23/contents
	Electricity Act 1989	Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents
	Countryside and Rights of Way Act 2000	Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents
Landscape (Chapter 6) & Visual (Chapter 7)	European Landscape Convention	Available at: https://www.coe.int/en/web/landscape/the-european-landscape-convention
	Town and Country Planning Act 1990	Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents
	Town and Country Planning (Trees) Regulations 1999	Available at: https://www.legislation.gov.uk/uksi/1999/1892/contents/made
Ecology and Biodiversity (Chapter 8)	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Available at: https://www.legislation.gov.uk/eudr/1992/43/contents
	Directive 2009/147/EC on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended)	Available at: https://www.legislation.gov.uk/eudr/2009/147
	Regulation (EU) 1143/2014 on the prevention and management of the introduction and spread of invasive alien species as enacted in England by The Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended)	Available at: https://www.legislation.gov.uk/eur/2014/1143/contents

Topic Chapter	Name	Reference
	The Invasive Non-native Species (Amendment etc.) (EU Exit) Regulations 2019	Available at: https://www.legislation.gov.uk/ukxi/2019/223
	Wildlife and Countryside Act 1981 (as amended)	Available at: https://www.legislation.gov.uk/ukpga/1981/69/contents
	Countryside and Rights of Way Act 2000	Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents
	The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations 2017)	Available at: https://www.legislation.gov.uk/ukxi/2017/1012/contents/made
	Natural Environment and Rural Communities Act 2006	Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents
	Environment Act 2021	Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents
	Protection of Badgers Act 1992	Available at: https://www.legislation.gov.uk/ukpga/1992/51/contents
	The Hedgerows Regulations 1997	Available at: https://www.legislation.gov.uk/ukxi/1997/1160/contents/made
	Animal Welfare Act 2006	Available at: https://www.legislation.gov.uk/ukpga/2006/45/contents
	Salmon and Freshwater Fisheries Act 1975	Available at: https://www.legislation.gov.uk/ukpga/1975/51/contents
	The Eels (England and Wales) Regulations 2009	Available at: https://www.legislation.gov.uk/ukxi/2009/3344/made
	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	Available at: https://www.legislation.gov.uk/ukxi/2017/407/contents/made
	Town and Country Planning Act 1990	Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents

Topic Chapter	Name	Reference
	Town and Country Planning (Tree Preservation) (England) Regulations 2012	Available at: https://www.legislation.gov.uk/ukxi/2012/605/made
	Forestry Act 1967	Available at: https://www.legislation.gov.uk/ukpga/1967/10/contents
	The Wild Mammals (Protection) Act 1996	Available at: https://www.legislation.gov.uk/ukpga/1996/3/contents https://www.legislation.gov.uk/ukpga/1996/3/contents
Cultural Heritage (Chapter 9)	Ancient Monuments and Archaeological Areas Act 1979 (amended by the National Heritage Act 19832002)	Available at: https://www.legislation.gov.uk/ukpga/1979/46/contents Available at: https://www.legislation.gov.uk/ukpga/1983/47/contents
	Planning (Listed Buildings and Conservation Areas) Act 1990	Available at: https://www.legislation.gov.uk/ukpga/1990/9/contents
	Protection of Military Remains Act 1986	Available at: https://www.legislation.gov.uk/ukpga/1986/35/contents
	The Hedgerows Regulations 1997	Available at: https://www.legislation.gov.uk/ukxi/1997/1160/contents/made
	Infrastructure Planning (Decisions) Regulations 2010	Available at: https://www.legislation.gov.uk/ukxi/2010/305/contents/made
Water Environment (Chapter 10)	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	Available at: https://www.legislation.gov.uk/ukxi/2017/407/contents/made
	Environment Act 2021	Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents
	The Land Drainage Act 1991 (	Available at: https://www.legislation.gov.uk/ukpga/1991/59/contents
	Water Resources Act 1991	Available at: https://www.legislation.gov.uk/ukpga/1991/57/contents

Topic Chapter	Name	Reference
	Flood and Water Management Act 2010	Available at: https://www.legislation.gov.uk/ukpga/2010/29/contents
	Flood Risk Regulations 2009	Available at: https://www.legislation.gov.uk/uksi/2009/3042/contents/made
	Environmental Permitting Regulations 2016	Available at: https://www.legislation.gov.uk/uksi/2016/1154/contents
Geology and Hydrogeology (Chapter 11)	The Environmental Protection Act (EPA) 1990 – Part 2A	Available at: https://www.legislation.gov.uk/ukpga/1990/43/part/IIA
	The Contaminated Land (England) Regulations 2006 (which consolidate the provisions of the Contaminated Land (England) Regulations 2000 and subsequent amendments), as amended by the Contaminated Land (England) (Amendment) Regulations 2012	Available at: https://www.legislation.gov.uk/uksi/2006/1380/contents/made
	Water Act 2014	Available at: https://www.legislation.gov.uk/ukpga/2014/21/contents
	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	Available at: https://www.legislation.gov.uk/uksi/2017/407/contents/made
	The Land Drainage Act 1991	Available at: https://www.legislation.gov.uk/ukpga/1991/59/contents
	Water Resources Act 1991	Available at: https://www.legislation.gov.uk/ukpga/1991/57/contents
	Flood and Water Management Act 2010	Available at: https://www.legislation.gov.uk/ukpga/2010/29/contents

Topic Chapter	Name	Reference
	Groundwater (England and Wales) Regulations 2009	Available at: https://www.legislation.gov.uk/ukdsi/2009/9780111480816/contents
	The Water Resources Act (Amendment) (England and Wales) Regulations 2009	Available at: https://www.legislation.gov.uk/uksi/2009/3104/contents
	The Floods and Water (Amendment etc.) (EU Exit) Regulations 2019	Available at: https://www.legislation.gov.uk/uksi/2019/558
	The Environmental Damage Regulations 2015	Available at: The Environmental Damage (Prevention and Remediation) (England) Regulations 2015
	The Control of Substances Hazardous to Health (Amendment) Regulations 2004	Available at: https://www.legislation.gov.uk/uksi/2004/3386
	The Anti-Pollution Works Regulations 1999	Available at: https://www.legislation.gov.uk/uksi/1999/1006/contents/made
	Environment Act 2021	Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents
	Environmental Permitting Regulations 2016	Available at: https://www.legislation.gov.uk/uksi/2016/1154/contents
	The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015	Available at: https://www.legislation.gov.uk/uksi/2015/1623/resources
	The Water Supply (Water Quality) Regulations 2010	Available at: https://www.legislation.gov.uk/wsi/2010/994/contents/made
Agriculture and Soils (Chapter 12)	Not Applicable	
Traffic and Transport (Chapter 13)	Transport Act 2000	Available at: https://www.legislation.gov.uk/ukpga/2000/38/contents

Topic Chapter	Name	Reference
	Railways Act 2005	Available at: https://www.legislation.gov.uk/ukpga/2005/14/contents
Air Quality (Chapter 14)	Environment Act 1995	Available at: https://www.legislation.gov.uk/ukpga/1995/25/contents
	Environmental Protection Act 1990	Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents
	Air Quality (England) Regulations 2000	Available at: https://www.legislation.gov.uk/uksi/2000/928/contents/made
	Air Quality Standards Regulations 2010, as amended in 2016	Available at: https://www.legislation.gov.uk/uksi/2016/1184/made
	Environment (Miscellaneous Amendments) (EU) Regulations 2020	Available at: https://www.legislation.gov.uk/uksi/2020/1313/made
	Environment Act 2021	Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents
	The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023	Available at: https://www.legislation.gov.uk/uksi/2023/96/contents/made
Noise and Vibration (Chapter 15)	The Control of Pollution Act 1974	Available at: https://www.legislation.gov.uk/ukpga/1974/40/contents
	Environmental Protection Act 1990	Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents
Socio-economics, Recreation and Tourism (Chapter 16)	Countryside and Rights of Way Act 2000	Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents
Health and Wellbeing (Chapter 17)	Health and Social Care Act 2012	Available at: https://www.legislation.gov.uk/ukpga/2012/7/contents

Topic Chapter	Name	Reference
	Care Act 2014	Available at: https://www.legislation.gov.uk/ukpga/2014/23/contents
	The Health and Care Act 2022	Available at: https://www.legislation.gov.uk/ukpga/2022/31/contents
Climate Change (Chapter 18)	Climate Change Act 2008 (2050 Target Amendment) Order 2019	Available at: https://www.legislation.gov.uk/ukdsi/2019/9780111187654
	Carbon Budget Order 2021	Available at: https://www.legislation.gov.uk/ukdsi/2021/9780348222616
Major Accidents and Disasters (Chapter 19)	Not Applicable	
Cumulative (Chapter 5)	The Town and Country Planning (Environmental Impact Assessment) Regulations 2017	Available at: https://www.legislation.gov.uk/uksi/2017/571/part/4/made

2B National and Regional Policy

2B.2 Overview

- 2B.1 National and regional policies listed below are generally applicable to the assessment principles to be considered by the environmental topics in the Environmental Impact Assessment (EIA). See **Table 2B.1**.

Table 2B.1 Schedule of potentially important and relevant national and regional planning policies

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
All Topics	Overarching National Policy Statement for Energy (NPS) (2024) EN-1 (Ref 2B.1)	2 Government policy on energy and energy infrastructure development	
		2.1 Introduction	
		NPS EN-1 sets out the Government’s overarching policy regarding the development of Nationally Significant Infrastructure Projects (NSIPs) in the energy sector. EN-1 emphasises the need for new energy projects.	Chapter 4 Description of the Project presents a detailed Description of the Project and the need for the Project is discussed in Chapter 1 Introduction .
		Paragraph 2.1.6 suggests that large-scale energy infrastructure is required to ensure the UK can provide a secure, reliable and affordable supply of energy.	
		3 The need for new nationally significant energy infrastructure projects	
		3.1 Introduction	
		Section 3 of NPS EN-1 explains why the government sees a need for significant amounts of new large-scale energy infrastructure to meet energy objectives.	The need for the Project is described in Chapter 1 Introduction .
		3.2 Secretary of State decision making	
		3.2.6 “The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part.”	The need for the Project is discussed in Chapter 1 Introduction .
		3.2.7 “In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008.”	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		3.3 The need for new nationally significant electricity infrastructure	
		Paragraph 3.3.71 of EN-1 recognises that for regions with multiple windfarms or offshore transmission projects it is expected that a coordinated approach will be delivered which is likely to reduce network infrastructure costs as well as the cumulative environmental impacts and impacts on coastal communities by installing a smaller number of larger connections, each taking power from multiple windfarms instead of individual point-to-point connections for each windfarm.	A coordinated approach to the delivery of the Project is expected to be undertaken to reduce network infrastructure costs. In addition, a description of the likely intra-project cumulative effects will be included within the Environmental Statement (ES).
		Paragraph 3.3.78 acknowledges that the case for a new connection or network reinforcement is demonstrated if the Project represents an efficient and economical means of: <i>“connecting a new generating station to the network: Reinforcing the network to accommodate such connections; or reinforcing the network to ensure that it is sufficiently resilient and capacious (per any performance standards set by Ofgem) to reliably supply present and/or anticipated future levels of demand.”</i>	The design evolution of the project and the alternatives considered are presented within Chapter 3 Main Alternatives Considered and Chapter 4 Description of the Project .
		In considering the ‘economic and efficient’ approach the network project also needs to follow good design, avoidance, and mitigation principles (and/ or biodiversity compensation where needed for transmission in the marine environment), as referenced in EN-5”.	
		3.3.83 <i>“Given the urgent need for new electricity infrastructure and the time it takes for electricity NSIPs</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>to move from design conception to operation, there is an urgent need for new (and particularly low carbon) electricity NSIPs to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy.”</i>	
		4 Assessment Principles	
		4.1 General Policies and Considerations	
		<i>4.1.3 “Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the Secretary of State will start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be countryused.”</i>	The energy NPS which are considered relevant in the context of the Project is discussed in Chapter 2 Regulatory and Planning Policy Context.
		4.2 The critical national priority for low carbon infrastructure	
		Paragraph 4.2.4 states that the Government has concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure, with paragraph 4.2.5 confirming that this includes electricity grid infrastructure including all power lines in the scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as substations.	The energy NPS which are considered relevant in the context of the Project is discussed in Chapter 2 Regulatory and Planning Policy Context.
		Paragraph 4.2.7 confirms that the CNP policy applies following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy. As such, it is relevant during SoS decision making and specifically in reference to any residual impacts that have been identified.	A Habitats Regulations Assessment (HRA) will be undertaken to determine whether the Project is likely to have a significant effect on any European designated site (now included within the national site network), or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. The HRA will inform the Ecology and Biodiversity chapter of the ES

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		Of particular relevance to the EIA process, paragraph 4.2.8 notes that: <i>“During decision making, the CNP policy will influence how non-HRA and non-MCZ residual impacts are considered in the planning balance. The policy will therefore also influence how the Secretary of State considers whether tests requiring clear outweighing of harm, exceptionality, or very special circumstances have been met by a CNP Infrastructure application...”</i>	and will be included as a separate report within the application for development consent. Designations, habitats and protected species have been identified within Chapter 8 Ecology and Biodiversity. The likely effects on these features (and any additional features identified) will be assessed and reported as part of the Ecology and Biodiversity chapter of the ES.
		4.5 Marine Considerations Section 4.5 of NPS EN-1 provides details of how effects on the marine environment should be considered, noting that individual Marine Plans must be consulted to understand the marine relevant specific considerations, and suggests that the marine license regulator (the Marine Management Organisation (MMO) in England) are approached during the pre-application stage to understand any need for additional marine licenses alongside the DCO application.	The East Inshore and East Offshore Marine Plan will be considered in the preparation of the application for development consent.
		4.6 Environmental and Biodiversity Net Gain Section 4.6 of NPS EN-1 provides details of how environmental and biodiversity net gain should be considered and confirms that this approach to development aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements. The ES should include a statement demonstrating how wider environmental net gains have	Environmental and biodiversity net gain detail will be discussed in Chapter 8 Ecology and Biodiversity.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		been considered, and where appropriate, incorporated into proposals as part of good design of the Project. 4.7 Criteria for good design for Energy Infrastructure Section 4.7 of NPS EN-1 provides details on the criteria for good design for energy infrastructure. Paragraph 4.7.1 states: <i>“The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important.”</i> 4.10 Climate Change Adaptation and Resilience Section 4.10 of NPS EN-1 details how the effects of climate change should be taken into account during the design stage to ensure new energy infrastructure is sufficiently resilient against the possible impacts of climate change. Specifically, as new energy infrastructure is typically likely to remain operational over many decades, the direct and indirect impacts of climate change when considering the Project location, design, build, operation and where appropriate decommissioning will need consideration.	Design of the project is discussed in Chapter 6 Landscape and Chapter 7 Visual. The design of the route of the 400 kV Overhead line, areas of reconductoring, and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). The construction measures proposed are summarised in Chapter 4 Description of the Project and Chapter 3 Main Alternatives Considered, describes the evolution of the Project. Appendix 18A Climate Change Resilience Screening Assessment sets out a screening assessment for the current stage of the Project to inform this Scoping assessment. The Screening Assessment sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone Climate Change Resilience assessment from the EIA based on proposed Design, Control and Management Measures. Further embedded design measures should be developed as the Project design evolves

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			through engagement with the engineering design team and included in the Design Principles document which will be established to inform the development of the Project design for both construction and operation. On this basis, no further assessment of the Project's vulnerability to climate change is proposed in the ES.
		5 Generic Impacts	
		Part 5 of NPS EN-1 sets out generic impacts in respect of matters such as air quality and emissions, greenhouse gas emissions, biodiversity and geological conservation, civil and military aviation and defence interests, coastal change, dust and odour, flood risk, historic environment, landscape and visual, land use, noise and vibration, socio-economics, traffic and transport, resource and waste management, and water quality and resources. These generic impacts have been considered in the preparation of this Scoping Report.	Impacts on the various issues will be address in the topic specific chapters 6 to 19 .
	National Policy Statement for Electricity Networks Infrastructure (EN-5) (2024) (Ref 2B.4)	2 Assessment and Technology-Specific Information 2.1 Introduction	
		Part 2 provides general assessment principles and technology-specific policies relating to matters including climate change adaptation, consideration of good design, biodiversity and geological conservation, landscape and visual and noise and vibration.	Chapter 4 Description of the Project describes the evolution of the Project to date.
		Paragraph 2.1.5 of NPS EN-5 reinforces Section 4.2 of NPS EN-1 which supports the urgent need for new low carbon infrastructure.	Chapter 1 Introduction describes the need for the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.2 Factors influencing site selection and design Paragraph 2.2.10 of EN-5 reiterates the duties under Section 9 of the Electricity Act 1989, both in relation to developing and maintaining an economical and efficient network and, in formulating proposals for new electricity network infrastructure.	Chapter 4 Description of the Project describes the evolution of the Project to date.
		2.3 Climate change adaptation and resilience Section 2.3 of NPS EN-5 details how electricity network infrastructure should consider climate change adaptation and resilience within the design of new schemes. Paragraph 2.3.2 details that applicants should set out to what extent the Project is expected to be vulnerable and how it has been designed to be resilient to: flooding, particularly for substations; the effect of wind and storms on overhead lines; higher than average temperatures leading to increased transmission losses; and earth movement or subsidence caused by flooding or drought, for underground cables.	In relation to adaptation and climate change resilience, Appendix 18A Climate Change Resilience Screening Assessment sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone Climate Change Resilience assessment from the EIA based on proposed Design, Control and Management Measures.
		2.12 Special assessment principles of offshore-onshore transmission The MPS provides the framework for preparing Marine Plans and taking decisions affecting the marine environment. The objective of Marine Plans is to ensure that marine resources are used in a sustainable way in line with the high level marine objectives and thereby: promote sustainable economic development; enable the UK's move towards a low-carbon economy, in order to mitigate the causes of climate change and ocean acidification and adapt to their effects; ensure a sustainable marine environment	The Project has limited interaction with the marine environment, although the proposed overhead line route of the Project will necessitate the crossing of one navigable river which falls under the jurisdiction of the MMO: the River Welland. Relevant policies contained in the MPS will be considered as part of the assessment of the Project and compliance with
	UK Marine Policy Statement (MPS) (2020) (Ref 2B.5)		

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets; and contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.	
	National Planning Policy Framework (NPPF) (2024) (Ref 2B.6)	14 Meeting the challenge of climate change, flooding and coastal change Paragraph 161 requires that the planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. Paragraph 164 requires that new development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change; and b) can help reduce greenhouse gas emissions.	In relation to adaptation and climate change resilience, Appendix 18A Climate Change Resilience Screening Assessment sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the Project to scope out a standalone Climate Change Resilience assessment from the EIA. With regards to reducing CO ₂ emissions, Chapter 18 Climate Change of the ES will document all the embedded design and mitigation measures taken to reduce construction and operational emissions.
	East Inshore and East Offshore Marine Plans (2014) (Ref 2B.16)	Regional Marine Plans are also relevant to the Project. The marine plans are focused on identifying how important navigable waters can be maintained as a vital feature of the marine plan area, as well as providing for changing vessel sizes. Paragraph 344 of the plan identifies that in the east marine plan areas there are increasing levels of activity encroaching on navigable space (for example, offshore wind farms), making it ever more important to indicate the area	The East Inshore and East Offshore Marine Plan will be considered in the preparation of the application for development consent. The construction measures proposed are summarised in Chapter 4 Description of the Project .

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		essential for navigation so that this is considered from the outset by public authorities and applicants.	
	National Infrastructure Planning Guidance (2024) (Ref 2B.15)	There are two parts of the National Infrastructure Planning Guidance that are relevant to the pre-application stage: Introduction to National Infrastructure Planning Guidance (April 2024), which sets out the role and scope of the National Infrastructure Planning Guidance and, Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects (April 2024), which provides guidance on the pre-application stage for NSIPs.	Under Section 50 of the Planning Act 2008 the guidance covering pre-application procedures is ‘statutory’ and National Grid will have regard to this section in preparing the application for development consent.
Chapter 6 Landscape	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.7 Criteria for good design for Energy Infrastructure <i>4.7.2 “Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.”</i> <i>4.7.3 “Good design is also a means by which many policy objectives in the NPSs can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts such as noise. Projects</i>	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). The construction measures proposed are summarised in Chapter 4 Description of the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>should look to use modern methods of construction and sustainable design practices such as use of sustainable timber and low carbon concrete. Where possible, projects should include the reuse of material.”</i>	
		<i>4.7.6 (part) “Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform, and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.”</i>	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3).
		<i>4.7.7 “Applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.”</i>	The Scoping Boundary has been developed through a detailed routing and siting process. The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered .
		<i>4.7.10 “In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be.”</i>	The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES.
		<i>4.7.11 “In doing so, the Secretary of State should be satisfied that the applicant has considered both</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.”</i> 4.7.12 “In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process.”	
		5 Generic Impacts	
		5.10 Landscape and Visual	
		5.10.5 “Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation.” 5.10.6 “Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the	The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape. An overview of the baseline landscape is provided in Section 6.5 of Chapter 6 Landscape. The assessment will include the identification of any beneficial effects arising from mitigation. Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routing, siting and design in accordance with

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>landscape, providing reasonable mitigation where possible and appropriate.”</i>	the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology .
		<i>5.10.7 (part) “National Parks, the Broads and AONBs have been confirmed by the government as having the highest status of protection in relation to landscape and natural beauty. Each of these designated areas has specific statutory purposes. Projects should be designed sensitively given the various siting, operational, and other relevant constraints.”</i>	No above ground construction or operational part of the Project would fall within the boundaries of a National Park or National Landscape (formerly Area of Outstanding Natural Beauty (AONB)). It does not lie within the area put forward in 2020 by North Lincolnshire Council as a proposed extension to the Lincolnshire Wolds.
		<i>5.10.8 “The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. In these locations, projects should be sensitively [located] given the various siting, operational, and other relevant constraints. The Secretary of State should be satisfied that measures which seek to further the purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.”</i>	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.
		<i>5.10.12 “Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England or a local development plan in Wales has policies based on</i>	The assessment will consider the effects of the Project on the locally designated landscapes listed in Chapter 6 Landscape .

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>landscape or waterscape character assessment, these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.”</i>	
		5.10.16 “The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects (see Section 4.3). Several guides have been produced to assist in addressing landscape issues.”	The landscape assessment will be reported in Chapter 6 Landscape of the ES. The assessment of cumulative effects will be reported in the cumulative assessment chapter of the ES.
		5.10.17 “The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant’s assessment should also take account of any relevant policies based on these assessments in local development plan documents in England and local development plans in Wales.”	The assessment of landscape effects will be based on the landscape character assessments listed in Chapter 6 Landscape but will be supplemented by baseline information within conservation area appraisals, neighbourhood plans or village design statements. The assessment will take account of the local planning policies listed in Chapter 6 Landscape .
		5.10.19 “The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised incorporated into the design, delivery and operation of the scheme.”	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.
		5.10.20 “The assessment should include the effects on landscape components and character during	No above ground construction or operational part of the Project would fall within the

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>construction and operation. For projects which may affect a National Park, The Broads or an Areas of Outstanding Natural Beauty the assessment should include effects on the natural beauty and special qualities of these areas.”</i>	boundaries of a National Park or National Landscape (formerly Area of Outstanding Natural Beauty (AONB)) or fall within its setting. It does not lie within the area put forward in 2020 by North Lincolnshire Council as a proposed extension to the Lincolnshire Wolds.
		<i>5.10.22 “The assessment should also address the landscape and visual effects of noise and light pollution, and other emissions (see Section 5.2 and Section 5.7), from construction and operational activities on residential amenity and on sensitive locations, receptors and views, how these will be minimised.”</i>	The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape. An overview of the baseline landscape is provided in this chapter (Section 6.5 Chapter 6 Landscape).
		<i>5.10.24 “Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.”</i>	The proposed scope of the landscape assessment is provided in Chapter 6 Landscape.
		<i>5.10.26 “Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant operational constraint and reduction in function – for example, electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the Secretary of State may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.”</i>	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.10.27 <i>“Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within its development site and wider setting. The careful consideration of colours and materials will support the delivery of a well-designed scheme, as will sympathetic landscaping and management of its immediate surroundings.”</i>	
		5.10.28 <i>“Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines may mitigate the impact when viewed from a more distant vista.”</i>	The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology .
		5.10.29 <i>“The Secretary of State should take into consideration the level of detailed design which the applicant has provided and is secured in the Development Consent Order, and the extent to which design details are subject to future approvals.”</i>	The design of the infrastructure will be substantially dictated by the equipment they contain and the function that they need to provide. National Grid will provide sufficient design and layout plans and management plans to avoid the need for further requirements. The detailed designs will be undertaken by a competent contractor with knowledge of designing high voltage transmission lines and will be supported by environmental specialists including landscape architects and ecologists.
		5.10.30 <i>“The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives.”</i>	The design evolution of the project is an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. The different choices made during the design process to

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			date are set out in Chapter 4 Description of the Project. National Grid has also considered alternative design suggestions during consultation feedback from external stakeholders and the design change process will be implemented by National Grid to address relevant design changes. This process allows for each identified change to be effectively assessed by National Grid's specialist teams covering environment, design and construction and land rights. These processes will continue in the future design evolution of the Project. Design considerations take place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place than govern how it designs and constructs its projects safely. National Grid is already required to ensure that the project is designed in accordance with standards set out within or overseen by, amongst others, the Electricity Supply, Quality and Continuity Regulations, British Standards, National Grid Technical Guidance Notes (Electricity) and National Grid Technical Reports (Electricity).
		5.10.34 <i>"The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas, which may have impacts</i>	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on designated landscapes through

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>within them. The aim should be to avoid harming the purposes of designation or to minimise adverse effects on designated landscapes, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. The fact that a proposed project will be visible from within a designated area should not in itself be a reason for the Secretary of State to refuse consent.”</i>	sensitive routing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. No above ground construction or operational part of the Project would fall within the boundaries of a National Park or National Landscape (formerly Area of Outstanding Natural Beauty (AONB)) or fall within its setting. It does not lie within the area put forward in 2020 by North Lincolnshire Council as a proposed extension to the Lincolnshire Wolds.
		<i>5.10.35 “The scale of energy projects means that they will often be visible across a very wide area. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.”</i>	The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape. An overview of the baseline landscape is provided in Section 6.5 Chapter 6 Landscape.
		<i>5.10.36 “In reaching a judgement, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.”</i>	The proposed scope of the assessment is provided in Chapter 6 Landscape. The landscape assessment will consider the intervisibility of the Project with the identified landscape receptors which could indirectly affect the landscape.
		<i>5.10.37 “The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the</i>	Chapter 4 Description of Project describes the evolution of the Project to date and demonstrates that minimising adverse effects

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation.”</i>	on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to mitigation is explained in Chapter 4 Description of the Project and in Chapter 6 Landscape.
NPS EN-5 (2024) (Ref 2B.4)		2 Assessment and Technology-Specific Information 2.2 Factors influencing site selection and design 2.2.8 “There will usually be a degree of flexibility in the location of the development’s associated substations, and applicants should consider carefully their location, as well as their design.” 2.2.9 “In particular, the applicant should consider such characteristics as the local topography, the possibilities for screening of the infrastructure and/or other options to mitigate any impacts...” 2.2.10 “As well as having duties under Section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), applicants must take into account Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, to have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special	Chapter 4 Description of Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. An overview of the baseline landscape is provided in Section 6.5 Chapter 6 Landscape. The proposed approach to mitigation is explained in Chapter 5, EIA Approach and Methodology and Chapter 6 Landscape. The design of the Project has sought to avoid such features through the application of the

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and ...do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.”</i>	Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). Chapter 4 Description of the Project describes the evolution of the Project and how it demonstrates good design in its development to date. The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape. An overview of the baseline landscape is provided in Section 6.5 Chapter 6 Landscape.
		2.2.11 “Depending on the location of the proposed development, statutory duties under Section 85 of the Countryside and Rights of Way Act 2000, Section 11A of the National Parks and Access to the Countryside Act 1949 (as amended by Section 62 of the Environment Act 1995), and Section 17A of the Norfolk and Suffolk Broads Act 1988 may be relevant. Applicants should note amendments to each of these provisions contained in Section 245 of the Levelling Up and Regeneration Act 2023.”	Chapter 4 Description of the Project describes the evolution of the Project and how it demonstrates good design in its development to date. A Design Development Report will be prepared and submitted with the application for development consent. Chapter 2 Regulatory and Planning Policy Context sets out how the Applicant will respond to the provisions contained in Section 245 of the Levelling Up and Regeneration Act 2023.
		2.9 Applicant assessment	
		2.9.7 “While the government does not believe that the development of overhead lines is incompatible in principle with applicants’ statutory duty under	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>Schedule 9 to the Electricity Act 1989, to have regard to visual and landscape amenity and to reasonably mitigate possible impacts thereon, in practice new overhead lines can give rise to adverse landscape and visual impacts.”</i>	effects on the landscape through sensitive routing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The main approach to mitigating the landscape effects of tall vertical infrastructure such as towers, is through careful design and routing.
		<i>2.9.8 “These impacts depend on the type (for example, whether lines are supported by towers or monopole structures), scale, siting, and degree of screening of the lines, as well as the characteristics of the landscape and local environment through which they are routed.”</i>	The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape .
		<i>2.9.9 “New substations, sealing end compounds (including terminal towers), and other above-ground installations that serve as connection, switching, and voltage transformation points on the electricity network may also give rise to adverse landscape and visual impacts.”</i>	An overview of the baseline landscape is provided in Section 6.5 Chapter 6 Landscape .
		<i>2.9.10 “Cumulative adverse landscape, seascape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, wind farms, and/or other new sources of generation.”</i>	The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.8 Chapter 6 Landscape .
		<i>2.9.11 “Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure. Though mitigation of the landscape and visual impacts arising from overhead lines and their</i>	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered .

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for overhead lines.”</i>	
		2.9.12 <i>“In nationally designated landscapes (for instance, National Parks, The Broads and Areas of Outstanding Natural Beauty) even residual impacts may well make an overhead line proposal unacceptable in planning terms. Applicants should also offer proposals for additional mitigation.”</i>	No above ground construction or operational part of the Project would fall within the boundaries of a National Park or National Landscape (formerly Area of Outstanding Natural Beauty (AONB)) or fall within its setting.
		2.9.13 <i>“Where possible, applicants should ensure that the principles detailed in Sections 2.11.16-2.11.19 below are embodied in the design of their proposed overhead line route and its associated infrastructure. Applicants should also offer proposals (for instance those detailed in Section 2.10 below) for additional mitigation.”</i>	The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology and Chapter 6 Landscape .
		2.9.14 <i>“Where the nature or proposed route of an overhead line will likely result in particularly significant landscape and visual impacts, as would be assessed through landscape, seascape and visual impact assessment, the applicant should demonstrate that they have given due consideration to the costs and benefits of feasible alternatives to the overhead line. This could include – where appropriate – rerouting, underground or subsea cables and the feasibility e.g. in cost, engineering or environmental terms of these. Applicants should note the position on nationally designated landscapes at section 2.9.20 below.”</i>	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered .
		2.9.15 <i>“The ES should set out details of this consideration [reference to clause 2.9.14], including</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>the applicant's rationale for eschewing feasible alternatives to the overhead line, and the mitigation cost-calculation methodology that this rationale may rely upon."</i>	
		2.9.16 "The Holford Rules – guidelines for the routing of new overhead lines – were originally set out in 1959. These guidelines, intended as a common-sense approach to overhead line route design, were reviewed and updated by the industry in the 1990s, and they should be embodied in the applicants' proposals for new overhead lines."	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.
		2.9.18 "The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 to the Electricity Act 1989. These principles should be embodied in applicants' proposals for the infrastructure associated with new overhead lines."	
		2.9.23 "Additionally [reference to clause 2.9.22], cases will arise where – though no part of the proposed development crosses a designated landscape – a high potential for widespread and significant adverse landscape and/or visual impacts along certain sections of its route may result in recommendations to use undergrounding for relevant segments of the line or alternatively consideration of using a route including subsea cabling."	Areas of a high potential for widespread and significant adverse landscape effects will be identified and assessed with appropriate consideration given to undergrounding if required in Chapter 6 Landscape .
		2.9.24 "In these cases, and taking account of the fact that the government has not laid down any further rule on the circumstances requiring use of underground or subsea cables, the Secretary of State must weigh the	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered .

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>feasibility, cost, and any harm of the undergrounding or subsea option against:</i> <i>the adverse implications of the overhead line proposal;</i> <i>the cost and feasibility of re-routing overhead lines or mitigation proposals for the relevant line section;</i> <i>and the cost and feasibility of their configuration, rationalisation, and/or use of underground or subsea cabling of proximate existing or proposed electricity networks infrastructure.”</i>	
		<i>2.9.25 “In such cases the Secretary of State should only grant development consent for underground or subsea sections of a proposed line over an overhead alternative if they are satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, the mitigation hierarchy has been followed, and that any technical obstacles associated with it are surmountable. In this context it should consider:</i> <i>the landscape and visual baseline characteristics of the setting of the proposed route, in particular, the impact on high sensitivity visual receptors (as defined in the current edition of the Landscape Institute’s Guidelines for Landscape and Visual Impact Assessment), residential areas, designated landscapes, valued landscapes, designated heritage assets and Heritage Coasts (including, where relevant, impacts on the setting of designated features and areas), noting the policy in</i>	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered. Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.5 Chapter 6 Landscape. An overview of the baseline landscape is provided in Chapter 6 Landscape.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>EN-1 section 5.4.53 on regional and local designations; the additional cost of the proposed underground or sub-sea alternatives, including their significantly higher lifetime cost of repair and later uprating;</i> <i>the potentially very disruptive effects of undergrounding on local communities, habitats, archaeological and heritage assets, marine environments, soil (including peat soils), hydrology, geology, and, for a substantial time after construction, landscape and visual amenity....”</i>	
NPPF (2024) (Ref 2B.6)		15 Conserving and enhancing the natural environment <i>180 “Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan). b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland. c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate. (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.</i>	Chapter 3 Main Alternatives Considered describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.”</i>	
		<i>181 (part) “Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.”</i>	
		<i>182 “Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks,</i>	No above ground construction or operational part of the Project would fall within the boundaries of a National Park or National Landscape (formerly Area of Outstanding Natural Beauty (AONB)) or fall within its setting.
	UK MPS (2020) (Ref 2B.6)	2 Chapter 2 2.6 Detailed considerations	
		<i>2.6.5.1 “The effects of activities and developments in the marine and coastal area on the landscape, including seascape, will vary on a case-by-case basis according to the type of activity, its location and its setting. There is no legal definition for seascape in the UK but the European Landscape Convention (ELC) defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”. In the context of this document, references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other.”</i>	Given the distance of the Project from the coast and the amount of existing built development, including several large offshore wind farms, the Project would not give rise to significant adverse effects on seascape. An assessment of effects on seascape is scoped out of the EIA.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
Chapter 7 Visual	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.7 Criteria for good design for Energy Infrastructure	
		4.7.2 “Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.” 4.7.3 “Good design is also a means by which many policy objectives in the NPSs can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts such as noise. Projects should look to use modern methods of construction and sustainable design practices such as use of sustainable timber and low carbon concrete. Where possible, projects should include the reuse of material.” 4.7.6 “Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform, and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist	The Strategic Options Report (SOR) (Ref 2B.7), Corridor Preliminary Routeing and Siting Study (CPRSS) (Ref 2B.8), Chapter 3 Main Alternatives Considered, and Chapter 4 Description of the Project describe the evolution of the Project to date and demonstrate that minimising adverse effects on views and visual amenity through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development. The evolution of the Project will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES. The proposed approach to assessing the likely significant visual effects of the Project is set out in Section 7.8 of Chapter 7 Visual. This includes the approach to the assessment of visual effects for residential receptors. The proposed approach to assessing likely significant cumulative effects is explained in

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>in ensuring that such development contributes to the quality of the area.”</i>	Section 7.8 of Chapter 7 Visual .
		<i>4.7.7 “Applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.”</i>	An overview of the baseline landscape is provided in Section 6.5 of Chapter 6 Landscape and the potential visual receptors are outlined in Section 7.5 of Chapter 7 Visual .
		<i>4.7.10 “In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can</i>	The proposed approach to mitigation is explained in Chapter 5, EIA Approach and Methodology .
		<i>4.7.11 “In doing so, the Secretary of State should be satisfied that the applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.”</i>	
		<i>4.7.12 “In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process.”</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5 Generic Impacts	
		5.10 Landscape and Visual	
		5.10.13 <i>“All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites.</i>	The SOR (Ref 2B.7), CPRSS (Ref 2B.8), Chapter 3 Main Alternatives Considered , and Chapter 4 Description of the Project describe the evolution of the Project to date and demonstrate that minimising adverse effects on views and visual amenity through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development.
		5.10.14 <i>The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.”</i>	
		5.10.16 <i>“The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects (see Section 4.3). Several guides have been produced to assist in addressing landscape issues.”</i>	The evolution of the Project will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES.
		5.10.19 <i>“The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised incorporated into the design, delivery and operation of the scheme.”</i>	The approach to assessing the likely significant visual effects of the Project is set out in the proposed assessment methodology in Section 7.8 of Chapter 7 Visual .
		5.10.21 <i>“The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on dark skies, local amenity, and nature conservation.”</i>	This includes the approach to the assessment of visual effects for residential receptors and reference to lighting and night-time effects with respect to visual amenity will be made where relevant. The proposed approach to assessing likely

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.10.22 “The assessment should also address the landscape and visual effects of noise and light pollution, and other emissions (see Section 5.2 and Section 5.7), from construction and operational activities on residential amenity and on sensitive locations, receptors and views, how these will be minimised.” 5.10.25 “In considering visual effects it may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on equally sensitive receptors. This may assist the Secretary of State in judging the weight they should give to the assessed visual impacts of the proposed development.” 5.10.26 “Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant operational constraint and reduction in function – for example, electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the Secretary of State may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.” 5.10.27 “Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure	significant cumulative effects is explained in Section 7.8 Chapter 7 Visual. An overview of the potential visual receptors is provided in Section 7.5 Chapter 7 Visual. The proposed approach to mitigation is explained in Chapter 5, EIA Approach and Methodology.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>within its development site and wider setting. The careful consideration of colours and materials will support the delivery of a well-designed scheme, as will sympathetic landscaping and management of its immediate surroundings.”</i> 5.10.28 “Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines may mitigate the impact when viewed from a more distant vista.” 5.10.29 “The Secretary of State should take into consideration the level of detailed design which the applicant has provided and is secured in the Development Consent Order, and the extent to which design details are subject to future approvals.” 5.10.30 “The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives.”	
	NPS EN-5 (2024) (Ref 2B.4)	2 Assessment and Technology-Specific Information 2.2 Factors influencing site selection and design 2.2.8 “There will usually be a degree of flexibility in the location of the development’s associated substations, and applicants should consider carefully their location, as well as their design.”	Chapter 4 Description of Project describes the evolution of the Project to date and demonstrates that minimising adverse visual effects through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			will continue in the future design evolution of the Project.
		2.2.9 <i>“In particular, the applicant should consider such characteristics as the local topography, the possibilities for screening of the infrastructure and/or other options to mitigate any impacts...”</i>	Chapter 4 Description of Project describes the evolution of the Project to date and demonstrates that minimising adverse visual effects through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to mitigation is explained in Chapter 4 Description of Project.
		2.2.10 <i>“As well as having duties under Section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), applicants must take into account Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, to “have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and ...do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.”</i>	The design of the Project has sought to avoid such features through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). Chapter 4 Description of Project describes the evolution of the Project and how it demonstrates good design in its development to date. The proposed approach to assessing the likely significant visual effects of the Project is explained in Section 7.8 Chapter 7 Visual. An overview of the baseline visual environment is provided in section 7.5 of Chapter 7 Visual.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.2.11 “Depending on the location of the proposed development, statutory duties under Section 85 of the Countryside and Rights of Way Act 2000, Section 11A of the National Parks and Access to the Countryside Act 1949 (as amended by Section 62 of the Environment Act 1995), and Section 17A of the Norfolk and Suffolk Broads Act 1988 may be relevant. Applicants should note amendments to each of these provisions contained in Section 245 of the Levelling Up and Regeneration Act 2023.”	Chapter 4 Description of Project describes the evolution of the Project and how it demonstrates good design in its development to date. Chapter 2 Regulatory and Planning Policy Context sets out how the Applicant will respond to the provisions contained in Section 245 of the Levelling Up and Regeneration Act 2023.
		2.9 Applicant assessment	
		2.9.7 “While the government does not believe that the development of overhead lines is incompatible in principle with applicants’ statutory duty under Schedule 9 to the Electricity Act 1989, to have regard to visual and landscape amenity and to reasonably mitigate possible impacts thereon, in practice new overhead lines can give rise to adverse landscape and visual impacts.”	Chapter 2 Regulatory and Planning Policy Context sets out how the Applicant will respond to the provisions contained in the relevant Acts, including Section 245 of the Levelling Up and Regeneration Act 2023. The SOR (Ref 2B.7), CPRSS (Ref 2B.8), Chapter 3 Main Alternatives Considered, and Chapter 4 Description of the Project describe the evolution of the Project to date and demonstrate that minimising adverse effects on views and visual amenity through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development.
		2.9.8 “These impacts [reference to clause 2.9.7] depend on the type (for example, whether lines are supported by towers or monopole structures), scale, siting, and degree of screening of the lines, as well as the characteristics of the landscape and local environment through which they are routed.”	The evolution of the Project will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This
		2.9.9 “New substations, sealing end compounds (including terminal towers), and other above-ground installations that serve as connection, switching, and voltage transformation points on the electricity network may also give rise to adverse landscape and visual impacts.”	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.9.10 “Cumulative adverse landscape, seascape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, wind farms, and/or other new sources of generation.”	evolution will be documented in the alternatives chapter within the ES. The proposed approach to assessing the likely significant visual effects of the Project is explained in Section 7.8 Chapter 7 Visual .
		2.9.11 “Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure. Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for overhead lines.”	This includes the approach to the visual aspects of residential amenity. Reference to night time lighting with respect to residential amenity will be made where relevant. An overview of the baseline visual environment is provided in Chapter 7 Visual . The proposed approach to assessing likely significant cumulative effects is explained in Section 7.8 Chapter 7 Visual . The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology .
		2.9.13 “Applicants should also offer proposals for additional mitigation.”	
		2.9.14 “Where the nature or proposed route of an overhead line will likely result in particularly significant landscape and visual impacts, as would be assessed through landscape, seascape and visual impact assessment, the applicant should demonstrate that they have given due consideration to the costs and benefits of feasible alternatives to the overhead line....”	
		2.9.15 “The ES should set out details of this consideration [reference to clause 2.9.16], including the applicant’s rationale for eschewing feasible alternatives to the overhead line, and the mitigation cost-calculation methodology that this rationale may rely upon.”	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.9.16 “The Holford Rules – guidelines for the routing of new overhead lines – were originally set out in 1959. These guidelines, intended as a common-sense approach to overhead line route design, were reviewed and updated by the industry in the 1990s, and they should be embodied in the applicants’ proposals for new overhead lines.” 2.9.18 “The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 to the Electricity Act 1989. These principles should be embodied in applicants’ proposals for the infrastructure associated with new overhead lines.”	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project.
		2.9.23 “Additionally [reference to clause 2.9.22], cases will arise where – though no part of the proposed development crosses a designated landscape – a high potential for widespread and significant adverse landscape and/or visual impacts along certain sections of its route may result in recommendations to use undergrounding for relevant segments of the line or alternatively consideration of using a route including subsea cabling.”	Areas of a high potential for widespread and significant adverse landscape effects will be identified and assessed with appropriate consideration given to undergrounding if required and reported in Chapter 6 Landscape.
		2.9.24 “In these cases, and taking account of the fact that the government has not laid down any further rule on the circumstances requiring use of underground or subsea cables, the Secretary of State must weigh the feasibility, cost, and any harm of the undergrounding or subsea option against:	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>the adverse implications of the overhead line proposal; the cost and feasibility of re-routing overhead lines or mitigations proposals for the relevant line section; and the cost and feasibility of the reconfiguration, rationalisation, and/or use of underground or subsea cabling of proximate existing or proposed electricity networks infrastructure.”</i>	
		2.9.25 “In such cases the Secretary of State should only grant development consent for underground or subsea sections of a proposed line over an overhead alternative if they are satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, the mitigation hierarchy has been followed, and that any technical obstacles associated with it are surmountable. In this context it should consider: <i>the landscape and visual baseline characteristics of the setting of the proposed route, in particular, the impact on high sensitivity visual receptors (as defined in the current edition of the Landscape Institute’s Guidelines for Landscape and Visual Impact Assessment), residential areas, designated landscapes, valued landscapes, designated heritage assets and Heritage Coasts (including, where relevant, impacts on the setting of designated features and areas), noting the policy in EN-1 section 5.4.53 on regional and local designations;</i>	The strategic options and alternatives considered for the Project are summarised in Chapter 3 Main Alternatives Considered. Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to assessing the likely significant landscape effects of the Project is set out in the proposed assessment methodology in Section 6.5 Chapter 6 Landscape. An overview of the baseline landscape is provided in Chapter 6 Landscape.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		- the additional cost of the proposed underground or sub-sea alternatives, including their significantly higher lifetime cost of repair and later uprating; - the potentially very disruptive effects of undergrounding on local communities, habitats, archaeological and heritage assets, marine environments, soil (including peat soils), hydrology, geology, and, for a substantial time after construction, landscape and visual amenity....”	
Chapter 8 Ecology and Biodiversity	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.6 Environmental and Biodiversity Net Gain 4.3.1 “Prior to granting a development consent order, the IPC must, under the Habitats and Species Regulations ⁷⁹ , (which implement the relevant parts of the Habitats Directive and the Birds Directive ⁸⁰ in England and Wales) consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects.”	A HRA will be undertaken to determine whether the Project is likely to have a significant effect on any European designated site (now included within the national site network), or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. The HRA will inform ES Chapter 8 Ecology and Biodiversity and will be included as a separate report within the application for development consent.
		5 Generic Impacts 5.3.3 “Where the development is subject to Environmental Impact Assessment (EIA) the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and	Designations, habitats and protected species have been identified within the Baseline section of Chapter 8 Ecology and Biodiversity . The likely effects on these features (and any additional features identified) will be assessed

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>other species identified as being of principal importance for the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the Infrastructure Planning Commission (IPC)31 consider thoroughly the potential effects of a proposed project.”</i>	and reported in ES Chapter 8 Ecology and Biodiversity .
		<i>5.3.4 “The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.”</i>	Mitigation measures to ensure the conservation of ecological receptors will be reported in the ES. Where the EIA process identifies opportunities to enhance biodiversity interests these will be reported in the Ecology and Biodiversity chapter and relevant documents such as the Planning Statement submitted with the application for development consent. National Grid has committed to 10% Net Gain (BNG) in Environmental value including, as a minimum, 10% Biodiversity Net Gain across all its construction projects. A BNG assessment will be undertaken and presented in a separate BNG report that will be submitted as part of the application for development consent.
		<i>5.3.9 “The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for these sites but do not provide statutory protection for potential Special Protection Areas (SPAs) before they have been classified as a SPA. For the purposes of considering development proposals affecting them, as a matter of policy the Government wishes SPAs to be considered in the same way as if they had already been classified.</i>	Chapter 8 Ecology and Biodiversity of the ES and the HRA will consider the potential for likely significant effects on potential Special Protection Areas (SPAs) and Ramsar sites, where relevant. Design adjustments may be required as a result of the HRA process, which will be fed into the final ES/application for development consent.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>Listed Ramsar sites should, also as a matter of policy, receive the same protection.”</i>	
		<i>5.3.10 “Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.”</i>	Sites of Special Scientific Interest (SSSIs) and National Nature Reserves located within the relevant Study Area have been identified within the Baseline section of Chapter 8 Ecology and Biodiversity . Project design-development work is being carried out to protect such sites by avoidance where possible, with mitigation being identified in the event that impacts are unavoidable.
		<i>5.3.17 “Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and thereby requiring conservation action. The IPC should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.”</i>	Chapter 8 Ecology and Biodiversity of the ES will consider other notable habitats and species (e.g. habitats of principal importance) as part of the assessment. The ES will also detail any mitigation that will be undertaken to protect such features.
		<i>5.3.18 “The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:</i>	Chapter 8 Ecology and Biodiversity of the ES will set out information on how the development will minimise working areas during construction, follow best practice during construction and operation to avoid or minimise

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements; habitats will, where practicable, be restored after construction works have finished; and opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals”.	disturbance or damage to species or habitats, restore habitats following construction/maintenance activities and where possible identify opportunities to enhance existing habitats and create new biodiverse habitats. Consultation will be held with relevant Statutory Nature Conservation Body (SNCB)/stakeholders throughout the project to discuss and agree the required mitigation and opportunities for enhancement.
NPS EN-1 (2024) (Ref 2B.1)		5.4.13 “National planning policy expects plans to identify and map Local Wildlife sites, and to include policies that not only secure their protection from harm or loss but also help to enhance them and their connection to wider ecological networks.”	Chapter 8 Ecology and Biodiversity of the ES will consider potential impacts on designated sites of ecological importance, including sites of regional and local biodiversity interest.
		5.4.15 “Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Ancient or veteran trees found outside ancient woodland are also particularly valuable. Other types of irreplaceable habitats include blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.”	Chapter 8 Ecology and Biodiversity of the ES will set out mitigation measures to protect ancient woodland, ancient/veteran trees and other types of habitat that are considered irreplaceable as far as reasonably practicable.
		5.4.21 “As set out in Section 4.6, the design process should embed opportunities for nature inclusive design. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains (see Section 4.5 on Environmental and Biodiversity Net Gain). The	As the Project and design evolves, opportunities for inclusive design for nature, both as part of BNG and beyond, will be sought and included. These will be set out within the Chapter 8 Ecology and Biodiversity of the ES and appropriate appendices.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>scope of potential gains will be dependent on the type, scale, and location of each project.”</i>	
		<i>5.4.22 “The design of Energy NSIP proposals will need to consider the movement of mobile/migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development.”</i>	Chapter 8 Ecology and Biodiversity of the ES will consider potential impacts on mobile and migratory species as part of the assessment. Mitigation measures will be embedded in the Project design with the aim to enable the continued movement of species, including birds, fish, aquatic and terrestrial mammals. This will be detailed in the Chapter 8 Ecology and Biodiversity and within appropriate appendices. Surveys for breeding and migratory/over-wintering birds, and other mobile species as appropriate, will be conducted and will inform the HRA process and the assessments presented in the ES.
		<i>5.4.30 “Applicants should work closely at an early stage in the pre-application process with SNCB and Defra/Welsh Government to develop a compensation plan for all protected sites adversely affected by the development.”</i>	Natural England will be consulted on the proposed mitigation measures for protected sites that could be adversely impacted by the Project.
		<i>5.4.34 “Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance. This may include considerations and opportunities identified through Local Nature Recovery Strategies, and national goals</i>	As the Project and design evolves, opportunities for inclusive design for nature, both as part of BNG and beyond, will be sought and included. These will be set out within the Chapter 8 Ecology and Biodiversity of the ES and appropriate appendices.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>and targets set through the government's strategy for nature for example."</i>	
NPS EN-5 (2024) (Ref 2B.4)		2 Assessment and Technology-Specific Information 2.7 <i>"The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the Environmental Impact Assessment (EIA) and ES (see Section 4.2 of EN-1). Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds."</i> 2.10.1 and 2.10.2 (part) <i>"...Large birds may also be electrocuted when landing or taking off by completing an electric circuit between live and ground wires. Even perching birds can be killed as soon as their wings touch energised parts of the infrastructure...The Applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the ES (see Section 4.2 of EN-1). Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds, where they are functionally linked to sites designated or allocated under the 'national site network' provisions of the Conservation of Habitats and Species Regulations."</i> 2.10.3 <i>"Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably."</i>	ES Chapter 8 Ecology and Biodiversity will consider potential impacts on species. Consideration will be given to feeding and hunting grounds, migration corridors and breeding grounds. ES Chapter 8 Ecology and Biodiversity will consider potential impacts on birds. Particular consideration will be given to feeding and hunting grounds, migration corridors and breeding grounds, where they are functionally linked to sites designated or allocated under the 'national site network' provisions of the Habitats Regulations 2017. Bird collision risk will be considered in the ES and this will be informed by appropriate surveys and assessment, as set out in Chapter 8 Ecology and Biodiversity. Consultation will

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.10.4 “Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision can also reduce the number of deaths. The design and colour of the diverters will be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk”. 2.10.5 “Electrocution risks can be reduced through the design of crossarms, insulators and the construction of other parts of high voltage power lines so that birds find no opportunity to perch near energised power lines on which they might electrocute themselves.”	be sought with key stakeholders regarding the ongoing baseline surveys, assessment methods and the identification of key risks and acceptable strategies for their avoidance and mitigation. The risk of electrocution will be considered in the ES and any mitigation requirements will be reported. This will be informed by appropriate surveys and assessment, as set out in Chapter 8 Ecology and Biodiversity. Consultation will be sought with key stakeholders regarding the ongoing baseline surveys, assessment methods and the identification of key risks and acceptable strategies for their avoidance and mitigation.
NPPF (2024) (Ref 2B.6)		15 Conserving and enhancing the natural environment The NPPF, with particular reference to Section 15 and paragraphs 187, 188, 192, 193-195 and 198, states that the planning system should contribute to and enhance the natural and local environment by “<i>minimising impacts on and providing net gains for biodiversity</i>”. The NPPF is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.	ES Chapter 8 Ecology and Biodiversity will consider potential impacts on designated sites of ecological importance, including sites of regional and local biodiversity interest.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		The NPPF also specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this is to be delivered in the planning system, including those that are potential, possible, listed or proposed sites. It states that: <i>189 “Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and National Landscapes which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads66. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.</i> Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required.	
	Natural Environment National Planning	Natural Environment NPPG The NPPG on the Natural environment provides additional guidance to the NPPF. Guidance of particular relevance to biodiversity and the natural	As the Project and design evolves, opportunities for inclusive design for nature, both as part of BNG and beyond, will be sought

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	Practice Guidance (NPPG) (2024) (Ref 2B.9)	environment includes Paragraphs 10 to 35 which set out how development plans and planning decisions have the potential to affect biodiversity and how individual development proposals may provide opportunities to conserve and enhance biodiversity and contribute to habitat connectivity in the wider area.	and included. These will be set out within Chapter 8 Ecology and Biodiversity of the ES and appropriate appendices.
	UK MPS (2020) (Ref 2B.5)	2.6 Detailed considerations Paragraph 2.6.1.1 requires marine plan authorities to be ensure, i) a halting and if possible, a reversal of biodiversity loss; and ii) the acceptance of biodiversity's role in enhancing the quality of life. 2.6.4 Ecological and chemical water quality and resources Paragraph 2.6.4.1 identifies that developments and other activities at the coast and at sea can have adverse effects on transitional waters, coastal waters and marine waters. During the construction, operation and decommissioning phases of developments, there can be increased demand for water, discharges to water and adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants into the water environment and the likelihood of transmission of invasive non-native species, for example through construction equipment, and their impacts on ecological water quality need to be considered. 2.6.4 Ecological and chemical water quality and resources	As the Project and design evolves, opportunities for inclusive design for nature, both as part of BNG and beyond, will be sought and included. These will be set out within Chapter 8 Ecology and Biodiversity of the ES and appropriate appendices. Effects on protected habitats and species and groundwaters are assessed in Chapter 8 Ecology and Biodiversity and Chapter 11 Geology and Hydrogeology respectively.
	East Inshore and East Offshore Marine Plans	Policy BIO1 seeks to ensure appropriate weight is attached to biodiversity, reflecting the need to protect biodiversity as a whole in the East marine plans and adjacent areas (marine and terrestrial).	As the Project and design evolves, opportunities for inclusive design for nature, both as part of BNG and beyond, will be sought and included. These will be set out within

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	(2014) (Ref 2B.16)	Policy BIO2 requests that enhancement of biodiversity and geological interests are incorporated into development; and Policy MPA1 requires that any impacts on the overall Marine Protected Area network is taken account of.	Chapter 8 Ecology and Biodiversity of the ES and appropriate appendices.
Chapter 9 Cultural Heritage		5 Generic Impacts	
		5.9 Historic Environment	
		Paragraphs 5.9.2 to 5.9.7 establish the definitions for the historic environment, designated and non-designated heritage assets, the heritage significance (value) of heritage assets derived from their historic, archaeological, architectural or artistic interest and the concepts of physical presence and setting. These definitions are aligned with those set out in the NPFF, notably the glossary set out in Appendix 2.	A desk-based assessment and ES Chapter 9 Cultural Heritage will utilise the terminology and definitions for the historic environment set out in the NPS.
		<i>5.9.9 “The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these along with how the mitigation hierarchy has been applied in the ES (see Section 4.3 [of the NPS]). This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.”</i>	A desk-based assessment will establish the baseline conditions and the ES chapter will provide the assessment of likely significant impacts to the heritage assets and the historic landscape. The methodology for the assessment is set out in Chapter 9 Cultural Heritage of this Scoping Report.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.9.10 <i>“The applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record (HER) (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development’s impact.”</i>	A desk-based assessment will establish the baseline cultural heritage resource and the results of this will be included in Chapter 9 Cultural Heritage of the ES. The desk-based assessment will assess the significance of all relevant known heritage assets likely to be impacted by the Project, including any contribution from their setting. It will include a review of data held by the relevant Historic Environment Records (HERs) as well as an assessment of the potential for previously unrecorded archaeological remains to be present. Furthermore, it will assess the significance (i.e. sensitivity) of the surrounding historic landscape. ES Chapter 9 Cultural Heritage will assess the potential likely significant effects of the Project on each individual asset.
		5.9.11 <i>“Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.”</i>	A desk-based assessment will be carried out and the results of this included ES Chapter 9 Cultural Heritage . The approach to undertaking archaeological evaluation and surveys has been set out in the Weston Marsh to East Leicestershire Heritage Survey Strategy and the scope of appropriate archaeological evaluation including fieldwork will be discussed with consultees and, if required, the results will be included in the ES.
		Paragraphs 5.9.16 to 5.9.21 establish the requirements for the mitigation of impacts arising from infrastructure projects. They establish that retention of heritage assets is preferable to a documentary record	The desk-based assessment will establish the potential for as yet undiscovered heritage assets with archaeological interest to survive within the draft Order Limits and their likely

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		and that the ability to record a heritage asset should not be a factor in determining whether its loss should be permitted. Where the loss of a heritage asset (wholly or partially) is justified the Secretary of State will require applicants to record and advance the understanding of the significance of the asset prior to its loss and that the requirements for recording should be proportionate to the asset's importance and significance of the impact. The requirement is also established for applicants to publish the results of any recording undertaken and make publicly assessable through the deposition of reports and the archival material with relevant HERs and museums. As is the means by which Secretary of State should consider securing the required recording e.g., through requirements imposed through the DCO or by obligations made by applicants. Finally, these sections make clear provision for the Secretary of State to consider requirements to ensure procedures are in place identifying and dealing with as yet undiscovered heritage assets with archaeological interest encountered during construction.	significance. ES Chapter 9 Cultural Heritage will make provision for proportionate mitigation measures, both those embedded within the Project's design and additional measures. These mitigation measures will be considered during the assessment of significant effects arising from the Project.
		Paragraphs 5.9.22 to 5.9.36 concern decision making by the Secretary of State in relation to heritage assets. They establish that, in determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, (Paragraph 5.9.22).	ES Chapter 9 Cultural Heritage will include an assessment of the significance of all heritage assets, including the contribution setting makes to that significance and will assess the impact of the Project on the significance of affected heritage assets and the potential for any harm or loss to occur.

In considering the impact of a proposed development

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		on any heritage assets, the NPS Secretary of State should consider the particular nature of the significance of the heritage assets (Paragraph 5.9.24), the desirability of sustaining and, where appropriate, enhancing the significance and setting of heritage assets (Paragraph 5.9.25), and the desirability for new development to make a positive contribution to the character and local distinctiveness of the historic environment (Paragraph 5.9.26). Paragraphs 5.9.27 and 5.9.28 align with the policies of the NPPF establishing that the Secretary of State should give great weight to the conservation of heritage assets, with greater weight given to assets of greater importance, irrespective of the scale of any potential harm. Any harm or loss of significance of a designated heritage asset should require clear and convincing justification. Paragraphs 5.9.29 to 5.9.30 expand on this, establishing the concept that substantial harm to or loss of significance of a grade II Listed Building or grade II Registered Park or Garden should be exceptional and that substantial harm to or loss of significance of assets of the highest significance should be wholly exceptional. Where proposed development will lead to less than substantial harm to the significance of the designated heritage asset Paragraph 5.9.32 directs that the harm should be weighed against the public benefits of the proposal. With regard to weighing applications that directly or	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		indirectly affect non-designated heritage assets Paragraph 5.9.33 calls for a balanced judgement between the scale of any harm or loss and the significance of the heritage asset. Finally, when considering development that affects the setting of a designated heritage asset, Paragraph 5.3.36 concludes that Secretary of State should give appropriate weight to the desirability of preserving the setting such assets, weighing them against the wider benefits of the application.	
Chapter 10 Water Environment	NPS EN-1 (2024) (Ref 2B.1)	5 Generic Impacts 5.8 Flood Risk	
		<i>5.8.9 “If, following application of the Sequential Test, it is not possible, (taking into account wider sustainable development objectives), for the project to be located in areas of lower flood risk the Exception Test can be applied as defined in https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2. The test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.”</i>	The Flood Risk Assessment (FRA) will detail the sequential approach and apply the Sequential Test for areas of the project to be located in areas of lower flood risk. All applicable sources of flooding to and arising from the Project will be assessed and where applicable, apply the Exception Test.
		<i>5.8.10 “The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site. It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would</i>	As above, the FRA will detail where the Exception Test is required to assess the acceptability of those aspects of the Project which must be sited in areas of higher flood risk.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>provide a clear reason for refusing development in any alternative locations identified. Examples could include alternative site(s) that are subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), SSSIs and World Heritage Sites (WHS) which would not usually be considered appropriate.”</i>	
		5.8.13 “A site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England or Zones B and C in Wales. In Flood Zone 1 in England or Zone A in Wales, an assessment should accompany all proposals involving: sites of 1 hectare or more land which has been identified by the EA or NRW as having critical drainage problems land identified (for example in a local authority strategic flood risk assessment) as being at increased flood risk in future land that may be subject to other sources of flooding (for example surface water) where the EA or NRW, Lead Local Flood Authority, Internal Drainage Board or other body have indicated that there may be drainage problems.”	An overview of baseline flood risk within the Scoping Boundary is described in Chapter 10 Water Environment. The application for development consent will be supported by an FRA that will inform the Project design and the findings of the ES.
		5.8.14 “This assessment should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account”.	The FRA will assess all applicable sources of flooding to and arising from the Project and identify any mitigation measures required to ensure flood resilience, taking climate change into account, and to prevent any off-site impacts.
		5.8.18 “Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions before the official pre-	Discussions will be held with the Environment Agency, the Lead Local Flood Authorities and Internal Drainage Boards to agree the FRA

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>application stage of the Nationally Significant Infrastructure Project (NSIP) process with the EA or NRW, and, where relevant, other bodies such as Lead Local Flood Authorities, Internal Drainage Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners and operators.”</i>	scope and to request baseline flood risk data. Engagement will continue throughout the EIA.
		<i>5.8.19 “Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be required by the Secretary of State to reach a decision on the application when it is submitted. The Secretary of State should advise applicants to undertake these steps where they appear necessary but have not yet been addressed.”</i>	
		<i>5.8.21 “The Sequential Test ensures that a sequential, risk- based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites with medium risk areas and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.”</i>	Discussions will be held to ensure the substation and overhead line design follows the sequential approach to ensure new development is in areas with the lowest risk of flooding, taking into account all sources of flood risk and climate change.
		<i>5.8.22 “The technology specific NPSs set out some exceptions to the application of the Sequential Test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not</i>	Exceptions to the Sequential Test are available for technology specific NPSs. These exceptions will be further discussed throughout the EIA process and detailed within the application for development consent.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>apply the Sequential Test, provided the proposed development is consistent with the use for which the site was allocated and there is no new flood risk information that would have affected the outcome of the test.”</i>	
		5.8.23 “Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.3 above. All projects should apply the Sequential Test to locating development within the site.”	The FRA will apply the sequential approach to location development in areas at lowest risk of flooding from all sources.
		5.8.29 “The sequential approach should be applied to the layout and design of the project. Vulnerable aspects of the development should be located on parts of the site at lower risk and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.”	
		5.16 Water Quality and Resources	
		5.16.1 “Infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters coastal and marine waters.”	The water environment assessment will consider the potential for likely significant effects on surface water quality, water resources and flood risk receptors during the construction, operation, and maintenance of the Project. The proposed scope of the assessment is provided in Chapter 10 Water Environment . The assessment will be based on the current and future baseline, accounting for climate change, as presented in this chapter. Effects on protected habitats and
		5.16.2 “During the construction, operation, and decommissioning phases, development can lead to increased demand for water, involve discharges to water and cause adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants to the water environment. These effects	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>could lead to adverse impacts on health or on protected species and habitats (see Section 4.3) and could result in surface waters, groundwaters or protected areas failing to meet environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and the Marine Strategy Regulations 2010.”</i>	species and groundwaters are assessed in Chapter 8 Ecology and Biodiversity and Chapter 11 Geology and Hydrogeology respectively.
		<i>5.16.3 “Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment, and how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment, as part of the ES or equivalent (see Section 4.3 and 4.10).”</i>	Current understanding of the existing status of these aspects of the water environment is presented in Chapter 10 Water Environment . The potential for likely significant effects on water quality, water resources and the physical characteristics of the water environment is discussed in Chapter 10 Water Environment .
		<i>5.16.14 “The Secretary of State should be satisfied that a proposal has regard to current River Basin Management Plans and meets the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19). The specific objectives for particular river basins are set out in River Basin Management Plans. The Secretary of State must refuse development consent where a project is likely to cause deterioration of a water body or its failure to achieve good status or good potential, unless the requirements set out in Regulation 19 are met. A project may be approved in the absence of a qualifying Overriding Public. Interest test only if there is sufficient certainty</i>	The Project will prepare a Water Framework Directive Compliance Assessment with reference to the relevant River Basin Management Plan. The assessment will appraise the potential for the Project to cause waterbody status deterioration or limit future achievement of good status/potential and will describe measures to avoid or reduce these risks.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>that it will not cause deterioration or compromise the achievement of good status or good potential.”</i> 5.16.15 “The Secretary of State should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline Management Plans.” 5.16.16 “The Secretary of State should consider proposals to mitigate adverse effects on the water environment and any enhancement measures put forward by the applicant and whether appropriate requirements should be attached to any development consent and/or planning obligations are necessary.”	The Baseline Conditions Section of Chapter 10 Water Environment presents data from the relevant River Basin Management Plans, A Water Framework Directive Compliance Assessment will be prepared to inform the ES, that will be informed by relevant Water Resource and Humber Estuary Management Plans. Measures to mitigate adverse effects on the water environment are described in Section 10.6 of Chapter 10 Water Environment These will be further developed throughout the EIA process and secured within the application.
NPS EN-5 (2024) (Ref 2B.4)		2 Assessment and Technology-Specific Information 2.3 Climate change adaptation and resilience 2.3.2 “As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it has been designed to be resilient to: flooding, particularly for substations that are vital to the network; and especially in light of changes to groundwater levels resulting from climate change; the effects of wind and storms on overhead lines;	The FRA will assess all applicable sources of flooding to the Project and identify any mitigation measures required to ensure flood resilience, taking climate change into account in accordance with current Environment Agency guidance. In respect of other climate variables, Appendix 18A Climate Change Resilience Screening Assessment sets out a screening assessment for the current stage of the Project to inform this Scoping assessment. The Screening Assessment sets out the potential impacts of

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>higher average temperatures leading to increased transmission losses;</i> <i>earth movement or subsidence caused by flooding or drought (for underground cables); and</i> <i>coastal erosion – for the landfall of offshore transmission cables and their associated substations in the inshore and coastal locations respectively.”</i>	current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone Climate Change Resilience assessment from the EIA based on proposed Design, Control and Management Measures. Further embedded design measures should be developed as the Project design evolves through engagement with the engineering design team and included in the Design Principles document which will be established to inform the development of the Project design for both construction and operation. On this basis, no further assessment of the Project’s vulnerability to climate change is required in the ES.
		<i>2.3.3 “Section 4.10 of EN-1 advises that the resilience of the project to the effects of climate change should be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment (see Section 5.8 in EN-1). Consideration should also be given to coastal change (see sections 5.6 in EN-1).”</i>	As noted above, the FRA prepared for the Project will examine future flood risk over the development lifetime, and identify mitigation measures required to ensure flood resilience, taking climate change into account.
NPPF (2024) (Ref 2B.6)		14 Meeting the challenge of climate change, flooding and coastal change The NPPF provides relevant guidance on a range of issues, including the definition of flood zones, development vulnerability classifications, compatibility of development types and flood zones, and guidance on the application of the flood risk Sequential and Exception Tests.	The assessment will be undertaken in accordance with and with reference to the NPPF and its accompanying Flood Risk and Coastal Change; and Water Quality and Supply NPPG. Although the NPSs are the primary source of statutory planning guidance for

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			NSIPs, NPPF guidance may also be material in determining applications for development consent.
	Flood Risk and Coastal Change NPPG (2022) (Ref 2B.10) and Water Quality and Supply NPPG (2019) (Ref 2B.11)	Flood Risk and Coastal Change and Water Quality and Supply NPPG The NPPG provides relevant guidance on a range of issues, including the definition of flood zones, development vulnerability classifications, compatibility of development types and flood zones, and guidance on the application of the flood risk Sequential and Exception Tests.	The assessment will be undertaken in accordance with and with reference to the NPPF and its accompanying Flood Risk and Coastal Change; and Water Quality and Supply NPPG. Although the NPSs are the primary source of statutory planning guidance for NSIPs, NPPF guidance may also be material in determining applications for development consent.
Chapter 11 Geology and Hydrogeology	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.12 Pollution Control and Other Environmental Regulatory Regimes	
Chapter 12 Agriculture and Soils		Section 4.12 of NPS EN-1 states that proposals should be considered within the context of existing pollution control regimes.	The interface with other pollution control regimes is covered in Chapter 11 Geology and Hydrogeology .
Chapter 13 Traffic and Movement		5 Generic Impacts 5.4 Biodiversity and Geological Conservation	
		5.4.7 “Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation,	Chapter 11 Geology and Hydrogeology explains the approach in relation to geological conservation.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>should be given a high degree of protection. Most National Nature Reserves are notified as SSSIs.”</i> 5.4.12 “Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature’s recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution.” 5.4.19 “The applicant should show how the project has taken advantage of opportunities to conserve and enhance geological conservation interests.” 5.11 Land Use, Including Open Space, Green Infrastructure, and Green Belt 5.11.8 “The ES (see Section 4.3) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate to the scale of the preferred scheme and its likely impacts on such receptors. For developments on previously developed land, the applicant should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.”	Chapter 11 Geology and Hydrogeology explains the approach in relation to land contamination. Proposed methodology accords with relevant guidance, including Design Manual for Roads and Bridges (DMRB) Sustainability and Environment Appraisal LA 109 Geology and soils” (2019).

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.16 Water Quality and Resources Assessments should consider the physical and chemical characteristics of groundwater and its importance as a resource, with reference to abstractions, discharges and drinking water Source Protection Zone (SPZ). Section 5.16 of NPS EN-1 states that: 5.16.7 <i>“The ES should in particular describe: ... the existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment Framework Directive) (England and Wales) Regulations 2017 and source protection zones (SPZs) around potable groundwater abstractions”</i>	Chapter 11 Geology and Hydrogeology covers the aspects of groundwater referred to in this policy.
	NPS EN-5 (2024) (Ref 2B.4)	2 Assessment and Technology-Specific Information 2.2 Factors influencing site selection and design 2.2.10 <i>“As well as having duties under Section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), applicants must take into account Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, to “have regard to the desirability of</i>	Chapter 9 Cultural Heritage (Proposed Assessment Methodology) explains the approach in relation to protecting sites, buildings and objects of architectural, historic or archaeological interest. Section 11.8 in Chapter 11 Geology and Hydrogeology (Proposed Assessment

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and ...do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.”</i>	Methodology) explains the approach in relation to geological conservation.
		2.3 Climate change adaptation and resilience	Chapter 11 Geology and Hydrogeology explains the approach in relation to groundwater and flooding.
		Paragraph 2.3.2 of NPS EN-5 specifies, with regards to climate change adaptation and resilience, applicants must detail the extent to which the proposed development is expected to be vulnerable and, where appropriate, how it has been designed to be resilient to flooding, particularly for substations critical to the network, and especially in light of changes to groundwater levels resulting from climate change, and earth movement or subsidence caused by flooding for underground cables.	Chapter 11 Geology and Hydrogeology explains the approach in relation to groundwater and flooding.
		2.9 Applicant assessment	
		<i>2.9.25 “...the Secretary of State should only grant development consent for underground or subsea sections of a proposed line over an overhead alternative if they are satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, the mitigation hierarchy has been followed, and that any technical obstacles associated</i>	Section 11.8 in Chapter 11 Geology and Hydrogeology (Proposed Assessment Methodology) explains the approach in relation to geological conservation.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>with it are surmountable. In this context it should consider:</i> <i>...the applicant's commitment, as set out in their ES, to mitigate the potential detrimental effects of undergrounding works on any relevant agricultural land and soils (including peat soils), particularly regarding Best and Most Versatile land, including development and implementation of a Soil Resources and Management Plan. Such a commitment must guarantee appropriate handling of soil, backfilling, and return of the land to the baseline Agricultural Land Classification (ALC), thus ensuring no loss or degradation of agricultural land. Such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites."</i>	
NPPF (2024) (Ref 2B.6)		15 Conserving and enhancing the natural environment 189 <i>"Planning policies and decisions should ensure that:</i> <i>(a) site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation)."</i>	Section 11.8 in Chapter 11 Geology and Hydrogeology (Proposed Assessment Methodology) explains how risks from contamination, remediation and historical mining will be assessed.
		5 Generic Impacts 5.11 Land Use, Including Open Space, Green Infrastructure, and Green Belt	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	NPS EN-1 (2024) (Ref 2B.1)	5.11.12 <i>“Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferable use land in areas of poorer quality (grades 3b, 4 and 5).”</i>	The extent of Best Most Versatile (BMV) land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design.
		5.11.13 <i>“Applicants should also identify any effects and seek to minimise impacts on soil health and protect and improve soil quality taking into account any mitigation measures proposed.”</i>	The likely impacts on BMV land will be assessed as part of Chapter 10 Agriculture and Soils of the ES, with mitigation measures set out to minimise as far as practicable the effects.
		5.11.14 <i>“Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination. The sustainable reuse of soils needs to be carefully considered in line with good practice guidance where large quantities of soils are surplus to requirements or are affected by contamination.”</i>	The mitigation measures will include the requirement for a Soil Management Plan in line with published guidance, which will form part of the Construction Environmental Management Plan (CEMP). Risks posed by land contamination are assessed in Chapter 11 Geology and Hydrogeology .
		5.11.34 <i>“The Secretary of State (SoS) should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. Where schemes are to be sited on best and most versatile agricultural land the Secretary of State should take into account the economic and other benefits of that land. Where development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.”</i>	The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The likely impacts on BMV land will be assessed as part of Chapter 10 Agriculture and Soils of the ES, with mitigation measures set out to minimise as far as practicable the effects.

2 Assessment and Technology-Specific Information

2.9 Applicant assessment

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	NPS EN-5 (2024) (Ref 2B.4)	2.9.25 (final bullet point) “...the applicant’s commitment, as set out in their ES, to mitigate the potential detrimental effects of undergrounding works on any relevant agricultural land and soils (including peat soils), particularly regarding Best and Most Versatile land, including development and implementation of a Soil Resources and Management Plan. Such a commitment must guarantee appropriate handling of soil, backfilling, and return of the land to the baseline Agricultural Land Classification (ALC), thus ensuring no loss or degradation of agricultural land. Such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites”.	There is currently no undergrounding proposed across the Project. However, the extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised through the evolution of the design. If undergrounding is to occur, the likely impacts on BMV land from undergrounding will be assessed as part of Chapter 10 Agriculture and Soils of the ES, with mitigation measures aligned to published guidance to ensure handling methodologies are appropriate to the soil type, that, where practicable, double handling is avoided and where soils are being reinstated the correct profile is recreated which is suitable for the proposed end land use. The mitigation measures will include the requirement for a Soil Management Plan in line with published guidance, which will form part of the CEMP as outlined in the Initial Outline CoCP (Appendix 4B) .
		2.9.58 “There is little evidence that exposure of crops, farm animals or natural ecosystems to transmission line EMFs [Electric and Magnetic Fields] (EMFs) has any agriculturally significant consequences.”	The potential effects of EMFs are proposed to be scoped out of the assessment. Where indirect effects to sensitive land uses (such as riding manèges) are identified, additional conductor clearances will be applied as part of the design.
	NPPF (2024) (Ref 2B.6)	15 Conserving and enhancing the natural environment 180 “Planning policies and decisions should contribute to and enhance the natural and local environment by:	The likely impacts on BMV land will be assessed as part of Chapter 10 Agriculture

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils [...]; recognising the intrinsic character and beauty of the countryside...including the economic and other benefits of the BMV agricultural land [...]; [...]</i> <i>(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.”</i> <i>Footnote of 181 “Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.”</i>	and Soils of the ES. Mitigation measures will be set out to minimise as far as practicable the effects. Potential effects upon sites of geological value will be identified in Chapter 11 Geology and Hydrogeology.
			The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design.
	NPS EN-1 (2024) (Ref 2B.1)	5 Generic Impacts 5.14 Traffic and Transport <i>5.14.4 “The consideration and mitigation of transport impacts is an essential part of Government’s wider policy objectives for sustainable development as set out in Section 2.6 of this NPS.”</i> <i>5.14.5 “If a project is likely to have significant transport implications, the applicant’s ES (see Section 4.3) should include a transport appraisal. The DfT’s Transport Analysis Guidance (TAG) and Welsh Governments WeTAG provides guidance on</i>	The Project’s transport impacts will be fully assessed and set out within an ES and Transport Assessment (TA). A TA will be produced to model and assess the impacts of the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>modelling and assessing the impacts of transport schemes.”</i>	
		5.14.6 “National Highways and Highways Authorities are statutory consultees on NSIP applications including energy infrastructure where it is expected to affect the strategic road network and / or have an impact on the local road network. Applicants should consult with National Highways and Highways Authorities as appropriate on the assessment and mitigation to inform the application to be submitted.”	National Highways and Local Highway Authorities will be consulted in developing the TA and ES chapter for the Project.
		5.14.7 “The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to: • reduce the need for parking associated with the proposal; • contribute to decarbonisation of the transport network; and • improve user travel options by offering genuine modal choice.”	A Construction Traffic Management Plan (CTMP) and Construction Workers Travel Plan (CWTP) will be produced.
		5.14.8 “The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).”	The ES and TA will consider all relevant modes and assess the impacts of the Project.
		5.14.10 “Applicants should discuss with network providers the possibility of co-funding by government for any third-party benefits. Guidance has been issued which explains the circumstances where this may be possible, although the government cannot guarantee	As part of discussions with network operators, any such opportunities will be identified and explored (where merited). Opportunities that are agreed to be incorporated into the Project and set out in the TA and ES.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>in advance that funding will be available for any given uncommitted scheme at any specified time.”</i>	
		5.14.11 “Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to: • reduce the need to travel by consolidating trips • locate development in areas already accessible by active travel and public transport • provide opportunities for shared mobility • re-mode by shifting travel to a sustainable mode that is more beneficial to the network • retime travel outside of the known peak times • reroute to use parts of the network that are less busy.”	Mitigation measures will be set out in the Transport Assessment, Construction Traffic Management Plan and Construction Worker Travel Plan.
		5.14.12 “If feasible and operationally reasonable, such mitigation should be required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. All stages of the project should support and encourage a modal shift of freight from road to more environmentally sustainable alternatives, such as rail, cargo bike, maritime and inland waterways, as well as making appropriate provision for and infrastructure needed to support the use of alternative fuels including charging for electric vehicles.”	
		5.14.13 “Regard should always be given to the needs of freight at all stages in the construction and operation of the development including the need to provide appropriate facilities for HGV drivers as appropriate.”	The CTMP will set out the relevant information of transport routing and compound locations. Welfare requirements for drivers fall outside the scope of this study topic.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.14.14 <i>“The Secretary of State may attach requirements to a consent where there is likely to be substantial HGV traffic that:</i> • control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements • make sufficient provision for HGV parking, and associated high quality drive facilities either on the site or at dedicated facilities elsewhere, to support driver welfare, avoid ‘overspill’ parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions • ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.”	Controls of timing and routing of Heavy Goods Vehicle (HGV) movements as well as parking will be set out within the Transport Assessment, CTMP and Construction Worker Travel Plan.
		5.14.15 <i>“The Secretary of State should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures.</i>	Demand management measures, where appropriate, will be considered as part of the transport strategy and set out in the TA.
		5.14.16 <i>Applicants should consider the DfT policy guidance “Water Preferred Policy Guidelines for the movement of abnormal indivisible loads” when preparing their application.”</i>	
		5.14.18 <i>“A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Secretary of State should</i>	Impacts will be assessed and mitigation considered through the ES, TA, CTMP, CWTP,

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility.”</i>	CEMP and Public Rights of Way Management Plan.
		<i>5.14.21 “The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.”</i>	The Project impacts shall be assessed and set out within the ES and TA.
NPPF (2024) (Ref 2B.6)	9 Promoting sustainable transport	<i>109 “Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve: understanding and addressing the potential impacts of development on transport networks;; realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage [...]”</i>	The Project will seek to utilise existing infrastructure where feasible.
		<i>116 “Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios..”</i>	The Project impact will be fully assessed and set out within the ES and TA.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		117 “All developments that will generate significant amounts of movement should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed.”	A TA will be prepared and assess impacts. Where required, mitigation measures will be put in place through the CTMP and CWTP to reduce impacts.
	Travel Plans, Transport Assessments and Statements NPPG (2014) (Ref 2B.12)	Travel Plans, Transport Assessments and Statements NPPG The NPPG includes guidance relating to Travel Plans, Transport Assessments and Statements. This includes the scope and level of detail to be included.	NPPG guidance has been considered in the preparation of the Travel Plans and the TA.
Chapter 14 Air Quality	NPS EN-1 (2024) (Ref 2B.1)	5 Generic Impacts 5.2 Air Quality and Emissions 5.2.9 “The ES should describe: - existing air quality concentrations and the relative change in air quality from existing levels; - any significant air quality effects, mitigation action taken and any residual effects, distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project; - the predicted absolute emissions, concentration change and absolute concentrations as a result of the proposed project, after mitigation methods have been applied; and - any potential eutrophication impacts.”	Should screening of traffic data for any of the Project stages indicate detailed assessment is required, then dispersion modelling will be undertaken as part of the air quality assessment (Chapter 14 Air Quality) to determine the change in pollutant concentrations as a result of the Project at relevant human and ecological receptor locations.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.7 Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation	
		<i>5.7.1 “During the construction, operation and decommissioning of energy infrastructure there is potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects. All have the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990. However, they are not regulated by the environmental permitting regime, so mitigation of these impacts will need to be included in the Development Consent Order.”</i>	The air quality assessment will consider the effects and resulting impacts associate with the Project. The approach to mitigation is described in the Design and Control Measures section of Chapter 14 Air Quality .
Chapter 15 Noise and Vibration	NPS EN-1 (2024) (Ref 2B.1)	5 Generic Impacts	
		5.12 Noise and Vibration	
		<i>5.12.1 “Excessive noise can have wide-ranging impacts on the quality of human life and health such as annoyance, sleep disturbance, cardiovascular disease and mental ill- health. It can also have an impact on the environment and the use and enjoyment of areas of value such as quiet places and areas with high landscape quality.”</i>	The principles in this section will be followed through the Scoping and ES.
		<i>5.12.2 “The Government’s policy on noise is set out in the Noise Policy Statement for England. It promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. In this section, in line with current legislation, references to “noise” below apply equally to the assessment of impacts of vibration”.</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		5.12.4 “Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed by the Secretary of State in accordance with the Biodiversity and Geological Conservation section of this NPS at Section 5.4. This should consider underwater noise and vibration especially for marine developments. Underwater noise can be a significant issue in the marine environment, particularly in regard to energy production.”	The effects of noise and vibration on ecological receptors will be considered within Chapter 8 Ecology and Biodiversity.
		5.12.6 “Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: • a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal characteristics, if the noise is impulsive, whether the noise contains particular high or low frequency content or any temporal characteristics of the noise; • identification of noise sensitive premises and noise sensitive areas that may be affected; • the characteristics of the existing noise environment; • a prediction of how the noise environment will change with the proposed development; • in the shorter term such as during the construction period;	Chapter 15 Noise and Vibration will include a description of the existing noise environment, the potential impacts and effects of noise and vibration on noise sensitive receptors, and with any control measures identified to mitigate and minimise potential adverse effects on health and quality of life.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>in the longer term, during the operating life of infrastructure;</i> <i>at particular times of the day, evening and night (and weekends) as appropriate, and at different times of the year.</i> <i>an assessment of the effect of predicted changes in the noise environment on any noise sensitive receptors, including an assessment of any likely impact on health and quality of life / well-being where appropriate, particularly among those disadvantaged by other factors who are often disproportionately affected by noise-sensitive areas;</i> <i>if likely to cause disturbance, an assessment of the effect of the underwater or subterranean noise; and</i> <i>all reasonable steps taken to mitigate and minimise potential adverse effects on health and quality or life.”</i>	
		5.12.7 “The nature and extent of the noise assessment should be proportionate to the likely noise impact.”	
		5.12.8 “Applicants should consider the noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation.”	The assessment will consider construction traffic noise, as described in Chapter 15 Noise and Vibration of this scoping report.
		5.12.9 “Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology-specific NPSs. In particular for renewables (EN-3) and	The assessment of will consider appropriate guidance as described in Chapter 15 Noise and Vibration of this scoping report.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>electricity networks (EN-5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies”.</i>	
		<i>5.12.10 “Some noise impacts will be controlled through environmental permits and parallel tracking is encouraged where noise impacts determined by an environmental permit interface with planning issues (i.e. physical design and location of development). The applicant should consult the EA and/or the SNCB, and other relevant bodies, such as the MMO or NRW, as necessary, and in particular regarding assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potential affected species in nearby sites may also need to be considered.”</i>	Requirements for permitting will be considered through the application for development consent process.. Consultation and engagement with relevant stakeholders will be undertaken as necessary. The effects of noise and vibration on ecological receptors will be considered within Chapter 8 Ecology and Biodiversity .
		<i>5.12.12 “Applicants should submit a detailed impact assessment and mitigation plan as part of any development plan, including the use of noise mitigation and noise abatement technologies during construction and operation.”</i>	A detailed impact assessment and any required control measures required to mitigate and minimise potential adverse effects of noise on health and quality of life will be included in Chapter 15 Noise and Vibration .
	NPS EN-5 (2024) (Ref 2B.4)	2 Assessment and Technology-Specific Information	
	NPS EN-5 (2024) (Ref 2B.4)	2.9 Applicant assessment	
		<i>2.9.26 “All high voltage transmission lines have the potential to generate noise under certain conditions.”</i>	It is expected conductors will be designed to operate below the inception level. This will be

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.9.27 <i>“Line noise is most commonly caused by corona noise when the surface electrical stress exceeds the inception level for corona discharge activity which is released as acoustic energy and radiates into the air as sound. Transmission line conductors are normally designed to operate below this threshold”.</i>	considered in Chapter 15 Noise and Vibration .
		2.9.37 <i>“Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors.”</i>	The assessment will consider operational noise from substation plant in Chapter 15 Noise and Vibration .
		2.9.38 <i>“Transformers are installed at many substations, and generate low frequency hum. Whether the noise can be heard outside a substation depends on a number of factors, including transformer type and the level of noise attenuation present (either engineered intentionally or provided by other structures).”</i>	The assessment will consider operational noise from substation plant in Chapter 15 Noise and Vibration . The assessment will consider operational noise from overhead lines in Chapter 15 Noise and Vibration .
		2.9.39 <i>“For the assessment of noise from substations, standard methods of assessment and interpretation using the principles of the relevant British Standards are satisfactory.”</i>	
		2.9.40 <i>“For the assessment of noise from overhead lines, the applicant must use an appropriate method to determine the sound level produced by the line in both dry and wet weather conditions, in addition to assessing the impact on noise-sensitive receptors.”</i>	The assessment will consider operational noise from overhead lines in Chapter 15 Noise and Vibration .
		2.9.41 <i>“For instance, the applicant may use an appropriate noise modelling tool or tools for the prediction of overhead line noise and its propagation</i>	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>over distance, such as an ISO 9613-2 or Technical Report TR(T)94.”</i> <i>2.9.42 “When assessing the impact of noise generated by overhead lines in wet weather relative to existing background sound levels, the applicant should consider the effect of varying background sound levels due to rainfall.”</i> 2.10 Mitigation <i>2.10.9 “Applicants must consider the following measures:</i> • the positioning of lines to help mitigate noise; • ensuring that the appropriately sized conductor arrangement is used to minimise potential noise; • quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects; • ensuring that conductors are kept clean and free of surface contaminants during stringing/installation; and • the selection of quieter cost-effective plants [sic]”. <i>2.10.10 “In addition, the ES should include information on planned maintenance arrangements. Where detail is not included, the Secretary of State should consider stipulating. appropriate maintenance arrangements by way of requirements attached to any grant of development consent”.</i>	Overhead lines have been routed to avoid noise sensitive receptors as far as reasonably practicable as set out in the Corridor Preliminary Routeing and Siting Study (CPRSS) (Ref 2B.8). This will be further refined as the Project design evolves. The proposed design and control measures are set out in Section 15.6 of Chapter 15 Noise and Vibration of this scoping report. Further detail based on the evolving design will be provided in Chapter 15 Noise and Vibration of the ES. Any required maintenance measures to ensure for ongoing minimisation of noise emission will be set out in Chapter 15 Noise and Vibration.
15 Conserving and enhancing the natural environment			

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	NPPF (2024) (Ref 2B.6)	187 “Planning policies and decisions should contribute to and enhance the natural and local environment by: (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.” 198 “Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should: mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life; identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.”	The principles in this section will be followed in the ES.
	Noise NPPG (2019) (Ref 2B.13)	Noise NPPG 001 “Noise needs to be considered when development may create additional noise or would be sensitive to the prevailing acoustic environment (including any	The principles in this section will be followed in the environmental assessment.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>anticipated changes to that environment from activities that are permitted but not yet commenced).</i>” 002 “[...] it is important to look at noise in the context of the wider characteristics of a development proposal, its likely users and its surroundings, as these can have an important effect on whether noise is likely to pose a concern.” 003 “Plan-making and decision making need to take account of the acoustic environment and in doing so consider: <i>Whether or not a significant adverse effect is occurring or likely to occur;</i> <i>whether or not an adverse effect is occurring or likely to occur; and</i> <i>whether or not a good standard of amenity can be achieved.</i>”	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		003 “Plan-making and decision making need to take account of the acoustic environment and in doing so consider: • Whether or not a significant adverse effect is occurring or likely to occur; • whether or not an adverse effect is occurring or likely to occur; and • whether or not a good standard of amenity can be achieved.” • 004 What are the observed effect levels? • Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur. • Lowest observed adverse effect level: this is the level of noise exposure above which adverse effects on health and quality of life can be detected. • No observed effect level: this is the level of noise exposure below which no effect at all on health or quality of life can be detected. Although the word ‘level’ is used here, this does not mean that the effects can only be defined in terms of a single value of noise exposure. In some circumstances adverse effects are defined in terms of a combination of more than one factor such as noise exposure, the number of occurrences of the noise in a given time period, the duration of the noise and the time of day the noise occurs.	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	Noise Policy Statement for England (NPSE) (2010) (Ref 2B.16)	1.6 <i>“This Noise Policy Statement for England (NPSE) sets out the long term vision of Government noise policy:</i> <i>Noise Policy Vision</i> <i>Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”</i> 1.7 <i>“This long term vision is supported by the following aims:</i> <i>Noise Policy Aims</i> <i>Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:</i> <i>• avoid significant adverse impacts on health and quality of life;</i> <i>• mitigate and minimise adverse impacts on health and quality of life; and</i> <i>where possible, contribute to the improvement of health and quality of life.”</i> 2.24 <i>“The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development...”</i>	The principles in this section will be followed in the environmental assessment.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.20 “There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are: NOEL – No Observed Effect Level This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise. LOAEL – Lowest Observed Adverse Effect Level This is the level above which adverse effects on health and quality of life can be detected.” 2.21 “Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level. SOAEL – Significant Observed Adverse Effect Level This is the level above which significant adverse effects on health and quality of life occur.”	
Chapter 16 Socioeconomics, Recreation and Tourism	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.3 Environmental Effects/Considerations 4.3.4 “To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as	The assessment will assess the likely significant socio-economic effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 16 Socioeconomics, Recreation and Tourism.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>employment, equality, biodiversity net gain, community cohesion, health and well-being.</i> <i>4.3.5 For the purposes of this NPS and the technology- specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project.”</i> <i>4.3.8 “In this NPS and the technology specific NPSs, when used in relation to environmental matters the terms ‘effects’, ‘impacts’ or ‘benefits’ should be understood to mean likely significant effects, likely significant impacts, or likely significant benefits.”</i> <i>4.3.15 “Applicants are obliged to include in their ES...an indication of the main reasons for the applicant’s choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility.”</i>	An option appraisal process has been undertaken on the route corridor options (including the preferred corridor) and technologies associated with the Project from an early stage. This is summarised in Chapter 3 Main Alternatives Considered. Any further Project design evolutions will be summarised within the ES.
		5 Generic Impacts 5.13 Socio-Economic Impacts <i>5.13.4 “The applicant’s assessment s should consider all relevant socio-economic impacts, which may include:</i> <i>• the creation of jobs and training opportunities;</i> <i>• the contribution to the development of low-carbon industries at the local and regional level as well as nationally;</i>	The assessment will assess the likely significant socio-economic effects from the construction, maintenance and operation of the Project. This includes assessing the proposed effects detailed in NPS EN-1. The proposed scope of the assessment is provided in Chapter 16 Socioeconomics, Recreation and Tourism.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		- the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities; - effects (positive or negative) on tourism and other users of the area impacted; - the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure; and - cumulative effects – if development consent were to be granted to a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.”	
		5.13.5 “Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development’s socio-economic impacts correlate with local planning policies.”	The assessment will include a baseline section, which is covered in Section 16.5 of Chapter 16 Socioeconomics, Recreation and Tourism. Chapter 2 Regulatory and Planning Policy Context sets out the legislative and policy context for the application. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
		5.13.6 “Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in Section 5.10 but may also have an impact on tourism and local businesses.”	This assessment in Chapter 16 Socioeconomics, Recreation and Tourism will include assessing the impact of the Project on tourism and local businesses in the Study Area. Where applicable, the assessment will

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			expand on inputs from other assessments reported within the ES including, but not limited to: air quality, noise and vibration, landscape, visual, traffic and transport and health and wellbeing effects.
		1 Introduction	
	NPS EN-5 (2024) (Ref 2B.4)	1.3 Relationship with EN-1	
	NPS EN-5 (2024) (Ref 2B.4)	<i>1.3.1. “This NPS is part of a suite of energy infrastructure NPSS. It should be read in conjunction with EN-1 and EN-3.”</i>	This NPS is reviewed alongside the guidance and requirements set out in EN-1 for the scoping and preparation of the ES to ensure full compliance within the context of the application for the Project.
		<i>1.3.2. “This NPS does not seek to repeat material set out in EN-1 or EN-3. EN-1 applies to all applications covered by this NPS unless stated otherwise. The policy in EN-3 on offshore wind in particular contains details relevant to offshore transmission.”</i>	This NPS is reviewed alongside the guidance and requirements set out in EN-1 for the scoping and preparation of the ES to ensure full compliance within the context of the application for the Project.
		2 Assessment and Technology-Specific Information	
		2.5 Environmental and Biodiversity Net Gain	
		<i>2.5.1 “When planning and evaluating the proposed development’s contribution to environmental and biodiversity net gain, it will be important – for both the applicant and the Secretary of State – to supplement the generic guidance set out in EN-1 (Section 4.6) with recognition that the linear nature of electricity networks</i>	The assessment will assess the likely significant socio-economic effects from the construction, maintenance and operation of the Project. This includes assessing the proposed effects detailed in NPS EN-5 (alongside EN-1). The proposed scope of the assessment is

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>infrastructure can allow for excellent opportunities to...connect people to the environment, for instance via footpaths and cycleways constructed in tandem with environmental enhancements.”</i> 2 Assessment and Technology-Specific Information 2.9 Applicant assessment Section 2.9 of NPS EN-5 refers to applicant assessments pertaining to electricity networks infrastructure that are not directly covered in NPS EN-1. Section 2.9 of NPS EN-5 includes assessments considering the following: • Biodiversity and Geological Conservation; • Landscape and Visual Impact; • Noise and Vibration; • Electric and Magnetic Fields (EMFs); and • Sulphur Hexafluoride. With regard to the Horlock Rules, the applicant should: <i>2.9.19 “consider environmental issues from the earliest stage to balance the technical benefits and capital cost requirements for new developments against the consequential environmental effects in order to keep adverse effects to a reasonably practicable minimum...seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections.”</i>	provided in Section 16.6 of Chapter 16 Socioeconomics, Recreation and Tourism. N/A – these set out the assessment requirements for other ES topic areas, however, are included in this table for completeness. An option appraisal process has been undertaken on the route corridor options (including the preferred corridor) and technologies associated with the Project from an early stage. This is summarised in Chapter 3 Main Alternatives Considered. Any further Project design evolutions will be summarised within the ES.
		2 Achieving sustainable development	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	NPPF (2024) (Ref 2B.6)	Paragraph 8 outlines the economic objective of the planning system <i>“to help build a strong, responsive, and competitive economy by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity”</i>. This is expanded on in Chapter 6 Paragraph 85 of the NPPF which sets out how planning policies and decisions should <i>“help to create the conditions in which businesses can invest, expand and adapt”</i>. Paragraph 8 also outlines the social objective of the planning system <i>“to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being”</i>. 8 Promoting healthy and safe communities 97 <i>“to provide the social, recreational and cultural facilities and services the community needs, decisions should: take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community.”</i> 104 <i>“decisions should protect and enhance public rights of way”</i>.	The assessment will assess the likely significant socio-economic effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 16 Socioeconomics, Recreation and Tourism. The assessment will assess the likely significant socio-economic effects from the construction, maintenance and operation of the Project, including potential disruption to community facilities as a result of impacts on access and adverse impacts on amenity. The proposed scope of the assessment is provided in Chapter 16 Socioeconomics, Recreation and Tourism. The assessment will assess the likely significant socio-economic effects from the

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			construction, maintenance and operation of the Project, including potential disruption to local users of promoted and recreational routes. The proposed scope of the assessment is provided in Chapter 16 Socioeconomics, Recreation and Tourism .
Chapter 17 Health and Wellbeing	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles 4.4 Health <i>4.4.1 “Energy infrastructure has the potential to impact on the health and well-being (“health”) of the population. Access to energy is clearly beneficial to society and to our health as a whole. However, the construction of energy infrastructure and the production, distribution and use of energy may have negative impacts on some people’s health.”</i> <i>“The direct impacts on health may include increased traffic air or water pollution dust, odour hazardous waste and substances noise exposure to radiation, and increases in pests.”</i>	The assessment will assess the likely significant effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 17 Health and Wellbeing. A cumulative effects assessment will be undertaken and presented within the ES, the scope of which is outlined within Chapter 5 EIA Approach and Methodology of this Scoping Report. Where adverse impacts are identified, attempts will be made to mitigate the effects for identified receptors. Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them. A health and wellbeing assessment will be undertaken as part of the ES, the scope of which is outlined in Chapter 17 Health and Wellbeing.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		4.4.4 <i>“As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on humans, the ES should assess these effects for each element of the project, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate.”</i>	The assessment will assess the likely significant effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 17 Health and Wellbeing . A cumulative effects assessment will be undertaken and presented within the ES, the scope of which is outlined within Chapter 5 EIA Approach and Methodology of this Scoping Report. Where adverse impacts are identified, attempts will be made to mitigate the effects for identified receptors.
		4.4.5 <i>“The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate.”</i>	The assessment will assess the likely significant effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 17 Health and Wellbeing . A cumulative effects assessment will be undertaken and presented within the ES, the scope of which is outlined within Chapter 5 EIA Approach and Methodology of this Scoping Report. Where adverse impacts are identified, attempts will be made to mitigate the effects for identified receptors.
		5 Generic Impacts	
		5.12 Noise and Vibration	
		5.12.17 <i>“The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims, through the effective management and control of noise:</i>	The assessment will assess the likely significant effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 17 Health and Wellbeing . A

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>avoid significant adverse impacts on health and quality of life from noise</i>	cumulative effects assessment will be undertaken and presented within the ES, the scope
		5.12.17 “The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims, through the effective management and control of noise: <i>avoid significant adverse impacts on health and quality of life from noise</i> <i>mitigate and minimise other adverse impacts on health and quality of life from noise</i> <i>where possible, contribute to improvements to health and quality of life through the effective management and control of noise.”</i>	The assessment will assess the likely significant effects from the construction, maintenance and operation of the Project. The proposed scope of the assessment is provided in Chapter 17 Health and Wellbeing. A cumulative effects assessment will be undertaken and presented within the ES, the scope of which is outlined within Chapter 5 EIA Approach and Methodology of this Scoping Report. Where adverse impacts are identified, attempts will be made to mitigate the effects in identified receptors.
		5 Generic Impacts	
		5.15 Resource and Waste Management	
		5.15.1 “Government policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible and disposal is required as a last resort, waste management regulation ensures that waste is disposed of in a way that is least damaging to the environment and to human health.”	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them. A health and wellbeing assessment will be undertaken as part of the ES, the scope of which is outlined in Chapter 17 Health and Wellbeing.
		2 Assessment and Technology-Specific Information	
		2.10 Mitigation	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
	NPS EN-5 (2024) (Ref 2B.4)	2.10.11 <i>“The applicant should consider the following factors:</i> • height, position, insulation and protection (electrical or mechanical as • appropriate) measures subject to ensuring compliance with the Electricity • Safety, Quality and Continuity Regulations 2002; • that optimal phasing of high voltage overhead power lines is introduced • wherever possible and practicable in accordance with the Code of Practice • to minimise EMFs; and • any new advice emerging from the Department of Health and Social Care <i>relating to government policy for EMF exposure guidelines.”</i>	As part of the health and wellbeing assessment, consideration has been given at the assessment scoping stage to the potential impacts associated with the generation of EMFs. The Project will be designed to comply with existing National Grid standards and the guidelines and policies detailed in NPS-EN5 including the International Commission on Non Ionizing Radiation Protection guidelines for electric and magnetic fields (EMFs) and associated precautionary policy. An EMF report will be prepared as part of the Project.
	NPPF (2024) (Ref 2B.6)	8 Promoting healthy and safe communities The NPPF sets out various policies with respect to the health and wellbeing objectives of the planning system. Section 8 of the NPPF states that policies should aim to achieve healthy, inclusive, and safe places which: promote social inclusion; are safe and accessible; and enable and support healthy lifestyles. In order to do this, planning policies and decisions should: <i>98 “(a) Plan positively for the provision of local services to enhance the sustainability of communities and residential environments;</i>	The health and wellbeing assessment will assess the likely significant effects from the construction, maintenance and operation of the Project on health and wellbeing in accord with NPPF guidance. Where adverse impacts are identified, attempts will be made to mitigate the effects on receptors.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;</i> <i>guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;</i> <i>ensure that established shops, facilities, and services are able to develop and modernise, and are retained for the benefit of the community; and</i> <i>ensure an integrated approach to considering the location of housing, economic uses and community facilities and services."</i> They should also "promote public safety and take into account wider security and defence" in developing planning policy; and "protect and enhance public rights of way and access."	
Chapter 18 Climate Change	NPS EN-1 (2024) (Ref 2B.1)	2 Government policy on energy and energy infrastructure development 2.2 Net zero by 2050	
		<i>2.2.1 "In June 2019, the UK became the first major economy to legislate for a 2050 net zero Greenhouse Gases ('GHG') emissions target through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. 22 In December 2020, the UK communicated its Nationally Determined Contributions to reduce GHG emissions by at least 68 per cent from 1990 levels by 2030.23 In April 2021, the government legislated for the sixth carbon budget (CB6), which requires the UK to reduce GHG emissions by 78 per cent by 2035 compared to 1990 levels".</i>	The Project will directly support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire and the East Midlands, and facilitate the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network. The climate change chapter of the ES will assess the Project's greenhouse gas emissions in the context of the legally binding greenhouse

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			gas reduction targets and carbon budgets in line with Institute of Sustainability and Environmental Professionals (ISEP) (formally Instructive of Environmental Management and Assessment (IEMA)) Greenhouse Gas (GHG) assessment guidance (Ref 2B.14)
		4 Assessment Principles	
		4.2 The critical national priority for low carbon infrastructure	
		4.2.1 <i>“Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions”.</i>	The GHG assessment within the climate change chapter of the ES will assess if the Project supports the growth of low– carbon and renewable energy in line with government policy to decarbonise the power system.
		4.2.2 to 4.2.5 <i>“Ensuring the UK is more energy independent, resilient and secure requires the smooth transition to abundant, low-carbon energy”.... “Low carbon infrastructure for the purposes of this policy means for electricity grid infrastructure, all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as substations. This is not limited to those associated specifically with a particular generation technology, as all new grid projects will contribute towards greater efficiency in constructing, operating and connecting low carbon infrastructure to the National Electricity Transmission System.”</i>	
		4 Assessment Principles	
		4.7 Criteria for good design for Energy Infrastructure	
		Section 4.7 of NPS EN-1 Sets out the principles for good design that should be applied to all energy infrastructure and notes the importance which the	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		Planning Act 2008 places on good design and sustainability.	within the underlying principle of good design through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys, considerations related to GHG emissions, as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES.
		5 Generic Impacts	
		Section 5 of NPS EN-1 sets out potential impacts in respect of matters such as air quality and emissions, greenhouse gas (GHG) emissions, biodiversity and geological conservation, coastal change, dust/odour/light pollution, flood risk, historic environment, landscape and visual, noise, socio-economic impacts, traffic and transport, resource and waste management, and water resources.	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3). The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys, considerations related to GHG emissions, as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES.
		5.3 Greenhouse Gas Emissions	
		Section 5.3 of NPS EN-1 covers GHG emissions associated with energy infrastructure development. This stipulates that all applications must include a full whole life GHG assessment (including construction, operational, decommissioning, and land use change impacts).	The GHG assessment within the climate change chapter of the ES will assess lifecycle carbon emissions in line with ISEP GHG assessment guidance (Ref 2B.14). The ES will also document the steps taken to

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
			drive down climate change impacts at each stage to reduce construction and operational carbon emissions as much as possible.
		5.3.4 “All proposals for energy infrastructure projects should include a GHG assessment as part of their ES (See Section 4.3). This should include: • A whole life GHG assessment showing construction, operational and decommissioning GHG impacts, including impacts from change of land use. • An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages. • Measurement of embodied GHG impact from the construction stage. • How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures. • How operational emissions have been reduced as much as possible through the application of best available techniques for that type of technology. • Calculation of operational energy consumption and associated carbon emissions. • Whether and how any residual GHG emissions will be (voluntarily) offset or removed using a recognised framework. • Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other	The GHG assessment within the climate change chapter of the ES will assess lifecycle carbon emissions in line with ISEP GHG assessment guidance (Ref 2B.14). The ES will also document the steps taken to drive down climate change impacts at each stage to reduce construction and operational carbon emissions as much as possible.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		<i>developments at a regional or national level, or sector level, if sectoral targets are developed.”</i> 5.3.5 “a GHG assessment should be used to drive down GHG emissions at every stage of the proposed development and ensure that emissions are minimised as far as possible for the type of technology” Section 5.3 of NPS EN-1 continues that appropriate weight must be given to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and decommissioning. Paragraph 5.3.11 states that: <i>“operational GHG emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided”</i> and that “operational GHG emissions are not reasons to prohibit the consenting of energy projects”	
	NPS EN-5 (2024) (Ref 2B.4)	2 Assessment and Technology-Specific Information	
	NPS EN-5 (2024) (Ref 2B.4)	2.9 Applicant assessment 2.9.59 “Sulphur Hexafluoride (SF6) is an insulating and arc- suppressant gas used in high-voltage switchgear for electricity networks.” 2.9.60 “It is also an extraordinarily potent greenhouse gas, and fugitive emissions from electricity networks infrastructure are an object of increasing environmental concern, especially in light of the UK’s commitment to net zero by 2050.”	SF6 is a potent greenhouse gas that is used as an insulating and arc- suppressant gas in high-voltage switchgear for electricity networks. The use of SF6 within switchgear equipment is a potential source of GHG emissions during operation of the Project.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		2.9.61 <i>“Applicants should at the design phase of the process consider carefully whether the proposed development could be reconceived to avoid the use of SF6- reliant assets.”</i> 2.9.62 <i>“Where the development cannot be so conceived, the applicant must provide evidence of their reasoning on this point. Such evidence will include, for instance, an explanation of the alternatives considered, and a case why these alternatives are technically infeasible or require bespoke components that are grossly disproportionate in terms of cost.”</i> 2.9.63 <i>“In particular, an accounting of the cost differential between the SF6-reliant asset and the appropriate SF6-free alternative should be provided.”</i> 2.9.64 <i>“Where applicants, having followed the above procedure, do propose to put new SF6-reliant assets onto the electricity system, they should design a plan for the monitoring and control of fugitive SF6 emissions consistent with the Fluorinated gas (F-gas) Regulation and its successors.”</i>	The Project will seek to avoid, and if not possible, minimise the use of SF6. Evidence will be provided, as required, for alternatives considered and a case why these alternatives are technically infeasible or require bespoke components that are grossly disproportionate in terms of cost.
NPPF (2024) (Ref 2B.6)		2 Achieving sustainable development 8 <i>“Achieving sustainable development means that the planning system has 3 overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):</i> • an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in	The Project will support the UK’s net zero target by reinforcing the electricity transmission network in Lincolnshire, Leicestershire and Northamptonshire, and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure; • a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well- designed beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and • an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”	In relation to adaptation and climate change resilience, Appendix 18A Climate Change Resilience Screening Assessment sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone Climate Change Resilience assessment from the EIA based on proposed Design, Control and Management Measures. Further embedded design measures should be developed as the Project design evolves through engagement with the engineering design team and included in the Design Principles document which will be established to inform the development of the Project design for both construction and operation. On this basis, no further assessment of the Project’s vulnerability to climate change is proposed in the ES. In relation to reducing CO₂ emissions, the Climate Change chapter of the ES will document all of the embedded design and mitigation measures taken to reduce construction and operational emissions.

20 “Strategic policies should set out an overall strategy for the pattern, scale and design quality of places, (to ensure outcomes support beauty and placemaking), and make sufficient provision for:

- housing (including affordable housing), employment, retail, leisure and other commercial development;
- infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);
- community facilities (such as health, education and cultural infrastructure); and
- conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation.”

The Project will support the UK’s net zero target by reinforcing the electricity transmission network in Lincolnshire, Leicestershire and Northamptonshire, and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.

In relation to adaptation and climate change resilience, **Appendix 18A Climate Change Resilience Screening Assessment** sets out the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project and provides justification for the proposal to scope out a standalone Climate Change Resilience assessment from the EIA based on proposed Design, Control and Management Measures. Further embedded design measures should be developed as the Project design evolves through engagement with the engineering design team and included in the Design Principles document which will be established to inform the development of the Project design for both construction and operation. On this basis, no further assessment of the Project’s vulnerability to climate change is proposed in the ES.

In relation to reducing CO₂ emissions, the Climate Change chapter of the ES will document all of the embedded design and mitigation measures taken to reduce construction and operational emissions.

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		14 Meeting the challenge of climate change, flooding and coastal change	
		157 <i>“The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.”</i>	As per above response
		159 “New development should be planned for in ways that: (a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and (b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the government’s policy for national technical standards.”	
		163 “When determining planning applications for renewable and low carbon development, local planning authorities should: (a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a	

Relevant to EIA Scoping Chapter	National or regional policy	National or regional policy section	Consideration in the EIA
		valuable contribution to significant cutting greenhouse gas emissions; (b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas; and (c) in the case of applications for the repowering and life- extension of existing renewable sites, give significant weight to the benefits of utilising an established site, and approve the proposal if its impacts are or can be made acceptable.”	
Chapter 19 Major Accidents and Disasters	NPS EN-1 (2024) (Ref 2B.1)	4 Assessment Principles	
		4.13 Safety	
		<i>4.13.7 “If a safety report is required it is important to discuss with the Competent Authority the type of information that should be provided at the design and development stage, and what form this should take. This will enable the Competent Authority to review as much information as possible before construction begins, in order to assess whether the inherent features of the design are sufficient to prevent, control and mitigate major accidents.”</i>	N/A - The scoping assessment has shown that the vulnerability of the Project to major accidents and disasters can be mitigated or reduced by the processes and standards in place. This is scoped out.

References

- Ref 2B.1 Department for Energy Security and Net Zero (2024) Overarching National Policy Statement for energy (EN-1) [online]. Available at: <https://assets.publishing.service.gov.uk/media/65bbfdbc709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed 7 August 2025].
- Ref 2B.2 National Grid (no date) The Holford Rules: Guidelines on Overhead Line Routeing [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf> [Accessed 7 August 2025].
- Ref 2B.3 Department National Grid (no date) NGC Substations and the Environment: Guidelines on Siting and Design [online]. Available at: <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> [Accessed 7 August 2025].
- Ref 2B.4 Department for Energy Security and Net Zero (2024) National Policy Statement for electricity networks infrastructure (EN-5) [online]. Available at: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf> [Accessed 7 August 2025].
- Ref 2B.5 Department for Environment, Food & Rural Affairs (2020) UK Marine Policy Statement [online]. Available at: https://assets.publishing.service.gov.uk/media/5a795700ed915d042206795b/pb3654_Department-marine-policy-statement-110316.pdf [Accessed 7 August 2025]
- Ref 2B.6 Department for Levelling Up, Housing and Communities (2024) National Planning Policy Framework [online]. Available at: <https://www.gov.uk/guidance/national-planning-policy-framework> [Accessed 7 August 2025].
- Ref 2B.7 National Grid (2025) Weston Marsh to East Leicestershire Strategic Options Report [online]. Available at: <https://www.nationalgrid.com/document/561311/download> [Accessed 7 August 2025].
- Ref 2B.8 National Grid (2025) Weston Marsh to East Leicestershire Corridor Preliminary Routeing and Siting Study [online]. Available at: <https://www.nationalgrid.com/electricity-transmission/document/152621/download> [Accessed 7 August 2025].
- Ref 2B.9 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2024) Natural Environment planning practice guidance [online]. Available at: <https://www.gov.uk/guidance/natural-environment> [Accessed 7 August 2025].
- Ref 2B.10 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2022) Flood risk and coastal change planning practice guidance [online]. Available at: <https://www.gov.uk/guidance/flood-risk-and-coastal-change> [Accessed 7 August 2025].
- Ref 2B.11 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2024) Water supply, wastewater and water quality planning practice guidance [online]. Available at: <https://www.gov.uk/guidance/natural-environment> [Accessed 7 August 2025].

- Ref 2B.12 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2024) Travel Plans, Transport Assessments and Statements planning practice guidance [online]. Available at: <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements> [Accessed 7 August 2025].
- Ref 2B.13 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019) Noise planning practice guidance [online]. Available at: <https://www.gov.uk/guidance/noise--2> [Accessed 7 August 2025].
- Ref 2B.14 Institute of Sustainability and Environmental Professionals (formally Institute of Environmental Management and Assessment) (2022). Assessing Greenhouse Gas Emissions and Evaluating their Significance, London: IEMA [online]. Available at: <https://www.iema.net/preview-document/assessing-greenhouse-gas-emissions-and-evaluating-their-significance> [Accessed 7 August 2025].
- Ref 2B.15 Institute of National Infrastructure Planning Guidance (April 2024). Available at: <https://www.gov.uk/government/collections/national-infrastructure-planning-guidance-portal#:~:text=As%20of%2030%20April%202024,all%20users%20of%20the%20system> [Accessed 7 August 2025].
- Ref 2B.16 Noise Policy Statement for England (March 2010). Available at: <https://www.gov.uk/government/publications/noise-policy-statement-for-england> [Accessed 21 August 2025]
- Ref 2B.17 East Inshore and East Offshore Marine Plans (2022) Ref 2.30 HM Government (2014) East Inshore and East Offshore Marine Plans [online]. Available at: <https://assets.publishing.service.gov.uk/media/5a7ec0eced915d74e33f2342/east-plan.pdf> [Accessed 15 April 2024].

2C Local Policy

2C.1 Overview

2C.1.1 Table 2C.1 is provided to outline the potentially relevant local policy, this will be reviewed throughout the evolution of the Project design and assessments.

Table 2C.1 Local Policy of relevance to the Project

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
Local Plans				
South East Lincolnshire Local Plan 2011-2036 (Adopted March 2019) (Ref 2C.1)	Policy 2: Development Management	Policy 2 seeks to ensure sustainable development considerations are met, including the consideration of noise impacts.	Chapter 15 Noise and Vibration	Noise and vibration will be assessed in the ES as described in this scoping report.
	Policy 4: Approach to Flood Risk	Policy 4 sets out the council's approach to flood risk. Development in Flood Zones 2 and 3 will only be permitted where no safer alternative sites are available.	Chapter 10 Water Environment	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible.
	Policy 7: Improving South East Lincolnshire's Employment Land Portfolio	The South East Lincolnshire Local Plan was adopted in March 2019. The Plan includes the following policies of relevance to the socio-economic topics. Policies 7 and 8: Employment Land.	Chapter 16 Socioeconomics, Recreation and Tourism	The socio-economics assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy 8: Prestige Employment Sites	Policy 7 relates to 'improving South East Lincolnshire's Employment Land Portfolio' and includes a list of the main employment areas as shown on the Local Plan Policies Map, as well as local employment areas, established employment areas and 'restricted use employment sites' which specifically relate to land associated with port-related activities and power-		

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		generation related industries. Policy 8 seeks to protect and support ‘prestige employment sites’ as shown on the Policies Map for which detailed masterplans would be required.		
	Policy 9: Promoting a Strong Visitor Economy	Policy 9: Promoting a Strong Visitor Economy supports proposals for tourism and visitor development within settlement boundaries.	Chapter 16 Socioeconomics, Recreation and Tourism	
	Policy 28: The Natural Environment	Policy 28: The Natural Environment supports protecting, managing and enhancing a high quality, comprehensive ecological network of interconnected designated sites, sites of nature conservation importance and wildlife-friendly greenspace.	Chapter 8 Ecology and Biodiversity	Mitigation measures to ensure the conservation of ecological receptors will be reported in the ES. Where the EIA process identifies opportunities to enhance biodiversity interests these will be reported in the Planning Statement submitted with the application for development consent.
	Policy 29: The Historic Environment	The Local Plan recognises the diverse historic nature of the area of South East Lincolnshire. Much of it is drained marsh and fen has resulted in an open and flat landscape, consequently leading to listed buildings and other dominant heritage assets being visible within the countryside e.g. church towers, spires and historic windmills. The Plan states that it is important to protect these heritage assets from inappropriate development.	Chapter 9 Cultural Heritage	The cultural heritage desk-based assessment and ES chapter will identify all designated and non-designated assets with a potential to be impacted by the Project, including those specifically highlighted by Policy 29 Historic Environment, and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Policy 29 encourages development proposals to conserve and enhance the character and appearance of designated and non-designated heritage assets. Policy 29 provides clear requirements for each class of heritage asset. With respect to development proposals that would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made to its setting, applications should be informed by proportionate historic environment assessments and evaluations such as heritage impact assessments, desk-based appraisals, field evaluation and historic building reports.		Project and appropriate mitigation measures will be assessed.
	Policy 30: Pollution	Policy 30 outlines that development proposals are not permitted where, taking account of proposed mitigation measures, they would lead to unacceptable adverse impacts upon the environment. Where development is proposed on a site which is known, or has the potential to be affected by contamination, a preliminary risk assessment shall be undertaken as the first stage in assessing the risk. Preliminary risk assessments and any subsequent additional information shall be	Chapter 10 Water Environment Chapter 11 Geology and Hydrogeology Chapter 12 Agriculture and Soils	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible. An outline Soil Management Plan will be submitted and will be

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		carried out in accordance with the Yorkshire and Lincolnshire Pollution Advisory Group (YALPAG) Document 'Development on Land Affected by Contamination' supported by YALPAG 'Verification Requirements for Cover Systems' and YALPAG 'Verification Requirements for Gas Protections Systems', or successor local or national guidance. Development proposals will not be permitted where, taking account of any proposed mitigation measures, they would lead to unacceptable adverse impacts upon: 1. health and safety of the public; 2. the amenities of the area; or 3. the natural, historic and built environment; by way of: 4. air quality, including fumes and odour.		developed in line with current good practice, including with reference to the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites. The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design. Risks posed by land contamination are assessed in Chapter 11 Geology and Hydrogeology.
			Chapter 14 Air Quality	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Air Quality. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
		Development proposals will not be permitted where, taking account of any proposed mitigation measures, they would	Chapter 15 Noise and Vibration	The assessment will take into account the policies of the Local Plan when assessing the impacts

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		lead to unacceptable adverse impacts from noise and vibration, amongst other considerations.		of the Project on noise and vibration. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy 31: Climate Change and Renewable Energy	Policy 31 Part A Requires all development proposals to demonstrate how the impacts of current climate change have been addressed, minimised and mitigated through design, the sequential approach and SuDS.	Chapter 4 Description of the Project	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2C.2) and Horlock Rules (Ref 2C.3) was a major consideration during its development and will continue in the future design evolution of the Project. The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology .
		Policy 31 Part B Renewable Energy supports the development of renewable energy facilities, associated infrastructure and the integration of decentralised	Chapter 7 Visual	The proposed approach to assessing the likely significant visual effects of the Project is explained in Section 7.8 Chapter

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		technologies on existing or proposed structures, provided, individually, or cumulatively, there would be no significant harm to: 1. visual amenity....it is important that proposals assess their impact individually and in combination with other similar developments on: residential amenity.		7 Visual. This includes the approach to the assessment of visual effects for residential receptors and reference to lighting and night-time effects with respect to visual amenity will be made where relevant. The visual assessment will be informed by a series of representative viewpoints which will include key views identified in any conservation area appraisals, neighbourhood plans or village design statements as well as the general visual amenity experienced by people living and moving around the area and will be reported as part of the visual chapter in the ES. The proposed approach to assessing likely significant cumulative effects is explained in Section 7.8 Chapter 7 Visual.
		All development proposals are required to demonstrate that the consequences of current climate change have been addressed and mitigated through design, adoption of sequential approach and SuDS schemes.	Chapter 10 Water Environment	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				systems will incorporate SuDS as far as possible.
		Paragraph 7.5.10 discusses amenity impacts of development comprising visual outlook, emit noise, fumes, odour and vibration; produce shadow flicker, sun light reflection and broadcast interference; and traffic issues on highways of unsuitable width and construction. It suggests the importance of assessing the impact individually and in combination with other similar developments. Noting that, in addition all proposals use land and so lower quality agricultural land should be used and the natural environment / biodiversity shall be protected and enhanced."	Chapter 12 Agriculture and Soils	An outline Soil Management Plan will be submitted and will be developed in line with current good practice, including with reference to the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites. The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design. Risks posed by land contamination are assessed in Chapter 11 Geology and Hydrogeology .
		The development of renewable energy facilities, associated infrastructure, and the integration of decentralised technologies on existing or proposed structures will be permitted provided, individually, or cumulatively, there would be no significant harm to residential amenity in respect of noise, amongst other considerations.	Chapter 15 Noise and Vibration	Noise and vibration will be assessed as in the ES as described in this scoping report.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Proposals by a local community for the development of renewable and low carbon sources of energy, in scale with their community's requirements, including supporting infrastructure for renewable energy projects, will be supported and considered in the context of contributing to the achievement of sustainable development and meeting the challenge of climate change.	Chapter 18 Climate Change	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Climate Change and Greenhouse Gas Emissions. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy 32: Community, Health and Well- Being	Policy 32: requires development to contribute to the creation of socially cohesive and inclusive communities; reducing health inequalities; and improving the community's health and well-being. This includes protecting and enhancing PRoWs and amenity greenspaces.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socioeconomic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Policy 32 highlights that development will not be permitted unless it: • Protects and enhances existing public rights of way, and creates new links to the rights of way network; and • Creates environments which: • Discourage crime and disorder, and do not create the fear of crime; • Encourage healthy eating and local food growing; • Are accessible to all sections of the community; • Facilitate walking, cycling and public transport use; and Encourage community use	Chapter 17 Health and Wellbeing	The impact of the proposed Project on the health and safety of residents will be considered in the assessment.
	Policy 33: Delivering a More Sustainable Transport Network	Policy 33 seeks improvements to existing transport infrastructure and services.	Chapter 13 Traffic and Transport	An ES and Transport Assessment (TA) will be prepared and will assess congestion and seek to minimise impacts on the pedestrian and cycle network.
		Policy 33: encourages the protection of existing footpaths, cycle routes and public rights of way from development.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
Melton Local Plan 2011-2036 (Adopted October 2018) (Ref 2C.2)	Policy SS1 - Presumption in favour of Sustainable Development	Policy SS1 sets out how the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework.	Chapter 18 Climate Change	The Project will directly support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire and the East Midlands, and will facilitate the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.
	Policy SS3 – Sustainable Communities (unallocated sites)	In rural settlements outside the main urban area, the Council will seek to protect and enhance existing services and facilities and will support sustainable development proposals in accordance with Policy SS2 above which contribute towards meeting local development needs, contributing towards the vision and strategic priorities of the plan, and improving the sustainability of our rural areas.	Chapter 17 Health and Wellbeing	This impact of the Project on the local community has been considered, taking into account access to receptors that encourage healthy and active lifestyles.
	Policy C9 – Healthy Communities	Policy C9 states that proposals should make a positive contribution to the following promoters of health and well-being:	Chapter 17 Health and Wellbeing	The assessment considers the impact of the Project on health outcomes. Where adverse impacts are identified, the

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		• Good quality, accessible green spaces, public realm, sports and recreational facilities close to where people live and work; • Safe, convenient and attractive network of streets, paths and cycleways integrated with public transport; • High quality local food growing spaces, including green roofs, edible landscaping, garden plots, community gardens, allotments and local markets; • ‘Healthy Homes’ that are affordable, easy to warm, have good natural light, decent space (internal and external), exploit views, safe from flooding and overheating; • High quality residential amenity; • Good quality, accessible green spaces, public realm, sports and recreational facilities close to where people live and work;		assessment will include potential mitigation options.
		Good local air quality, with new development in an air quality management area to be consistent with the aims and objectives of the Air Quality Action Plan, providing an air quality assessment where appropriate.	Chapter 14 Air Quality	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Air Quality. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				with all relevant national and local policy requirements.
		Contributions will be sought from developers towards the provision of health facilities where their development would impact on the capacity of existing healthcare provision. Proposals for new health care facilities should relate well to public transport services, walking and cycling routes and be accessible to all sectors of the community. Opportunities for the multi-use and co-location of health facilities with other services and facilities should be considered to provide co-ordinated care and a community focus. Health impacts of major development proposals should be considered early in the planning process through the submission of a Health Impact Assessment (HIA) with a planning application, where the Local Planning Authority requests it.	Chapter 17 Health and Wellbeing Chapter 14 Air Quality	This will be taken into account in the assessment methodology, taking into consideration the impact of the Project on promoted recreational routes and access to health care and social infrastructure. The assessment considers the impact of the Project on health outcomes. Where adverse impacts are identified, the assessment will include potential mitigation options. The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Air Quality. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy EN3–The Melton Green Infrastructure Network	Policy EN3 sets out a strategic approach to the delivery, protection and enhancement of green infrastructure by the Borough Council working with partners, in order to deliver new assets where deficits have been identified in the green infrastructure strategy and to enhance primary green infrastructure areas.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas.
	Policy EN5 – Local Green Space	Local Green Space Development proposals will be required to protect designated Local Green Spaces in the Borough. Proposals should not harm the key features, value and functionality of a Local Green Space such that its character is protected. Neighbourhood Plans are encouraged to designate additional Local Green Space as evidenced by the Areas of Separation, Settlement Fringe Sensitivity and Local Green Space Study or other up to date evidence document.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socioeconomic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy EN6 – Settlement Character	Development proposals will be supported where they do not harm open areas which: • contribute positively to the individual character of a settlement; • contribute to the setting of historic built form and features; • contribute to the key characteristics and features of conservation areas; and • form a key entrance and/or gateway to a settlement. Development proposals will also be supported where they do not harm individual features of a settlement which contribute towards settlement character as identified in a Neighbourhood Plan, including Non designated heritage assets.	Chapter 9 Cultural Heritage Chapter 6 Landscape Chapter 3 Main Alternatives	The cultural heritage desk-based assessment and ES chapter will identify all designated and non-designated assets with a potential to be impacted by the Project, including those specifically highlighted by Policy EN6 Settlement Character and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed. The assessment of landscape effects will be based on the landscape character assessments identified through local policies but will be supplemented by baseline information within conservation area appraisals, neighbourhood plans or village design statements. Chapter 3 Main Alternatives Considered describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2C.2) and

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				Horlock Rules (Ref 2C.3) were used as guiding principles during early design development and will continue in the future design evolution of the Project.
	Policy EN8 – Climate Change	All new development proposals will be required to demonstrate how the need to mitigate and adapt to climate change has been considered, subject to considerations of viability, in terms of: • Sustainable design and construction in accordance with Policy EN9 – ensuring energy efficient and low carbon development. • Provision of green infrastructure in accordance with Policy EN3 – the Melton Green Infrastructure Network. • Provision of renewable and/or low carbon energy production, including decentralised energy and/or heat networks in accordance with Policy EN10 – energy generation from renewable sources. • Flood risk in accordance with Policy EN11 – minimizing the risk of flooding and policy EN12 – sustainable urban drainage systems. • Providing opportunities for sustainable modes of transport in accordance with	Chapter 18 Climate Change Chapter 8 Ecology and Biodiversity	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on climate change and greenhouse gas emissions. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements. The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Policy IN1 – delivering infrastructure to support new development.	Chapter 10 Water Environment	areas. This Chapter will address the embedded environmental measures to steer new development to areas with the lowest probability of flooding and demonstrate that flood risk to people and property is managed satisfactorily. A FRA will be produced to inform Project design and the ES assessment, and the Project will secure SuDS based drainage design for operational infrastructure.
	Policy EN10 – Energy Generation from Renewable and Low Carbon Sources	Energy Generation from Renewable and Low Carbon Sources Renewable and low carbon energy proposals appropriate for Melton, including biomass power generation, combined heat and power (CHP), hydro, wind, solar and micro generation systems, will be supported and considered in the context of sustainable development and climate change. Proposals for renewable and low carbon energy technology, associated infrastructure and integration of renewable and low carbon technology on existing or proposed structures will be assessed both individually and cumulatively on their merits taking account of the following factors;	Chapter 6 Landscape	The proposed approach to assessing the Project is explained in Section 6.8 Chapter 6 Landscape . The assessment of effects on landscape receptors will be based on the landscape character assessments listed in this chapter and supplemented by baseline information within any conservation area appraisals, neighbourhood plans or village design statements. The effects will be assessed and reported as part of the landscape chapter in the ES.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		- Siting, so as to gain maximum effect from wind/solar/water sources; - The surrounding landscape, townscape and heritage assets; - Residential and visual amenity		
		Noise impacts	Chapter 15 Noise and Vibration	Noise and vibration will be assessed in the ES as described in this scoping report.
		Odour impacts	Chapter 14 Air Quality	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Air Quality. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
		- Designated nature conservation, geo-diversity or biodiversity considerations, including potential impact on ancient woodland and veteran trees; - Ecology; - Aircraft movements and associated activities, including effects on	Chapter 8 Ecology and Biodiversity Chapter 11 Geology and Hydrogeology	Designations, habitats and protected species have been identified within the Baseline Conditions sections of Chapter 8 Ecology and Biodiversity and Chapter 11 Geology and Hydrogeology . The likely effects on these features (and any additional features identified) will be assessed and reported as part

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		radar, communications and navigational systems; Electromagnetic transmissions;		of the ES. Mitigation measures to ensure the conservation of ecological and geological receptors will be reported in the ES. Where the EIA process identifies opportunities for enhancement these will be reported in the Planning Statement submitted with the application for development consent.
		High quality agricultural land	Chapter 12 Agriculture and Soils	An outline Soil Management Plan will be submitted and will be developed in line with current good practice, including with reference to the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites. The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design. Risks posed by land contamination are assessed in Chapter 11 Geology and Hydrogeology .
		Access for construction, maintenance and de-commissioning.	Chapter 13 Traffic and Transport	The Project will seek to meet the policy requirements which will be set out in the ES and TA. The

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		• Not creating demand for bio-energy fuels known to result in net carbon emissions through production methods, transport requirements and/or loss of carbon sinks; • General safety in terms of highways, power lines, icing, visual distraction; and • Transport movements for importation of biomass fuel		CTMP and CWTP will set out the construction implications and impact of delivery the Project.
	Policy EN11 – Minimizing the Risk of Flooding	Minimizing the Risk of Flooding Melton Borough Council will ensure that development proposals do not increase flood risk and will seek to reduce flood risk to others. The Council will do this by working in partnership with the appropriate agencies (the Environment Agency, Leicestershire County Council as Lead Local Flood Authority, Internal Drainage Boards, Severn Trent & Anglian Water and the Canal and River Trust), developers and landowners. The Borough Council will follow a sequential approach to flood risk management with the aim of locating development on land with the lowest risk of flooding (Zone 1 and outside of surface water flood risk). For development in Flood Zones 2, 3a & 3b, the exception test will be applied in accordance with Table 3 of National Planning Practice Guidance.	Chapter 10 Water Environment	This Chapter will address the embedded environmental measures to steer new development to areas with the lowest probability of flooding and demonstrate that flood risk to people and property is managed satisfactorily. A FRA will be produced to inform Project design and the ES assessment, and the Project will secure SuDS based drainage design for operational infrastructure.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy EN12 – Sustainable Drainage Systems	For major developments, proposals should demonstrate through a surface water drainage strategy that properties will not be at risk from surface water flooding allowing for climate change effects. Surface water management should be undertaken, wherever practicable through the utilisation of appropriate SuDS techniques which mimic natural drainage patterns, and where appropriate achieve net gains for nature through the creation of ponds and wetlands near watercourses and the introduction of blue green corridors. For sites which lie within or close to groundwater protection zones or aquifers, guidance should be sought from the Lead Local Flood Authority.	Chapter 10 Water Environment	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible.
	Policy EN13 – Heritage Assets	Policy EN13 outlines the need to assess the effect of a proposal on the significance of an asset and the need for a balanced judgment about the scale of any harm or loss and the significance of the heritage asset. Melton Borough has a number of important historic assets. These include Listed Buildings, Conservation Areas, Scheduled Monuments (SMs) and non-designated heritage assets (ranging from nationally to locally important heritage features).The	Chapter 9 Cultural Heritage	The cultural heritage chapter will identify all designated and non-designated assets with a potential to be impacted by the Project and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Borough of Melton contains heritage assets that are at risk through neglect, decay or other threats. These will be conserved, protected and where possible enhanced.		
	Policy EC1 – Employment Growth in Melton Mowbray and EC2 – Employment Growth in the Rural Area	Policy EC1 and EC2 demonstrate that the Local Plan must guide development in a way which ensures that the natural and physical environment (infrastructure) remains attractive and a local workforce can be provided to service business. This means additional employment growth in the villages through a positive approach to the rural economy and rural diversification.	Chapter 16 Socioeconomics, Recreation and Tourism	The socio-economics chapter will assess employment effects as a result of the Proposed Development, including leakage which analyses how much of the construction and operational workforce will be locally based.
The South Kesteven District Council Local Plan 2011-2036 (Adopted 2020) (Ref 2C.3)	Policy SD1: The Principles of Sustainable Development in South Kesteven	Policy SD1 sets out that development proposals in South Kesteven will be expected to minimise the impact on climate change and contribute towards creating a strong, stable and more diverse economy.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socioeconomic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				relevant national and local policy requirements.
	Policy E2 Strategic Employment Sites	Policy E2 sets out sites that are considered to be of strategic employment importance. Proposals will not be supported to cause harm to the strategic employment focus of these sites.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project. This will be considered during the construction, maintenance, and operation phases.
	Policy E3 Employment Areas	Appropriate proposals for new B1, B2 and/or B8 uses and/or redevelopment to B1, B2 and/or B8 uses on employment sites identified on the Policies Map and listed will be supported where proposals: Do not conflict with neighbouring land uses; Scale does not harm the character and/or amenities of the area; and Do no impact unacceptably on the local and/or strategic highway network. Other employment generating uses, outside of the B-use classes may also be appropriate on these sites, and will be considered where the promoter actively engages with the Council and an end-user for the proposal has been positively identified.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project. This will be considered during the construction, maintenance, and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy E4: Protection of		Chapter 16 Socioeconomics,	Addressed above.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Existing Employment Sites	Policy E4 sets out how important employment sites identified on the Policies Map will be protected. Do not conflict with neighbouring land uses; Scale does not harm the character and/or amenities of the area; and Do no impact unacceptably on the local and/or strategic highway network.	Recreation and Tourism Chapter 13 Traffic and Transport	The Project will seek to meet the policy requirements which will be set out in the ES and TA. The CTMP and CWTP will set out the construction implications and impact of delivery the Project.
	Policy E9: Visitor Economy	Policy E9 sets out that proposals for the development of the local visitor economy will be supported: allow provision for visitors which is appropriate in use and character to South Kesteven's settlements and maintains the quality of the countryside and the natural environment; enhance existing tourist and visitor facilities; aid the retention and/or enhancement of existing overnight accommodation and the provision of new overnight accommodation; allow new tourism provision and initiatives where these would also benefit local communities and support the local economy; or allow new tourism development of an appropriate scale and use which utilises existing historic buildings in the	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		countryside whilst respecting their character. In all cases proposals should be of a scale appropriate to the setting of the area and a sequential test should be applied where appropriate.		
	Policy EN1: Landscape Character	Development must be appropriate to the character and significant, natural, historic and cultural attributes and features of the landscape within which it is situated, and contribute to its conservation, enhancement or restoration. In assessing the impact of proposed development on the Landscape, relevant Landscape Character Appraisals should be considered, including those produced to inform the Local Plan and Neighbourhood Plans. Consideration should also be given to the Capacity and Limits to Growth studies produced for Grantham and Stamford and the points of the Compass Assessments.	Chapter 6 Landscape	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2C.2) and Horlock Rules (Ref 2C.3). The aim of the routeing and siting process is to avoid or minimise any adverse landscape effects. The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter of the ES.
	Policy EN2: Protecting Biodiversity and Geodiversity	Policy EN2 sets out how the council will facilitate the conservation, enhancement and promotion of biodiversity and geological interests of the natural environment. Proposals that are likely to have a	Chapter 8 Ecology and Biodiversity	Designations, habitats and protected species have been identified within the Baseline Conditions section. The likely effects on these features (and any additional features identified) will be assessed and reported as part

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		significant impact on sites designated internationally, nationally, or locally for their biodiversity and geodiversity importance, species populations and habitats identified within the Lincolnshire Biodiversity Action Plan, Geodiversity Strategy and the Natural Environment and Rural Communities (NERC) Act 2006 will be permitted only in exceptional circumstances.		of the Ecology and Biodiversity and Geology and Hydrogeology Chapters of the ES. Mitigation measures to ensure the conservation of ecological receptors will be reported in the ES. Where the Environmental Impact Assessment (EIA) process identifies opportunities to enhance biodiversity interests these will be reported in the Planning Statement submitted with the application for development consent.
	Policy EN3: Green Infrastructure	Policy EN3 sets out the Councils commitment to maintaining and improving the green infrastructure in the district by enhancing, creating and managing green space within and around settlements. Development proposals should ensure that existing and new green infrastructure is considered and integrated into the scheme design. Proposals that cause loss or harm to this network will not be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts.	Chapter 16 Socioeconomics, Recreation and Tourism Chapter 8 Ecology and Biodiversity	The assessment will take into account the policies of the Local Plan when assessing the socioeconomic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements. Designations, habitats and protected species have been identified within the Baseline Conditions sections of Chapter 8

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
			Chapter 11 Geology and Hydrogeology	Ecology and Biodiversity and Chapter 11 Geology and Hydrogeology. The likely effects on these features (and any additional features identified) will be assessed and reported as part of the ES. Mitigation measures to ensure the conservation of ecological and geological receptors will be reported in the ES. Where the EIA process identifies opportunities for enhancement these will be reported in the Planning Statement submitted with the application for development consent.
	Policy EN4: Pollution Control	Development should seek to minimise pollution and where possible contribute to the protection and improvement of the quality of air, land and water. In achieving this: Development should be designed from the outset to improve air, land and water quality and promote environmental benefits. Development that, on its own or cumulatively, would result in significant air, light, noise, land, water or other environmental pollution or harm to amenity, health well-being or safety will not	Chapter 14 Air Quality Chapter 12 Agriculture and Soils	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on Air, Quality. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements. An outline Soil Management Plan will be submitted and will be developed in line with current

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		be permitted. New development proposals should not have an adverse impact on existing operations. Development will only be permitted if the potential adverse effects can be mitigated to an acceptable level by other environmental controls, or by measures included in the proposals. Development that would lead to deterioration or may compromise the ability of a water body or underlying groundwater to meet good status standards in the Anglian River Basin Management Plan (required by the Water Framework Directive) will not be permitted. Where development is situated on a site with known or high likelihood of contamination, remediation strategies to manage this contamination will be required.	Chapter 10 Water Environment Chapter 11 Geology and Hydrogeology	good practice, including with reference to the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites. The extent of BMV land within the Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design. Risks posed by land contamination are assessed in Chapter 11 Geology and Hydrogeology. The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible. A Water Framework Directive Compliance Assessment will be prepared to inform the ES.
	Policy EN5: Water	Policy EN5 sets out the councils approach to flood risk. It states that development	Chapter 10 Water Environment	This Chapter will address the embedded environmental

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Environment and Flood Risk Management	should be located in the lowest areas of flood risk, in accordance with the South Kesteven Strategic Flood Risk Assessment (SFRA).		measures to steer new development to areas with the lowest probability of flooding and demonstrate that flood risk to people and property is managed satisfactorily. A FRA will be produced to inform Project design and the ES assessment, and the Project will secure SuDS based drainage design for operational infrastructure.
	Policy EN6: The Historic Environment	The council will seek to protect and enhance heritage assets and their settings in keeping with the policies in the National Planning Policy Framework. Development that is likely to cause harm to the significance of a heritage asset or its setting will only be granted where the public benefits of the proposal outweigh the potential harm. Where development affecting archaeological sites is acceptable in principle, the Council will seek to ensure mitigation of impact through preservation remains in situ as a preferred solution.	Chapter 9 Cultural Heritage	The local plan policy EN6 is aligned with the NPPF and NPS-EN1. The cultural heritage chapter will identify all designated and non-designated assets with a potential to be impacted by the Project and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed.
	Policy DE1: Promoting	To ensure high quality design is achieved throughout the District, all development proposals will be expected to:	Chapter 7 Visual	The SOR (Ref 2B.7), CPRSS (Ref 2B.8), Chapter 3 Main Alternatives Considered, and Chapter 4 Description of the

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Good Quality Design	• Make a positive contribution to the local distinctiveness, vernacular and character of the area. Proposals should reinforce local identity and not have an adverse impact on the streetscene, settlement pattern or the landscape / townscape character of the surrounding area. Proposals should be of an appropriate scale, density, massing, height and material, given the context of the area; • Ensure there is no adverse impact on the amenity of neighbouring users in terms of noise, light pollution, loss of privacy and loss of light and have regard to features that minimise crime and the fear of crime; and • Provide sufficient private amenity space, suitable to the type and amount of development proposed. Development proposals should seek to: • Retain and incorporate important on site features, such as trees and hedgerows and incorporate, where possible, nature conservation and biodiversity enhancement into the development; e. Provide well designed hard and soft landscaping; and • Effectively incorporate onsite infrastructure, such as flood mitigation systems or green infrastructure, as	Chapter 15 Noise and Vibration	Project describe the evolution of the Project to date and demonstrate that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2C.2) and Horlock Rules (Ref 2C.3) was a major consideration during its development and will continue in the future design evolution of the Project. The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES. The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology. The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on noise and vibration. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		appropriate. All major development (as defined in the Glossary) must demonstrate compliance with: • Neighbourhood Plan policies;h. Manual for Streets guidance and relevant Lincolnshire County Council guidance • Village design statements, where approved by the Council. • For new residential proposals, development should perform positively against Building for Life 12.		supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy CS1: Open Space	Policy CS1 sets out standards to ensure the availability of adequate open space for existing and future needs.	Chapter 17 Health and Wellbeing	This will be taken into account of the assessment methodology, considering the effects on employment and access to open space and recreation.
	Policy RE1: Renewable Energy Generation	Proposals for renewable energy generation will be supported subject to meeting the detailed criteria as set out in the accompanying Renewable Energy Appendix 3 and provided that: • The proposal does not negatively impact the District's agricultural land asset. • The proposal can demonstrate the support of affected local communities. • The proposal includes details for the transmission of power produced. • The proposal details that all apparatus related to renewable energy production	Chapter 12 Agriculture and Soils	The extent of Best and Most Versatile (BMV) land within The Scoping Boundary will be assessed in the baseline. The Project will have regard to the location of BMV land, and the extent affected will be minimised where practicable through the evolution of the design.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		will be removed from the site when power production ceases: and That the proposal complies with any other relevant Local Plan policies and national planning policy.		
	GR2 Sustainable Transport in Grantham	All major development proposals within the Grantham Transport Strategy area, and additionally proposals for development on site reference GR.SE1 under Policy E1, site reference GR3-H1 under policy GR3 and any any other land in proximity to the Grantham Southern Relief Road, should make an appropriate contribution to necessary transport improvements and the delivery of the objectives of the Grantham Transport Strategy, either directly where appropriate (such as the provision of infrastructure or through the contribution of land to directly enable a scheme to occur) or indirectly (such as through appropriate developer contributions to an identified scheme).	Chapter 13 Traffic and Movement	The Project will seek to meet the policy requirements which will be set out in the ES and TA. The CTMP and CWTP will set out the construction implications and impact of delivery the Project. TA will assess impacts in relation to congestion, access/severance, safety and maintain sustainable travel connectivity. Need to understand plans / timescale for delivery of new link road and identify conflicts.
	Policy ID2: Transport and Strategic Transport Infrastructure	New development will be required to contribute to transport improvements in line with appropriate evidence, including the Infrastructure Delivery Schedule, the Local Transport Plan and local transport strategies. All new developments should demonstrate that they have applied the following principles:	Chapter 13 Traffic and Movement	The Project will seek to meet the policy requirements which will be set out in the ES and TA. The CTMP and CWTP will set out the construction implications and impact of delivery the Project. TA will assess impacts in relation to congestion, access/severance, safety and maintain sustainable travel connectivity. Need to understand plans / timescale for

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		• Are located where travel can be minimised and the use of sustainable transport modes maximised; • Reduce additional travel demand through the use of measures such as travel planning, safe and convenient public transport, dedicated walking and cycling links and cycle storage/parking links and integration with existing infrastructure; • Seek to generate or support the level of demand required to improve, introduce or maintain public transport services, such as rail and bus services; • Do not severely impact on the safety and movement of traffic on the highway network or that any such impacts can be mitigated through appropriate improvements, including the provision of new or improved highway infrastructure; and • Ensure that transport is accessible to all, including appropriate provision for vehicle, powered two wheeler and cycle parking is made for residents, visitors, employees, customers, deliveries and for people with impaired mobility. Compliance with the criteria of this policy should be demonstrated through the provision of a transport Statement/Assessment and/or a travel plan as appropriate.		delivery of new link road and identify conflicts.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
Harborough Local Plan 2011-2031 (Adopted 2019) (Ref 2C.4)	Policy GD1: Achieving Sustainable Development	Policy GD1 sets out how the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework (NPPF).	Chapter 4 Description of the Project Chapter 18 Climate Change	The Project will support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire, Leicestershire, Cambridgeshire and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.
	Policy GD3: Development in the Countryside	Policy GD3 states that outside Market Harborough, Key Centres, the Principal Urban Area (PUA), Rural Centres and Selected Rural Villages, and land adjoining them, but excluding Green Wedges, development will be permitted where it is required for the following purposes: ... d. renewable energy production		
	Policy GD5 Landscape Character	Policy GD5 outlines how development should be located and designed in such a way that it is sensitive to its landscape setting and landscape character area.	Chapter 6 Landscape	The proposed approach to assessing the likely significant landscape effects of the Project is set out in Appendix 6A Landscape Assessment Methodology . An overview of the baseline landscape is provided in Chapter 6 Landscape . The proposed scope of the assessment is provided in Chapter 6 Landscape . The scope will include an assessment of how the intervisibility of the Project with individual landscape character areas could indirectly affect the landscape character area.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy GD8 Good design in development	Development will be permitted where it achieves a high standard of design, including meeting the following criteria: • being inspired by, respecting and enhancing both the local character and distinctiveness of the settlement concerned; • where appropriate, being individual and innovative, yet sympathetic to the local vernacular, including in terms of building materials; • in areas with high heritage value (Conservation Areas and in proximity to Listed Buildings, Scheduled Monuments and other heritage assets and their settings), reflecting those characteristics that make these places special; • respecting the context and characteristics of the individual site, street scene and the wider local environment to ensure that it is integrated as far as possible into the existing built form; • being designed to minimise impact on the amenity of existing and future residents by: • not having a significant adverse effect on the living conditions of existing and new residents through loss of privacy, overshadowing and overbearing impact, and	Chapter 6 Landscape	The design of the route of the 400 kV overhead line and the siting of the substations and associated infrastructure is being developed within the underlying principle of good design through the application of the Holford Rules (Ref 2C.2) and Horlock Rules (Ref 2C.3). The aim of the routeing and siting process is to avoid or minimise any adverse landscape effects. The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in in the alternatives chapter in the ES. The assessment of effects on landscape character will be based on the landscape character assessments listed in this chapter but will be informed by the local landscape character assessments listed in this Chapter including the North East Lincolnshire Landscape Character Assessment, Sensitivity and Capacity Study and the Lincolnshire Historic Landscape Characterisation Project, and any conservation area appraisals,

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		- not generating a level of activity, noise, vibration, pollution or unpleasant odour emission, which cannot be mitigated to an appropriate standard and so would have an adverse impact on amenity and living conditions; - minimising the amount of water consumption; - minimising pollution from glare or spillage of light from external lighting; - minimising opportunity for crime and maximising natural surveillance; - protecting and enhancing existing landscape features, wildlife habitats and natural assets (including trees, hedges and watercourses) as an integral part of the development; - enhancing the public realm, including high quality open spaces and links to the wider green infrastructure network to promote healthy lifestyles; - making provision for the needs of specific groups in the community such as the elderly and those with disabilities; - ensuring safe access, adequate parking and servicing areas including for refuse collection in new residential development; - ensuring the safe, efficient and convenient movement of all highway users, including bus passengers,	Chapter 15 Noise and Vibration	neighbourhood plans or village design statements. The likely landscape effects will be assessed and reported as part of the landscape chapter in the ES. Noise and vibration will be assessed in the ES as described in this scoping report.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		cyclists, pedestrians and horse riders; and where the site has previously been developed: - identifying the need for any decontamination and implementing this to an agreed programme; and - ensuring that any contamination is not relocated elsewhere to a location where it could adversely affect the water environment or other wildlife habitats.		
	Policy GD9 Minerals Safeguarding Areas	Non-exempt development in Minerals Safeguarding Areas will be permitted where the requirements set out in the minerals safeguarding policies of the Leicestershire County Council Minerals Local Plan have been met.	Chapter 11 Geology and Hydrogeology	If required, a standalone Minerals Assessment Report will be prepared. This will identify all safeguarded minerals and provide an appraisal of the effects of the Project against relevant minerals policy.
	BE3 Existing Employment Areas	Policy BE3 sets out types of development permitted in Key Employment Areas, General Employment Areas, and development starter homes on industrial and commercial land that is considered under-used or unviable.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy RT4 Tourism and Leisure	Policy RT4 Tourism and leisure outlines how tourism will be maximised and supported. This includes supporting the retention, enhancement and expansion of existing tourism and leisure attractions and tourist accommodation.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy HC1 Heritage	Development affecting heritage assets and their settings will: • be appraised in accordance with national policy; and • be permitted where it protects, conserves or enhances the significance, character, appearance and setting of the asset, including where possible better revealing the significance of the asset and enabling its interpretation. Where the proposed development would lead to substantial harm to (or total loss of significance of) a designated heritage asset it will only be permitted under set circumstances.	Chapter 9 Cultural Heritage	The cultural heritage chapter will identify all designated and non-designated assets with a potential to be impacted by the Project and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy GI1 Green Infrastructure networks	Development which supports specified green infrastructure assets to contribute to the wider green infrastructure network will be permitted. The green infrastructure assets listed will also be safeguarded and, where possible, enhanced.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas.
	Policy GI2 Open Space, Sport, and Recreation	The districts open space, sport and recreation facilities and any future additional facilities provided as part of the new development will be safeguarded and enhanced through improvement to their quality and use.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project. This will be considered during the construction, maintenance, and operation phases.
	Policy GI4 Local Green Space	Local Green Spaces are allocated on the Policies Map and will retain their openness permanently. Further Local Green Space may be identified in Neighbourhood Plans providing it meets the relevant criteria in relation to scale, beauty, historic significance, recreational value, tranquillity, or ecological value and it does not conflict with the strategic policies of this Local Plan.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing,

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				areas of green infrastructure such as new links between existing areas.
	Policy GI5 Biodiversity and Geodiversity	Policy GI5 sets out how nationally and locally designated biodiversity and geodiversity sites will be safeguarded.	Chapter 8 Ecology and Biodiversity Chapter 11 Geology and Hydrogeology	Designations, habitats and protected species have been identified within the Baseline Conditions section. The likely effects on these features (and any additional features identified) will be assessed and reported as part of the Ecology and Biodiversity and Geology and Hydrogeology Chapters of the ES. Mitigation measures to ensure the conservation of ecological and geological receptors will be reported in the ES. Where the Environmental Impact Assessment (EIA) process identifies opportunities for enhancement these will be reported in the Planning Statement submitted with the application for development consent.
	Policy CC1 Mitigating Climate Change	Major development will be permitted where it demonstrates: how carbon emissions would be minimised through passive design measures; the extent to which it meets relevant best practice accreditation schemes to promote	Chapter 18 Climate Change	The Project will directly support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire and the East Midlands, and will facilitate the connection of planned offshore wind generation, battery

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		the improvement in environmental and energy efficiency performance; how the development would provide and utilise renewable energy technology; whether the building(s) would require cooling, and if so how this would be delivered without increasing carbon emissions; how existing buildings to be retained as part of the development are to be made more energy efficient; how demolition of existing buildings is justified in terms of optimisation of resources in comparison to their retention and re-use; and how carbon emissions during construction will be minimised. 2. In Strategic Development Areas applicants should demonstrate whether a decentralised energy network is viable and, if so, the arrangements for its delivery and future management.		storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network. The Project will consider a range of measures to reduce energy consumption (and associated emissions) during both construction and operation.
	Policy CC2 Renewable Energy Generation	Development for renewable and low carbon energy generation will be permitted where: it is an appropriate technology for the site; it does not create a significant noise intrusion for existing dwellings; it includes measures to mitigate against any adverse impacts on the built and	Chapter 6 Landscape Chapter 15 Noise and Vibration	The assessment will take into account the policies of the Local Plan when assessing the impacts of the Project on noise and vibration. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		natural environment resulting from the construction, operation and decommissioning of any equipment/infrastructure; it does not contribute towards an unacceptable cumulative visual impact from renewable energy developments when considered in conjunction with nearby developments and permitted proposals within the District or adjoining local authority areas; and adequate conditions are imposed and/or a legal agreement is entered into ensuring that once the use ceases operating permanently, it is fully decommissioned and the site appropriately restored.		supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy CC3 Managing Flood Risk	Policy CC3 sets out the Councils approach to managing flood risk. New development should take place in areas of the lowest risk of flooding, including the potential future risk due to climate change.	Chapter 10 Water Environment	This Chapter will address the embedded environmental measures to steer new development to areas with the lowest probability of flooding and demonstrate that flood risk to people and property is managed satisfactorily. A FRA will be produced to inform Project design and the ES assessment, and the Project will secure SuDS based drainage design for operational infrastructure.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy CC4 Sustainable Drainage	All major development must incorporate sustainable drainage systems (SuDS).	Chapter 10 Water Environment	This Chapter will address the embedded environmental measures to steer new development to areas with the lowest probability of flooding and demonstrate that flood risk to people and property is managed satisfactorily. A FRA will be produced to inform Project design and the ES assessment, and the Project will secure SuDS based drainage design for operational infrastructure.
	Policy IN1 Infrastructure	1. Major development will be permitted where there is, or will be when needed, sufficient infrastructure capacity to support and meet all the requirements arising from it, including those away from the site and its immediate vicinity, whether within Harborough District or outside. 2. Direct provision and/or financial contributions towards meeting all the eligible costs of infrastructure directly required by a major development (or cumulatively with other major developments within Harborough District or outside) will be sought from the scheme promoter whenever this is necessary. Planning obligations under Section 106 of the Town and Country Planning Act 1990 (as amended) will be required taking into account the viability of the development.		The Project will support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire, Cambridgeshire and Leicestershire, and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		This will be in addition to the affordable housing requirement as set out in Policy H2.		
	Policy IN2 Sustainable Transport	Policy IN2 sets out that development proposals should have regard to the transport policies of the Local Transport Authority and where there are impacts on the national road network be aligned with policies of Highways England. Proposals should seek to maximise the use and efficiency of existing transport facilities and where necessary provide mitigating measures to deal with the impacts of development on the transport network.	Chapter 13 Traffic and Transport	The Project proposals will seek to minimise or avoid impact on transport networks and maintain connectivity.
North Northamptonshire Local Plan. (Part 1 (2016) and Part 2, Local Plans.) (Ref 2C.5)	Policy 1: Presumption in Favour of Sustainable Development	Policy 1 sets out that when considering development proposals the Local Planning Authority will take a positive approach that reflects the presumption in favour of sustainable development contained within the National Planning Policy Framework.	Chapter 18 Climate Change	The Project will support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire, Cambridgeshire and Leicestershire, and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.
	Policy 2: Historic Environment	Policy 3 sets out how the historic environment will be protected, preserved and, where appropriate, enhanced. Where a development would impact upon a heritage asset and/or its setting:	Chapter 9 Cultural Heritage	The cultural heritage chapter will identify all designated and non-designated assets with a potential to be impacted by the Project and will assess their significance including any contribution from

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		- Proposals should conserve and, where possible, enhance the heritage significance and setting of an asset or group of heritage assets in a manner commensurate to its significance; - Proposals should complement their surrounding historic environment through the form, scale, design and materials; - Proposals should protect and, where possible, enhance key views and vistas of heritage assets, including of the church spires along the Nene Valley and across North Northamptonshire; - Proposals should demonstrate an appreciation and understanding of the impact of development on heritage assets and their setting in order to minimise harm to these assets and their setting. Where loss of historic features or archaeological remains is unavoidable and justified, provision should be made for recording and the production of a suitable archive and report; - Where appropriate, flexible solutions to the re-use of buildings and conservation of other types of heritage assets at risk will be encouraged, especially, where this will result in their removal from the 'at risk' register.		setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy 3: Landscape Character	Policy 3 sets out that development should be located and designed in a way that is sensitive to its landscape setting, retaining and, where possible, enhancing the distinctive qualities of the landscape character which it would affect.	Chapter 6 Landscape	The assessment of effects on landscape character will be based on the landscape character assessments listed in this chapter but will be informed by the local landscape character assessments listed in this Chapter including the North East Lincolnshire Landscape Character Assessment, Sensitivity and Capacity Study and any conservation area appraisals, neighbourhood plans or village design statements.
	Policy 4: Biodiversity and Geodiversity	Policy 4 states that a net gain in biodiversity will be protected and enhanced through: • Protecting existing biodiversity and geodiversity assets. • Enhancing ecological networks by managing development and investment. • Supporting through developer contributions or development design, the protection and recovery of priority habitats and species linked to national and local targets. • Developments that are likely to have an adverse impact, either alone or in-combination on the Upper Nene Valley Gravel Pits Special Protection Area or other European Designated Sites must	Chapter 8 Ecology and Biodiversity	Designations, habitats and protected species have been identified within the Baseline Conditions section. The likely effects on these features (and any additional features identified) will be assessed and reported as part of the Ecology and Biodiversity and Geology and Hydrogeology Chapters of the ES. Mitigation measures to ensure the conservation of ecological and geological receptors will be reported in the ES. A Habitat Regulations Assessment (HRA) will be undertaken to determine whether the Project is likely to have a

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		satisfy the requirements of the Habitats Regulations.		significant effect on any European designated site (now included within the national site network), or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. The HRA will inform the Ecology and Biodiversity chapter of the ES and will be included with the application for development consent. Design adjustments may be required as a result of the HRA process, which will be fed into the final ES/ application for development consent. National Grid has committed to 10% Net Gain in environmental value including as a minimum 10% Biodiversity Net Gain (BNG) across all its construction projects. A BNG assessment will be undertaken and presented in a separate BNG report that will be submitted as part of the application for development consent.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy 5: Water Environment, Resources and Flood Risk Management	Development should contribute towards reducing the risk of flooding and to the protection and improvement of the quality of the water environment. Development should, wherever possible, be avoided in high and medium flood risk areas.	Chapter 10 Water Environment Chapter 11 Geology and Hydrogeology	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible Chapter 11 Geology and Hydrogeology will assess the impact of the development on groundwater quality.
	Policy 6: Development on Brownfield Land and Land Affected by Contamination	Where development is situated on a site with known or high likelihood of contamination, remediation strategies to manage this contamination will be required. Subject to the Policies in this Plan, planning permission will be granted for development on land affected by contamination where it can be established by the proposed developer that the site can be safely and viably developed with no significant impact on either future users or on ground and surface waters.	Chapter 11 Geology and Hydrogeology	This policy will be considered to take into account the environmental impacts on human health, buildings, land and groundwater arising as a result of the Project. Should significant effects be identified, these will be assessed through the EIA process and appropriate mitigation measures recommended.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy 7: Community Services and Facilities	Development should support and enhance community services and facilities, where appropriate by: • Providing on site where necessary or contributing towards accessible, new or enhanced community services and facilities. • Providing accessible greenspace in accordance with Natural England's Accessible Natural Greenspace Standards (ANGSt) and the Woodland Trust's Woodland Access Standard, unless local standards have been adopted; • Safeguarding existing facilities. • Not resulting in the net loss of open space, allotments, sports and recreational buildings and land.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy 19: The Delivery of Green Infrastructure	Policy 19 sets out how the mixed urban and rural character of North Northamptonshire will be maintained and enhanced by: • Managing development and investment to secure a net gain in green infrastructure through: • Safeguarding identified sub-regional green infrastructure corridors. • Contributing towards the enhancement or ongoing management of local green infrastructure corridors by prioritizing green infrastructure investment areas.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Requiring, where appropriate, project level Habitats Regulations Assessments, to ensure the protection of European designated sites such as the Upper Nene Valley Gravel Pits Special Protection Area and Ramsar Site.		A Habitat Regulations Assessment (HRA) will be undertaken to determine whether the Project is likely to have a significant effect on any European designated site (now included within the national site network), or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. The HRA will inform the Ecology and Biodiversity chapter of the ES and will be included with the application for development consent. Design adjustments may be required as a result of the HRA process, which will be fed into the final ES/application for development consent.
	Policy 22 – Delivering Economic Prosperity	Policy 22 sets out the Council's plans to deliver a net increase of jobs, including through prioritising the enhancement of existing employment sites and the regeneration of previously developed land, also safeguarding existing and committed employment sites.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy 26: Renewable and Low Carbon Energy	Proposals for sensitively located renewable and low carbon energy generation will be supported. • The landscape impact of the development is minimised and mitigated against; • The development links to a specific demand through a decentralised energy network or where this is not possible, the necessary infrastructure is provided to supply power to the National Grid; • The siting of development avoids harm to the significance of a heritage asset and its setting in accordance with the provisions of the NPPF; • The siting of development does not significantly adversely affect the amenity of existing, or proposed, residential dwellings and/or businesses, either in isolation or cumulatively, by reason of noise, odour intrusion, dust, traffic generation, visual impact or shadow flicker; • The development does not result in an adverse impact on the capacity and safety of the highways network and of public rights of way; • The development includes a managed programme of measures to mitigate against any adverse impacts on the built and natural environment resulting	Chapter 6 Landscape	Chapter 4 Description of the Project describes the evolution of the Project to date and demonstrates that minimising adverse effects on the landscape through sensitive routeing, siting and design in accordance with the Holford Rules (Ref 2C.2) and Horlock Rules (Ref 2C.3) was a major consideration during its development and will continue in the future design evolution of the Project. The evolution of the design will continue to be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the alternatives chapter within the ES. The assessment of effects on landscape character will be based on the landscape character assessments listed in this chapter but will be informed by the local landscape character assessments listed in this chapter and any conservation area appraisals, neighbourhood plans or village design statements. The effects will be assessed and reported as

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		from the construction, operation and decommissioning of any equipment/infrastructure; - The development does not create a significant adverse cumulative noise or visual impact when considered in conjunction with other developments planned within North Northamptonshire and adjoining local authority areas; - The development retains and enhances on-site biodiversity and supports the enlargement of, and/or connection to, existing biodiversity assets such as wildlife corridors, where possible; - Proposals for Solar Photovoltaic farms avoid the best and most versatile agricultural land.	Chapter 8 Ecology and Biodiversity Chapter 15 Noise and Vibration Chapter 18 Climate Change	part of the landscape chapter in the ES. The proposed approach to assessing likely significant cumulative effects is explained in Appendix 6A Landscape Assessment Methodology. The proposed approach to mitigation is explained in Chapter 5 EIA Approach and Methodology. The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas. Noise and vibration will be assessed in the ES as described in this scoping report. The Project will support the UK's net zero target by reinforcing the electricity transmission network in
West Northamptonshire Local Plan	Policy SA: Presumption in Favour of	Policy SA outlines how the council will take a positive approach that reflects the presumption in favour of sustainable		

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
(Adopted 2014) (Ref 2C.6)	Sustainable Development	development contained within the National Planning Policy Framework.		Lincolnshire, Cambridgeshire and Leicestershire, and facilitating the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network.
	Policy S10: Sustainable Development Principles	Policy 10 outlines 10 sustainable development principles that should be adhered to. • Achieve the highest standards of sustainable design incorporating safety and security considerations and a strong sense of place; • Be designed to improve environmental performance, energy efficiency and adapt to changes of use and a changing climate over its lifetime; • Make use of sustainably sourced materials; • Minimise resource demand and the generation of waste and maximise opportunities for reuse and recycling; • Be located where services and facilities can be easily accessed by walking, cycling or public transport; • Maximise use of solar gain, passive heating and cooling, natural light and ventilation using site layout and building design;	Chapter 18 Climate Change	The Project will directly support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire and the East Midlands, and will facilitate the connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network. The Project will consider a range of measures to reduce energy consumption (and associated emissions) during both construction and operation. Circular economy principles will be considered at the design stage with the intention to implement measures to design out waste

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		• Maximise the generation of its energy needs from decentralised and renewable or low carbon sources; • Maximise water efficiency and promote sustainable drainage; • Protect, conserve and enhance the natural and built environment and heritage assets and their settings; • Promote the creation of green infrastructure networks, enhance biodiversity and reduce the fragmentation of habitats; and • Minimise pollution from noise, air and run off.		and integrate circular economy principles which will include consideration of pre-construction, construction, operation, and end-of life processes and materials will be selected to minimise waste over the whole life cycle of the Project. Where appropriate, the Project will endeavour to use materials with the highest recycled content, where this leads to lower whole life carbon emissions and encourage their use through procurement exercises. The Project will continue to integrate carbon as a weighted element within the design and decision-making process and continue to work with partners across the industry on lower carbon alternatives. These principles along with other management control measures are included in Appendix 4A Initial Code of Construction Practice.
	Policy S11 Low Carbon and Renewable Energy	Policy S11 states that major development and sustainable urban extensions should contribute to reductions in carbon emissions and adapt to the effect of climate change.	Chapter 18 Climate Change Chapter 6 Landscape	The Project will directly support the UK's net zero target by reinforcing the electricity transmission network in Lincolnshire and the East Midlands, and will facilitate the

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Proposals should be sensitively located and designed to minimize potential impacts on people, the natural environment, biodiversity, historic assets and mitigate pollution.		connection of planned offshore wind generation, battery storage/solar, interconnectors with other countries and subsea links to Scotland, allowing clean energy to be carried on the network. The Project will consider a range of measures to reduce energy consumption (and associated emissions) during both construction and operation. Circular economy principles will be considered at the design stage with the intention to implement measures to design out waste and integrate circular economy principles which will include consideration of pre-construction, construction, operation, and end-of life processes and materials will be selected to minimise waste over the whole life cycle of the Project. Where appropriate, the Project will endeavour to use materials with the highest recycled content, where this leads to lower whole life carbon

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				emissions and encourage their use through procurement exercises. The Project will continue to integrate carbon as a weighted element within the design and decision-making process and continue to work with partners across the industry on lower carbon alternatives.
	Policy E1 Existing Employment Areas	Policy E1 outlines that to help support a vibrant, successful and developing local economy existing and allocated employment sites and industrial estates will be retained for classes B1, B2, B8 and appropriate non-B employment generating uses. Changes of use to other uses will be resisted until it can be demonstrated that the site is no longer economically viable.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socio-economic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy BN1 Green Infrastructure Connections	Policy BN1 sets out how green infrastructure corridors of sub-regional and local importance of the joint core strategy will be conserved, managed and enhanced.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas.
	Policy BN2 – Biodiversity	Development that will maintain and enhance existing designations and assets or deliver a net gain in biodiversity will be supported. Development that has the potential to harm sites of ecological importance will be subject to an ecological assessment and required to demonstrate: - the methods used to conserve biodiversity in its design and construction and operation - how habitat conservation, enhancement and creation can be achieved through linking habitats - how designated sites, protected species and priority habitats will be safeguarded. Development management decisions will reflect the hierarchy of biodiversity and geodiversity designations attaching appropriate weight to the status of the site which would be affected. In cases where it can be shown that there is no reasonable alternative to development that is likely to prejudice the integrity of an existing wildlife site or protected habitat, appropriate	Chapter 8 Ecology and Biodiversity	National Grid has committed to 10% Net Gain in environmental value including as a minimum 10% Biodiversity Net Gain (BNG) across all its construction projects. A BNG assessment will be undertaken and presented in a separate BNG report that will be submitted as part of the application for development consent. Designations, habitats and protected species have been identified within the Baseline Conditions section. The likely effects on these features (and any additional features identified) will be assessed and reported as part of the Ecology and Biodiversity and Geology and Hydrogeology Chapters of the ES. Mitigation measures to ensure the conservation of ecological and geological receptors will be reported in the ES.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		mitigation measures including compensation will be expected in proportion to the asset that will be lost.		
	Policy BN3 – Woodland Enhancement and Creation	Policy BN3 states that measures to enhance and manage existing woodlands and create new woodlands in West Northamptonshire will be supported. The protection of aged and veteran trees outside ancient woodlands will also be supported. Any development that would lead to further fragmentation or result in a loss of ancient woodland, aged or veteran trees will not be permitted unless the need for, and benefits of the development clearly outweigh the loss.	Chapter 8 Ecology and Biodiversity	The Project will aim to retain and enhance existing green infrastructure features wherever possible. This would include retaining habitat corridors such as woodlands, hedgerows and tree lines to maintain links between areas of habitat, particularly those which are designated. Opportunities would be sought to create new, or enhance existing, areas of green infrastructure such as new links between existing areas.
	Policy BN5 The Historic Environment and Landscape	Designated and non-designated heritage assets and their settings and landscapes will be conserved and enhanced in recognition of their individual and cumulative significance and contribution to local distinctiveness and sense of place.	Chapter 9 Historic Environment	The Historic Environment desk-based assessment and ES chapter will identify all designated and nondesignated assets with a potential to be impacted by the Project and will assess their significance including any contribution from setting. Impacts on the significance including the setting of assets arising from the Project and appropriate mitigation measures will be assessed.
	Policy BN7 Flood Risk	Policy BN7 outlines the councils approach to flood risk, and how development proposals will comply with flood risk	Chapter 10 Water Environment	The Project design is developing to avoid areas of highest flood risk wherever possible. Where flood

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		assessment and management requirements set out in the National Planning Policy Framework and Planning Practice Guidance, and the West Northamptonshire Strategic Flood Risk Assessments.		risk cannot be avoided, appropriate mitigation measures will be identified in the FRA, which will make appropriate allowance for the effects of climate change over the Project lifetime. Drainage systems will incorporate SuDS as far as possible.
	Policy BN9 Planning for Pollution Control	Proposals for new development which are likely to cause pollution or likely to result in exposure to sources of pollution or risks to safety will need to demonstrate that they provide opportunities to minimise and where possible reduce pollution issues that are a barrier to achieving sustainable development and healthy communities including: • maintaining and improving air quality, particularly in poor air quality areas, in accordance with national air quality standards and best practice; • protecting and improving surface and groundwater water quality; • minimising light pollution; • ensuring remediation of contaminated land so as not to pose a risk to health and the environment; and • reducing the adverse impacts of noise.	Chapter 11 Geology and Hydrogeology	Pollution risks on groundwater quality (b) and contaminated land (d) will be assessed and minimised.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
	Policy BN10 Ground Instability	Development will be permitted on sites of unstable or potentially unstable land provided that: - the nature of the ground stability of the site has been assessed to the satisfaction of the determining planning authority and a ground stability report has been provided and agreed before the application is determined; - the development does not add to the instability of the site or surrounding land; - any required remedial works are implemented prior to occupation of development; and - the development of any required stabilisation measures are environmentally acceptable to the satisfaction of the determining authority.	Chapter 3 Main Alternatives Considered	Chapter 3 Main Alternatives Considered describes the Project Design Approach including the development of design principles to set desirable design outcomes which the Project should endeavour to achieve, as far as is reasonably practicable, and facilitate an integrated design approach which draws together engineering, environment, sustainability and social value design considerations. Sensitive routeing, siting and design (including land use impacts) is in accordance with the Holford Rules (Ref 2B.2) and Horlock Rules (Ref 2B.3) and will continue in the future design evolution of the Project.
	Policy INF1 Approach to Infrastructure Delivery	New development will be supported by, and provide good access to, infrastructure, including physical, green, and social elements. Paragraph 11.10 states that ensuring all new development proposals address their impact appropriately and deliver solutions that allow West Northamptonshire to grow in a sustainable manner.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the policies of the Local Plan when assessing the socioeconomic impacts of the Project. This will be considered during the construction, maintenance and operation phases. Any future application for development consent will be supported by a

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
				Planning Statement, which will detail how the Project complies with all relevant national and local policy requirements.
	Policy M11: Safeguarding of Mineral Resources	M11 highlights that applications for non-minerals development in a minerals safeguarding areas must be accompanied by a Minerals Assessment.	Chapter 4 Description of the Project	If required, a standalone Minerals Assessment Report will be prepared. This will identify all safeguarded minerals and provide an appraisal of the effects of the Project against relevant minerals policy.
	M15: Borrow Pits	M15 set out that planning permission will be granted for borrow pits to supply materials for major construction projects under set circumstances.	Chapter 4 Description of the Project	
Leicestershire Minerals and Waste Local Plan (Adopted 2019) (Ref 2C.9)	Policy M11: Safeguarding of Mineral Resources	Policy M11 sets out how Minerals Safeguarding Areas will be protected from permanent sterilisation by other development. Planning applications for non-mineral development within a Mineral Safeguarding Area should be accompanied by a Mineral Assessment.	Chapter 4 Description of the Project	If required, a standalone Minerals Assessment Report will be prepared. This will identify all safeguarded minerals and provide an appraisal of the effects of the Project against relevant minerals policy.
Northamptonshire Minerals and Waste Local Plan Update (2017) (Ref 2C.10)	Policy 18 Addressing the impact of proposed minerals and waste development	Policy 18 sets out how minerals and waste development must demonstrate that the following matters have been considered and addressed. - protecting Northamptonshire's natural resources and key environmental designations (including heritage assets), - avoiding and / or minimising potentially adverse impacts to an acceptable level,	Chapter 4 Description of the Project	If required, a standalone Minerals Assessment Report will be prepared. This will identify all safeguarded minerals and provide an appraisal of the effects of the Project against relevant minerals policy.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		specifically addressing air emissions (including dust), odour, bioaerosols, noise and vibration, slope stability, vermin and pests, birdstrike, litter, land use conflict and cumulative impact, • impacts on flood risk as well as the flow and quantity of surface and groundwater, • ensuring built development is of a design and layout that has regard to its visual appearance in the context of the defining characteristics of the local area, • ensuring access is sustainable, safe and environmentally acceptable, and • ensuring local amenity is protected. Where applicable a site-specific management plan should be developed to ensure the implementation and maintenance of mitigation measures throughout construction, operation, decommissioning and restoration works.		
Transport Strategies				
Lincolnshire Local Transport Plan 5 (Consultation Draft) (Ref 2C.11)		This transportation plan focusses on the five-year short and ten-year medium-term aspirations for the county. The key themes and strategic objectives for the plan are: • Theme 1 – Supporting economic growth	Chapter 13 Traffic and Transport	The Project proposals will seek to minimise or avoid impact on transport networks and maintain connectivity.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		• Theme 2 – Future ready, green transport • Theme 3 – Promote thriving environments • Theme 4 – Supporting safety, security and a healthy lifestyle • Theme 5 – Promoting high aspirations • Theme 6 – Improve quality of life		
Northamptonshire Transportation Plan (Adopted March 2012) (Ref 2C.12)		This transportation plan describes six overarching objectives: • Fit for the Future. • Fit for the Community. • Fit to Choose. • Fit for Economic Growth. • Fit for the Environment. • Fit for Best Value.	Chapter 13 Traffic and Transport	The Project proposals will seek to minimise or avoid impact on transport networks and maintain connectivity.
West Northamptonshire Council Local Transport Plan (Adopted March 2025) (Ref 2C.13)		The Local Transport Plan sets out West Northamptonshire's priorities for the next five years and beyond: • Objective 1: Improve the accessibility of the public transport, walking and cycling networks, to promote a system that is fair and provides attractive travel alternatives to key destinations. • Objective 2: Create thriving communities through local investment in a more resilient transport network, services and the public realm in urban	Chapter 13 Traffic and Transport	The Project proposals will seek to minimise or avoid impact on transport networks and maintain connectivity.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		and rural towns and villages across West Northamptonshire • Objective 3: Improve road safety and reducing pollution, while expanding active travel networks and supporting infrastructure that facilitates improved public health outcomes. • Objective 4: Enhance local environments and further reduce carbon emissions from transport by investing in low carbon and electric modes, mindful of local heritage. • Objective 5: Reduce inequalities through better transport connections to key employment and education opportunities, to support local socio-economic growth. • Objective 6: Maximise the benefits to communities and businesses through use of technology and innovation.		
Interim Melton Mowbray Transport Strategy: Engagement Draft (Ref. 2C.14)		The Interim Melton Mowbray Transport Strategy sets in place an interim strategy to deliver several key proposals identified as early priorities for, and developed ahead of, the Melton Mowbray Transport Strategy. These priorities includes the Melton Mowbray Distributor Road (MMDR) and to provide a framework to develop other measures to be put in place after the MMDR has opened.	Chapter 13 Traffic and Transport	The Project proposals will seek to minimise or avoid impact on transport networks and maintain connectivity.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
Local Economic Policy				
Greater Lincolnshire Local Industrial Strategy (Ref 2C.15)		Local Industrial Strategies are long-term plans that aim to build on local economic strengths and opportunities and promote the coordination of local economic policy and national funding streams. The GLLEP Local Industrial Strategy sets the economic priorities for Lincolnshire to 2030 and beyond and has been developed in partnership with public and private sector stakeholders. The Strategy recognises renewable energy and associated infrastructure as a priority sector for the regional economy and outlines the potential wider economic benefits for Lincolnshire from the planned investments in offshore wind capacity for sites off the Lincolnshire coastline. A key aim of the Strategy is to enhance supply chain links to facilitate the transition to low carbon and low cost flexible grid systems. The agri-food industry is also outlined as a priority sector, and the Strategy outlines a plan to enhance the international competitiveness of the sector through resource efficiency. The main concentrations of the food industry are in North East Lincolnshire and the South Holland and Boston areas of Lincolnshire. A further focus of the Strategy is the visitor economy and the contribution of tourism to the regional economy. The Strategy	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		outlines the vision to create a Tourism Zone, which is a key initiative of the UK Tourism Sector Deal to increase off-season visits and the productivity of the tourism sector through digital skills training and apprenticeships. Key statistics of the contribution of the key regional sector presented in the Strategy are summarised below. The energy industry supports approximately 5,900 jobs in Greater Lincolnshire, and 210 local businesses operate within this sector. The agri-food industry supports approximately 75,000 jobs and contributes £3.7 billion to regional Gross Value Added (GVA). This represents 18% of Lincolnshire's GVA, compared to 3% nationally.		
Greater Lincolnshire LEP Employment and Skills Advisory Panel Local Skills Report (Ref 2C.16)		The Local Skills Report sets out the local skills strengths and needs across Greater Lincolnshire. High skill opportunities in growth sectors, including decarbonisation and offshore wind, are identified as a regional strength. However, the Report recognises that a higher level of technical skill is needed among the resident population to benefit from these opportunities. The greatest job vacancies in the offshore wind industry are in project management and electrical engineering professions.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the priorities outlined in the GLLEP Local Skills Report in the assessment of potential employment and training benefits within the local and regional labour market. This will be considered during the construction and maintenance phases.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
Lincolnshire Wolds Destination Management Plan 2023-2027 (Ref 2C.17)		The Lincolnshire Wolds Destination Management Plan provides a strategic focus to the development of the visitor economy in the Lincolnshire Wolds and outlines a delivery framework for the public and private sectors. The priorities and key actions of the Plan are summarised below. Priorities Maintaining and improving rights of way within the Wolds is a key priority, and the visitor economy links to broader AONB agendas such as conservation, rewilding, and recreation. The tourism economy in the Wolds is still recovering from the pandemic, however the 'staycation' effect is identified as a potential opportunity for the Wolds over the short and medium term. The Plan identifies several potential specialist focus areas for the market towns in the Wolds: • Louth: Food and drink, and/or retail and market; • Spilsby: Walking and heritage; • Alford: The Manor House and Windmill; • Horncastle: Antiques and the arts; • Market Rasen: Events and performance (linked to racecourse).	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will take into account the priorities outlined in the Lincolnshire Wolds Destination Management Plan in the assessment of socio-economic, tourism, and recreation impacts of the Project. This will be considered during the construction, maintenance, and operation phases.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Actions Continue to develop pipeline and opportunities to enhance the visitor offer in the Wolds, such as small-scale accommodation development and nature viewing points. Seek to expand the walking and cycling offer. Secure potential funding opportunities such as from the Levelling Up Fund and UK Shared Prosperity Fund. Strengthen tourism delivery across a range of public sector organisations and the Love Lincolnshire Wolds Tourism Partnership. Economic impact This section provides data from economic impact modelling of the tourism economy in the Lincolnshire Wolds presented in the Plan. All data is from 2022. Annually, approximately 3.7 million tourists visit the Wolds, contributing £200m to the local economy and supporting over 2,100 Full-Time Equivalents.		
Lincolnshire Wolds AONB Management Plan 2018-2023 (Ref 2C.18)		The overarching vision of the AONB Management Plan is to sustainably manage development within the Wolds whilst maintaining its unique sense of place and its natural and cultural heritage. Policies within the AONB Management Plan are ordered by five key themes:	Chapter 6 Landscape Chapter 7 Visual	This document is a Management Plan which does not form part of the Local Development Plan in terms of planning policy, although has been prepared and endorsed by the LPAs affected by the AONB designation (East and West Lindsey and North East Lincolnshire Councils). As such the management plan is a

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		- Theme 1: Protecting the Lincolnshire Wolds. - Theme 2: Living and Working in the Wolds. - Theme 3: Discovering the Wolds. - Theme 4: Developing the Wolds. - Theme 5: Partnerships in the Wolds. Key policies that ought to be considered in the design of the project include Policy PP5 which seeks to promote awareness and encourage consideration of the impact of adjacent development on the views to and from the AONB. Policy PP9 which states that, to ensure that where larger scale development must proceed within or adjacent to the AONB, because of other national interests, the highest regard is placed on minimising any impacts upon the primary purpose of the designation – the area’s natural beauty.		material consideration for the Project. No above ground infrastructure would fall within the boundaries of the Lincolnshire Wolds National Landscape (formerly AONB). An assessment of likely significant indirect effects on the natural beauty and special qualities of the Lincolnshire Wolds National Landscape (formerly AONB) set out in Table 1 of the Lincolnshire Wolds AONB Management Plan 2018-2023 will be informed by a setting study prepared for the designated area and reported as part of the landscape chapter in the ES. Effects on key views to and from the AONB will be assessed and reported in the visual chapter of the ES. The proposed approach to assessing likely significant effects is explained in Appendix 6A Landscape Assessment Methodology and Appendix 7A Visual Assessment Methodology.
South Holland District Council Economic Action Plan (Adopted 2019) (Ref 2C.19)		The plan outlines the vision for South Holland as a place of prosperity, wellbeing, and opportunity. It focuses on sustainable growth, business support, skills development and inward investment.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		Key challenges identified within the plan include low wages, skill shortages and infrastructure constraints, with initiatives to improve digital and transport infrastructure.		
South Kesteven Economic Development Strategy (Adopted 2024) (Ref 2C.20)		The plan outlines a vision for a thriving, innovative, and inclusive local economy. It prioritises business growth, high-quality job creation, skills development, regeneration, inward investment, and boosting the visitor economy.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.
		Key aims include raising productivity and wages above the national average, with a strong focus on collaboration and long-term economic resilience.		
Draft Harborough District Economic Development Strategy (Ref 2C.21)		The strategy sets out a vision for Harborough to become a distinctive economic hub in Leicestershire and the Midlands, focusing on four key themes: • Thriving People; • Places; • Enterprise; and • Environment	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.
North Northamptonshire Council Economic Growth Strategy (Adopted 2025) (Ref 2C.22)		The strategy emphasises three pillars as key focus areas for the next five years: Business; People; and Place.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.

Local Policy	Policy Ref	Policy Context	Relevant to EIA Scoping Chapter	How it will be considered
		The strategy aims to support sustainable business growth, develop a skilled and inclusive workforce, and enhance the area’s appeal for investment, residents, and visitors.		
West Northamptonshire Corporate Plan (Ref 2C.23)		The strategy focuses on six key priorities: clean and green communities; improved life chances; connected communities; thriving villages and towns; economic development; and robust resource management.	Chapter 16 Socioeconomics, Recreation and Tourism	The assessment will consider the local economic priorities when assessing the socio-economic, tourism, and recreation impacts of the Project.

References

- Ref 2C.1 South East Lincolnshire Joint Strategic Planning Committee (2019) South East Lincolnshire Local Plan 2011-2036 (Adopted March 2019). [online] Available at: <https://www.selincopartnership.co.uk/local-plan/adopted-local-plan> [Accessed 7 August 2025].
- Ref 2C.2 Melton Borough Council (2018) Melton Local Plan 2011-2036 (Adopted October 2018). [online] Available at: <https://www.meltonplan.co.uk/adoptedplan> [Accessed 7 August 2025].
- Ref 2C.3 South Kesteven District Council (2020) South Kesteven District Council Local Plan 2011-2036 (Adopted January 2020). [online] Available at: <https://www.southkesteven.gov.uk/planning-building-control/planning-policy-local-plans/south-kesteven-local-plan> [Accessed 7 August 2025].
- Ref 2C.4 Harborough District Council (2019) Harborough Local Plan 2011-2031 (Adopted April 2019). [online] Available at: https://www.harborough.gov.uk/info/20004/planning_strategy/220/harborough_local_plan_2011-2031 [Accessed 7 August 2025].
- Ref 2C.5 North Northamptonshire Joint Planning Unit (2016 & 2021) North Northamptonshire Joint Core Strategies 2011-2031 (Adopted July 2016) and Part 2 Local Plans. [online] Available at: <https://www.northnorthants.gov.uk/planning-strategies-and-plans/north-northamptonshire-local-plan> [Accessed 7 August 2025].
- Ref 2C.6 West Northamptonshire Joint Planning Unit (2014) West Northamptonshire Joint Core Strategy Local Plan (Adopted December 2014). [online] Available at: <https://www.westnorthants.gov.uk/west-northamptonshire-joint-core-strategy/west-northamptonshire-joint-core-strategy-local-plan-part> [Accessed 7 August 2025].
- Ref 2C.7 Lincolnshire County Council (2016) Lincolnshire Minerals and Waste Local Plan: Core Strategy and Development Management. [online] Available at: <https://www.lincolnshire.gov.uk/downloads/file/2361/core-strategy-and-development-management-policies> [Accessed 07 August 2025].
- Ref 2C.8 Lincolnshire County Council (2022) Review of the Lincolnshire Minerals and Waste Local Plan: Issues and Options. [online] Available at: <https://www.lincolnshire.gov.uk/downloads/file/6742/issues-and-options> [Accessed 7 August 2025].
- Ref 2C.9 Leicestershire County Council (2019) Leicestershire Minerals and Waste Local Plan (Adopted September 2019). [online] Available at: <https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/10/3/Leicestershire-Minerals-and-Waste-Local-Plan-Up-to-2031-Adopted-2019.pdf> [Accessed 7 August 2025].
- Ref 2C.10 Northamptonshire County Council (2017) Northamptonshire Minerals and Waste Local Plan (Adopted July 2017). [online] Available at: <https://www.northnorthants.gov.uk/minerals-and-waste-planning-policy/adopted-minerals-and-waste-local-plan> [Accessed 7 August 2025].

- Ref 2C.11 Lincolnshire County Council (2024) Lincolnshire Local Transport Plan 5 (Adopted February 2022) [online] Available at: <https://www.lincolnshire.gov.uk/directory-record/61695/local-transport-plan> [Accessed 7 August 2025].
- Ref 2C.12 Northamptonshire County Council (2012) Northamptonshire Transportation Plan (Adopted March 2012). [online] Available at: <https://www.westnorthants.gov.uk/sites/default/files/2022-04/Northamptonshire-Transportation-Plan.pdf> [Accessed 7 August 2025].
- Ref 2C.13 West Northamptonshire Council (2025) West Northamptonshire Council Local Transport Plan 2025-2045 (Adopted March 2025). [online] Available at: <https://www.westnorthants.gov.uk/planning-policy> [Accessed 7 August 2025]
- Ref 2C.14 Interim Melton Mowbray Transport Strategy: Engagement Draft (2021). [online] Available at: <https://www.leicestershire.gov.uk/roads-and-travel/road-maintenance/transport-policy-plans-and-studies> [Accessed 21 August 2025]
- Ref 2C.15 Greater Lincolnshire Local Enterprise Partnership (2021) Greater Lincolnshire Local Industrial Strategy. [online] Available at: https://www.greaterlincolnshirelep.co.uk/assets/documents/GLLEP_Local_Industrial_Strategy_%282021%29.pdf [Accessed 8 August 2025].
- Ref 2C.16 Greater Lincolnshire Local Enterprise Partnership (2022) Greater Lincolnshire LEP Employment and Skills Advisory Panel Local Skills Report. [online] Available at: https://www.greaterlincolnshirelep.co.uk/assets/documents/Greater_Lincolnshire_Local_Skills_Report_January_2022.pdf [Accessed 8 August 2025].
- Ref 2C.17 West Lindsey District Council and East Lindsey District Council (2023) Lincolnshire Wolds Destination Management Plan 2023-2027. [online] Available at: <https://www.west-lindsey.gov.uk/sites/default/files/2024-01/Love%20Lincolnshire%20Wolds%20Management%20Plan%20optimised.pdf> [Accessed 8 August 2025].
- Ref 2C.18 Lincolnshire Wolds AONB Management Plan 2018-2023 [online]. Available at: <https://www.lincswolds.org.uk/our-work/management-plan> [accessed 7 August 2025].
- Ref 2C.19 South Holland District Council (2019) South Holland District Council Economic Action Plan 2019-21 (Adopted May 2019). [online] Available at: <https://democracy.sholland.gov.uk/documents/s26385/Appendix%201%20for%20Economic%20Action%20Plan.pdf> [Accessed 7 August 2025].
- Ref 2C.20 South Kesteven District Council (2024) South Kesteven Economic Development Strategy & Action Plan 2024-2028 (Adopted August 2024). [online] Available at: <https://www.southkesteven.gov.uk/economic-development/south-kesteven-economic-development-strategy-2024-2028> [Accessed 7 August 2025].
- Ref 2C.21 Harborough District Council (2024) Draft Harborough District Economic Development Strategy 2024-2031. [online] Available at: https://www.harborough.gov.uk/downloads/download/1327/economic_development_strategy [Accessed 7 August 2025].
- Ref 2C.22 North Northamptonshire Council (2025) North Northamptonshire Council Economic Growth Strategy (Adopted July 2025). [online] Available at: <https://www.northnorthants.gov.uk/supporting-your-business/economic-growth-strategy> Accessed 7 August 2025].

Ref 2C.23 West Northamptonshire Council (2025) West Northamptonshire Corporate Plan.
[online] Available at: <https://www.westnorthants.gov.uk/corporate-plan> [Accessed 7 August 2025].

4A. Initial Outline Code of Construction Practice

Contents

4A.	Initial Outline Code of Construction Practice	4A-4-1
4A.1	Introduction	4A-4-1
	Overview	4A-4-1
4A.2	Purpose of the Code of Construction Practice	4A-1
4A.3	Preparation of the CoCP	4A-2
	Stage 1: Initial Outline CoCP	4A-2
	Stage 2: Draft Outline CoCP (with the Preliminary Environmental Information Report)	4A-2
	Stage 3: Outline CoCP (with the ES)	4A-2
	Stage 4: CoCP	4A-2
4A.4	Construction Schedule	4A-3
4A.5	Roles and Responsibilities	4A-3
	Early Contractor Involvement	4A-3
	Environmental Management Systems	4A-4
	Project responsibilities	4A-4
4A.6	Control and Management Measures	4A-5
	References	4A-26

Table 4A.1 Illustrative key roles and responsibilities for the Project	4A-4
Table 4A.2 Environmental Control Plans	4A-6
Table 4A.3 Control and management measures	4A-7

Image 4A.1 Code of Construction Practice Process	4A-3
--	------

4A. Initial Outline Code of Construction Practice

4A.1 Introduction

Overview

- 4A.1.1 The Weston Marsh to East Leicestershire Project (the Project) is being developed by National Grid Electricity Transmission plc (National Grid) to increase the ability of the transmission system to transfer power between other proposed transmission infrastructure in the east of England and the Midlands. The objective of the Project is to reinforce the electricity transmission network, facilitating the connection of planned offshore wind generation, interconnectors with other countries and other sources of electricity, allowing clean green energy to be carried on the network.
- 4A.1.2 The Project is expected to include the following elements:
- Approximately 60 km of new 400 kV overhead transmission line.
 - A new 400 kV substation to be built in the vicinity of the existing 4VK (Cottam – Wymondley) 400 kV overhead line near Corby Glen, South Kesteven (to be referred to as WMEL-A).
 - A new 400 kV substation to be built in the vicinity of the existing ZA (Cottam – Sundon) 400 kV overhead line near Ab Kettleby, Melton (to be referred to as WMEL-B).
 - Reconductoring of approximately 66 km of the existing ZA 400 kV overhead line from WMEL-B to the existing Grendon substation.
 - Replacement of short sections of existing 400 kV overhead line and local changes to the lower voltage distribution networks to facilitate the construction of the new overhead line and substations.
- 4A.1.3 The Project may potentially include new substation infrastructure and associated connections, including up to two new 400 kV substations to be built to connect to the existing 400 kV 4ZM transmission line that runs south east of Sleaford towards King's Lynn, and the existing 400 kV 2WS transmission line that runs east of Spalding towards a Tee-Point with the 400 kV 4ZM transmission line between Sleaford and King's Lynn (to be referred to as Weston Marsh substation infrastructure).

- 4A.1.4 In addition, third party utilities diversion and/or modifications may also be required to facilitate the construction of the Project. Further details would be included within the Environmental Statement (ES).
- 4A.1.5 The Project has been divided five Sections, refer to **Figure 1.2 Scoping Boundary** and Table 4.1 of **Chapter 4 Description of the Project**:
- South Holland;
 - South Kesteven;
 - Melton;
 - Harborough; and
 - Northamptonshire.

4A.2 Purpose of the Code of Construction Practice

- 4A.2.1 This is the Initial Outline Code of Construction Practice (CoCP) for the Project, which has been produced to support the Environmental Impact Assessment (EIA) Scoping Report. It has been produced to set out control and management measures that will be undertaken during construction of the Project. The CoCP aims to ensure that adverse effects from the construction phase of the Project, on the environment and local communities, are minimised and controlled appropriately.
- 4A.2.2 It will be updated as the Project evolves to include additional measures identified through the engineering design, the EIA process, and from engagement with stakeholders. An Outline CoCP will be submitted as an appendix to the Environmental Statement (ES) as part of the application for development consent. During examination and decision period for the application, this Outline CoCP may be updated as agreed with the Examining Authority. The development of the final CoCP, substantially in accordance with the approved Outline CoCP will be secured by way of a Requirement in the DCO.
- 4A.2.3 It is assumed that measures in the Outline CoCP will be in place before undertaking the assessment as they are good practice which would be implemented regardless of EIA. This will enable the assessment to be proportionate and focused on the likely significant effects that would be material to the decision. This is in accordance with the Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment) (2016) guidance document, Delivering Quality Development (Ref 4A.1).
- 4A.2.4 The Project will be delivered in compliance with all relevant legislation, consents and permits. Any statutory requirements listed in this document and industry good practice guidance which has informed each part of the document are not to be seen as exhaustive.
- 4A.2.5 National Grid will put in place robust procedures to audit and inspect the Project, including its supply chain of contractors, to make sure the control measures set out in the Outline CoCP are adopted when constructing the Project. The Outline CoCP will apply to all areas of the Project delivered pursuant to the DCO, during construction.

4A.3 Preparation of the CoCP

- 4A.3.1 This section describes the four stage iterative approach to developing the CoCP from the initial outline through to the Final CoCP which the contractor will implement throughout the construction of the Project (see **Image 4A.1**).

Stage 1: Initial Outline CoCP

- 4A.3.2 This document is the Initial Outline CoCP for the Project and has been produced to support the EIA Scoping Report. It has been produced to set out control and management measures that may be undertaken during construction of the Project if the application for development consent is granted.

Stage 2: Draft Outline CoCP (with the Preliminary Environmental Information Report)

- 4A.3.3 The Draft Outline CoCP would be prepared in parallel with the preliminary design, based on known project information. The Draft Outline CoCP would include control and management measures which have been identified through the preliminary technical assessments reported in the Preliminary Environmental Information Report (PEIR).

Stage 3: Outline CoCP (with the ES)

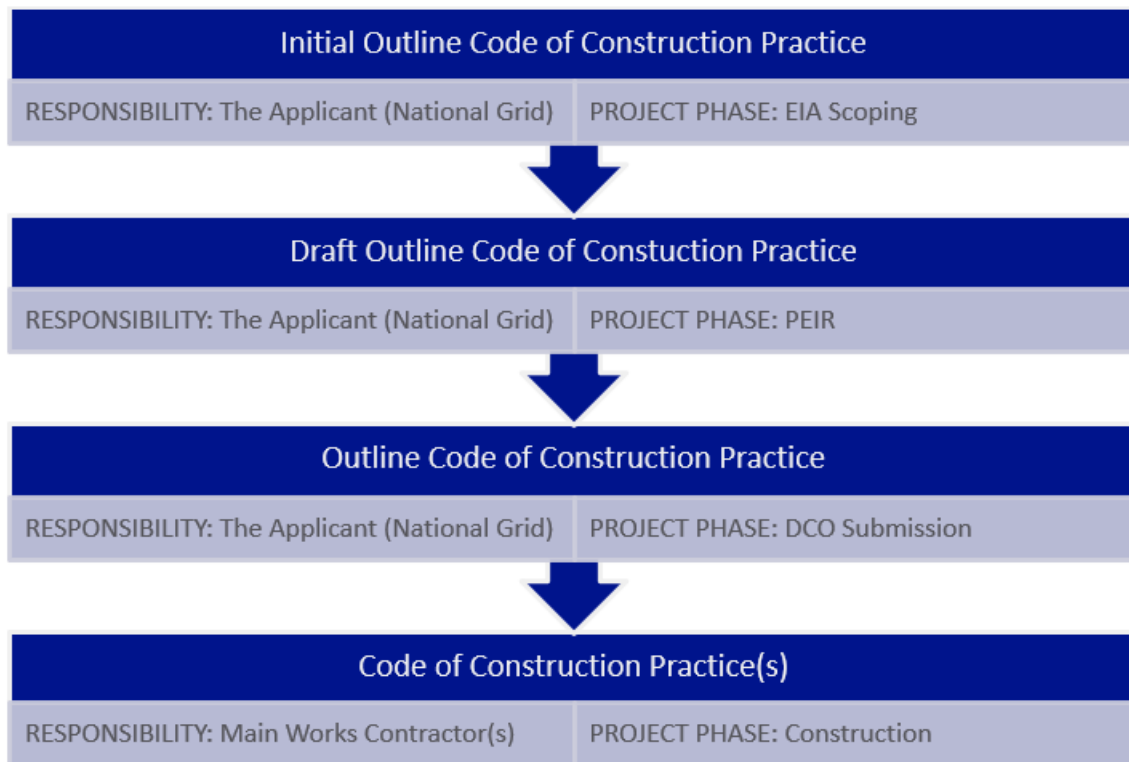
- 4A.3.4 The Draft Outline CoCP, published at statutory consultation with the PEIR, will be updated to form the Outline CoCP which will be submitted to support the application for development consent. The Final CoCP will either be supported by outline or draft Environmental Control Plans (ECPs) or include requirements for those plans to be developed by the contractor(s) prior to construction. The Outline CoCP will likely be the subject of discussion during the examination of the application for development consent and may be updated in the course of examination.
- 4A.3.5 The ECPs will be developed by the contractor(s) prior to the commencement of construction into final control plans.
- 4A.3.6 The mitigation measures and environmental commitments within the final CoCP will be presented with reference to relevant Project Sections, ensuring that commitments and controls are reported in relation to their specific locations.
- 4A.3.7 The format of the Outline CoCP is also likely to differ from the draft Outline CoCP to allow for the CoCP to be managed and implemented by multiple contractor(s) appointed to construct the Project.

Stage 4: CoCP

- 4A.3.8 The Outline CoCP will be developed into the Final CoCP (following detailed design) by the contractor(s) to discharge a DCO Requirement. The CoCP will be in accordance with the requirements of the Outline CoCP and will be developed, prior to commencement of construction and adhered to throughout the construction phase.
- 4A.3.9 The CoCP will include specific organisational information such as organograms, contact details of the Environmental Managers/Environmental Clerks of Works, specific organisational commitments, for example.

- 4A.3.10 The ECPs will be developed by the contractor(s) prior to the commencement of construction into final control plans and appended to the CoCP. Where relevant the ECPs will include contractor specific working methodologies.

Image 4A.1 Code of Construction Practice Process



4A.4 Construction Schedule

- 4A.4.1 Should consent be granted in 2029, it is anticipated that access and construction of the Project would commence in 2030, starting with enabling works including, site clearance activities, the installation of construction compounds and access roads. It is expected the main construction works would continue through to 2034.
- 4A.4.2 The phasing of the programme is yet to be confirmed, further information will be contained in the Outline CoCP, as previously noted.

4A.5 Roles and Responsibilities

Early Contractor Involvement

- 4A.5.1 The Project is part of the Great Grid Partnership which has been established by National Grid to assist in delivering the new electricity network infrastructure. The partnership includes major contractors and consultants with a focus on network design and construction. This provides the Project with early involvement of construction contractors during the pre-application stage, bringing forward specialist contractor knowledge and expertise to inform design and production of key project deliverables such as the Construction Environmental Management Plan (CEMP).

Environmental Management Systems

- 4A.5.2 National Grid will implement management processes and briefings so that the works are carried out in accordance with current legislation and guidance at the time of construction. This will be achieved by application of well-established work processes that apply the recognised British Standard (BS) EN ISO 14001:2015 or equivalent.
- 4A.5.3 The contractor(s) will have an Environmental Policy that meets the requirements of ISO 14001 or equivalent, through their internal Business Management System procedures. The policy statement will be displayed on the site notice boards, publicised to all site staff and operatives, and made available to interested parties upon request.

Project responsibilities

- 4A.5.4 A management structure that includes an organisational chart encompassing all staff roles responsible for environmental work would be included within the Outline CoCP. This will set out the respective roles and responsibilities about the environment and identify the nominated Construction Environmental Manager(s). Illustrative key roles and responsibilities are set out in **Table 4A.1**.

Table 4A.1 Illustrative key roles and responsibilities for the Project

Role	Organisation	Responsibilities
Environmental Manager(s)	Contractor(s)	The Environmental Manager(s) will be responsible for the maintenance of all environmental plans and registers, including monitoring that the environmental measures and mitigations are implemented on site as described in the CoCP and ECPs. They will be the main point of contact for all environmental matters on the Project. They will also develop good working relationships with external stakeholders such as the Environment Agency, Natural England, and the relevant planning authorities.
Environmental Clerk of Works (ENvCoWs)	Contractor(s)	The EnvCoW(s) will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required mitigation measures. The EnvCoW will be supported by appropriate technical specialist advisors depending on the location and potential effects.
Ecological Clerk of Works (ECoWs)	Contractor(s)	The ECoW(s) will monitor the works to ensure compliance with any licenses, permits and consents obtained to avoid effects on protected species and habitats, along with ensuring compliance with environmental legislation. The ECoW will oversee ecological pre-construction surveys and will also manage ecological operatives engaged in ecological mitigation activities – such as undertaking ecological watching briefs and translocation of protected species.

Role	Organisation	Responsibilities
Arboricultural Clerk of Works (ACoW)	Contractor(s)	The ACoW(s) will monitor works conducted by a suitably qualified and experienced arborist to/within proximity to high grade trees, including trees under Tree Preservation Orders and veteran trees, to ensure relevant control measures are in place to protect these trees.
Permits and Consents Manager(s)	Contractor(s)	The Permits and Consents Manager(s) will collaborate with the Environmental Manager to draft and submit permits and consents on behalf of the Project, track the progress, provide updates, and communicate approvals.
Works Supervisor(s)	Contractor(s)	The Works Supervisor(s) will be responsible for delivering the works in accordance with the requirements of the CoCP and implementing good environmental practices required by the Environmental Manager(s). They are responsible for managing operatives, plant, and their areas of work in accordance with the principles of good environmental practice.
Land Officer(s)	Contractor(s)	The Land Officer will have an agricultural background and experience of working with utility companies. They will provide a single point of contact for both the contractor(s) and the landowner/occupier of the land. They will be responsible for delivering site access in line with pre-agreed timescales, help facilitate the dialogue between the contractor(s) and the landowner/occupier as necessary and will be the first point of contact for any issues escalated by the landowner/occupier or the contractor(s). They will be responsible for witnessing and agreeing all land condition surveys conducted by the contractor(s).
Technical specialist advisors	Contractor(s)/ National Grid	These will have the relevant experience to supervise the relevant aspects of the works, which might include an arboriculturist, land contamination specialist, soil specialist, ecologist, or archaeologist.

4A.5.5 This section will be further developed within the Outline CoCP, and subsequently within the final CoCP, by the contractor(s) to include the following:

- Project organograms and contact details of the key staff;
- Lines of communication and reporting;
- Approaches for engagement with the community and stakeholders;
- Emergency procedures; and
- Specific organisational commitments.

4A.6 Control and Management Measures

4A.6.1 Control and management measures have been identified that would reduce impacts from the Project on the environment (**Table 4A.3**). These are generally measures

that would normally be implemented on a well-run construction site, but also include a number of good practice measures that have been identified through the scoping work to support a proportionate assessment. They also include effective measures that have typically been employed on other projects, including those of National Grid.

- 4A.6.2 Control and management measures in **Table 4A.3** have been assigned a reference number, for example (GG01) for ease of cross-reference. The Contractor(s) will be expected to demonstrate compliance with these measures during construction.
- 4A.6.3 The CoCP, once approved by the relevant planning authorities, will be issued to contractor(s), and fed into the relevant contracts for the Weston Marsh to East Leicestershire construction works. The Contractor(s) will prepare detailed management plans to explain how the management measures provided in the CoCP will be implemented and monitored.
- 4A.6.4 As described in the Outline CoCP, ECPs may be prepared to accompany the CoCP. They will be further developed by the contractor(s) as a requirement of the CoCP which shall be secured as a Requirement of the DCO. The final ECPs may be developed in consultation with the relevant planning authority. The contractor(s) would implement the final CoCP and ECPs during the construction of the Project. The ECPs will detail further topic specific environmental measures to avoid, reduce or compensate for any detrimental effects on the environment for example the Site Waste Management Plan (SWMP) which details how materials will be managed efficiently during construction.
- 4A.6.5 Whilst the Outline CoCP and any Outline ECPs will be expected to be approved during the DCO examination process, it is anticipated that DCO requirements will require the final plans to be submitted to and approved by the relevant planning authority. The anticipated ECPs are described in **Table 4A.2**.

Table 4A.2 Environmental Control Plans

Plan	Description
Construction Environmental Management Plan (CEMP)	To detail how to mitigate and manage the identified environmental impacts during the construction of the Project.
Landscape Ecological Management Plan (LEMP)	To detail how habitats and other ecological enhancements will be managed and maintained throughout the Project lifecycle.
Site Waste Management Plan (SWMP)	To detail how materials will be managed efficiently and disposed of legally during the construction of the Project.
Construction Traffic Management Plan (CTMP)	To detail the environmental and traffic control measures which may be implemented in relation to the traffic generated during the construction phase for the Project.
Public Rights of Way Management Plan (PRoWMP)	To detail management and environmental measures strategy for all PRoWs and Open Access Land affected by the Project.
Overarching Written Scheme of Investigation (WSI)	To detail required measures to mitigate direct adverse impacts to the historic environment.

Soil Management Plan (SMP)	To detail management measures to minimise adverse effects on the soil resource.
----------------------------	---

Table 4A.3 Control and management measures

Ref	Control and management measures
General project commitments	
GG01	The Project will be compliant with all relevant legislation, consents and permits.
GG02	The Project will be designed to comply with existing National Grid standards and the guidelines and policies detailed in NPS-EN5 including the International Commission on Non-Ionizing Radiation Protection guidelines for electric and magnetic fields (EMFs) and associated precautionary policy.
GG03	A final CoCP (based on the provisions in the Outline CoCP) will be produced prior to the commencement of construction ¹ .
GG04	Suitably experienced Environmental Managers will be appointed for the duration of the construction phase. In addition, qualified and experienced Environmental Clerks of Works will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the Management Plans. The Environmental Clerks of Works will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The Environmental Clerks of Works will be supported as necessary by appropriate specialists, including ecologists and arboriculturists, soils and land drainage experts.
GG05	Construction workers will undergo training to increase their awareness of environmental issues as applicable to their role on the Project. Topics will include but not be limited to: • pollution prevention and pollution incident response; • dust management and control measures; • location and protection of sensitive environmental sites and features; • adherence to protected environmental areas around sensitive features; • working hours and noise and vibration reduction measures; • working with potentially contaminated materials; • waste management and storage;

¹ Measures GG03 and GG06 will be secured through the Requirements of the DCO.

Ref	Control and management measures
	• flood risk response actions; • agreed traffic routes, and access points; • soil management; and • drainage management.
	Pre-Commencement
GG06	A record of condition will be carried out (photographic and descriptive) of the working areas that may be affected by the construction activities, prior to works commencing. This record will be available for comparison following reinstatement after the works have been completed to ensure that the standard of reinstatement at least meets that recorded in the pre-condition survey.
	Construction
GG07	A CEMP, LEMP, SWMP, CTMP, PRowMP, Overarching WSI, along with a SMP will be produced prior to construction. These are collectively referred to as ‘the Environmental Control Plans (ECPs).’
GG08	The CEMP shall include measures to manage dust, waste, water, noise, vibration and soil during construction. The contractor(s) shall undertake daily site inspections to check conformance to the ECPs.
GG09	Land used temporarily will be reinstated where practicable to its pre-construction condition (including Agricultural Land Classification grade) and use. Hedgerows, fences, and walls (including associated earthworks and boundary features) will be reinstated to a similar style to those that were removed, unless otherwise agreed.
GG010	Where sensitive features such as ancient woodland and protected habitats are to be retained within or immediately adjacent to the Order Limits, an appropriate protective area will be established using appropriate fencing and signage and will be inspected, repaired, and replaced as necessary. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP.
	Construction site setup
GG11	The name and contact details for the Project will be displayed at the entrance to all compounds. This will include an emergency number.
GG12	Any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise, vibration and lighting, will be located away from sensitive receptors such as residential properties or ecological sites where practicable.

Ref	Control and management measures
GG13	Appropriate site layout and housekeeping measures will be implemented by the contractor(s) at all construction sites. This will include but not be limited to: • preventing pests and vermin control and treating any infestation promptly, including arrangements for the proper storage and disposal of waste produced on site; • inspecting and collecting any waste or litter found on site; • locating or designing site offices and welfare facilities to limit the overlooking of residential properties; • siting temporary construction compounds to avoid impacts on existing landscape features and key characteristics as far as practical; • minimise the need for temporary access tracks, particularly associated with proposed reconductoring works (i.e. use of track pads or low impact vehicles); • locating designated smoking/vaping areas to avoid nuisance to neighbours; • managing staff/vehicles entering or leaving site, especially at the beginning and end of the working day; and • managing potential off-site contractor and visitor parking.
GG14	Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. Plant and construction vehicles will conform to relevant applicable standards for the vehicle type as follows: • Euro 4 (NOx) for petrol cars, vans and minibuses • Euro 6 (NOx and PM) for diesel cars, vans and minibuses • Euro VI (NOx and PM) for lorries, buses, coaches and Heavy Goods Vehicles (excluding specialist abnormal indivisible loads) • Stage V (NOx, PM, hydrocarbons, carbon monoxide (CO) and sulphur dioxide (SO₂)) for non-road engines (static plant and non-road mobile machinery).
GG15	Materials and equipment will not be moved or handled unnecessarily. When loading and unloading materials from vehicles, including excavated materials, drop heights will be limited.
GG16	Fuels, oils and chemicals will be stored responsibly, away from sensitive water receptors. Where practicable, they will be stored >15 m from watercourses, ponds and groundwater dependent terrestrial ecosystems. Where it is not practicable to maintain a >15 m distance, additional measures will be identified. All refuelling, oiling and greasing of construction plant and equipment will take place above drip trays and also away from drains as far

Ref	Control and management measures
	as is reasonably practicable. Vehicles and plant will not be left unattended during refuelling. Appropriate spill kits will be made easily accessible for these activities. Potentially hazardous materials used during construction will be safely and securely stored including use of secondary containment where appropriate. Stored flammable liquids such as diesel will be protected either by double walled tanks or stored in a bunded area with a capacity of 110% of the maximum stored volume for a single tank or 25% of the total volume of multiple containers. Spill kits will be located nearby.
GG17	Runoff across the site will be controlled through a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding. There will be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of an emergency).
GG18	Wash down of vehicles and equipment will take place in designated areas within construction compounds. Wash water will be prevented from passing untreated into watercourses and groundwater. Appropriate measures will include use of sediment traps.
GG19	Wheel washing facilities will be provided at each main compound, where appropriate. Road sweepers will be deployed on public roads where necessary to prevent excessive dust or mud deposits.
GG20	To avoid dust generation, earthworks and stockpiled soil will be protected by covering, seeding, or using water suppression where appropriate.
GG21	Bonfires and the burning of waste material will be prohibited.
GG22	Construction lighting will be of the lowest luminosity necessary to safely perform each task.
GG23	The SWMP shall include but not be limited to: • waste forecasts; • how waste will be reused, managed and disposed of in accordance with the waste hierarchy; • identification of recovery routes; and • actual waste figures once work has begun. Consideration will be given to the guidance in the Code of Practice developed by Contaminated Land: Applications in Real Environments (CLAIRE) “A Definition of Waste: Development Industry Code of Practice (DoWCoP)”. Dedicated waste management areas will be designed to sufficiently accommodate the types and volumes of waste

Ref	Control and management measures
	produced and to reduce the environmental risk of storing waste on site (covered, secured and away from drainage).
GG24	An Emergency Action Plan will be developed for the construction phase which will outline procedures to be implemented in case of unplanned events, including but not limited to site flooding and pollution incidents.
GG25	Temporary work pads of suitable materials (stone, wooden bog mats or similar) will be installed in areas where heavy equipment, such as cranes and piling rigs, are to be used. The work pads will provide stable working areas and will reduce disturbance to the ground. The work pad area will be stripped of the topsoil, which will be stored and reinstated in accordance with the SMP.
GG26	Working areas will be appropriately fenced. The type of fencing installed will depend on the area to be fenced and will take into consideration the level of security required in relation to the surrounding land and public access, rural or urban environment and arable or stock farming. For some locations the fence used may also serve to provide acoustic and visual screening of the work sites and reduce the potential for disturbance of users in the surrounding areas. Fencing will be regularly inspected and maintained and removed as part of the Demobilisation unless otherwise specified.
GG27	Members of the community and local businesses will be kept informed regularly of the works through active community liaison and groups with local membership. This will include notification of noisy activities, heavy traffic periods and start and end dates of key phasing. A contact number will be provided which members of the public can use to raise any concerns or complaints about the Project. All construction-related complaints will be logged by the contractor(s) in a complaints register, together with a record of the responses given and actions taken.
GG28	Active private water supplies would be identified with landowners through the landowner discussions. Appropriate measures would be considered during construction. In the event of a landowner or tenant reporting that installation activities have affected their private water supplies, an initial response would be provided. Where the installation works have affected a private water supply, an alternative water supply would be provided, as appropriate.
	Landscape and Visual
LV01	A pre-condition survey will be undertaken to ensure appropriate reinstatement is undertaken. The contractor(s) will retain vegetation where practicable. The duration of temporary disturbance to landform and vegetation will be kept to a minimum, with progressive reinstatement as soon as works in an area are complete. Any gaps in vegetation where construction access is required to pass through hedgerows will also be minimised, and

Ref	Control and management measures
	planting with suitable native species will be provided to fill in the gaps as part of construction reinstatement. Where vegetation is lost and trees cannot be replaced in situ due to the restrictions associated with land rights required for operational safety, native shrub planting approved by National Grid will be used as a replacement, in accordance with the outline vegetation reinstatement plans included within the LEMP. Replacement vegetation will be planted as close by as practicable and will complement landscape character and be sympathetic to the local habitat type in order to provide a high biodiversity value.
LV02	The contractor(s) will apply the relevant protective principles set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition, and construction. This will be applied to those trees within the Order Limits which will be preserved through the construction phase, and to trees outside of the Order Limits where such measures do not hinder or prevent the use of the relevant working width for construction. An Arboricultural Clerk of Works will ensure the suitability of tree protection before and during the construction phase. All works to high grade trees, including trees under any Tree Preservation Orders and veteran trees, will be undertaken, or supervised by a suitably qualified arboriculturist.
	<i>Aftercare</i>
LV03	A five-year aftercare period will be established for all reinstatement and mitigation planting, details of which will be set out in the LEMP.
	<i>Lighting</i>
LV04	Construction lighting will be directional and minimised where possible to reduce the intrusion into adjacent properties, protected species and habitats.
	<i>Soil Surveys</i>
LV05	Pre-construction soil surveys will be undertaken where necessary in areas of proposed mitigation planting where no existing soil survey data is available. This would support the soil management measures and inform selection of suitable plant species.
	<i>Ecology and biodiversity</i>
B01	The contractor(s) will comply with relevant protected species legislation. Appropriate licences will be obtained where necessary from Natural England or the Environment Agency for all works affecting protected species as identified by the Environmental Statement and through pre-construction surveys. All applicable works will be undertaken in accordance with the relevant requirements and conditions set out in those licences.

Ref	Control and management measures
B02	The contractor(s) will seek to ensure that vegetation with the potential to support breeding birds will not be removed during the main breeding bird season (01 March to 31 August). In the event that vegetation or any other feature with the potential to support breeding birds is required to be removed during the main breeding bird season (01 March to 31 August) or, in the case of Schedule 1 birds (e.g. barn owl), is likely to be disturbed, then works will be undertaken in the presence of an ENvCoW. Appropriate protection measures will be put in place should active nests be found. These will include exclusion zones around active nests until chicks fledge or nests become inactive as determined by monitoring by the ENvCoW. Active nests of wild birds are protected at all times and therefore the same measures will be put in place if an active nest is identified at any time of year.
B03	Where there will be a risk of animal entrapment, a means of escape will be installed into all excavations left open overnight.
B04	To control the spread of invasive weeds in accordance with the Wildlife and Countryside Act 1981, any plant or machinery that has been used in areas contaminated with invasive species (both terrestrial and aquatic), such as Japanese knotweed and Himalayan balsam, will be thoroughly cleaned. Water used to clean vehicles will be discharged or emptied into the contaminated area to prevent the spread of the plant (through plant propagules, e.g. seeds, rhizomes, fragments). The area will be cordoned off to prevent any inadvertent spreading. Any plant material or soil contaminated with plant propagules if removed from a site is classified as controlled waste and will be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with Section 34 of the Environmental Protection Act 1990.
B05	Subject to the location and scale of impact, suitable habitat for common reptiles will be subject to two-stage habitat manipulation that will take place between mid-March and mid-October. Firstly, vegetation will be cut to approximately 150 mm (with the arisings removed) under the supervision of an ECoW and the site left for a minimum of two days to allow reptiles to naturally disperse from the area. Secondly, vegetation will be cleared down to ground level under the supervision of an ECoW. Vegetation will be cleared using appropriate equipment based on the type of vegetation to be removed, the area affected, and the risk of mortality or injuring reptiles. Construction works could commence immediately after completion of the second stage. Reptile hibernacula will be retained and protected during construction where practicable. If unavoidable, the removal of vegetation and groundworks at hibernacula will be timed to avoid the hibernation season (late October to early March). Replacement hibernacula and refugia will be provided.

Ref	Control and management measures
B06	Alternative roost structures (bat boxes) will be provided (with landowner consent) on retained trees within the Order Limits or areas outside of the Order Limits agreed with landowners. Unless specified otherwise by the provisions of any protected species licence for bats, two boxes will be provided for each tree to be felled where Potential Roost Features (PRF) on that tree are classified as PRF-I bat roost potential (low-moderate roost suitability). Five boxes will be provided for each tree with PRF-M bat roost potential (high roost suitability) to be felled.
B07	Alternative barn owl breeding sites (barn owl boxes) will be provided (with landowner consent) on retained trees or poles within the Order Limits or areas outside of the Order Limits agreed with landowners. Three boxes will be provided for any confirmed breeding site that is to be permanently or temporarily impacted by the proposed works. Two boxes will be provided for each breeding site impacted.
B08	Where the works require the crossing or removal of hedgerows, the gap will be reduced to a width required for safe working. Where hedge removals are necessary, 'dead hedging' should be used, where practicable, in the interim periods to retain connectivity during construction. Dead hedging can comprise vegetation arisings or artificial provision, such as willow screening panels or Heras fencing covered in camouflage netting. New hedgerow planting will contain native, woody species of local provenance
B09	Habitat translocation or any species translocation (if required) that is not covered by protected species licences will be undertaken in accordance with a method statement. The method statement will be specific to the habitat type or species affected and will detail the appropriate construction methods, timing, management, receptor site preparation and post-construction habitat management and monitoring. The receptor site will be clearly identified and prepared in advance of translocation.
	Historic environment
H01	Known heritage assets and locations of known archaeological interest will have been identified by a programme of desk-based assessment and field evaluation prior to construction. Wherever possible identified heritage assets and archaeological remains will be avoided by the Project design. Where avoidance has not been possible, archaeological mitigation measures comprising the preservation of archaeological remains, or a programme of archaeological investigation will be implemented. Areas of archaeological preservation, or where archaeological work is planned, will be demarcated using appropriate fencing and signage to prevent unintentional damage. The fencing and condition of the areas will be inspected, repaired, and replaced as necessary. The areas of archaeological preservation or

Ref	Control and management measures
	investigation will be identified on plans within the Outline Written Scheme of Investigation (WSI) and CEMP.
H02	Where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the Project will inform the relevant authorities and will agree a solution that protects the significance of the new discovery, so far as is practicable, within the Project parameters. An outline process for dealing with the unexpected discovery of archaeological remains including human remains and Treasure during construction will be set out in the Outline WSI and CEMP.
H03	Where practicable, the Project will maintain elements within the historic landscape such as vegetation and hedgerows (including re-instating hedgerows and fences).
	Water environment
W01	All works within main rivers or ordinary watercourses will be in accordance with a method approved under environmental permits issued under the Environmental Permitting Regulations 2016, the Land Drainage Act 1991, IDB (Internal Drainage Board) Byelaws (where relevant) or the protective provisions of the DCO for the benefit of the Environment Agency, Lead Local Flood Authorities (LLFAs) and IDBs.
W02	For any open cut watercourse crossings and installation of vehicle crossing points, good practice measures will include but not be limited to, where practicable: • reducing the working width for open cut crossings of a main or ordinary watercourse whilst still providing safe working; • installation of a pollution boom downstream of open cut works; • the use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required; • have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident; • the use of all static plant such as pumps in appropriately sized spill trays; • prevent refuelling of any plant or vehicle within 15 m of a watercourse; • prevent storing of soil stockpiles within 15 m of a main river; • inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and • reinstating the riparian vegetation and natural bed of the watercourse, using the material removed when appropriate, on completion of the works and compacting as necessary. If

Ref	Control and management measures
	additional material is required, appropriately sized material of similar composition will be used.
W03	Riverbank and in-channel vegetation will be retained where not directly affected by installation works. Natural substrate will be provided through temporary watercourse crossings box culverts.
W04	Where watercourses are to be crossed by construction traffic, measures to be applied include the use of temporary culverts or temporary spanned bridges. Once the temporary culvert is installed, the area above the temporary culvert will be backfilled and construction mats placed over the backfilled area to permit the passage of plant, equipment, materials, and people. Temporary culverts will be sized to reflect the span width and the estimated flow characteristics of the watercourse under peak flow conditions and kept free from debris. Where used, temporary bridges will be designed specifically to consider the span length and the weight and size of plant and equipment that will cross the bridge. Specific detailed designs for each watercourse crossing, consistent with these design principles, will be prepared by the construction contractor. These will be subject to the appropriate consent by the relevant drainage authority (Flood Risk Activities Permit from the Environment Agency for main rivers, Ordinary Watercourse Consent from the LLFA or IDB for ordinary watercourses).
W05	The contractor(s) will comply with all relevant consent conditions or DCO provisions regarding de-watering and other discharge activities. This will particularly be with regard to volumes and discharge rates and will include discharges to land, water bodies or third-party drains/sewers.
W06	The Project will incorporate appropriate surface water drainage measures into its final design for the haul roads, access tracks, works compounds and laydown areas so that they do not lead to a significant increase in flood risk. Temporary haul routes within Flood Zone 3 and areas of high and medium risk of flooding from surface water will be removed at the end of the construction phase and the ground surface will be reinstated to pre-project levels.
W07	The contractor(s) will subscribe to the Environment Agency's Floodline service, which provides advance warning of potential local flooding events, and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor(s) will implement a suitable flood risk action plan, which will include appropriate evacuation procedures should a flood occur or be forecast.
W08	Active private water supplies will be identified with landowners through the landowner discussions. Appropriate measures will be considered during construction. In the event of a landowner or tenant reporting that installation activities have affected their private water supplies, an initial response will be provided within

Ref	Control and management measures
	24 hours. Where the installation works have affected a private water supply, an alternative water supply will be provided, as appropriate.
W09	In the event of a significant spill during construction, all relevant landowners/tenants will be contacted within 24 hours, within 250 m of the spill, to determine if there are any private water supplies that might be affected; an assessment of the likelihood of groundwater contamination reaching identified private water supplies will be undertaken, and where a private water supply is judged likely to be affected, an alternative water supply will be provided, as appropriate.
W10	Severance of existing land drainage routes, including agricultural field drainage systems would be managed during construction through provision of temporary alternative drainage routes, and these drainage systems would be permanently reinstated to ensure their existing function is maintained.
W11	Appropriate control of runoff from working areas will be achieved through implementation of a Drainage Management Plan (DrMP) for the construction phase. The DrMP will use sustainable drainage systems (SuDS) principles, promoting infiltration of runoff wherever possible and specifying appropriate treatment and attenuation storage to ensure any discharges to watercourses are uncontaminated and limited to greenfield rates. The DrMP will cover all aspects of construction works and temporary infrastructure. Drainage measures will be phased to be completed before the commencement of earthwork operations, in a specific area, and will be retained until the drainage system of the completed Project is fully operational, or site restoration works are completed. This will include the temporary diversion of existing agricultural drainage around working areas, if required, followed by reinstatement on completion of works.
	Geology and hydrogeology
GH01	Intrusive ground investigations and assessment will be undertaken prior to construction which will inform appropriate geotechnical design in relation to the site/structure specific ground conditions including ground instability/adverse ground conditions.
GH02	Construction methods such as appropriate piling techniques will be required to minimise the risk of mixing of aquifer bodies through the creation of new pathways. This includes the provision of a Foundation Works Risk Assessment (FWRA), which would be undertaken once the proposed foundation solutions are known, in accordance with EA guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination' (EA, 2001).

Ref	Control and management measures
GH03	Use of appropriate occupational health and safety measures e.g. Personal Protective Equipment (PPE), and statutory health and safety compliance (e.g. compliance with the Confined Spaces Regulations, 1997 in relation to ground gas from working in confined spaces/trenches) to minimise the risks associated with anticipated/unexpected contamination. This would be based on risk assessment informed by site specific information.
GH04	Construction workers will be appropriately trained in the use and handling of chemicals and general construction site good environmental and waste management procedures should be utilised (e.g. regular vehicle checks, use of spill kits, correct waste storage and disposal).
GH05	All use and storage of chemicals to be undertaken in accordance with The Control of Pollution (Oil Storage) Regulations 2001 and Environment Agency guidance 'Protect groundwater and prevent groundwater pollution'.
GH06	The control of earthworks or materials movement (including any re-use of materials) under appropriate Environmental Permits, exemptions or CL:AIRE 'The definition of Waste: The development industry Code of Practice (2011).
GH07	Any temporary dewatering activities during construction will be undertaken in accordance with EA guidance, and if required, an Abstraction Licence and Environmental Permit (for the discharge). As far as reasonably practicable these will be limited to the depth and time required to facilitate construction activities, and be non-consumptive.
GH08	A protocol for dealing with any unexpected contamination will be included in the CEMP.
GH09	General good contamination avoidance and waste management procedures for construction sites (e.g. regular vehicle checks, use of spill kits, correct waste storage and disposal).
GH10	If required, herbicides to be used in accordance with relevant DEFRA guidance.
GH11	Any application of salt grit (for example, to prevent access tracks freezing) to comply with recommended rates in CIRIA 648 'Control of water pollution from linear construction projects (C648)', with control of run-off during any application in SPZs.
GH12	All water discharges will have appropriate pre-treatment (e.g. de-silting) where required.
GH13	Areas of hardstanding required for laydown and construction compounds will be minimised, to reduce the associated risk of reduction of recharge to groundwater.

Ref	Control and management measures
	Agriculture and soils
AS01	Soil management measures will be set out in the SMP. The SMP, will include, but not be limited to the following: • details of the soil resources present; • how topsoil and subsoil will be stripped and stockpiled; • suitable conditions for when handling soil will be undertaken, for example avoiding handling of waterlogged soil; • indicative soil storage locations; • how soil stockpiles will be designed taking into consideration site conditions and the nature/composition of the soil; • specific measures for managing sensitive soils; • suitable protective surfacing where soil stripping can be avoided, based on sensitivity of the environment and proposed works; • approach to reinstating soil that has been compacted, where required; • details of measures required for soil restoration; and • requirements for monitoring.
AS02	Where land is being returned to agricultural use on completion of construction, the appropriate soil conditions (for example through the replacement of stripped layers and the removal of any compaction) will be recreated. This will be achieved to a depth of 1.2 m (or the maximum natural soil depth if this is shallower).
AS03	Access to and from residential, commercial, community and agricultural land uses will be maintained throughout the construction period or as agreed through the landowner discussions. This may require signed diversions or temporary restrictions to access. The means of access to affected properties, facilities and land parcels will be communicated to affected parties during the pre-construction period. with any changes communicated in advance of the change being implemented. Where field-to-field access points require alteration as a result of construction, alternative field access will be provided in consultation with the landowner/occupier.
AS04	Existing water supplies for livestock will be identified pre-construction. Where supplies will be lost or access compromised by construction works, temporary alternative supplies will be provided. Water supplies will be reinstated following construction.
AS05	Consultation with affected landowners will be carried out to investigate the current extent of land drainage. A scheme of pre-construction land drainage will be designed with the intent of maintaining the efficiency of the existing land drainage system and to assist in maintaining the integrity of the working area during construction. The Project may include a system of 'cut-off' drains

Ref	Control and management measures
	which feed into a new header drain and the Project will also take into account surface water runoff measures.
AS06	Should animal bones be discovered during construction, which may indicate a potential burial site, works will cease, and advice will be sought from the Animal Health Regional Office on how to proceed, relevant to the origin and age of the materials found.
AS07	All movement of plant and vehicles between fields will cease in the event of a notification by the Department for Environment, Food and Rural Affairs (Defra) of a disease outbreak in the vicinity of the site that requires the cessation of activities. Advice will be sought from Defra in order to develop suitable working methods required to reduce the biosecurity risk associated with the continuation of works.
AS08	Clay bungs or other vertical barriers will be constructed within trench excavations where deemed necessary by a suitably experienced person, to prevent the creation of preferential drainage pathways.
AS09	Temporary work pads of suitable materials (stone, wooden bog mats or similar) will be installed in areas where heavy equipment, such as cranes and piling rigs, are to be used. The work pads will provide stable working areas and will reduce disturbance to the ground. The work pad area will be stripped of the topsoil, which will be stored and reinstated in accordance with the soil management measures outlined in the SMP.
	Traffic and transport
TT01	The CTMP will set out measures to reduce route and journey mileage to and from and around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. It will also provide suitable control for the means of access and egress to the public highway and set out measures for the maintenance and upkeep of the public highway. The plan will also identify access for emergency vehicles. It will also set out measures to reduce safety risks through construction vehicle and driver quality standards and measures to manage abnormal loads.
TT02	The contractor(s) will implement a monitoring and reporting system to check compliance with the measures set out within the CTMP. The contractor(s) will also monitor the number of construction vehicles on key approach routes between the site and the strategic and/or 'A' road network. Deviations from the authorised routes or changes to traffic levels that are higher than the CTMP assumptions will require discussion of the need for additional mitigation measures with highways authorities.
TT03	All affected PRowWs will be identified, and any potential permanent or temporary closures detailed in the DCO. All designated PRowWs

Ref	Control and management measures
	crossing the working area will be managed with access only closed for periods while construction activities occur. Any required diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the Diversion and a contact number for any concerns and will be subject to a PProWMP. PProWs crossing the working areas will be managed in discussion with the relevant local authorities and potential temporary closures applied for discussed with the relevant local authority. Access disruption would be reduced as reasonably practicable while construction activities occur.
	Noise and vibration
NV01	Best Practicable Means (BPM), as defined under Section 72 of the Control of Pollution Act (CoPA) 1974 will be demonstrated at all times during construction works to minimise noise (including vibration) at neighbouring residential properties and other Noise Sensitive Receptors. BPM mitigation measures shall be considered in the following hierarchy: • Control at source – e.g. the selection of quiet and low vibration equipment, review of construction programme and methodology to consider quieter methods, and use of less intrusive alarms, such as broadband vehicle reversing warnings; • Control on-site – e.g. location of equipment on site, control of working hours, the provision of acoustic enclosures, and screening, including local screening of equipment, perimeter hoarding or the use of temporary stockpiles to limit the hours of spoil movements.
NV02	Construction working will be undertaken as far as reasonably practicable within normal working hours set out within the DCO.
	Air Quality
AQ01	Dust management measures will be set out in the Dust Management Plan (DMP) as part of the CEMP. This will be specific to particular phases of the Project. The DMP, will include, but not be limited to the following: • Communications to include display of the name and contact details of person(s) accountable for air quality and dust issues on the site boundary; • Site management measures to include recording all dust and air quality complaints, identify causes and take measures to reduce emissions in a timely manner, and record the measures taken; • Preparation and management of the site;

Ref	Control and management measures
	• Monitoring and inspections to include evolving evaluation of Project phases as required and practicable; and • Construction Operations.
AQ02	The contractor will ensure that soft strip will be used inside buildings prior to demolition (retaining walls and windows in the rest of building where possible, to provide a screen against dust). Sufficient effective water suppression will be used during demolition operations. The use of explosive blasting will be avoided where possible, using appropriate manual or mechanical alternatives.
AQ03	The contractor is to ensure exposed areas of earthworks are to be vegetated and stabilised as soon as practicable. Use of hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. Covers will only be removed in small areas during working.
AQ04	During construction, bulk cement and other fine powder materials are to be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. Sand and other aggregates are stored in bunding areas and not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate control measures to reduce dust are in place. For smaller supplies of fine powder materials, bags are to be sealed after use and stored appropriately.
AQ05	If on-site haul routes are used, the contractor is to inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
AQ06	Burning of waste materials and bonfires are not to be undertaken.
Socio-economics, recreation and tourism	
S01	Provision of training to construction workers, particularly in relation to working hours and the management of emissions (e.g. dust, noise, vibration).
S02	As set out in ref. TT03, PRoWs including any promoted recreational routes crossing the working areas will be managed in discussion with the relevant local authorities and will be subject to a PRoWMP, which will ensure users of PRoW including any promoted recreational routes are informed of any temporary or permanent diversions, which will help ensure any potential disruption is avoided or limited.
Climate Change	
CC01	The contractor(s) would develop and implement a Carbon Efficiency Plan as part of their Environmental Management

Ref	Control and management measures
	System, to manage carbon emissions from construction activities. This may contain: - proposed measures to reduce significant sources of construction energy use (fuel/electricity) and associated emissions; - the approach to securing energy from renewable and/or zero or low emission sources; - the approach to energy and carbon dioxide reporting from relevant site activities including construction activities and the transportation of materials and waste; and - consideration of the procurement, maintenance and use of energy and carbon efficient construction plant.
CC02	Mitigation measures set out within the Carbon Efficiency Plan may include: - a commitment to avoid or prevent greenhouse gas (GHG) emissions as far as reasonably practical by maximising the potential for re-using and/or refurbishing existing assets to reduce the extent of new construction required, and/or explore alternative lower carbon options to deliver the Project objectives; - a commitment to reduce GHG emissions as far as reasonably practical by implementing low carbon and/or reduced resource consumption solutions (including technologies, materials and products) to minimise resource consumption during the construction, operation, and at end of life; - the design of the Project should minimise the requirement for energy consuming operational equipment such as lighting wherever possible. Where lighting cannot be avoided, use of low lux and demand-sensitive lighting should be considered; - the specification of materials with fewer embodied GHG emissions within the contractor's contracts (e.g. where practical, sustainable materials, materials with a higher recycled content and locally sourced materials should be selected), including where feasible, design for end of component reuse; - use of renewable/zero or low carbon energy sources for construction vehicles, plant and machinery where reasonably practicable, e.g. electric vehicles and plant; - efficient use of construction plant and machinery, i.e. using appropriately sized plant and machinery, and switching off when not in use; - fuel use monitoring; - employing low carbon construction techniques; - plant and machinery to be kept in good working order to maintain power efficiency;

Ref	Control and management measures
	• sufficient training for operatives to use machinery and plant efficiently; • using appropriate size generators for plant and any temporary buildings etc.; • nominating named individuals with responsibility for minimising energy use on site; • commitments to recycle/reuse demolition waste wherever practicable; • commitments to reduce water use and disposal; • provision of suitable thermal insulation for site accommodation to minimise energy demand for heating; • early connection to grid electricity to reduce use of mobile diesel energy generation; • efficient transportation of construction materials and waste transport, with the aim to use electric vehicles wherever practicable; • sourcing construction materials from local suppliers where practicable to reduce transport emissions; • promotion and provision of modes of sustainable transport for construction workers; • material excavated during construction should be processed for use in the works wherever possible to reduce the amount of material disposed of off-site as well as imported from other sources; • the Project design should carefully consider the use of appropriate tree and shrub species to reduce associated maintenance operations; and • once operational, asset data should be managed, maintained and monitored to ensure the Project design is operating as intended. Corrective action to be taken where necessary.
CC03	The contractor will pay due consideration to the impacts of extreme weather events and related conditions during construction. Measures will include, for example: • health and safety plans to prevent worker exhaustion due to heat supportive measures for working in high temperatures might include the provision of sunblock, sun hats and lightweight clothing, refreshment breaks and cooled water supply; • temporary buildings designed with measures to cool summertime overheating; • safety measures to mitigate against issues caused by high winds such as increase dust or damage to structures/construction plant.
CC04	The contractor should use a short to medium range weather forecasting service from the Met Office, or other approved

Ref	Control and management measures
	meteorological data and weather forecast provider, to inform short to medium term programme management, environmental control and impact mitigation measures e.g. health and safety plans to include supportive measures for working in extreme high or low temperatures. The contractor's EMS will consider all measures deemed necessary and appropriate to manage severe weather events and should as a minimum cover training of personnel and prevention and monitoring arrangements to manage severe weather events. As appropriate, construction method statements should also consider severe weather events where risks have been identified.
CC05	An early warning system for wildfire detection and evacuation procedures for construction workers should be implemented alongside fire safety measures such as clearance of vegetation around temporary structures (where appropriate), access to fire extinguishing equipment, and evacuation protocols developed.

References

- Ref 4A.1 Institute of Sustainability and Environmental Professionals (2016) Environmental Impact Assessment Guide to: Delivering Quality Development. [online] Available at: <https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/Delivering-Quality-Development.pdf> (Accessed 11 July 2025).

8A. Ecology Survey Strategy

Contents

8A.1	Introduction	8A-1
	Purpose of the Ecology Survey Strategy	8A-1
8A.2	Avoidance Measures and Principles for Scoping of Ecology Surveys and Assessments	8A-1
8A.3	Study Area	8A-2
8A.4	Ecological Survey Strategy	8A-3
References		8A-23

Table 4B.1 Ecological Survey Strategy		8A-3
---------------------------------------	--	------

8A.1 Introduction

- 8A.1.1 The Ecology Survey Strategy (hereafter referred to as the Strategy) describes the approach to the collection of baseline data for the Weston Marsh to East Leicestershire Project (the Project). The Project is being developed by National Grid Electricity Transmission (NGET) to increase the ability of the transmission system to provide the required capability between the North, the Midlands and the South. The Project forms part of a major programme of reinforcement of the electricity transmission system to accommodate major increases in power flows, helping take power generated from low carbon sources (especially from offshore wind) to areas of consumer demand across the UK.

Purpose of the Ecology Survey Strategy

- 8A.1.2 This Strategy is intended to support the Environmental Impact Assessment (EIA) and ongoing engagement with key stakeholders for the purpose of agreeing a proportionate approach to ecological field surveys and assessments. The Strategy will be updated where necessary as Project design and layout develops.
- 8A.1.3 The Strategy focuses on gathering data for the Project where there is potential significant adverse effects on ecological features. In line with the Chartered Institute of Ecology and Environmental Management (CIEEM) approach to Ecological Impact Assessment Guidelines (EcIA) (8A.1) data received through consultation, desk-based investigations and field-based investigations will be used to identify relevant ecological features (including designated sites, ecosystems, habitat and species) of value (or potential value) and to describe the main factors contributing to their value in relation to available guidance.
- 8A.1.4 Using a constraints mapping approach, the Strategy seeks to prioritise and, where appropriate, scope out the requirement for field surveys. The Planning Inspectorate (PINS) Advice Note Seven provides guidance (Ref 8A.2) on the justification for the scoping out of matters from an assessment. This includes consideration of whether there is potential for a significant effect, the potential for cumulative impacts, and the method and confidence of avoidance and mitigation measures.
- 8A.1.5 It is not necessary in the assessment to address all habitats and species that could potentially be impacted in the defined Study Area and instead the focus should be on those that are relevant i.e. ecological features considered important and potentially affected by the Project. In its guidance (8A.1), CIEEM makes clear that there is no need to *"carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable"*.
- 8A.1.6 All ecological features of Local value and above, where there is the potential for the Project to directly or indirectly impact them, will be taken forward to impact assessment and will comprise the relevant ecological features for the purposes of EcIA.

8A.2 Avoidance Measures and Principles for Scoping of Ecology Surveys and Assessments

- 8A.2.1 Major known constraints such as designated sites for nature conservation have been avoided during the Corridor, Preliminary Routeing and Siting Study (CPRSS) (Ref

8A.3) process. Integrating further avoidance measures into the Project design where possible, such as adjusting design to avoid other habitats not associated with designated sites, will assist in defining and reducing the potential requirement for and scope of ecology field surveys and assessments.

8A.2.2 Relevant ecological features for the Project will be considered and overarching principals developed to avoid and minimise impacts to sensitive receptors that would require survey, therefore, minimising the scoping of surveys required. This would ensure a proportionate approach in developing a robust baseline to inform the EIA which would be compliant with relevant policy and guidance, and in working towards agreement on scope and approach with statutory consultees. Integrating the following avoidance measures, which also align with National Grid Horlock (Ref 8A.4) and Holford Rules (Ref 8A.5) for siting overhead lines, into the Project design where possible will assist in defining potential constraints and requirements for ecology field surveys and assessments:

- Avoidance of statutory and non-statutory designated sites.
- Avoidance of land within 50 m of designated ancient woodland.
- Avoidance of Habitats of Principal Importance.
- Retention and protection of mature trees, including woodland and veteran trees.
- Avoidance and protection of native species-rich and or important hedgerows.
- 10 m stand off from watercourses, including ditches, and waterbodies.
- Avoidance of buildings.

8A.2.3 Where avoidance is not possible then ecological surveys/assessments of the relevant features is likely to be required.

8A.3 Study Area

8A.3.1 The emerging Preferred Corridor for the new overhead line and substation siting locations has been identified through an initial desk study exercise and appraisal to avoid the most sensitive ecological receptors (listed in paragraph 8A.2.2). Habitats within this corridor largely comprise flat arable land, hedgerows, drainage ditches and pockets of woodland. The Study Area as set out in Chapter 8 Ecology and Biodiversity of the Scoping Report will be refined over time as the design progresses and habitat and protected species surveys carried out in 2026 will be based on the design fixed for statutory consultation and results will further inform the design.

8A.4 Ecological Survey Strategy

Table 8A.1 Ecological Survey Strategy

Description	Timing
Desk based habitat assessment (including aerial and satellite/remote sensing imagery)	
Scope and rationale AECOM's Ecoplift tool will be utilised to create an initial map of the Preferred Route Corridor (subject to scoping stage and updated as the route is defined) habitat baseline to enable a high-level assessment, further inform the scope of UKHab surveys and protected species surveys as well as feed into ongoing refinement of the Preferred Route Corridor. The tool is aligned with the statutory Biodiversity Net Gain (BNG) metric and it will be used to calculate a high level BNG baseline for the Project, by aggregating publicly accessible datasets including designated sites, Habitats of Principal Importance (HPIs), ancient woodland, watercourses and waterbodies (including ponds), Natural England's Living England data (Ref 8A.6), and high-resolution aerial imagery or satellite imagery. This will enable early identification of areas of risk to avoid and areas of opportunity at an early stage of the Project. The Ecoplift tool will therefore be used to help influence Project design prior to the completion of the site based ecological field work. The tool helps to identify locations of higher biodiversity value to allow the targeting of site based ecological field survey reducing overall scope of subsequent surveys. Method The Ecoplift tool will be used across the Study Area plus a 50 m buffer. A suitably experienced ecologist will assess the output of the tool along with any additional desk-based information to identify the location of high value habitat and habitat suitability for protected species to further scope the ecological habitat and species surveys.	July to September 2025
Preliminary Ecological Walkover Survey	
Indicative Baseline The Preferred Route Corridor is characterised by flat arable land and drainage ditches to the east to more undulating topography to the west. This option does not directly impact any internationally designated sites (Special Protection Areas (SPA), Special Area of Conservation (SAC) and Ramsar sites)) but there are several that are hydrologically connected. There are ancient semi-natural and replanted woodlands and priority habitat sites including deciduous woodlands, grasslands, hedgerows, ponds and watercourses within the preferred route corridor. Scope and rationale	October to December 2025 and January 2026. To proceed initially from public areas e.g. Public Rights of Way, then on private land when / if access granted by landowner, planned from January 2026.

Description	Timing
A preliminary ecological walkover will be undertaken following the desk-based exercise to review and ground truth (or verify) habitats identified as being of higher ecological value, including ponds, and other habitats likely to support protected species, or where greater impacts are assumed, such as substation and compound locations. This walkover survey will aim to further define the scope of the specific UKHab survey which will be undertaken at a more optimal time of year and on the refined corridor route for statutory consultation to capture the necessary data that will also help refine the scope for protected species surveys to be undertaken in 2026. The walkover survey can also verify where there are large areas of intensive arable habitat of low ecological value that can be mapped as such in UKHab to reduce the scope of subsequent surveys. Method The walkover survey will be undertaken by suitably experienced ecologists within the Study Area plus a 50 m buffer at locations determined by the desk study exercise and carried out following the CIEEM guidelines for Preliminary Ecological Appraisal (Ref 8A.7).	
UKHab Survey	
Indicative Baseline As mentioned above, the Preferred Route Corridor is characterised by flat arable land and drainage ditches to the east to more undulating topography but still largely arable land to the west. There are ancient semi-natural and replanted woodlands and priority habitat sites including deciduous woodlands, grasslands, hedgerows, ponds and watercourses within the preferred route corridor. Scope and rationale The UKHab survey will be undertaken within the Study Area plus a 50 m buffer. All habitats will be surveyed, with the exception of intensively managed arable land (hedgerows and boundary features will be surveyed) that could be adequately classified from desk-based sources or the preliminary walkover. The UKHab survey will focus on recording botanical data, habitat classification and condition status in the locations where these features are likely to be impacted or influence design, including the requirement for mitigation and compensation. Habitats that are likely to influence the design are: • designated sites; • ancient woodland; • ancient, veteran or notable mature trees; • habitats of principal importance, including hedgerows; • all aquatic habitats (ponds, watercourses, wet ditches); • habitats that support notable flora including scarce arable flora;	April to August 2026

Description	Timing
• other habitats that are of high or moderate distinctiveness or are of low; • distinctiveness but still require habitat condition assessment (e.g. modified grassland); and • where there may be records of scarce arable field margin flora these areas will be surveyed.	
Method Habitats will also be assigned a UK Habitat Classification habitat type in accordance with UK Habitat Classification (Ref 8A.8) and their condition will be assessed in accordance with the condition assessment criteria outlined in the Statutory Biodiversity Net Gain (BNG) guidance documents (Ref 8A.9). An assessment of the possible presence of and habitat suitability to support protected and notable species and incidental records of these species or their field signs will be recorded. A record of invasive non-native plant species (INNPS) will also be recorded where visible.	
National Vegetation Classification (NVC) Surveys	
Indicative Baseline The Preferred Route Corridor indicates that there are priority habitats present throughout the Study Area which may not all be avoidable. These habitats may be deciduous woodland or good quality semi-improved grasslands.	May to August 2026 inclusive (exact timing dependent on habitat type)
Scope and rationale Priority habitats may be impacted directly through habitat loss or indirectly as a result of degradation from air or water pollution during construction which may lead to significant effects. Subject to habitat type/likely to be impacted by the Project, as defined by the corridor alignment for statutory consultation, National Vegetation Classification (NVC) surveys may be required to inform a detailed botanical assessment of habitats of high ecological value including priority habitats if they cannot be avoided. It is assumed impacts to watercourses will be avoided – if this is not the case, further aquatic macrophyte surveys may be required. Areas of further survey are to be identified following receipt of local records and UKHab survey results. Results of the NVC survey will inform detailed mitigation strategies to compensate for the loss or degradation of such habitats, which may involve translocation, habitat creation or habitat enhancement on or offsite. Method	

Description	Timing
The survey would be undertaken by a suitably experienced botanist in accordance with the JNCC NVC Users Handbook (Ref 8A.10).	
Hedgerows	
Indicative Baseline The Preferred Route Corridor is largely arable land which is more intensive to the east with larger field patterns bordered with hedgerows, but as the topography is more variable in the west, the field patterns indicate the presence of potentially older field boundaries of hedgerows with and without standard trees.	May to August 2026
Scope and rationale Hedgerow surveys will be based on the Study Area as defined in the Preferred Route Corridor for statutory consultation and will concentrate on areas where hedgerows are proposed to be lost or fragmented throughout the overhead line route, including tower locations, substation locations and haul or access routes. Locations of hedgerows will also be verified during the UKHab survey. The purpose of the specific hedgerow assessment is to identify whether hedgerows to be lost meet the criteria of important under the Hedgerows Regulations and therefore will inform the mitigation and compensation required for their replacement. Extensive loss of important hedgerows may result in a significant effect. Hedgerows will be classified as: • important under the Hedgerows Regulations; • species-rich hedgerows; and • a Habitat of Principal Importance priority habitat (s41) under the Section 41 of the NERC Act 2006.	
Method Surveys will be undertaken in accordance with the DEFRA Hedgerow Survey Handbook (Ref 8A.11) which defines a hedgerow as “<i>any boundary line of trees or shrubs over 20 m long and less than 5 m wide at the base, provided that at one time the trees or shrubs were more or less continuous</i>”. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs. This includes ‘classic’ shrubby hedgerows, lines of trees, shrubby hedgerows with trees and very gappy hedgerows (where each shrubby section may be less than 20 m long, but the gaps are less than 20 m). Any hedgerows that form the curtilage of a residential property are not considered as part of the Hedgerows Regulations.	
Trees including Ancient, Veteran and Notable trees	
Indicative Baseline	May to September 2026

Description	Timing
There are several blocks of ancient woodland within the Preferred Route Corridor which would aim to be avoided. In addition, there are many priority habitat woodlands and those marked as forest inventory woodlands. It is likely that smaller blocks of woodland that are not large enough to be listed on the Ancient Woodland Inventory may be ancient woodland or that trees in connecting hedgerows may also be ancient and or veteran. Scope and rationale Ancient and veteran trees (and woodland) are considered irreplaceable habitat and a material consideration in terms of National Planning Policy and therefore should be avoided so that there are no significant adverse effects as a result of loss or degradation of this habitat. An arboricultural survey is therefore recommended in areas to be impacted by the Project including overhead line, and associated infrastructure such as substations, haul roads and compounds. The survey will help to categorise trees, identify any veteran or ancient trees and flag areas of potential ancient woodland (especially that which may be too small to be registered on the Ancient Woodland Inventory (AWI)). The survey will inform tree protection requirements for retained trees in close proximity to the Project in line with BS 5837:2012 (Ref 8A.12). Results of the survey will inform the layout and design of the works in terms of irreplaceable or high-quality habitat to avoid, or if this is unavoidable, to inform the mitigation and compensatory planting required. Method An arboriculturist will undertake an arboricultural survey and associated reporting in accordance with British Standards BS5837 2012(Ref 8A.12).	
Amphibians Indicative Baseline There is potential for great crested newt to be present in the area due to the amount of field drains and small waterbodies present within the Preferred Route Corridor providing suitable habitat for the species. Scope and rationale Great crested newt is a European Protected Species (EPS) and they are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981(as amended). Potential impacts to great crested newt during the construction phase are habitat loss of terrestrial and aquatic habitats (breeding ponds),	HSI January to March 2026 (sub optimal time due to likely lack of vegetation) eDNA – mid-April to end of June 2026

Description	Timing
fragmentation of terrestrial habitat within a metapopulation, habitat degradation from pollution and mortality and injury during site clearance or construction. Surveys will inform whether a Natural England District Level Licence (DLL) is required to be applied for the Project. The desk study will identify the presence of potential suitable waterbodies within the Project footprint available at that time) and up to 500 m from it. The presence of ponds can be confirmed during the Preliminary Ecology Appraisal walkover and UKHab surveys within the draft Order Limits to be developed and used for the preliminary environmental information published at Statutory Consultation. The following surveys will be undertaken: • Habitat Suitability Index (HSI) assessments of all waterbodies within and up to 500 m from the Study Area. There is scope to reduce this to 250 m following consultation with Natural England. • Survey scope will be further defined based on barriers to great crested newt movement, habitat connectivity and likely impacts. • Environmental DNA (eDNA) surveys of suitable waterbodies that may be impacted will be carried out to confirm presence or likely absence. • It is not anticipated that full population surveys are required for the implementation of a DLL. Method A Habitat Suitability Index (HSI) assessment for great crested newt will be completed. The results of which will help to indicate the suitability of the ponds to support great crested newt. The HSI assessment for the great crested newt was developed by Oldham et al. (Ref 8A.13). The HSI assessment will be completed with due regard to the approach in Amphibian and Reptile Group (ARG) UK Advice Note 5 (Ref 8A.14). Where waterbodies are suitable for great crested newt, eDNA sampling will take place to confirm presence / absence. The eDNA surveys will be carried out in accordance with Biggs et al (Ref 8A.15) which is an alternative to the traditional methods by Natural England (Ref 8A.16), for assessing the presence or likely absence of great crested newts in waterbodies. Environmental DNA analysis can detect traces of great crested newt for up to two weeks after the species has been present in a waterbody.	
Beavers	
Indicative Baseline There is potential for beavers to be present in the area due to the number of watercourses including main rivers within a rural landscape present within the Preferred Route Corridor providing suitable habitat for the species.	Optimal surveys are carried out between October and March. Scoping surveys proposed between April and September 2026 with follow up

Description	Timing
Scope and rationale Eurasian beavers are a European Protected Species and they are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981(as amended). Beavers have been reintroduced into Lincolnshire within 30 km of the Scoping Boundary to the north and at the Nene Washes within the Scoping Boundary to the south. These populations are likely within enclosures but there are also reports of wild beaver or those that may have escaped enclosures, within Northamptonshire. Method Surveys of watercourses to be impacted or hydrologically connected to the Project will be undertaken in accordance with Natural England Guidance (Ref 8A.17) on reaches of 500 m to identify: • Burrows, lodges or dams on or adjacent to the Study Area, taking into account that burrows will be hard to find as often under water. • Map any evidence of territorial boundaries, access to foraging and dispersal routes.	survey between October 2026 and March 2027.
Birds	
Indicative Baseline Agricultural land, hedgerows and woodland and permanent grassland within the Preferred Route Corridor provide suitable habitat for both breeding and non-breeding birds, including those of higher legal and conservation value. Scope and rationale To characterise the ornithological baseline a series of surveys to determine the breeding and non-breeding populations and assemblages of birds will be undertaken. These surveys will consider species that may be associated with designated sites such as SPA, species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and those species that are of conservation concern, i.e., Species of Principal Importance and Birds of Conservation Concern (BoCC) Red and Amber list species. The surveys to be undertaken will consider the potential impacts of the Project on the aforementioned species and designed to allow a robust, but proportionate, assessment of potential impacts. The key potential impacts to birds are likely to be: • disturbance and displacement during construction and operation; • mortality during construction with regard to site clearance; • loss of, or degradation to, habitat during construction; and • collision and potential mortality during operation.	
Vantage Point (VP) Surveys To understand the potential risks of new overhead line to birds a programme of VP Surveys will be undertaken. These surveys will	October 2025 to September 2026 inclusive. The

Description	Timing
provide data on flight activity and movements and inform an assessment of the potential risk of collision. This method is recommended in the NatureScot guidance on the assessment of the impacts of powerlines on birds (Ref 8A.18), adapted from the recommended bird survey methods to inform impact assessment of onshore windfarms (Ref 8A.19). Each VP viewshed will be observed for a minimum of six hours per month over a minimum of a single year survey period using a team of two surveyors (to ensure no lone working and to optimise recording efficiency), ensuring minimum survey effort of 72 hours for a full year at all VPs. These surveys will run from October 2025 – September 2026 inclusive. The requirement for further survey beyond this period will be determined following review of the data collected in this period and consultation with stakeholders. VP locations will be continuously reviewed to ensure that adequate, but proportionate coverage is being provided. Where levels of flight activity by potentially sensitive species is either low or completely absent, then the continuing of further surveys will be reviewed. It is not considered necessary to collect flight activity data along the route of the Scheme where only reconductoring is proposed, as the existing overhead line will already influence bird activity, i.e., there is no new risk of collision or displacement from overhead line presence.	requirement for further vantage point surveys beyond this period will be determined following review of data collected in this period and consultation with stakeholders.
Non-breeding Bird Walkovers To complement the VP surveys, monthly walkovers (a combination of walked and driven transects) will be undertaken at the eastern end of the Project where there is the potential for birds associated with the Wash designated sites complex to occur. These surveys will be undertaken between October 2025 and March 2026, and will record the spatial and temporal distribution of target bird species. It is anticipated that surveys will also be required at substation locations, i.e., areas where permanent habitat loss may occur. These will be undertaken in winter 2026/27, once further Project refinement has occurred. The reconductoring elements of the Project include works over and in the vicinity of, the Upper Nene Valley Gravel Pits SPA / Ramsar site. To understand current usage of the designated site by species, as well as the potential occurrence of qualifying bird species in areas away from the designated sites, which could be subject to disturbance from works associated with the reconductoring, monthly visits to record the distribution of birds will be undertaken between October 2025 and March 2026.	October 2025 to March 2026.
Breeding Bird Territory Mapping Survey In accordance with the breeding bird survey method (Ref 8A.20) surveys comprise six survey visits during the breeding season (broadly mid-March to early July). For areas comprising a large expanse of open grassland or arable field, the boundaries would be walked and all	March 2026 to July 2026

Description	Timing
birds within the field recorded. In other habitat where access and views allow, efforts would be made to record all bird activity within 50 m of the Study Area. Where no access is available, PRow (where available) and local roads (where it is deemed safe to do so) would be utilised.	
Breeding Schedule 1 Species surveys Surveys for breeding Schedule 1 birds will be carried out over a four-month period in a single year (April-July 2026). During each survey visit, surveys will be targeted at areas identified as supporting suitable habitat for Wildlife and Countryside Act 1981 (as amended) Schedule 1 breeding bird species in accordance with the survey methods outlined in Gilbert et al. (Ref 8A.21), Hardey et al. (Ref 8A.22) and Shawyer (Ref 8A.23), which will include habitat searches and possible further VP effort at additional locations. Taking account of the predominant habitat type within the Study Area comprised of arable farmland, breeding bird assemblages in such habitat will largely be comprised of farmland passerines (songbirds) which are not generally at risk of significant impacts from transmission lines and therefore not the focus of VP surveys or Transect Surveys. Additional breeding season target species that could be present and at risk of significant impacts from the proposed overhead line comprise several species of raptor – marsh harrier, hobby, peregrine and red kite – and barn owl. As such, breeding bird survey transects will be undertaken at locations where proposed infrastructure is likely to require the clearance of habitat suitable for assemblages of breeding passerines (typically woodland, scrub, dense networks of mature hedgerows and reedbeds) and at other locations to sample the breeding bird assemblage along the emerging Preferred Corridor. Where high levels of flight activity from target species of raptor are noted on transect surveys outside of the viewing arcs of the VP locations, consideration will be given to undertaking habitat searches following as closely as possible to suitable methods set out in Gilbert et al. (1998) (Ref 8A.21), Hardey et al. (2013) (Ref 8A.22) and/or further VP effort at additional locations will be considered. Such surveys will not be carried out where third party data are considered sufficiently detailed and contemporary to inform the assessment of potential impacts of the Project, or where data from VP surveys are sufficient to conclude confirmed or probable breeding.	April 2026 to July 2026
Birds - Wintering	
Indicative Baseline It is possible that wintering birds associated with the Wash SPA and Ramsar site will be present in the eastern side of the Project.	November 2025 to March 2026 inclusive

Description	Timing
Scope and rationale Baseline surveys have been designed to cover a much wider range of potential impacts on designated sites over a wider area, plus more general ornithological constraints and potential impacts across the Study Area. These include: • Indirect impacts on The Wash Ramsar site, SPA and SSSI and Rutland Water Ramsar site, SPA and SSSI through potential effects on habitat that is outside of the designated sites but that nevertheless provides a supporting function to the designations (termed “Functionally Linked Land”), by providing habitat that is regularly used in some capacity; • Potential impacts on key sites or habitats that are notable for their capacity to support notable bird populations regardless of any designation (for instance as a significant habitat resource for breeding birds; or as a significant feeding and roosting area regularly used by non-breeding birds); • Potential impacts on key flyways or migration routes for any species of bird which may lead to mortality or population decline during construction and operation of the Project; and • Potential impacts of collision with transmission overhead lines by bird species that are known to be vulnerable. Method Each VP viewshed will be observed for a minimum of 6 hours per month over a minimum of a single year survey period using a team of two surveyors (to ensure no lone working and to optimise recording efficiency), ensuring minimum survey effort of 36 hours for a full year at all VPs. This method is recommended in the NatureScot guidance on the assessment of the impacts of powerlines on birds (Ref 8A.18), adapted from the recommended bird survey methods to inform impact assessment of onshore windfarms (Ref 8A.19).	
Badger Indicative Baseline Badger setts are likely to be present within arable, grassland habitat, woodland and hedgerows which are all present within the Preferred Route Corridor. Scope and rationale Badgers are a common and widespread species that are of no more than local importance. Impacts upon badgers from the Project are therefore not anticipated to result in significant adverse effects. However, badgers are afforded protection under the Protection of Badgers Act (1992), which makes it an illegal offence to damage or disturb a badger sett. Adverse impacts on badgers during construction would include:	January to April 2026 and September to December 2026. (Badger surveys can be undertaken at any time of year but are most effective over winter before vegetation growth obscures setts and field signs).

Description	Timing
• Habitat loss (setts and territory); • Habitat and territory fragmentation; • Disturbance during construction; and • Mortality or injury during construction. Surveys for badger setts and activity will focus on areas within the proposed construction footprint of permanent and temporary works where there will be habitat loss such as: • The emerging preferred substation siting zones and compound locations as there will be a permanent and/or temporary loss of habitat – here additional space may be required to achieve a successful design; for example, providing space for replacement main setts or foraging habitat; and • Overhead line route and other areas of temporary works such as haul roads and access road. Here the locations where there is greater potential for main setts to occur within the preferred route corridor will be surveyed. This shall include areas within 100 m of known main setts and any areas located within 50 m of optimal habitat (woodland, continuous scrub, hedgerows and permanent grassland, road/rail verges and embankments). If it is not possible for the design to avoid active badger setts with a buffer of at least 30 m, a licence from Natural England will be required for any sett closures between July and November, as informed by the survey information.	
Method Badger surveys will be undertaken within the defined survey area with reference to standard guidance; Harris, S., Cresswell. P., and Jefferies, D.J., (1989) (Ref 8A.24) to include the recording of field signs such as latrines, footprints, paths and hair), setts and classification of sett activity and status, i.e. main, annex, subsidiary or outlier in accordance with Roper, T.J. 1992. Badger setts – architecture, internal environment and function. Mammal Review 22: 43-53. The Mammal Society (Ref 8A.25). In addition, the size of the sett in terms of area coverage will be collected and also the number of, and of grid reference for each sett entrance. Any incidental badger field signs within the Study Area undertaken during other ecology surveys will be recorded and all survey results reviewed to determine if further surveys such as badger bait marking to establish territories for each main sett, are required. This is considered unlikely as territories are unlikely to be permanently fragmented by the Project.	
Bats – Roosts	
Indicative Baseline	Ground level tree assessments –

Description	Timing
Bats are likely to be present across the Preferred Route Corridor, in particular within deciduous woodland, older properties, and utilising hedgerows, waterbodies and grasslands for foraging. Scope and rationale All bat species native to the UK are protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). Adverse impacts on bat roosts from overhead line and associated infrastructure during construction have the potential to result in significant adverse effects and may include: • Habitat (roost) loss (trees/buildings) loss; • Disturbance during construction; and • Mortality or injury during site clearance. No buildings or structures will be removed as a result of the Project. Trees that cannot be avoided by the Project within and up to 50 m from the Preferred Route Corridor and substation sites at statutory consultation, or those where disturbance impacts are anticipated, will be surveyed for roosting bats. Method All bat surveys will be undertaken with reference to the current best practice guidance (Ref 8A.26). A daytime ground level tree assessment will be carried out on identified trees within the Study Area. This will involve a visual inspection from the ground using binoculars. Features with bat suitability will be recorded such as potential entrance/exit points and crevices. Trees will be classified as having no Potential Roost Features (PRFs). PRFs present or Further Assessment Required (FAR). This assessment will be used to inform further survey work. All trees assessed as having PRFs/FAR (and impacted by the Project) will be climbed and inspected by a licensed bat ecologist to confirm PRF status. Surveyors will assess potential roost features for their suitability to support roosting bats and record signs of bat activity including droppings, staining, odour or live/dead bats and assign a category of PRF-I, PRF-M or features not suitable. Should any tree identified as having PRFs not be safe to climb, three dusk emergence surveys will be carried out. Surveyors will stand below the tree with a bat detector observing the potential roost feature to record any bats leaving or entering the roost at dusk or dawn. All activity will be recorded including bat passes. Night vision aids will be used. The surveys will commence 15 minutes before sunset and continue for up to two hours after sunset. A European Protected Species Mitigation Licence (EPSML) will be required if a bat roost will be disturbed or destroyed.	January 2026 to April 2026. Aerial inspection – total of three visits May to September (with at least two between May and August 2026). Three dusk emergence surveys – May to September inclusive (with at least two between May and August 2026).
Bats - Activity	

Description	Timing
Indicative Baseline As stated above, bats are likely to be present across the Preferred Route Corridor, in particular utilising hedgerows, open fields, woodlands and waterbodies for foraging activity. Scope and rationale All bat species native to the UK are protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). Adverse impacts on bats from overhead line and associated infrastructure during construction have the potential to result in significant adverse effects and may include: • habitat loss (woodland, tree lines, hedgerows, scrub and open grassland); • habitat fragmentation during the construction phase and any management of habitat under overhead line during the operational phase likely to involve tree and scrub removal; and • disturbance during construction i.e. from noise or lighting. Night-time bat walkovers (NBWs) and VP surveys will be targeted in areas of habitat loss which is considered to be of value to foraging and commuting bats. As well as directly impacting suitable bat foraging habitat, the clearance of vegetation has the potential to remove or sever (i.e. fragment) features that are used by bats to move between foraging or roosting areas. Where the clearance of suitable habitat is planned, NBWs shall focus on identifying the features that are of importance to the local bat population for commuting and foraging. The requirement for survey will take account of the likely extent of vegetation clearance at each location, including the retention of suitable connecting habitat within the Project and surrounding landscape, such as hedgerows and watercourses. Due to the scale of the Project and to achieve a proportionate approach to survey the activity surveys will be planned using a combination of desk-based assessment of suitability and ground-truthing. The desk-based approach will make use of the habitat connectivity map and local records for bats. The habitat connectivity map will identify locations that have the potential to be utilised by fauna, including bats, for movement across the landscape. This mapping will utilise digital habitat data for features that are known to be used by bats, including woodland, smaller tree groups and lines of trees, hedgerows and watercourses. Method All bat surveys will be undertaken with reference to the current best practice guidance (Collins, 2023) (Ref 8A.26). Night-time Bat Walkover (NBW)	April to October 2026 inclusive.

Description	Timing
NBW surveys will be carried out in Spring (April/May), Summer (June/July/August) and Autumn (September/October), 2026. The NBW will be carried out by two surveyors, one of which will be suitably experienced in leading bat activity surveys and hold a Natural England bat survey licence or have a suitable level of experience. The surveyors will walk a pre-determined route using a full spectrum bat detector to record bat species. Following the Bat Conservation Trust (BCT) good practice guidelines (Ref 8A.26), surveyors will commence the survey at sunset and will stand on potential flight lines close to potential roost features where present (i.e. a woodland block or line of trees). Surveyors will remain stationary observing these potential roost features for between 30 minutes to an hour after sunset, observing behaviour and making acoustic recordings of bat activity. Surveyors will then continue walking the pre-determined transect route and complete the survey 2-3 hours after sunset (the transect route would be walked at least once). The surveyors may stop or take a detour to observe bat behaviour, any changes to the pre-determined route must clearly be marked. Data on the number of bats, species, location and time of activity, type of activity (foraging/commuting/emerging) and direction of travel etc.	
Vantage Point Surveys A dusk survey will be carried out in Spring (April/May), Summer (June/July/August) and Autumn (September/October) 2026 at required VP locations. The survey will be carried out by two surveyors, one of which will be suitably experienced in leading bat activity surveys and/or hold a Natural England bat survey licence. Surveys should be 60-90 minutes in duration, commencing at sunset. The aim of the VP survey is to track the route of each bat that crosses the feature of interest, in particular its horizontal and vertical distance from the habitat feature. The information to be recorded: • a record number for each observation made; • the precise (ideally to the second) time of the observation; • a call/track identifier to allow the observation to be paired with the relevant sound file; • the approximate height of the bat above the feature of interest to the nearest metre; • the side of the feature that the bat crossed on, using compass bearings; • the direction the bat crossed, using compass bearings; and, • weather variables and other comments.	
Automated Bat Detector Surveys	

Description	Timing
Automatic static bat detectors will be used to record foraging and commuting activity at the NBW and VP locations. The locations of automated bat detector deployment will take into account the habitats likely to be impacted by the Project, and the need to identify important habitat features within the survey area. Each detector will be deployed in accordance with the current survey guidelines which will be determined following initial ecology surveys and desk exercise as the frequency and length of deployment time depends on the value of foraging and commuting habitat and anticipated impacts. Deployment will be between April and October and as a minimum cover Spring, Summer and Autumn, 2026. The static detector should be set to start recording 30 minutes before sunset and continue for 30 minutes after sunrise and be positioned on hedgerows/trees other suitable location but not placed on the ground.	
Hazel Dormouse	
Indicative Baseline Dormice are not abundant within the County of Lincolnshire. They were reintroduced to Lincolnshire in 2002 and have since spread into the wider landscape. Further reintroductions have also occurred since then. Dormice are most likely to be within broadleaved woodland connected to other woodlands in the landscape via a network of hedgerows. Consultation with People's Trust for Endangered Species (PTES) is advisable to check locations of reintroduced populations and likely rates of dispersal towards the Preferred Route Corridor.	Survey set up February/March 2026. Survey between April and October 2026 (full season required).
Scope and Rational Hazel dormice are a European Protected Species protected under the Conservation of Habitats and Species Regulations 2017 (as amended). Any dormouse presence in Lincolnshire would be at least of county value. Adverse effects on dormice that may lead to an adverse significant effect would be: • habitat loss (woodland scrub and hedgerow) loss; • habitat fragmentation during the construction phase and any management of habitat under overhead line during the operational phase likely to involve tree and scrub removal; and • mortality or injury during site clearance. A desk-based appraisal of release sites and known populations and likely dispersal will inform the requirement for further survey of suitable habitat to be impacted dormouse habitat includes woodland, hedgerows and scrub. Where such habitat cannot be avoided and will be lost either temporarily or permanently, dormouse surveys will be undertaken to advise whether a Natural England (EPSML) is required to facilitate any vegetation clearance.	
Method	

Description	Timing
Surveys will be carried out with reference to the current best practice guidance published in 2025 (Ref 8A.27).	
Invertebrates Terrestrial	
Indicative Baseline Notable invertebrates may also be present in any species-rich or grassland or other suitable terrestrial habitats within the Preferred Route Corridor.	April to September 2026– however dependant on target species.
Scope and Rational Biodiversity hotspots identified through the desk study and the location of notable invertebrate records will be used to identify areas of potential high quality invertebrate habitat within the Preferred Route Corridor for statutory consultation. The requirement for further surveys will be planned based upon the extent and quality of habitat present confirmed through field survey. The level of survey effort will be proportionate to the anticipated extent of potential impacts, and opportunities to minimise habitat losses will be taken into account when determining any need for follow on surveys. Habitats to be surveyed may include flower rich grassland, mature and veteran trees and early successional habitats.	
Method An initial appraisal of invertebrate habitat will be made in accordance with Natural England Guidance (Ref 8A.28) and Kirby (2013) (Ref 8A.29) and where necessary sampling of invertebrate fauna will be undertaken where there is permanent loss of high-quality invertebrate habitat. Survey methods will be determined based on habitat to be surveyed and likely target species as determined by a specialist and in accordance with Natural England Guidance (Ref 8A.30).	
Invertebrates (Aquatic)	
Indicative Baseline Notable invertebrates may be present in any watercourses or ditches within the Preferred Route Corridor. Specifically, populations of white clawed crayfish is generally restricted to the River Witham and tributaries within the Lincolnshire Wolds. The River Witham runs through Segment 1e, and a number of reintroduction or isolated conservation site (ARC sites) are located within the county.	July to October 2026 (with optimum time for white clawed crayfish July to September). (Full survey period is May to October).
Scope and rationale The white-clawed crayfish is protected under both European and UK law. It has full protection under Annex II and V of the European Habitats Directive (1992), requiring the designation of SAC for its protection and prohibiting the taking or disturbance of the species in the wild. Therefore, any impacts may result in an adverse significant effect. There are many watercourse and drainage ditches within the	

Description	Timing
Study Area. These may contain an abundance of aquatic invertebrates. If any watercourses are to be permanently impacted, for example by culverting or diverting, aquatic invertebrate surveys will be undertaken to identify the presence of species of principal importance. This includes surveys for white clawed crayfish if habitat is suitable or there is hydrological connection to known sites indicated on the National Biodiversity Network Atlas (Ref 8A.31), such as the River Witham or within the Water Framework Directive (WFD) catchment area. Habitat appraisal as above for terrestrial invertebrates will also be used to determine the requirement for aquatic invertebrate surveys. Method All survey for aquatic invertebrates should be carried out in accordance with the guidance outlined below: • BS EN ISO 10870:2012 (European Committee of Standardization, 2014) (Ref 8A.32); • Environment Agency’s standard macroinvertebrate sampling and analysis manual – BT001 (Ref 8A.33); and • White clawed crayfish surveys must be undertaken by licensed surveyors in accordance with the following guidance: Peay S (2003) (Ref 8A.34). Survey sample areas will cover 100 m within a 500 m stretch of watercourse.	
Other Indicative Baseline Otters are a widespread species, and it is reasonable expect that otter are present within all suitable watercourses within the Preferred Route Corridor. Scope and Rational Otters are a European Protected Species and are protected under the Conservation of Habitats and Species Regulations 2017. Impacts to these habitats may arise with associated infrastructure to install towers and overhead line rather than during the operational phase. Any adverse impacts may result in an adverse significant effect. Otter breeding sites represent the most sensitive features used by this species and the loss of disturbance of these features may require a Natural England licence. Survey will focus on the identification of otter holt and resting sites within terrestrial habitat areas that are located within or adjacent to the project. Any watercourses within the Study Area that provide suitable otter habitat and that may be impacted temporarily or permanently by the Project will be surveyed for otter and otter holts. A minimum length of 500 m of any watercourse will be surveyed and at least 200 m from the Study Area as the potential distance for disturbance of otter may also extend up to 200 m from an impact (Ref 8A.35). Up to 100 m of suitable terrestrial habitat inland from a watercourse will also be	March and April 2026, and September 2026 if required. Can be carried out alongside initial water vole surveys. Otter surveys must not be undertaken following rainfall. A period of several days should be left after rain before commencing survey.

Description	Timing
surveyed for the presence of otter holts, though most are located closer to the watercourse (Ref 8A.36).	
Method Field survey will be undertaken in accordance with Chanin (2003) (Ref 8A.37) and Lenton et al (1980) (Ref 8A.38). Surveys will comprise an initial appraisal of habitat suitability, followed by a survey for otter signs and potential holt sites. Where holts are identified then further detailed monitoring may be required to determine the likely presence of otter and mitigation required.	
Reptiles	
Indicative Baseline Reptiles are likely to be present in grassland, hedgerows or woodland edges throughout the Preferred Route Corridor.	Refugia deployment – March 2026.
Scope and rationale Reptiles are protected under UK law under the Wildlife and Countryside Act 1981 (as amended). Adverse impacts may include: • habitat loss; • habitat fragmentation; • disturbance due to noise and vibration; and • mortality or injury during site clearance.	Surveys in April/May/June and September/October 2026.
Reptile surveys will be undertaken where suitable reptiles habitat has been identified within the proposed construction footprint of permanent and temporary works where large areas of habitat loss is proposed such as sub-station locations, compounds, haul roads and pylon base locations. Suitable habitat to survey will include long/rough grassland for example at field edges or verges and hedgerows. To determine the presence/likely absence of reptiles within a defined habitat patch, a minimum of seven visits will be conducted during the optimal survey period (likely April and May) within optimal survey conditions. Where presence of reptiles is established and habitat is to be permanently lost with no scope for local displacement, a further 13 visits (totalling 20) will be conducted in order to inform the population size assessment in order to inform a translocation strategy. Visits should be a minimum of 48 hours apart.	
Method Reptile surveys will be undertaken with reference to the current best practice guidance: • Froglife Advice Sheet 10: Reptile Survey (Ref 8A.39). • Froglife Reptile survey Booklet (Ref 8A.40). • Herpetofauna Workers Manual (Ref 8A.41).	

Description	Timing
Details including refugia number, life stages, and sex (if possible) of reptiles to be recorded. Locations of potential reptile hibernation sites, or refugia such as log or rubble piles should also be noted.	
Water Vole	
Indicative Baseline Water voles are likely to be present within slow flowing watercourses and drains throughout the Preferred Route Corridor.	Two surveys, one between mid-April to June 2026 and one between July and September 2026.
Scope and rationale Water voles are protected under UK law under the Wildlife and Countryside Act 1981 (as amended). Impacts to water vole and their habitat if watercourses cannot be avoided during the construction phase. Adverse impacts may result in an adverse significant effect. Surveys to assess presence or absence of water vole would be undertaken on all watercourses or waterbodies providing suitable water vole habitat within the Study Area that may be impacted temporarily or permanently by the Project, and where physical works come within 5 m of the toe of bank of any watercourse or waterbody. A minimum length of 500 m of any watercourse will be surveyed extending 50 m from the Study Area where applicable. Surveys will inform the mitigation required and whether a displacement licence from Natural England is required for any water vole populations that may be impacted. Two survey visits for assessing water vole habitat suitability and presence or absence would be undertaken on any watercourse to be impacted by the Project.	Water vole surveys must not be undertaken following heavy rainfall as it will wash away field signs. A period of several days should be left after rain before commencing survey.
Method All water vole surveys will be undertaken by suitably experienced ecologists with reference to the current best practice M.Dean (2021) (Ref 8A.42).	
Aquatic receptors	
Indicative Baseline Seven main rivers bisect the Preferred Route Corridor with many other streams and ditches present. In addition, there a likely to be waterbodies throughout the Project.	April to November 2026.
Scope and Rationale Watercourses, ditches and lakes will be surveyed as receptors over and above surveys required for protected species. Surveys will be based on the Preferred Route Corridor for statutory consultation. Condition assessments for BNG calculations for linear features, will be conducted in areas of permanent or temporary habitat loss, on all rivers and watercourses including ditches and streams where the watercourse itself or the bank top region (10 m buffer from each river/stream edge or 5 m for ditches) falls within the Study Area. It is	

Description	Timing
anticipated that impact to any lakes will be avoided by Project design and refinement and therefore Lake Naturalness surveys will not be required. Surveys for other aquatic fauna such as fish, will only be carried out where there is direct adverse impact to the watercourse or body within the Study Area. Methods Condition assessments of rivers, streams and qualifying ditches will be surveyed for condition in accordance with the MoRPh survey methodology (Ref 8A.43) by an assessor trained and accredited in the River Condition Assessment (RCA) method.	
Invasive Non-Native Species (plants)	
Indicative Baseline Habitats throughout the Study Area are varied and include watercourses which often provide a mechanism for spread of aquatic Invasive Non-Native Species (INNS). Terrestrial INNS are more likely to be found in areas of disturbance nearer residential areas or road/rail embankments etc.	May to September 2026.
Scope and rationale	
Invasive plant species are those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and covers both terrestrial and aquatic species. Presence of INNS will not result in significant effects but surveys will be undertaken across all construction areas within the Study Area to map the presence of species and to inform an Invasive Species Management Plan for legal compliance.	
Method	
The survey will involve a systematic walkover of the survey area, recording any species, both terrestrial and aquatic. All identified species should be photographed (providing it is safe to do so) and their location and extent mapped on a GPS device.	

References

- Ref 8A.1 Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2019). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. Second Edition v1.1. CIEEM, Winchester.
- Ref 8A.2 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice pages. [online] Available at: <https://www.gov.uk/government/collections/national-infrastructure-planning-advice-notes> (Accessed October 2025)
- Ref 8A.3 National Grid, June 2025, The Great Grid Upgrade, Weston Marsh to East Leicestershire - Corridor Preliminary Routing and Siting Study. Available online at: website <https://www.nationalgrid.com/document/561431/download> (Accessed September 2025)
- Ref 8A.4 National Grid HGC Substation and the Environment: Guidelines on siting and design. Available online at: <https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf> (Accessed October 2025)
- Ref 8A.5 National Grid, The Holford Rules. [online] Available at: <https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf>
- Ref 8A.6 Department for Environment, Food & Rural Affairs (2024) Living England: a national habitat map for everyone [online] Available at: <https://defraenvironment.blog.gov.uk/2024/12/18/living-england-a-national-habitat-map-for-everyone/> (Accessed October 2025)
- Ref 8A.7 Chartered Institute of Ecology and Environmental Management (CIEEM) (Second Edition December 2017). Guidelines for Preliminary Ecological Appraisal, CIEEM, Winchester.
- Ref 8A.8 UKHab (2018.2022). The UK Habitat Classification System [online]. Available at: <https://ukhab.org/> (Accessed July 2025).
- Ref 8A.9 Department for the Environment, Food and Rural Affairs (February 2024). Statutory Biodiversity Metric tools and guides [online]. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> (Accessed July 2025)
- Ref 8A.10 Rodwell, J.S. (2006) NVC Users' Handbook, JNCC, Peterborough
- Ref 8A.11 Defra (2007) Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. Defra, London.
- Ref 8A.12 British Standards BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations.
- Ref 8A.13 Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M, (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155 The Great Crested Newt Mitigation Guidelines.

- Ref 8A.14 Amphibian and Reptile Groups of the United Kingdom ARG UK Advice Note 5; Great Crested Newt Habitat Suitability Index (May 2010).
- Ref 8A.15 Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.
- Ref 8A.16 English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature.
- Ref 8A.17 Department for Environment, Food & Rural Affairs (2025) Beavers: advice for making planning decisions [online] Available at : <https://www.gov.uk/guidance/beavers-advice-for-making-planning-decisions#when-to-ask-for-a-survey> (Accessed October 2025).
- Ref 8A.18 NatureScot (2016) Guidance – Assessment and mitigation of impacts of power lines and guyed meteorological masts on bird.
- Ref 8A.19 NatureScot (2017) Recommended bird survey methods to inform impact assessment of onshore windfarms. Version 2.
- Ref 8A.20 Bird Survey & Assessment Steering Group (2022). Bird Survey Guidelines for assessing ecological impacts, v.0.1.6. [online] Available at: <https://birdsurveyguidelines.org> (Accessed October 2025).
- Ref 8A.21 Gilbert, G., Gibbons D.W., and Evans, J. (1998). Bird Monitoring Methods. RSPB, Sandy.
- Ref 8A.22 Hardey, J., Crick, H., Wenham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). Raptors: a field guide to survey and monitoring (3rd Edition). The Stationery Office, Edinburgh.
- Ref 8A.23 Shawyer, C. R. (2011). Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester.
- Ref 8A.24 Harris, S., Cresswell. P., and Jefferies, D.J., (1989). Surveying badgers. Mammal Society, London.
- Ref 8A.25 Roper T.J., (1992) Badger *Meles meles* setts-architecture, internal environment and function
- Ref 8A.26 Collins J. (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th Edition. London: The Bat Conservation Trust.
- Ref 8A.27 Wells, D., Chanin. P., Gubert. L., (2025) Hazel dormouse mitigation handbook. Mammal Society.
- Ref 8A.28 Natural England (2006) Organising surveys to determine site quality for invertebrates. A framework guide for ecologists.
- Ref 8A.29 Kirby (2013) Habitat Management for Invertebrates – A practical handbook.
- Ref 8A.30 Drake C.M., Lott, D.A., Alexander, K.N.A and Webb, J. (2007) Surveying Terrestrial and Freshwater Invertebrates for Conservation and Evaluation. Natural England

- Ref 8A.31 National Biodiversity Network (no date) [online] Available at: <https://nbnatlas.org/> (Accessed August 2025).
- Ref 8A.32 BS EN ISO 10870:2012, (2012) Water quality — Guidelines for the selection of sampling methods and devices for benthic macroinvertebrates in fresh waters
- Ref 8A.33 Environmental Monitoring Programme: Biological Techniques, BT001 or Murray-Bligh, JAD (1999) Procedure for collecting and analysing macro-invertebrate samples.
- Ref 8A.34 Peay S (2003). Monitoring the White-clawed Crayfish *Austropotamobius pallipes*. Conserving Natura 2000 Rivers Monitoring Series No. 1, English Nature, Peterborough.
- Ref 8A.35 NatureScot (2024) Standing advice for planning consultations – Otters [online] Available at: <https://nature.scot/doc/standing-advice-planning-consultations-otters> (Accessed October 2025)
- Ref 8A.36 Department of Agriculture, Environment and Rural Affairs (2011) Northern Ireland Environment Agency - Otters & Development
- Ref 8A.37 Chanin P (2003) Monitoring the Otter *Lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough
- Ref 8A.38 Lenton, E.J., Chanin, P.R.F. and Jefferies, D.J., (1980). Otter Survey of England 1977-79. Nature Conservancy Council, London
- Ref 8A.39 Froglife Advice Sheet 10: Reptile Survey (1999) [online] Available at: https://www.wildcare.co.uk/media/wysiwyg/pdfs/froglife_advice_sheet_10_-_reptile_surveys.pdf (Accessed October 2025)
- Ref 8A.40 Froglife Reptile survey Booklet. [online] Available at: <https://www.froglife.org/wp-content/uploads/2013/06/Reptile-survey-booklet-3mm-bleed.pdf> (Accessed October 2025)
- Ref 8A.41 Gent A.H., & Gibson, S.D., Eds. (1998) Herpetofauna Workers Manual. [online] Available at: <https://data.incc.gov.uk/data/9d7da8c4-9d76-4b65-8263-6b925b3433a4/Herpetofauna-Workers-Manual-2003.pdf> (Accessed October 2025)
- Ref 8A.42 M. Dean (2021) Water vole field signs and habitat assessment – A practical guide to water vole surveys.
- Ref 8A.43 Gurnell, A., England, J., Shuker, L., Wharton, G. (2019). MoRPh Survey Technical Reference Manual.

9A. Designated Heritage Asset Gazetteer

Contents

9A.	Designated Heritage Assets Gazetteer	9A-1
9A.1	Introduction	9A-1
9A.2	Designated Heritage Assets	9A-1
Table 9A.1 Section 1 of the Scoping Boundary		9A-1
Table 9A.2 Section 2 of the Scoping Boundary		9A-4
Table 9A.3 Section 3 of the Scoping Boundary		9A-16
Table 9A.4 Section 4 of the Scoping Boundary		9A-33
Table 9A.5 Section 5 of the Scoping Boundary		9A-57

9A. Designated Heritage Assets Gazetteer

9A.1 Introduction

- 9A.1.1 This document provides the full lists of the designated heritage assets within the Scoping Boundary and surrounding Study Area.
- 9A.1.2 The Project has been divided into five Sections as described in **Chapter 4, Description of the Project** and shown in **Figure 1.2 Scoping Boundary**. The Sections are defined by the geographical alignment of the Scoping Boundary and the administrative boundaries of the local authorities. The baseline environment is reported for the Sections along the Scoping Boundary in the respective text below.

9A.2 Designated Heritage Assets

Table 9A.1 Section 1 of the Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1004966; 1146782	Scheduled monument; Grade II listed building	Pinchbeck Engine	TF 26174 26148	Scoping Boundary
1004975	Scheduled monument	Settlement South of Bank House	TF 19401 23359	1 km-3 km
1009979; 1064459	Scheduled monument; Grade II listed building	Moated site of monastic grange with adjacent earthworks at Rigbolt House	TF 19459 28227	Within 1 km
1009981	Scheduled monument	Moated site of Newhall Grange	TF 19529 26987	Within 1 km
1013529; 1064473	Scheduled monument; Grade II listed building	Churchyard cross, St Mary's churchyard	TF 29229 25150	Within 1 km
1019096; 1064471	Scheduled monument; Grade I listed building	Wykeham Chapel: a moated monastic grange and retreat house	TF 27600 26386	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1019526	Scheduled monument	Medieval moated site and post-medieval gardens at Cressy Hall	TF 22408 30398	1 km-3 km
1064403	Grade I listed building	Church of St Lawrence	TF 25136 28230	Within 1 km
1064433	Grade I listed building	Church of St Mary	TF 24197 25594	1 km-3 km
1064475	Grade I listed building	Church of St Mary	TF 29248 25153	Within 1 km
1306702	Grade I listed building	Church of St Paul including attached Former Sunday Schoolroom	TF 26144 23802	1 km-3 km
1063959	Grade II* listed building	The Grange	TF 24813 22906	1 km-3 km
1063983	Grade II* listed building	Garden Wall to No 21	TF 2511 022822	1 km-3 km
1063991	Grade II* listed building	Willesby	TF 25223 23195	1 km-3 km
1064460	Grade II* listed building	Cressy Hall	TF 22404 30479	1 km-3 km
1169039	Grade II* listed building	Cley Hall	TF 25129 22834	1 km-3 km
1359524	Grade II* listed building	Yew Lodge	TF 25112 22810	1 km-3 km
1359525	Grade II* listed building	East Elloe	TF 25214 22981	1 km-3 km
1359567	Grade II* listed building	Old Office Block of Land Settlement Association	TF 27122 22352	1 km-3 km
1392209	Grade II* listed building	Vicarage to Church of St Paul	TF 26102 23817	1 km-3 km
1064431	Grade II listed building	39, Church Street	TF 24176 25784	Within 1 km
1064432	Grade II listed building	Barn to Number 47	TF 24204 25850	Within 1 km
1064434	Grade II listed building	Pinchbeck Hall	TF 24140 26059	Within 1 km
1064434	Grade II listed building	Cottage Farmhouse	TF 24537 27388	Within 1 km
1064435	Grade II listed building	Graft House Wall and Store	TF 24084 25928	Within 1 km
1064438	Grade II listed building	Manor Farmhouse	TF 23944 26732	Within 1 km
1064439	Grade II listed building	Traphouse to The Grange	TF 22916 25952	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1064440	Grade II listed building	Gate Piers to Chapel Farmhouse	TF 27473 26257	Within 1 km
1064472	Grade II listed building	41, Church Street, Pinchbeck	TF 24180 25792	Scoping Boundary
1064474	Grade II listed building	Row of 7 gravestones 1-6 metres to south of Church, Main Street	TF 29247 25148	Within 1 km
1064476	Grade II listed building	Milestone, Main Street	TF 28739 24747	Within 1 km
1064477	Grade II listed building	Pigeoncote to the south of Wraggmarsh House	TF 29880 30371	Within 1 km
1146713	Grade II listed building	Money Bridge Public House	TF 21557 25626	Within 1 km
1146821	Grade II listed building	Pigeoncote at Brownlow House	TF 21682 25697	Within 1 km
1146855	Grade II listed building	The End Cottage	TF 23418 25995	Within 1 km
1146861	Grade II listed building	Glen House	TF 23434 26062	Within 1 km
1146938	Grade II listed building	Chapel Farmhouse	TF 27602 26406	Within 1 km
1147513	Grade II listed building	The Grange	TF 22939 25955	Within 1 km
1147551	Grade II listed building	Lychgate	TF 29251 25124	Within 1 km
1147556	Grade II listed building	Tomb chest approximately 3 metres south of church	TF 29230 25158	Within 1 km
1147591	Grade II listed building	Barn to south of Oakleigh House	TF 29099 24953	Within 1 km
1147603	Grade II listed building	Wraggmarsh House Farmhouse	TF 29893 30434	Within 1 km
1261851	Grade II listed building	Oakleigh House	TF 29109 24978	Within 1 km
1308755	Grade II listed building	47, Church Street	TF 24222 25821	Within 1 km
1308859	Grade II listed building	Glen House	TF 21822 25648	Within 1 km
1359276	Grade II listed building	Northgate Mill	TF 22785 25945	Within 1 km
1359277	Grade II listed building	The Ship	TF 23491 26008	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1359288	Grade II listed building	Cheal House Screen Gate and Wall Piers	TF 23542 28724	Within 1 km
1359314	Grade II listed building	Traphouse and Stables to Pinchbeck Hall	TF 24104 26038	Within 1 km
1359315	Grade II listed building	Brownlow House	TF 21708 25691	Within 1 km
1481070	Grade II listed building	The Mermaid Inn	TF 25093 28168	Within 1 km
1482125	Grade II listed building	Surfleet War Memorial	TF 25109 28268	Within 1 km
-	Conservation area	Pinchbeck	-	Within 1 km

Table 9A.2 Section 2 of the Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1004928; 1165913	Scheduled monument; Grade II listed building	Remains of Medieval Gatehouse	TF 00006 25010	Within 1 km
1004959	Scheduled monument	Car Dyke, South of Dyke	TF 10505 21709	1 km-3 km
1004976	Scheduled monument	Settlement between Rippingale Running Dike and Long Drove	TF 15564 27840	Within 1 km
1004977	Scheduled monument	Settlement between Long Drove and Dowsby Drain	TF 15623 28282	Within 1 km
1005001	Scheduled monument	Corby moated mound	SK 99990 25125	Scoping Boundary
1007655	Scheduled monument	Remains of Knights Templar preceptory, watermill and fishponds	SK 92815 20556	Within 1 km
1009200; 1241286	Scheduled monument; Grade II listed building	Ripplegate village cross	TF 09855 27823	1 km-3 km
1009201	Scheduled monument	Dunsby village cross	TF 10587 26864	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1009202; 1146650	Scheduled monument; Grade II listed building	Churchyard cross, St Michael's churchyard	TF 06194 21804	1 km-3 km
1009203; 1147014	Scheduled monument; Grade II listed building	Swinstead village cross	TF 01820 22490	Within 1 km
1009204; 1062818	Scheduled monument; Grade II listed building	Corby Glen market cross	SK 99907 25009	Within 1 km
1009205; 1062317	Scheduled monument; Grade II listed building	Churchyard cross, St Mary's churchyard	SK 92788 21864	Within 1 km
1009206; 1062352	Scheduled monument; Grade II listed building	Churchyard cross, St Nicholas' churchyard	SK 91274 21546	Within 1 km
1014681	Scheduled monument	Castle Bytham Castle, associated town defences and ponds	SK 99040 18358; SK 99089 18588; SK 99289 18410	1 km-3 km
1016969	Scheduled monument	The Hermitage moated site, 400m north east of Corby Pasture Farm	TF 01093 26466	Within 1 km
1019527	Scheduled monument	Tower Hill motte castle, Stainby	SK 90962 22689	1 km-3 km
1062325	Grade I listed building	Church of St John The Baptist	SK 92718 19409	Within 1 km
1062362	Grade I listed building	Woolsthorpe Manor House	SK 92409 24399	1 km-3 km
1062789	Grade I listed building	Summer House	TF 02160 22469	Within 1 km
1062822	Grade I listed building	Cross Shaft on south side of Church of St. Peter, 6 yards from South Doorway	TF 01452 19872	1 km-3 km
1062823	Grade I listed building	Grimsthorpe Castle and North Court	TF 04456 22778	Within 1 km
1062848	Grade I listed building	Willoughby Memorial Library and Art Gallery	SK 99975 24876	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1062863	Grade I listed building	Church of St Mary Magdalene	SK 98305 28397	1 km-3 km
1146587	Grade I listed building	Church of St Michael and All Angels	TF 06210 21829	1 km-3 km
1146898	Grade I listed building	Irnham Hall	TF 02296 26642	Within 1 km
1165123	Grade I listed building	Church of All Saints	TF 10521 26821	Within 1 km
1166122	Grade I listed building	Church of St. Mary and All Saints	TF 06981 27045	1 km-3 km
1166154	Grade I listed building	Church of St Peter	TF 01457 19880	1 km-3 km
1166266	Grade I listed building	Cross Shaft on west side of Church of St Peter, 12 yards north-west of Tower	TF 01437 19883	1 km-3 km
1166383	Grade I listed building	Church of St John The Baptist	TF 09826 24010	Within 1 km
1260603	Grade I listed building	Church of St Andrew	TF 09780 27815	1 km-3 km
1308771	Grade I listed building	Church of St Andrew	TF 02347 26675	Within 1 km
1309158	Grade I listed building	Church of St John	TF 00136 25002	Within 1 km
1317197	Grade I listed building	Church of St Thomas A Becket	SK 97969 25839	Within 1 km
1360095	Grade I listed building	Church of St James	SK 98862 18348	1 km-3 km
1360128	Grade I listed building	Church of St Mary	TF 01860 22454	Within 1 km
1360134	Grade I listed building	Church of St Andrew	TF 10672 25262	Within 1 km
1360309	Grade I listed building	Church of St John The Baptist	SK 93027 24155	1 km-3 km
1360327	Grade I listed building	Church of St Mary	SK 92805 21870	Within 1 km
1062712	Grade II* listed building	Heggy's Cottage	TF 10374 25219	Within 1 km
1062773	Grade II* listed building	Castle Farm House	SK 99248 22620	Within 1 km
1062846	Grade II* listed building	The Priory	SK 98881 18325	1 km-3 km
1073203	Grade II* listed building	Stocken Hall	SK 95719 18171	1 km-3 km
1164977	Grade II* listed building	Church of St Andrew	TF 11328 29276	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1166363	Grade II* listed building	Gardeners Cottage	TF 04724 22472	1 km-3 km
1308944	Grade II* listed building	4 Garden Ornaments on south terrace at Grimsthorpe Castle	TF 04482 22682	Within 1 km
1317485	Grade II* listed building	Dowsby Hall	TF 11052 29307	1 km-3 km
1360074	Grade II* listed building	3 Statues east of Grimsthorpe Castle	TF0450722796	Within 1 km
1360127	Grade II* listed building	Church of St Nicholas	SK 99324 22644	Within 1 km
1365619	Grade II* listed building	Chapel Cottage	SK 92289 24409	1 km-3 km
1062311	Grade II listed building	Barn at Glebe Farm	SK 91239 21584	Within 1 km
1062318	Grade II listed building	Gravestone, 5 paces south of Tower in churchyard of Church of St Mary	SK 92790 21868	Within 1 km
1062319	Grade II listed building	Pigeoncote at Manor House	SK 92833 21822	Within 1 km
1062324	Grade II listed building	14, Church Street	SK 92726 19506	Within 1 km
1062326	Grade II listed building	2, Church Street	SK 92750 19420	Within 1 km
1062687	Grade II listed building	Wall and Gate Lodges to The Grange	TF 09525 23995	Within 1 km
1062688	Grade II listed building	18, High Street	TF 09480 23986	Within 1 km
1062689	Grade II listed building	6, Station Road	TF 09835 23968	Within 1 km
1062690	Grade II listed building	War Memorial	TF0980324004	Within 1 km
1062708	Grade II listed building	3, Chapel Lane	TF 10543 25474	Within 1 km
1062709	Grade II listed building	Gateway and Garden Wall of Fir Tree House	TF 10507 25406	Within 1 km
1062710	Grade II listed building	Beam Ends House	TF 10608 25375	Within 1 km
1062711	Grade II listed building	3 Table Tombs to south of Church Porch	TF 10665 25234	Within 1 km
1062713	Grade II listed building	Haconby Hall	TF 10348 25182	Within 1 km
1062714	Grade II listed building	Threshing Barn at Haconby Hall	TF 10306 25181	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1062715	Grade II listed building	14, Hall Lane	TF 10348 25251	Within 1 km
1062716	Grade II listed building	Spa House	TF 08042 25167	Within 1 km
1062725	Grade II listed building	45 and 47, Haconby Lane	TF 09820 24306	Within 1 km
1062726	Grade II listed building	41, High Street	TF 09652 24033	Within 1 km
1062727	Grade II listed building	19, High Street	TF 09418 24005	Within 1 km
1062728	Grade II listed building	44, High Street	TF 09726 24004	Within 1 km
1062729	Grade II listed building	Milestone	TF 09171 26360	Within 1 km
1062768	Grade II listed building	The Spring Cottage	TF 10586 26929	Within 1 km
1062769	Grade II listed building	Milepost	TF 10080 26222	Scoping Boundary
1062770	Grade II listed building	Dunsby Hall	TF 10590 26757	Within 1 km
1062771	Grade II listed building	Mechanics Cottage and adjacent Cottage (opposite Old Stables)	TF 02573 26571	Within 1 km
1062774	Grade II listed building	Manor House	SK 98840 22731	Within 1 km
1062775	Grade II listed building	Rose Cottage	SK 98872 22735	Within 1 km
1062776	Grade II listed building	Manor Farm House	SK 99145 22929	Within 1 km
1062777	Grade II listed building	Swayfield House	SK 99128 22817	Within 1 km
1062778	Grade II listed building	Stable and Granary at No.10	SK 98792 22637	Within 1 km
1062779	Grade II listed building	11, Bourne Road	TF 01950 22647	Within 1 km
1062780	Grade II listed building	4 and 6, Bourne Road	TF 01969 22616	Within 1 km
1062781	Grade II listed building	Old School (behind Nos. 2-6 Bourne Road)	TF 01991 22582	Within 1 km
1062782	Grade II listed building	The Windmill Inn	TF 01883 22506	Within 1 km
1062783	Grade II listed building	25, High Street	TF 01696 22496	Within 1 km
1062784	Grade II listed building	14, High Street	TF 01820 22510	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1062785	Grade II listed building	24 and 28 High Street	TF 01734 22503	Within 1 km
1062786	Grade II listed building	42, High Street	TF 01602 22564	Within 1 km
1062787	Grade II listed building	Tower Farmhouse	TF 03160 23430	Within 1 km
1062788	Grade II listed building	11, Park Road	TF 01961 22457	Within 1 km
1062790	Grade II listed building	K6 Telephone Kiosk near junction with Croake Hill	TF 01763 22491	Within 1 km
1062793	Grade II listed building	Ivy Cottage and adjacent cottage	TF 04819 22962	Within 1 km
1062794	Grade II listed building	Rose Cottage	TF 04762 22959	Within 1 km
1062795	Grade II listed building	The Dairy	TF 04870 22965	Within 1 km
1062796	Grade II listed building	Old Post Office Cottage	TF 04799 22993	Within 1 km
1062797	Grade II listed building	Black Horse Inn	TF 04655 23047	Within 1 km
1062798	Grade II listed building	Right-hand Stable Block to Black Horse Inn	TF 04666 23028	Within 1 km
1062799	Grade II listed building	Home Farm House	TF 04223 24418	Within 1 km
1062800	Grade II listed building	Milestone by Home Farm	TF 04086 23844	Within 1 km
1062802	Grade II listed building	Bulby Hall	TF 05141 25682	Within 1 km
1062803	Grade II listed building	Grange Farmhouse	TF 05042 26061	Within 1 km
1062804	Grade II listed building	Barn and Stables at Grange Farm	TF 05039 26103	Within 1 km
1062805	Grade II listed building	6, 7 and 8, Corby Road	TF 02336 26761	Within 1 km
1062806	Grade II listed building	12-14, Corby Road	TF 02435 26761	Within 1 km
1062807	Grade II listed building	Griffin Inn	TF 02485 26782	Within 1 km
1062808	Grade II listed building	Gateway, Railings to Churchyard of Church of St Andrew	TF 02363 26741	Within 1 km
1062811	Grade II listed building	Walled Garden to Irnham Hall	TF 02193 26536	Within 1 km
1062812	Grade II listed building	The Kennels	TF 02094 25755	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1062813	Grade II listed building	The Mount	SK 99811 25478	Within 1 km
1062814	Grade II listed building	The Post Office	SK 99901 25024	Within 1 km
1062815	Grade II listed building	4, Market Place	SK 99923 25025	Within 1 km
1062816	Grade II listed building	7, Market Place	SK 99912 24973	Within 1 km
1062817	Grade II listed building	Fighting Cocks Inn	SK 99881 25002	Within 1 km
1062819	Grade II listed building	Round House Farm	SK 99479 24345	Scoping Boundary
1062824	Grade II listed building	Fountain Basin In North Court of Grimsthorpe Castle	TF 04432 22827	Within 1 km
1062825	Grade II listed building	Conference Centre and Restaurant	TF 04417 23071	Within 1 km
1062847	Grade II listed building	Milestone, on north side of B676 near Heath Farm	SK 98276 24327	Scoping Boundary
1062849	Grade II listed building	15 and 17, Church Street	TF 00104 24996	Within 1 km
1062850	Grade II listed building	2, Church Street	SK 99940 24971	Within 1 km
1062851	Grade II listed building	27, High Street	SK 99829 25107	Within 1 km
1062852	Grade II listed building	No.8 and Gate and Railings	SK 99847 25105	Within 1 km
1062853	Grade II listed building	Roman Catholic Church of Our Lady of Mount Carmel	SK 99823 25268	Within 1 km
1062870	Grade II listed building	Old Rectory	SK 97933 25943	Within 1 km
1062871	Grade II listed building	Barn on Street Frontage at Manor Farm	SK 97977 25652	Within 1 km
1146759	Grade II listed building	Pump at Home Farm	TF 04228 24426	Within 1 km
1146777	Grade II listed building	Stable Block at Wood Farm	TF 05141 26193	Within 1 km
1146779	Grade II listed building	Pump at Grange Farm	TF 05037 26054	Within 1 km
1146785	Grade II listed building	Former School and School House	TF 02240 26788	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1146820	Grade II listed building	Stables and Coach House to the Griffin Inn	TF 02478 26738	Within 1 km
1146836	Grade II listed building	16 and 17, Corby Road	TF 02498 26816	Within 1 km
1146902	Grade II listed building	Shuttlecock Lodge, Gateway and Store	TF 02562 25860	Within 1 km
1146903	Grade II listed building	Bridge on Parish Boundary	TF 02531 24432	Scoping Boundary
1146951	Grade II listed building	43, Corby Road	SK 99122 22903	Within 1 km
1146960	Grade II listed building	Stables at Manor Farm	SK 99143 22957	Within 1 km
1146969	Grade II listed building	10, Overgate Road	SK 98820 22637	Within 1 km
1146973	Grade II listed building	Horseshoe Villa	SK 98760 22626	Within 1 km
1146996	Grade II listed building	2, Bourne Road	TF 01954 22578	Within 1 km
1147011	Grade II listed building	1, Creeton Road	TF 01840 22491	Within 1 km
1147018	Grade II listed building	6, Creeton Road	TF 01799 22415	Within 1 km
1147041	Grade II listed building	Cross	TF 01814 22492	Within 1 km
1147081	Grade II listed building	27, High Street	TF 01680 22502	Within 1 km
1147091	Grade II listed building	10 and 12, High Street	TF 01834 22512	Within 1 km
1147105	Grade II listed building	30 High Street	TF 01711 22509	Within 1 km
1147109	Grade II listed building	Milestone Near Norwood Farm	TF 02774 23910	Scoping Boundary
1147114	Grade II listed building	Barn at Norwood Farm	TF 03123 23935	Within 1 km
1147118	Grade II listed building	Waggon Hovel and Stores at Tower Farm	TF 03133 23436	Within 1 km
1147122	Grade II listed building	5-9, Park Road	TF 01961 22472	Within 1 km
1147131	Grade II listed building	4 and 6, Park Road	TF 01939 22466	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1147928	Grade II listed building	Church of St Nicholas	SK 91273 21554	Within 1 km
1165101	Grade II listed building	Dunsby Grange Farmhouse	TF 10620 26948	Within 1 km
1165140	Grade II listed building	The Old Rectory	TF 10558 27030	Within 1 km
1165143	Grade II listed building	Cottage next, east to, Laburnam Cottage	TF 10545 26869	Within 1 km
1165148	Grade II listed building	The Cottage	TF1059826842	Within 1 km
1165150	Grade II listed building	Stable Block at Dunsby Hall	TF 10629 26758	Within 1 km
1165676	Grade II listed building	Barn at Manor Farm	SK 97946 25650	Within 1 km
1165869	Grade II listed building	Stables and Outbuildings at Haconby Hall	TF 10317 25205	Within 1 km
1165883	Grade II listed building	Heath Farmhouse	SK 98305 24150	Within 1 km
1165890	Grade II listed building	Farmbuilding to west of Number 3 Chapel Lane	TF 10506 25454	Within 1 km
1165985	Grade II listed building	Glebe Farmhouse and Barn	SK 99985 24960	Within 1 km
1165992	Grade II listed building	Glaziers Arms	SK 99833 25100	Within 1 km
1166014	Grade II listed building	2, High Street	SK 99882 25032	Within 1 km
1166023	Grade II listed building	Presbytery House at Roman Catholic Church of Our Lady of Mount Carmel	SK 99838 25261	Within 1 km
1166038	Grade II listed building	1, Irnham Road	SK 99770 25338	Within 1 km
1166042	Grade II listed building	12, Market Place	SK 99884 24990	Within 1 km
1166155	Grade II listed building	Grove House	TF 08483 23944	Within 1 km
1166159	Grade II listed building	The Farmhouse	TF 09833 24210	Within 1 km
1166183	Grade II listed building	35, High Street	TF 09606 24043	Within 1 km
1166201	Grade II listed building	13, High Street	TF 09390 23995	Within 1 km
1166232	Grade II listed building	The Grange	TF 09577 23972	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1166254	Grade II listed building	12, High Street	TF 09431 23974	Within 1 km
1166342	Grade II listed building	Stable Block	TF 04485 22864	Within 1 km
1166352	Grade II listed building	Stables to rear of Number 6 at Holme Farm	TF 09840 23941	Within 1 km
1166357	Grade II listed building	Laundry Cottages in Estate Yard	TF 04462 23075	Within 1 km
1168214	Grade II listed building	Gravestone, 5 paces south of Tower in Churchyard of Church of St Mary	SK 92791 21870	Within 1 km
1168232	Grade II listed building	The Old Black Bull	SK 93818 21269	Within 1 km
1168243	Grade II listed building	Manor House	SK 92813 21823	Within 1 km
1168255	Grade II listed building	2, Rectory Lane	SK 92735 21786	Within 1 km
1168360	Grade II listed building	The Angel Inn	SK 92695 19422	Within 1 km
1168394	Grade II listed building	Coverley House	SK 92736 19369	Within 1 km
1168403	Grade II listed building	Tanyard Farmhouse and Barn	SK 92840 19377	Within 1 km
1168419	Grade II listed building	39 and 41, High Street	SK 92628 19196	Within 1 km
1240799	Grade II listed building	K6 Telephone Kiosk	TF 04903 22943	Within 1 km
1241291	Grade II listed building	K6 Telephone Kiosk near junction with St John's Close	TF 09728 24024	Within 1 km
1241292	Grade II listed building	Baptist and Primitive Methodist Chapel	TF 10644 25439	Within 1 km
1308677	Grade II listed building	16, High Street	TF 01809 22508	Within 1 km
1308744	Grade II listed building	Old Stables	TF 02512 26539	Within 1 km
1308799	Grade II listed building	Manor House	TF 02307 26737	Within 1 km
1308804	Grade II listed building	Stables at Bulby Hall	TF 05133 25732	Within 1 km
1308812	Grade II listed building	Gates and Railings to Newton House	TF 02287 26769	Within 1 km
1308822	Grade II listed building	Post Office and General Stores	TF 02418 26761	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1308831	Grade II listed building	Left-hand Stable Block at Black Horse Inn	TF 04641 23032	Within 1 km
1308977	Grade II listed building	The Vicarage	TF 09789 23854	Within 1 km
1309025	Grade II listed building	43 and 45, High Street	TF 09664 24037	Within 1 km
1309046	Grade II listed building	Pump	SK 99901 24992	Within 1 km
1309127	Grade II listed building	The Rectory, Wall and Gateway	TF 00142 24974	Within 1 km
1309175	Grade II listed building	Milestone, west of Garage	SK 99784 24883	Within 1 km
1360057	Grade II listed building	Pigeoncote, Stables, Barn at Manor Farm	SK 97842 25716	Within 1 km
1360085	Grade II listed building	Milestone, north side of B676 by Birkholme House	SK 96981 23412	Within 1 km
1360086	Grade II listed building	Forge, Waggon Hovel and Loose Boxes at Heath Farm	SK 98258 24128	Within 1 km
1360087	Grade II listed building	Gates and Gate Piers to Churchyard of Church of St. John	TF0011024980	Within 1 km
1360088	Grade II listed building	The Old Smithy	TF 00020 24966	Within 1 km
1360089	Grade II listed building	The Wheelwrights	SK 99842 25122	Within 1 km
1360090	Grade II listed building	Harwoods, Builders	SK 99787 25375	Within 1 km
1360093	Grade II listed building	Norwood Farmhouse	TF 03098 23924	Within 1 km
1360094	Grade II listed building	1 and 3, Park Road	TF 01964 22508	Within 1 km
1360098	Grade II listed building	Heather Cottage	TF 04778 22965	Within 1 km
1360099	Grade II listed building	Grimsthorpe Lodge Cottage	TF 04577 23033	Within 1 km
1360100	Grade II listed building	Butlers Cottage	TF 04774 23005	Within 1 km
1360101	Grade II listed building	Wood Farmhouse	TF 05122 26176	Within 1 km
1360102	Grade II listed building	Newton House	TF 02298 26799	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1360103	Grade II listed building	9 and 10, Corby Road	TF 02368 26759	Within 1 km
1360104	Grade II listed building	Nos. 18 and 19 (Greystones)	TF 02502 26832	Within 1 km
1360105	Grade II listed building	Woodhouse Tomb 20 metres to the south of Church of St. Andrew	TF 02334 26698	Within 1 km
1360106	Grade II listed building	Gates, Gateway and Wall to Irnham Hall	TF 02397 26650	Within 1 km
1360107	Grade II listed building	Thimleby Almshouses	TF 02560 26513	Within 1 km
1360108	Grade II listed building	Barn at The Mount	SK 99785 25396	Within 1 km
1360109	Grade II listed building	No. 1, Market Place	SK 99889 25018	Within 1 km
1360110	Grade II listed building	5, Market Place	SK 99926 25013	Within 1 km
1360122	Grade II listed building	North End Farmhouse	TF 10638 27039	Within 1 km
1360123	Grade II listed building	Milepost	TF1091927475	Within 1 km
1360124	Grade II listed building	Woodbine Cottage	TF 10615 26859	Within 1 km
1360125	Grade II listed building	Hall Farmhouse	TF 02464 26706	Within 1 km
1360129	Grade II listed building	No. 29 and 31 and Workshop	TF 01654 22505	Within 1 km
1360130	Grade II listed building	18, High Street	TF 01796 22507	Within 1 km
1360132	Grade II listed building	Milestone	TF 09330 24873	Scoping Boundary
1360133	Grade II listed building	Fir Tree House	TF 10528 25387	Within 1 km
1360135	Grade II listed building	Manor House	TF 10731 25332	Within 1 km
1360141	Grade II listed building	Harby House	TF 08530 23988	Within 1 km
1360142	Grade II listed building	Wall with Piers in front of Number 35	TF 09608 24020	Within 1 km
1360143	Grade II listed building	Dunsby House	TF 10714 26650	Within 1 km
1360160	Grade II listed building	Manor Farmhouse	TF 09678 23982	Within 1 km
1360161	Grade II listed building	Engine House at Engine Farm	TF 15282 24614	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1360162	Grade II listed building	2 Barns at Church Farmhouse	TF 09870 23966	Within 1 km
1360328	Grade II listed building	Porters Lodge Farmhouse and Yard	SK 95839 19525	Within 1 km
1360329	Grade II listed building	Old Rectory	SK 92670 21850	Within 1 km
1360333	Grade II listed building	Barn at Coverley House	SK 92736 19351	Within 1 km
1360334	Grade II listed building	Priory Farmhouse	SK 92697 19506	Within 1 km
1360346	Grade II listed building	Milestone, 20 yards west of Colsterworth Pasture Lodge	SK 95490 23789	Within 1 km
1392727	Grade II listed building	K6 Telephone Kiosk	SK 98003 25621	Within 1 km
1453151	Grade II listed building	Corby Glen War Memorial	SK 99738 24890	Within 1 km
1000978	Grade I registered park and garden	Grimsthorpe Castle	TF 03333 18732	Within 1 km
	Conservation area	Corby Conservation Area	-	Scoping Boundary
	Conservation area	Dunsby Conservation Area		Within 1 km
	Conservation area	Irham Conservation Area		Within 1 km
	Conservation area	Burton-le-Coggles Conservation Area		Within 1 km
	Conservation area	South Witham Conservation Area		Within 1 km
	Conservation area	Swinstead Conservation Area		Within 1 km
	Conservation area	Morton Conservation Area		Within 1 km

Table 9A.3 Section 3 of the Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1008553	Scheduled monument	Stapleford deserted medieval village and ice house	SK 81305 18564	1 km-3 km
1009174	Scheduled monument	Preceptory at Old Dalby	SK 67582 23341	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1009285	Scheduled monument	Kirby Bellars Priory	SK 71738 18253	Scoping Boundary
1010304	Scheduled monument	Garden, moat and five fishponds at Kirby Bellars	SK 72173 17889; SK 72024 17419; SK 71882 17634	Scoping Boundary
1010306	Scheduled monument	North Marefield deserted medieval village and moated site	SK 74998 08923	Within 1 km
1010666	Scheduled monument	The Mount motte at Melton Mowbray	SK 74780 18841	1 km-3 km
1010705	Scheduled monument	Moated site at Ab Kettleby	SK 72495 22859	Scoping Boundary
1010928	Scheduled monument	Bescaby shrunken medieval village	SK 82184 26223	1 km-3 km
1011244	Scheduled monument	Croxton Abbey and associated remains	SK 82346 27643; SK 82073 27508; SK 82298 27419	1 km-3 km
1012441	Scheduled monument	Burrough Iron Age hill fort	SK 76056 11945	1 km-3 km
1012560	Scheduled monument	Moated site north-east of St Remigius' Church	SK 72272 27218	1 km-3 km
1014391	Scheduled monument	Moated grange at Spinney Farm, Melton Mowbray	SK 76178 21927	Scoping Boundary
1014510; 1075008	Scheduled monument; Grade II* listed building	Churchyard cross, All Saints' churchyard	SK 66153 19916	1 km-3 km
1014512	Scheduled monument	Anglo-Scandinavian cross, St Bartholomew's churchyard	SK 85666 24904	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1014513; 1075135	Scheduled monument; Grade II listed building	Stump Cross, approximately 700m south of Main Street, Frisby on the Wreake	SK 69694 17031	Scoping Boundary
1015209; 1307615	Scheduled monument; Grade II listed building	Village cross at the western end of Main Street	SK 69417 17667	Scoping Boundary
1016317	Scheduled monument	Sysonby Grange, 450m west of Sysonby Farm	SK 73799 21029	Within 1 km
1017492; 1188640	Scheduled monument; Grade II listed building	Churchyard cross in St Egelwin's churchyard	SK 76294 24111	Within 1 km
1017496; 1360928	Scheduled monument; Grade II listed building	Churchyard cross in All Saints' churchyard	SK 66909 17332	1 km-3 km
1017619	Scheduled monument	Moated site and fishpond at Wyfordby	SK 79292 18878	1 km-3 km
1017798; 1061252	Scheduled monument; Grade II listed building	Churchyard cross in St Peter's churchyard	SK 85152 18638	Within 1 km
1017999	Scheduled monument	Cross 160m north east of St Mary Magdalen Church	SK 81276 18327	1 km-3 km
1018834	Scheduled monument	Medieval settlement remains immediately north east and 210m south east of White House Farm	SK 73676 18051; SK 73820 17942	1 km-3 km
1471118	Scheduled monument	Wyfordby Wayside Cross	SK 79231 18929	1 km-3 km
1061267	Grade I listed building	Church of St Mary	SK 70678 11988	Scoping Boundary
1061273	Grade I listed building	Church of St Andrew	SK 84803 22186	Within 1 km
1061281	Grade I listed building	Church of St John The Baptist	SK 87907 23078	1 km-3 km
1075004	Grade I listed building	Church of All Saints	SK 66916 17348	1 km-3 km
1075128	Grade I listed building	Church of St Michael	SK 85814 17556	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1176947	Grade I listed building	Church of St Mary Magdalen	SK 81172 18203	1 km-3 km
1177844	Grade I listed building	Church of St Peter	SK 85157 18653	Within 1 km
1188847	Grade I listed building	Church of St Mary Magdelene	SK 80254 25049	1 km-3 km
1235286	Grade I listed building	Parish Church of St Mary	SK 75276 19030	1 km-3 km
1261717	Grade I listed building	Church of St Peter	SK 71789 18239	Scoping Boundary
1307264	Grade I listed building	Church of St Andrew	SK 72992 10094	Scoping Boundary
1307476	Grade I listed building	Church of St Mary	SK 83160 20931	Within 1 km
1307542	Grade I listed building	Church of St Luke	SK 68975 13051	Within 1 km
1360855	Grade I listed building	Church of St Mary	SK 80384 20122	1 km-3 km
1360859	Grade I listed building	Stapleford Hall with Adjoining Service Wings and Orangery	SK 81375 18060	1 km-3 km
1360866	Grade I listed building	Church of All Saints	SK 70812 18939	Scoping Boundary
1360878	Grade I listed building	Church of St Thomas of Canterbury	SK 69581 17801	Scoping Boundary
1360902	Grade I listed building	Church of St Denys	SK 77932 26379	1 km-3 km
1075018	Grade II* listed building	Church of St Egelwin The Martyr	SK 76297 24129	Within 1 km
1075032	Grade II* listed building	Church of St Peter	SK 70067 20967	Scoping Boundary
1075040	Grade II* listed building	Brooksby Hall	SK 67100 16072	1 km-3 km
1075052	Grade II* listed building	Manor Farmhouse	SK 72204 27112	1 km-3 km
1075059	Grade II* listed building	The Hall (Number 1, Town's Lane)	SK 77928 26430	1 km-3 km
1075069	Grade II* listed building	Church of St Mary	SK 69583 26214	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1075107	Grade II* listed building	Manor House	SK 72348 23089	Scoping Boundary
1075115	Grade II* listed building	Church of St Bartholomew	SK 72520 20975	Within 1 km
1075141	Grade II* listed building	Church of St Michael	SK 71242 23158	Scoping Boundary
1176759	Grade II* listed building	Church of St Peter	SK 81979 20088	Within 1 km
1178375	Grade II* listed building	The Old Hall	SK 70690 19030	Scoping Boundary
1187998	Grade II* listed building	Church of St John The Baptist	SK 67397 23540	1 km-3 km
1188025	Grade II* listed building	Church of St Remigius	SK 72218 27188	1 km-3 km
1188434	Grade II* listed building	Saxelby Manor House	SK 70091 20858	Scoping Boundary
1188442	Grade II* listed building	Church of St John The Baptist	SK 68551 21893	Scoping Boundary
1188473	Grade II* listed building	Church of St Michael	SK 67097 16004	1 km-3 km
1188547	Grade II* listed building	Church of All Saints	SK 67519 16536	1 km-3 km
1188553	Grade II* listed building	Church of All Saints	SK 66149 19930	1 km-3 km
1235477	Grade II* listed building	5, King Street	SK 75247 19202	1 km-3 km
1235657	Grade II* listed building	Ye Olde Pork Pie Shoppe	SK 75166 19213	1 km-3 km
1261728	Grade II* listed building	Stable Range at Stapleford Hall	SK 80976 18136	1 km-3 km
1265067	Grade II* listed building	Gregory and Hugh Tomb	SK 75232 19036	1 km-3 km
1265121	Grade II* listed building	Anne of Cleves House	SK 75315 18984	1 km-3 km
1265186	Grade II* listed building	Maison Dieu Bedehouses	SK 75324 19019	1 km-3 km
1294595	Grade II* listed building	Church of St Bartholomew	SK 85663 24918	1 km-3 km
1295102	Grade II* listed building	The Old Rectory	SK 70842 18914	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1295131	Grade II* listed building	Church of St Leonard	SK 73580 23638	Within 1 km
1295154	Grade II* listed building	Church of St James The Greater	SK 72425 22872	Scoping Boundary
1307233	Grade II* listed building	Wymondham Windmill	SK 85053 19253	Within 1 km
1307340	Grade II* listed building	Church of St Mary The Virgin	SK 75745 10789	1 km-3 km
1360830	Grade II* listed building	Dysart Mausoleum and Railing	SK 87942 23078	1 km-3 km
1360835	Grade II* listed building	Church of St Swithin	SK 74211 14429	1 km-3 km
1360948	Grade II* listed building	Church of St Mary The Virgin	SK 77046 20099	1 km-3 km
1360956	Grade II* listed building	Church of St Peter	SK 82287 24745	Within 1 km
1061248	Grade II listed building	The Old School	SK 73049 10030	Scoping Boundary
1061249	Grade II listed building	Church of St Michael	SK 73210 11714	Scoping Boundary
1061250	Grade II listed building	Lewin's Bridge	SK 72878 10215	Scoping Boundary
1061251	Grade II listed building	The Priory	SK 85060 18728	Within 1 km
1061253	Grade II listed building	Former Grammar School	SK 85150 18684	Within 1 km
1061263	Grade II listed building	Magpie Cottage	SK 69627 17896	Scoping Boundary
1061264	Grade II listed building	The Limes with adjoining Outbuildings, Boundary Wall and Pump	SK 69414 17644	Scoping Boundary
1061265	Grade II listed building	Gaddesby Windmill	SK 69760 12424	Scoping Boundary
1061266	Grade II listed building	Old Oak Cottage	SK 69938 11238	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1061268	Grade II listed building	Wayside Cross at crossroads 1 mile north east of Ashby Folville	SK 71486 13400	Scoping Boundary
1061269	Grade II listed building	Cream Cottage at west end of Street	SK 69679 11425	Within 1 km
1061270	Grade II listed building	Lawn Cottage	SK 68807 13103	Within 1 km
1061271	Grade II listed building	The Hermitage	SK 68754 13074	Within 1 km
1061272	Grade II listed building	Park House	SK 68835 13374	Within 1 km
1061274	Grade II listed building	Sundial 50 metres south east of Church of St Mary	SK 83200 20922	Scoping Boundary
1061283	Grade II listed building	Water Pump at stables 30 metres north west of The Tollemache Arms	SK 88027 22885	Within 1 km
1061284	Grade II listed building	Pair of Farmhouses, Front Railing and Boundary Wall	SK 88908 21794	Within 1 km
1061285	Grade II listed building	Old Manor Farmhouse	SK 88954 21843	Within 1 km
1061288	Grade II listed building	Old Manor Cottage	SK 74088 14325	Within 1 km
1061292	Grade II listed building	K6 Telephone Kiosk, 20 metres south east of Sycamore House and 50 metres south west of The Old Rectory	SK 82020 19992	Within 1 km
1074972	Grade II listed building	Milepost at SK 7852 2192	SK 78522 21934	Within 1 km
1074974	Grade II listed building	Chester House	SK 80052 24802	Within 1 km
1074978	Grade II listed building	Chest Tomb approximately 5 metres east of Porch of Church of St Egelwin The Martyr	SK 76306 24116	Within 1 km
1074979	Grade II listed building	The Old Manor Bakery	SK 76307 24090	Within 1 km
1074980	Grade II listed building	Manor Farm	SK 76267 24533	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1074981	Grade II listed building	Garden Boundary Wall to street, Gates and Gate Piers To Ravenholt (Number 8)	SK 76233 23967	Within 1 km
1074982	Grade II listed building	Approximately 7 metres of Street Boundary Wall to Garden of Nether Hall Farmhouse (Number 24)	SK 76251 23946	Within 1 km
1074983	Grade II listed building	Yew Tree House	SK 76153 24017	Within 1 km
1074985	Grade II listed building	The Old School	SK 82391 24792	Within 1 km
1074986	Grade II listed building	Church Farm	SK 82303 24769	Within 1 km
1074989	Grade II listed building	Hall Farmhouse	SK 82274 24559	Within 1 km
1074994	Grade II listed building	Opal Cottage	SK 82226 24635	Within 1 km
1075006	Grade II listed building	Orchard House	SK 67645 16652	Within 1 km
1075016	Grade II listed building	Chest Tomb approximately 4 metres south of south west angle of Church Of St Mary	SK 78209 24601	Within 1 km
1075017	Grade II listed building	Manor Farmhouse	SK 78326 24517	Within 1 km
1075019	Grade II listed building	Chest Tomb approximately 1 metre east of Porch of Church of St Egelwin The Martyr	SK 76299 24117	Within 1 km
1075033	Grade II listed building	Ambleside	SK 70004 20988	Scoping Boundary
1075034	Grade II listed building	Yew Tree Cottage and The Cottage (Numbers 17 and 19)	SK 68600 21908	Scoping Boundary
1075035	Grade II listed building	Base and Shaft of Cross immediately south of Church of St John The Baptist	SK 68547 21878	Scoping Boundary
1075036	Grade II listed building	Church Farmhouse	SK 68528 21857	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1075037	Grade II listed building	Church Farmhouse	SK 70009 21099	Scoping Boundary
1075038	Grade II listed building	Shoby Priory	SK 68304 20258	Scoping Boundary
1075039	Grade II listed building	Approx 2 metres of wall adjoining west corner of Shoby Priory	SK 68303 20260	Scoping Boundary
1075104	Grade II listed building	K6 Telephone Kiosk	SK 72549 23109	Scoping Boundary
1075105	Grade II listed building	K6 Telephone Kiosk	SK 73625 23645	Within 1 km
1075106	Grade II listed building	The Old Vicarage	SK 72520 23034	Scoping Boundary
1075108	Grade II listed building	The Willows	SK 72516 23072	Scoping Boundary
1075109	Grade II listed building	Well Head	SK 72489 23004	Scoping Boundary
1075110	Grade II listed building	Garden Boundary Wall with Gate Piers to north west of Beechcroft (Number 15)	SK 70812 18917	Scoping Boundary
1075111	Grade II listed building	Red Lodge	SK 69854 18839	Scoping Boundary
1075112	Grade II listed building	Coach House and Stable at The Old Hall	SK 70673 19038	Scoping Boundary
1075113	Grade II listed building	Village Cross	SK 70784 19006	Scoping Boundary
1075114	Grade II listed building	Potter Hill Farmhouse	SK 73100 22161	Within 1 km
1075126	Grade II listed building	Apple Tree Cottage	SK 85144 18787	Within 1 km
1075132	Grade II listed building	The Manor House	SK 85220 18828	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1075133	Grade II listed building	Wymondham House	SK 84988 18625	Within 1 km
1075136	Grade II listed building	Pigeoncote 150 metres north west of Park Farm	SK 71954 17564	Scoping Boundary
1075137	Grade II listed building	The Coach House	SK 69592 17736	Scoping Boundary
1075138	Grade II listed building	Remains of Cross 7 metres south east of Church of St Peter	SK 71784 18218	Scoping Boundary
1075139	Grade II listed building	Little Belvoir	SK 71228 24003	Scoping Boundary
1075140	Grade II listed building	The Old Inn	SK 73577 23598	Within 1 km
1075142	Grade II listed building	Barn approximately 55 metres east of Church Farmhouse	SK 71251 23190	Scoping Boundary
1075143	Grade II listed building	Stable Range with Implement Shed and Granary immediately north east of Church Farmhouse	SK 71233 23204	Scoping Boundary
1075144	Grade II listed building	Tower Cottage and attached Wall Tower House and attached Wall	SK 71089 23163	Scoping Boundary
1075145	Grade II listed building	York Cottage, Crecca and Cottage adjoining (Number 19, Hack Cottage)	SK 73582 23689	Within 1 km
1075146	Grade II listed building	Clifton Cottage (Number 14, Church Cottage)	SK 73574 23665	Within 1 km
1176666	Grade II listed building	Dale Farmhouse and adjoining Stables	SK 74057 14438	Within 1 km
1176776	Grade II listed building	Cottage 7 metres north east of The Old Rectory	SK 82027 20060	Within 1 km
1177025	Grade II listed building	Mill House	SK 69770 18003	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1177068	Grade II listed building	Barn 10 metres south east of Gables Farmhouse	SK 69432 17750	Scoping Boundary
1177123	Grade II listed building	The Cottage	SK 68684 13136	Within 1 km
1177170	Grade II listed building	The Bedehouses	SK 70675 11954	Scoping Boundary
1177272	Grade II listed building	Summerhouse, 70 metres north of Ashby Folville Manor	SK 70794 11934	Scoping Boundary
1177284	Grade II listed building	Gaddesby Hall	SK 68935 13111	Within 1 km
1177301	Grade II listed building	Harewell House	SK 70664 12191	Scoping Boundary
1177803	Grade II listed building	K6 Telephone Kiosk adjoining The Old School	SK 73046 10036	Scoping Boundary
1177877	Grade II listed building	Lychgate and Side Gate and Walls 70 metres north west of Church of St Peter	SK 85135 18681	Within 1 km
1177995	Grade II listed building	Japonica Cottage and adjoining Bakehouse	SK 85076 18825	Within 1 km
1178014	Grade II listed building	The Thatches	SK 84689 18685	Within 1 km
1178238	Grade II listed building	Headstone approximately 2 metres north east of Chancel of Church of St James The Greater	SK 72441 22879	Scoping Boundary
1178259	Grade II listed building	Chest Tomb approximately 2 metres west of Tower of Church of St Michael	SK7 12302 3160	Scoping Boundary
1178265	Grade II listed building	Church Farmhouse	SK 71203 23176	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1178267	Grade II listed building	Implement Shed and Stable Range with Dovecote immediately south east of Church Farmhouse	SK 71236 23172	Scoping Boundary
1178271	Grade II listed building	Hall Farmhouse	SK 73466 23725	Within 1 km
1178274	Grade II listed building	Manor Farmhouse	SK 73665 23644	Within 1 km
1178352	Grade II listed building	Chest Tomb approximately 2 metres south west of Porch of Church of All Saints	SK 70804 18928	Scoping Boundary
1178366	Grade II listed building	90 and 92, Main Street	SK 70943 19053	Scoping Boundary
1180089	Grade II listed building	The Blue Bell Public House	SK 70554 18959	Scoping Boundary
1180093	Grade II listed building	159, Main Street	SK 70510 18913	Scoping Boundary
1180096	Grade II listed building	Welby Grange	SK 72995 21171	Within 1 km
1180103	Grade II listed building	Grange Cottage	SK 72753 21019	Within 1 km
1188425	Grade II listed building	Row of 7 Headstones to south of Porch of Church of St Peter	SK 70068 20954	Scoping Boundary
1188438	Grade II listed building	Village Stocks	SK 68427 21853	Scoping Boundary
1188450	Grade II listed building	Pair of Headstones approximately 18 metres south of Tower of Church of St John The Baptist	SK 68536 21871	Scoping Boundary
1188459	Grade II listed building	Barn immediately west of Church Farmhouse (Number 16)	SK 68501 21858	Scoping Boundary
1188467	Grade II listed building	Shoby House	SK 68150 20168	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1188627	Grade II listed building	Chest Tomb approximately 3 metres south of South Porch of Church of St Mary	SK 78216 24596	Within 1 km
1188631	Grade II listed building	Spring Cottage	SK 78427 24521	Within 1 km
1188670	Grade II listed building	Stables 10 metres east of Church Farm (Number 22)	SK 82315 24785	Within 1 km
1188678	Grade II listed building	The Redlands	SK 82354 24755	Within 1 km
1188727	Grade II listed building	K6 Telephone Kiosk	SK 82292 24662	Within 1 km
1188917	Grade II listed building	Milepost at SK 7956 2311	SK 79546 23082	Within 1 km
1188922	Grade II listed building	Milepost at SK 77532 2060	SK 77543 20653	Within 1 km
1188981	Grade II listed building	The Old Mill	SK 80318 24882	Within 1 km
1235471	Grade II listed building	Eye Kettleby Hall	SK 73405 16737	Within 1 km
1253578	Grade II listed building	Park Farm	SK 72049 17436	Scoping Boundary
1253599	Grade II listed building	Dawsons' Farmhouse and adjoining Stables	SK 69486 17718	Scoping Boundary
1253606	Grade II listed building	Cottage adjoining Post Office to west	SK 69580 17713	Scoping Boundary
1261702	Grade II listed building	Glebe Cottage	SK 69526 17788	Scoping Boundary
1264940	Grade II listed building	Syonsby Lodge	SK 74518 20874	Within 1 km
1294601	Grade II listed building	Gorse Farmhouse	SK 82263 24648	Within 1 km
1294643	Grade II listed building	Manor House	SK 82419 24692	Within 1 km
1294647	Grade II listed building	Glenroy	SK 82330 24775	Within 1 km
1294741	Grade II listed building	Church Cottage	SK 68547 21863	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1294842	Grade II listed building	Clawson Lodge Farmhouse	SK 72696 25110	Within 1 km
1295072	Grade II listed building	Barn at The Old Hall	SK 70656 19046	Scoping Boundary
1295133	Grade II listed building	Ivy House Farmhouse	SK 73602 23606	Within 1 km
1307493	Grade II listed building	Stoneleigh	SK 69798 11376	Scoping Boundary
1307507	Grade II listed building	The Cheney Arms	SK 68724 12952	Within 1 km
1307549	Grade II listed building	Former Stables and Coach House Block at Ashby Folville Manor	SK 70752 11956	Scoping Boundary
1307604	Grade II listed building	Thatch Cottage	SK 69923 11263	Scoping Boundary
1307628	Grade II listed building	Zion House	SK 69421 17603	Scoping Boundary
1307741	Grade II listed building	Sycamore House	SK 82010 19974	Within 1 km
1342106	Grade II listed building	Navvies Cottages Number 2	SK 85076 19079	Within 1 km
1360824	Grade II listed building	Gables Farmhouse	SK 69414 17753	Scoping Boundary
1360825	Grade II listed building	Ivy Cottage	SK 68698 13113	Within 1 km
1360826	Grade II listed building	The Vicarage	SK 70657 11952	Scoping Boundary
1360827	Grade II listed building	Ashby Folville Manor	SK 70782 11895	Scoping Boundary
1360831	Grade II listed building	Church of Holy Trinity	SK 88959 21576	Within 1 km
1360832	Grade II listed building	The Blue Dog	SK 88862 21782	Within 1 km
1360837	Grade II listed building	The Old Rectory	SK 82017 20039	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1360843	Grade II listed building	Headstone approximately 2 metres east of Chancel of Church of St James The Greater	SK 72441 22875	Scoping Boundary
1360844	Grade II listed building	Yew Tree Farm Cottages	SK 73602 23642	Within 1 km
1360845	Grade II listed building	Chest Tomb approximately 3 metres south west of south west Angle of Church of St Michael	SK 71231 23149	Scoping Boundary
1360854	Grade II listed building	Manor Farmhouse and adjoining Stable	SK 73067 10160	Scoping Boundary
1360856	Grade II listed building	Saxby House	SK 82072 19956	Within 1 km
1360860	Grade II listed building	Mill Lock and Bridge	SK 69752 18059	Scoping Boundary
1360864	Grade II listed building	Home Farmhouse and attached Outbuilding	SK 72573 23104	Scoping Boundary
1360865	Grade II listed building	Number 21 and attached Outbuilding	SK 72400 23032	Scoping Boundary
1360867	Grade II listed building	The Elms at Asfordby Service Station	SK 70743 19020	Scoping Boundary
1360868	Grade II listed building	Pump approximately 30 metres south west of The Old Hall	SK 70668 18995	Scoping Boundary
1360869	Grade II listed building	Stone Outbuilding immediately east of Welby Grange	SK 73010 21174	Within 1 km
1360873	Grade II listed building	The Hunters Arms Hotel	SK 85292 18624	Within 1 km
1360879	Grade II listed building	Number 3 and adjoining Outbuilding	SK 69444 17686	Scoping Boundary
1360880	Grade II listed building	Manor House	SK 71748 18064	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1360906	Grade II listed building	The Old Rectory	SK 70151 20996	Scoping Boundary
1360907	Grade II listed building	Brook Farmhouse	SK 70063 20917	Scoping Boundary
1360908	Grade II listed building	The Red House Farmhouse	SK 68514 21894	Scoping Boundary
1360930	Grade II listed building	Laburnum Cottage Post Office Farmhouse	SK 67647 16631	Within 1 km
1360950	Grade II listed building	Milepost at SK 8002 2456	SK 80029 24557	Within 1 km
1360952	Grade II listed building	The Rectory	SK 76250 24140	Within 1 km
1360953	Grade II listed building	Ravenholt	SK 76237 23987	Within 1 km
1360954	Grade II listed building	Nether Hall Farmhouse	SK 76218 23939	Within 1 km
1360955	Grade II listed building	Stoneleigh	SK 76155 24044	Within 1 km
1360957	Grade II listed building	Home Farmhouse	SK 82399 24692	Within 1 km
1391384	Grade II listed building	Former Schoolroom	SK 70088 20934	Scoping Boundary
1391583	Grade II listed building	3, Spring Lane	SK 84960 18758	Within 1 km
1439337	Grade II listed building	Great Dalby War Memorial	SK 74224 14306	Within 1 km
1441835	Grade II listed building	Gaddesby War Memorial and associated Railings	SK 68943 13016	Within 1 km
1455454	Grade II listed building	Grimston War Memorial Cross	SK 68463 21861	Scoping Boundary
1464968	Grade II listed building	Scalford War Memorial	SK 76297 24112	Within 1 km
1467025	Grade II listed building	Ab Kettleby War Memorial	SK 72422 22886	Scoping Boundary
1467388	Grade II listed building	Sewstern War Memorial	SK 88524 21637	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1469633	Grade II listed building	Wymondham War Memorial	SK 85149 18638	Within 1 km
-	Conservation area	Holwell Conservation Area		Scoping Boundary
	Conservation area	Ab Kettleby Conservation Area		Scoping Boundary
	Conservation area	Wartnaby Conservation Area		Scoping Boundary
	Conservation area	Grimston Conservation Area		Scoping Boundary
	Conservation area	Saxelbye Conservation Area		Scoping Boundary
	Conservation area	Ashfordby Conservation Area		Scoping Boundary
	Conservation area	Frisby on the Wreake Conservation Area		Scoping Boundary
	Conservation area	Ashby Folville Conservation Area		Scoping Boundary
	Conservation area	Barsy Conservation Area		Scoping Boundary
	Conservation area	Buckminster Conservation Area		Within 1 km
	Conservation area	Sproxton Conservation Area		Within 1 km
	Conservation area	Stonesby Conservation Area		Within 1 km
	Conservation area	Waltham on the Wolds Conservation Area		Within 1 km
	Conservation area	Scalford Conservation Area		Within 1 km
	Conservation area	Rotherby Conservation Area		Within 1 km
	Conservation area	Gaddesby Conservation Area		Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
	Conservation area	Great Dalby Conservation Area		Within 1 km
	Conservation area	Freeby Conservation Area		Within 1 km
	Conservation area	Wymondham Conservation Area		Within 1 km

Table 9A.4 Section 4 of the Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1003607; 1361206	Scheduled monument: Grade II listed building	St Mary in Arden Church	SP 74077 87505	Scoping Boundary
1005045	Scheduled monument	Defended enclosure on Robin-a-tiptoe Hill	SK 77364 04349	Within 1 km
1005071	Scheduled monument	Mound 220yds (200m) north-north west of church	SK 74228 05847	Scoping Boundary
1005080	Scheduled monument	Bridge at Medbourne	SP 79918 93066	1 km-3 km
1005493	Scheduled monument	Castle mound	SK 79045 04728	1 km-3 km
1008555	Scheduled monument	Whatborough deserted medieval village	SK 77135 05955	1 km-3 km
1008556	Scheduled monument	Owston Augustinian Abbey with six fishponds, a gatehouse and boundary	SK 77412 08121; SK 77400 07837	1 km-3 km
1009197	Scheduled monument	Cold Newton shrunken medieval village and moated site	SK 71703 06567; SK 71769 06501; SK 71506 06331	Scoping Boundary
1009236	Scheduled monument	Moated site and deserted medieval village at Old Ingarsby	SK 68433 04756;	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
			SK 68547 05069; SK 68422 05188	
1010303	Scheduled monument	Sauvey Castle	SK 78715 05280	1 km-3 km
1010306	Scheduled monument	North Marefield deserted medieval village and moated site	SK 74998 08923	Scoping Boundary
1010487	Scheduled monument	Hallaton motte and bailey castle	SP 77979 96709	1 km-3 km
1010704	Scheduled monument	Moated site at Tilton	SK 74542 05198	Scoping Boundary
1012125	Scheduled monument	Baggrave Deserted Medieval Village	SK 69727 08691	Within 1 km
1012438	Scheduled monument	Lowesby deserted medieval village with three fishponds	SK 72431 07871	Scoping Boundary
1012566; 1360740	Scheduled monument; Grade II listed building	Old Hall moated site	SP 70861 87037	1 km-3 km
1014514; 1074889	Scheduled monument; Grade II listed building	Market cross on west side of Market Place	SK 71913 02822	Within 1 km
1014517; 1360999	Scheduled monument; Grade II listed building	Churchyard cross, St Peter's churchyard	SK 74348 05634	Scoping Boundary
1017208	Scheduled monument	Medieval manorial earthworks and gardens 140m south of Manor House	SP 70994 94416	1 km-3 km
1017489; 1061604	Scheduled monument; Grade II listed building	Churchyard cross in St Michael's churchyard	SP 70668 99287	1 km-3 km
1017493; 1061690	Scheduled monument; Grade II listed building	Churchyard cross in St John the Baptist's churchyard	SK 73261 00401	Scoping Boundary
1017498; 1061688	Scheduled monument; Grade II listed building	Butter Cross 150m east of the church	SP 78798 96509	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1017616	Scheduled monument	Medieval village earthworks, fishponds and mill leat at Stonton Wyville	SP 73562 94749; SP 73563 95299	Scoping Boundary
1018351	Scheduled monument	Manorial site west of St Gile's Church and medieval settlement west of Manor Farm	SP 80208 95455; SP 80522 95455	1 km-3 km
1018352	Scheduled monument	Roman villa 200m south of Station Cottages	SK 73678 06849	Scoping Boundary
1018577	Scheduled monument	Medieval village remains immediately south of the church	SP 69307 96959	1 km-3 km
1018579	Scheduled monument	Frisby medieval village remains	SK 70580 01547	1 km-3 km
1018837; 1188253	Scheduled monument; Grade II listed building	Chapel immediately north west of Manor House	SP 70851 94530	1 km-3 km
1483470	Scheduled monument	Iron Age and Roman ritual site, settlement, enclosures and linear ditched features, 500m east of Swallow Hill Farm	SP 78055 96111	1 km-3 km
1061277	Grade I listed building	Church of St Peter and St Paul	SP 74636 88876	Scoping Boundary
1074439	Grade I listed building	Church of St Dionysius	SP 73355 87285	Within 1 km
1074839	Grade I listed building	Church of St Peter	SK 74344 05655	Scoping Boundary
1074871	Grade I listed building	Church of St Andrew	SK 77446 07964	1 km-3 km
1295060	Grade I listed building	Quenby Hall	SK 70186 06393	1 km-3 km
1360624	Grade I listed building	Church of St Michael and All Angels	SP 78655 96531	1 km-3 km
1360652	Grade I listed building	Noseley Chapel	SP 73762 98492	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1361201	Grade I listed building	Old Grammar School	SP 73365 87259	Within 1 km
1061278	Grade II* listed building	The Old Rectory	SP 74614 88918	Scoping Boundary
1061497	Grade II* listed building	Church of St Peter	SP 72408 93414	Within 1 km
1061500	Grade II* listed building	The Old Rectory	SP 72346 93331	Within 1 km
1061581	Grade II* listed building	Church of St Nicholas	SP 71538 96001	Within 1 km
1061583	Grade II* listed building	Church of St Andrew	SP 71360 94542	1 km-3 km
1061607	Grade II* listed building	Bridge Dale Farmhouse	SP 79950 92793	1 km-3 km
1061611	Grade II* listed building	Manor House	SP 80257 93035	1 km-3 km
1061650	Grade II* listed building	Church of St Denis	SP 73546 95092	Scoping Boundary
1061695	Grade II* listed building	Church of St Michael	SP 76153 95305	Scoping Boundary
1074394	Grade II* listed building	Brooke House School	SP 73155 87596	Within 1 km
1074412	Grade II* listed building	The Three Swans Hotel	SP 73261 87356	Within 1 km
1074415	Grade II* listed building	Manor House Buildings	SP 73235 87403	Within 1 km
1074437	Grade II* listed building	The Old House	SP 74174 86518	Scoping Boundary
1074821	Grade II* listed building	Stableblock at Quenby Hall	SK 70181 06441	1 km-3 km
1074823	Grade II* listed building	Church of St John The Baptist	SK 69099 07277	1 km-3 km
1074875	Grade II* listed building	Skeffington Hall	SK 74183 02640	Scoping Boundary
1074886	Grade II* listed building	School	SK 72036 02553	Within 1 km
1086988	Grade II* listed building	Church of St John	SK 73254 00410	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1104871	Grade II* listed building	Church of St Andrew	SP 76541 92444	Scoping Boundary
1115490	Grade II* listed building	Church of St John The Baptist	SP 75024 98892	Scoping Boundary
1178021	Grade II* listed building	Loddington Hall	SK 79071 02252	1 km-3 km
1178050	Grade II* listed building	Lowesby Hall	SK 72178 07551	Scoping Boundary
1180165	Grade II* listed building	Carlton Curlieu Hall	SP 69556 97114	1 km-3 km
1180301	Grade II* listed building	Church of St Michael and All Angels	SP 70672 99301	1 km-3 km
1216631	Grade II* listed building	The Rectory	SP 74080 86980	Scoping Boundary
1287658	Grade II* listed building	Congregational Church	SP 73219 87513	Within 1 km
1294791	Grade II* listed building	Dale Farmhouse	SP 80093 92957	1 km-3 km
1294798	Grade II* listed building	Old Hall	SP 80090 93028	1 km-3 km
1294816	Grade II* listed building	Church of St Giles	SP 79964 93067	1 km-3 km
1295080	Grade II* listed building	Baggrave Hall	SK 69861 09024	Within 1 km
1295216	Grade II* listed building	Church of All Saints	SK 72372 07471	Scoping Boundary
1326673	Grade II* listed building	Church of St Thomas A Becket	SK 76178 01012	Scoping Boundary
1334372	Grade II* listed building	Church of All Saints	SP 78090 94508	Within 1 km
1360651	Grade II* listed building	Noseley Hall	SP 73832 98466	Scoping Boundary
1360657	Grade II* listed building	Church of All Saints	SK 78290 00452	1 km-3 km
1360984	Grade II* listed building	Church of St John The Baptist	SK 71997 02538	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1360995	Grade II* listed building	Church of St Thomas A Beckett	SK 74143 02632	Scoping Boundary
1361009	Grade II* listed building	Church of St Michael	SK 78624 02003	1 km-3 km
1361194	Grade II* listed building	43, High Street	SP 73219 87482	Within 1 km
1361231	Grade II* listed building	The Paddocks	SP 73157 87523	Within 1 km
1061276	Grade II listed building	7, Sutton Road	SP 74544 88954	Scoping Boundary
1061279	Grade II listed building	Oak Apple Cottage	SP 73978 88946	Within 1 km
1061280	Grade II listed building	17 and 19 Welham Road	SP 74571 89117	Scoping Boundary
1061438	Grade II listed building	Manor Cottage	SP 74014 92559	Within 1 km
1061499	Grade II listed building	Leadclune Court	SP 72428 93320	Within 1 km
1061544	Grade II listed building	Shangton House	SP 71527 94627	Within 1 km
1061582	Grade II listed building	Wall at Crox Farm	SP 71517 94611	Within 1 km
1061603	Grade II listed building	New Inn	SP 72301 99959	Within 1 km
1061648	Grade II listed building	Valley Farmhouse	SP 77790 94423	Within 1 km
1061649	Grade II listed building	Rosslyn House	SP 77824 94445	Within 1 km
1061651	Grade II listed building	Mill Farmhouse	SP 73549 94702	Scoping Boundary
1061652	Grade II listed building	Ravens Court	SK 76728 00363	Within 1 km
1061653	Grade II listed building	Hazelrigg Farmhouse	SK 75980 00780	Scoping Boundary
1061654	Grade II listed building	The Black Horse Public House	SK 76085 00913	Scoping Boundary
1061655	Grade II listed building	Walls to Manor House Garden	SP 76504 92454	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1061656	Grade II listed building	The Old Rectory	SP 76568 92429	Scoping Boundary
1061657	Grade II listed building	The Grange	SP 76605 92537	Scoping Boundary
1061658	Grade II listed building	Grange Farm Cotttage	SP 76612 92542	Scoping Boundary
1061689	Grade II listed building	Stables at Nosley Hall	SP 73824 98511	Scoping Boundary
1061691	Grade II listed building	Othorpe House	SP 77086 95544	Within 1 km
1061696	Grade II listed building	Pump	SP 75916 95034	Scoping Boundary
1061702	Grade II listed building	Ivy House Farmhouse	SP 75086 95878	Scoping Boundary
1061703	Grade II listed building	Moat Farmhouse	SP 74919 95869	Scoping Boundary
1061704	Grade II listed building	Fragment of Preaching Cross in Churchyard	SP 74871 95782	Scoping Boundary
1061705	Grade II listed building	The Old School	SP 75000 98819	Scoping Boundary
1061706	Grade II listed building	Home Farmhouse	SP 75014 98846	Scoping Boundary
1074389	Grade II listed building	4 and 5, Leicester Road	SP 73184 87529	Within 1 km
1074390	Grade II listed building	6, Leicester Road	SP 73179 87535	Within 1 km
1074391	Grade II listed building	7, Leicester Road	SP 73174 87543	Within 1 km
1074392	Grade II listed building	8, Leicester Road	SP 73170 87550	Within 1 km
1074393	Grade II listed building	9-11, Leicester Road	SP 73163 87558	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1074395	Grade II listed building	Wall, Gates and Piers at Number 12 Brooke House School	SP 73150 87568	Within 1 km
1074396	Grade II listed building	The Poplars	SP 72968 87817	Within 1 km
1074399	Grade II listed building	37, Main Street	SP 74286 88828	Scoping Boundary
1074400	Grade II listed building	The Roundhouse	SP 73948 88841	Within 1 km
1074401	Grade II listed building	29, Manor Road	SP 74337 88981	Scoping Boundary
1074402	Grade II listed building	The Grange	SP 74847 89025	Scoping Boundary
1074403	Grade II listed building	53, Northampton Road	SP 73607 86872	Within 1 km
1074404	Grade II listed building	Market Harborough Railway Station	SP 74154 87387	Scoping Boundary
1074405	Grade II listed building	91 and 93, St Marys Road	SP 73739 87250	Within 1 km
1074406	Grade II listed building	1914 to 1918 War Memorial	SP 73408 87174	Within 1 km
1074407	Grade II listed building	Lloyds Bank	SP 73379 87146	Within 1 km
1074408	Grade II listed building	2-8, The Square	SP 73451 87214	Within 1 km
1074409	Grade II listed building	40, The Square	SP 73370 87246	Within 1 km
1074410	Grade II listed building	The Old Forge	SP 74572 88692	Scoping Boundary
1074411	Grade II listed building	3 Cast Iron Posts on the pavement outside Number 14	SP 73305 87295	Within 1 km
1074414	Grade II listed building	23, High Street	SP 73262 87367	Within 1 km
1074416	Grade II listed building	The Retreat	SP 73196 87402	Within 1 km
1074417	Grade II listed building	32, High Street	SP 73223 87426	Within 1 km
1074418	Grade II listed building	35, High Street	SP 73210 87440	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1074419	Grade II listed building	36, High Street	SP 73206 87447	Within 1 km
1074420	Grade II listed building	Radcliffe House	SP 73182 87477	Within 1 km
1074421	Grade II listed building	4 Cast Iron Posts on pavement in front of Number 39	SP 73190 87482	Within 1 km
1074422	Grade II listed building	Harborough District Council Offices	SP 73215 87489	Within 1 km
1074423	Grade II listed building	45, High Street	SP 73238 87456	Within 1 km
1074424	Grade II listed building	48, High Street	SP 73252 87435	Within 1 km
1074425	Grade II listed building	52, High Street	SP 73273 87410	Within 1 km
1074426	Grade II listed building	The Town Hall	SP 73282 87375	Within 1 km
1074427	Grade II listed building	67, High Street	SP 73316 87315	Within 1 km
1074428	Grade II listed building	The Chestnuts	SP 73985 87093	Scoping Boundary
1074429	Grade II listed building	Cherry Tree Inn	SP 74022 87032	Scoping Boundary
1074430	Grade II listed building	7, Knights End Road	SP 74611 88729	Scoping Boundary
1074431	Grade II listed building	28, Knights End Road	SP 74551 88583	Scoping Boundary
1074432	Grade II listed building	Turnpike Cottage	SP 73785 88909	Within 1 km
1074436	Grade II listed building	1 and 3, Adam and Eve Street	SP 73453 87225	Within 1 km
1074438	Grade II listed building	King Edward VII Grammar School	SP 73203 88113	Within 1 km
1074440	Grade II listed building	4, Church Square	SP 73353 87313	Within 1 km
1074441	Grade II listed building	10, Church Square	SP 73395 87293	Within 1 km
1074442	Grade II listed building	Symingtons Factory	SP 73406 87284	Within 1 km
1074443	Grade II listed building	5, Church Street	SP 73326 87325	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1074444	Grade II listed building	Rear Range to Numbers 10 and 12	SP 73337 87342	Within 1 km
1074445	Grade II listed building	16 Church Street	SP 73330 87348	Within 1 km
1074446	Grade II listed building	7 And 9, Dingley Road	SP 74708 88855	Scoping Boundary
1074447	Grade II listed building	Cloisters, Presbytery and Sacristries attached to the Roman Catholic Church of Our Lady of Victories	SP 73112 87184	Within 1 km
1074448	Grade II listed building	Drinking Trough	SP 74568 88770	Scoping Boundary
1074449	Grade II listed building	5-7, The Green	SP 74515 88762	Scoping Boundary
1074450	Grade II listed building	18 and 19, The Green	SP 74479 88797	Scoping Boundary
1074451	Grade II listed building	30, The Green	SP 74542 88818	Scoping Boundary
1074452	Grade II listed building	32 and 33, The Green	SP 74540 88830	Scoping Boundary
1074453	Grade II listed building	White Angel	SP 74588 88783	Scoping Boundary
1074454	Grade II listed building	45, The Green	SP 74607 88759	Scoping Boundary
1074455	Grade II listed building	1, High Street	SP 73353 87208	Within 1 km
1074456	Grade II listed building	The Talbot Public House	SP 73318 87259	Within 1 km
1074833	Grade II listed building	Rear Gate and Wall to Skeffington Hall	SK 74141 02598	Scoping Boundary
1074834	Grade II listed building	Stables to rear of Skeffington Hall	SK 74118 02668	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1074835	Grade II listed building	Corner Cottage and Garden Wall Little Vale and Garden Wall	SK 74414 02598	Scoping Boundary
1074836	Grade II listed building	Rose Cottage	SK 74037 02613	Scoping Boundary
1074837	Grade II listed building	Outbuilding to north of Park Cottage	SK 73942 01117	Scoping Boundary
1074838	Grade II listed building	Mile Post	SK 75243 02171	Scoping Boundary
1074840	Grade II listed building	Redhill Farmhouse and Garden Wall	SK 74383 05502	Scoping Boundary
1074841	Grade II listed building	Brookside House	SK 74358 05404	Scoping Boundary
1074842	Grade II listed building	Manor Farmhouse	SK 74313 05511	Scoping Boundary
1074843	Grade II listed building	Jasmine Cottage Kildare Cottage	SK 74389 05700	Scoping Boundary
1074855	Grade II listed building	16, Uppingham Road	SK 71996 02805	Within 1 km
1074856	Grade II listed building	Ivy Cottage	SK 71728 06464	Scoping Boundary
1074864	Grade II listed building	Outbuilding at Lowesby Hall	SK 72208 07559	Scoping Boundary
1074865	Grade II listed building	Lowesby Hall: Steps and Retaining Wall	SK 72162 07508	Scoping Boundary
1074866	Grade II listed building	Lowesby Hall: Summerhouse	SK 72226 07495	Scoping Boundary
1074867	Grade II listed building	Lowesby Hall: Cottages	SK 72253 07543	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1074868	Grade II listed building	School	SK 72404 07511	Scoping Boundary
1074869	Grade II listed building	Manor House Farmhouse	SK 74566 07971	Scoping Boundary
1074870	Grade II listed building	Beaumanor Farmhouse	SK 74601 07944	Scoping Boundary
1074876	Grade II listed building	Skeffington Hall Urn in front of House	SK 74191 02648	Scoping Boundary
1074877	Grade II listed building	1, Church Street	SK 71911 02778	Within 1 km
1074878	Grade II listed building	Pear Tree Cottage	SK 71911 02769	Within 1 km
1074879	Grade II listed building	25, Church Street	SK 72001 02576	Within 1 km
1074880	Grade II listed building	Boundary Wall to Number 27	SK 72023 02574	Within 1 km
1074881	Grade II listed building	Mowbray House	SK 71883 02738	Within 1 km
1074882	Grade II listed building	Queen's Head Public House	SK 71894 02707	Within 1 km
1074883	Grade II listed building	36, Church Street	SK 71940 02631	Within 1 km
1074884	Grade II listed building	Ivy House	SK 71949 02571	Within 1 km
1074885	Grade II listed building	Church Cottage	SK 71973 02566	Within 1 km
1074887	Grade II listed building	8, Leicester Road	SK 71899 02858	Within 1 km
1074888	Grade II listed building	Doone Cottage	SK 71950 02903	Within 1 km
1074890	Grade II listed building	5, Market Place	SK 71882 02815	Within 1 km
1074891	Grade II listed building	4, Market Place	SK 71942 02792	Within 1 km
1074893	Grade II listed building	Potters Cottage	SK 71951 02778	Within 1 km
1074894	Grade II listed building	Numbers 6 and 8 and Cobblers Cottage	SK 71961 02787	Within 1 km
1078230	Grade II listed building	K6 Kiosk	SK 72051 02532	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1096847	Grade II listed building	Welham Cottage	SP 77756 94432	Within 1 km
1104844	Grade II listed building	Welham Lodge	SP 75339 93601	Scoping Boundary
1104895	Grade II listed building	The Meet	SP 73563 95213	Scoping Boundary
1104912	Grade II listed building	West Lodge	SK 76385 00430	Scoping Boundary
1104927	Grade II listed building	Manor House	SP 73520 95060	Scoping Boundary
1115521	Grade II listed building	Gate Piers and Gates to Home Farm	SP 74985 98841	Scoping Boundary
1115544	Grade II listed building	The Hollies	SP 74953 98778	Scoping Boundary
1115585	Grade II listed building	Hill Farmhouse	SP 74915 98803	Scoping Boundary
1115603	Grade II listed building	Cottages on north side of Main Street	SP 74951 95850	Scoping Boundary
1115628	Grade II listed building	Glooston Lodge	SP 75046 96844	Scoping Boundary
1177868	Grade II listed building	32, Church Street	SK 71932 02654	Within 1 km
1177874	Grade II listed building	38, Church Street	SK 71941 02616	Within 1 km
1177880	Grade II listed building	42, Church Street	SK 71954 02583	Within 1 km
1177883	Grade II listed building	Pump in garden of Number 44	SK 71956 02573	Within 1 km
1177886	Grade II listed building	The Vicarage and Boundary Wall	SK 72039 02526	Within 1 km
1177894	Grade II listed building	Boundary Wall to Churchyard	SK 71992 02505	Within 1 km
1177918	Grade II listed building	St Anne's	SK 71826 02879	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1177922	Grade II listed building	2, Long Lane	SK 71943 02840	Within 1 km
1177941	Grade II listed building	War Memorial	SK 71911 02825	Within 1 km
1177945	Grade II listed building	7, Market Place	SK 71888 02824	Within 1 km
1177951	Grade II listed building	Barn At Kates Hill Farm	SK 72064 02540	Within 1 km
1177954	Grade II listed building	1, Uppingham Road	SK 71962 02816	Within 1 km
1178087	Grade II listed building	Lowesby Hall: Retaining Wall to Rose Garden	SK 72207 07506	Scoping Boundary
1178094	Grade II listed building	Lowesby Hall: Summer House	SK 72202 07446	Scoping Boundary
1178134	Grade II listed building	The Cedars	SK 72453 07543	Scoping Boundary
1180084	Grade II listed building	Stable Yard Cottages	SK 74414 02575	Scoping Boundary
1180091	Grade II listed building	White Lodge	SK 74400 02548	Scoping Boundary
1180094	Grade II listed building	Park Cottage	SK 73943 01107	Scoping Boundary
1180107	Grade II listed building	The Old Village Store	SK 74375 05390	Scoping Boundary
1180130	Grade II listed building	Outbuilding at Robin A Tiptoe Farmhouse	SK 77150 03953	Within 1 km
1180162	Grade II listed building	Old School	SK 74368 05620	Scoping Boundary
1180174	Grade II listed building	Yew Tree Cottage	SK 74349 05433	Scoping Boundary
1180213	Grade II listed building	Animal Feed Mill at Halstead House	SK 75358 05890	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1188193	Grade II listed building	Gateway to the rear of Shangton Hall Farmhouse	SP 71549 96132	Within 1 km
1189660	Grade II listed building	Chapel of St Leonard	SP 74019 92436	Within 1 km
1189679	Grade II listed building	The Hollies	SP 72236 93203	Within 1 km
1216006	Grade II listed building	15 and 16, Church Square	SP 73381 87251	Within 1 km
1216041	Grade II listed building	Rear Range to Number 8	SP 73348 87333	Within 1 km
1216059	Grade II listed building	26 and 28, Church Street	SP 73299 87378	Within 1 km
1216073	Grade II listed building	School	SP 74676 88860	Scoping Boundary
1216086	Grade II listed building	The Vicarage	SP 74734 88848	Scoping Boundary
1216098	Grade II listed building	John Bull Malting, premises of H Church and Son, Agricultural Merchants	SP 73125 87248	Within 1 km
1216125	Grade II listed building	The Shoulder of Mutton Public House	SP 74526 88757	Scoping Boundary
1216131	Grade II listed building	16 and 17, The Green	SP 74482 88788	Scoping Boundary
1216133	Grade II listed building	20, The Green	SP 74478 88807	Scoping Boundary
1216143	Grade II listed building	31, The Green	SP 74542 88823	Scoping Boundary
1216151	Grade II listed building	36, The Green	SP 74538 88855	Scoping Boundary
1216158	Grade II listed building	44, The Green	SP 74612 88764	Scoping Boundary
1216175	Grade II listed building	6, High Street	SP 73333 87242	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1216307	Grade II listed building	The Angel Hotel	SP 73198 87459	Within 1 km
1216310	Grade II listed building	40 and 40a, High Street	SP 73170 87495	Within 1 km
1216357	Grade II listed building	44, High Street	SP 73231 87467	Within 1 km
1216378	Grade II listed building	49, High Street	SP 73257 87431	Within 1 km
1216381	Grade II listed building	51, High Street	SP 73267 87416	Within 1 km
1216410	Grade II listed building	57, High Street	SP 73287 87392	Within 1 km
1216425	Grade II listed building	61 and 62, High Street	SP 73299 87348	Within 1 km
1216426	Grade II listed building	Horse Shoe House	SP 74523 88583	Scoping Boundary
1216488	Grade II listed building	1, Knights End Road	SP 74604 88742	Scoping Boundary
1216546	Grade II listed building	1, Main Street	SP 74454 88825	Scoping Boundary
1216613	Grade II listed building	Tudor House	SP 74338 88939	Scoping Boundary
1216616	Grade II listed building	41-45, Northampton Road	SP 73574 86958	Within 1 km
1227738	Grade II listed building	The Lodge	SP 73793 87280	Within 1 km
1227904	Grade II listed building	Welland House	SP 73421 87145	Within 1 km
1227926	Grade II listed building	10, The Square	SP 73437 87210	Within 1 km
1227975	Grade II listed building	Boundary Walls, Gate Piers and Monuments at yhe Churchyard of The Church of St Peter and St Paul	SP 74598 88854	Scoping Boundary
1227987	Grade II listed building	Nether Green Stables	SP 74572 89036	Scoping Boundary
1227995	Grade II listed building	The Old Hall	SP 74097 88915	Within 1 km
1228003	Grade II listed building	89, Main Street	SP 73813 88836	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1228027	Grade II listed building	K6 Telephone Kiosk, The Green	SP 74469 88823	Scoping Boundary
1228030	Grade II listed building	Original north west building at Harborough Rubber Works	SP 73927 87258	Scoping Boundary
1228034	Grade II listed building	The Old Fire Station	SP 73175 87344	Within 1 km
1228036	Grade II listed building	12 and 14, Abbey Street	SP 73163 87336	Within 1 km
1228047	Grade II listed building	The Settling Rooms	SP 73708 87075	Within 1 km
1251265	Grade II listed building	Gazebo 100 metres south-south west of Baggrave Hall	SK 69779 08957	Within 1 km
1252065	Grade II listed building	K6 Kiosk	SP 74954 95836	Scoping Boundary
1262480	Grade II listed building	K6 Telephone Kiosk, Main Street	SP 77705 94472	Scoping Boundary
1262484	Grade II listed building	K6 Telephone Kiosk, Main Street	SP 76555 92487	Scoping Boundary
1287421	Grade II listed building	5, Sutton Road	SP 74545 88933	Scoping Boundary
1287432	Grade II listed building	9, Sutton Road	SP 74547 88968	Scoping Boundary
1287454	Grade II listed building	74, Station Road	SP 74492 88617	Scoping Boundary
1287534	Grade II listed building	The Peacock Hotel	SP 73481 87200	Within 1 km
1287546	Grade II listed building	War Memorial 1914 to 1918 War in Churchyard of Church of St Nicholas	SP 74022 86962	Scoping Boundary
1287561	Grade II listed building	The Old Bake House	SP 74124 88837	Within 1 km
1287597	Grade II listed building	27 and 29, Knights End Road	SP 74625 88663	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1287600	Grade II listed building	30, Knights End Road	SP 74545 88570	Scoping Boundary
1287623	Grade II listed building	17 and 19, Kettering Road	SP 74006 87070	Scoping Boundary
1294167	Grade II listed building	Manor Farmhouse	SP 74008 92576	Within 1 km
1294835	Grade II listed building	Quenby Lodge Farmhouse	SK 70773 06718	Within 1 km
1294885	Grade II listed building	Manor House	SP 71491 96095	Within 1 km
1295029	Grade II listed building	Coach House at Rodhill Farm	SK 74383 05529	Scoping Boundary
1295036	Grade II listed building	The Rose and Crown Public House	SK 74300 05658	Scoping Boundary
1295043	Grade II listed building	Wall at Manor Farm	SK 74316 05409	Scoping Boundary
1295048	Grade II listed building	Halstead Grange	SK 74906 05708	Scoping Boundary
1295054	Grade II listed building	Carr Bridge	SK 70695 08577	Within 1 km
1295079	Grade II listed building	Gate Piers to Skeffington Hall	SK 74241 02791	Scoping Boundary
1295112	Grade II listed building	Wall	SK 74005 02642	Scoping Boundary
1295166	Grade II listed building	Skeffington Hall Wall to Churchyard	SK 74167 02646	Scoping Boundary
1295197	Grade II listed building	Bakehouse at Manor House Farm	SK 74524 07958	Scoping Boundary
1295242	Grade II listed building	Stables at Lowesby Hall	SK 72228 07555	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1295244	Grade II listed building	Lowesby Hall: Terrace Wall, Piers and Steps	SK 72173 07541	Scoping Boundary
1295299	Grade II listed building	13, Long Lane	SK 71959 02941	Within 1 km
1320341	Grade II listed building	Church of St John The Baptist	SP 74873 95790	Scoping Boundary
1326662	Grade II listed building	Manor House and Barns	SP 76423 92400	Scoping Boundary
1326670	Grade II listed building	Keythorpe Court and Courtyard Wall	SK 76768 00274	Within 1 km
1332949	Grade II listed building	Garden Wall and Gate	SP 76579 92518	Scoping Boundary
1332961	Grade II listed building	Vane Farmhouse	SK 75999 00743	Scoping Boundary
1334369	Grade II listed building	Barns at Valley Farm	SP 77776 94413	Within 1 km
1334407	Grade II listed building	Matthew's Cottage	SP 77618 94484	Scoping Boundary
1335876	Grade II listed building	Terrace Walls and Urns at Noselely Hall	SP 73841 98443	Scoping Boundary
1335912	Grade II listed building	Gardener's Cottage	SK 73413 00422	Scoping Boundary
1360653	Grade II listed building	Ivy House	SP 77656 94477	Scoping Boundary
1360655	Grade II listed building	The Old Rectory	SP 76203 95302	Scoping Boundary
1360656	Grade II listed building	The Old School and Master's Cottage	SP 76017 95076	Scoping Boundary
1360658	Grade II listed building	Cottage Adjoining Hill Farmhouse	SP 74912 98793	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1360659	Grade II listed building	Pine House	SP 75044 98789	Scoping Boundary
1360672	Grade II listed building	Mill Farmhouse and Barn	SP 77970 94464	Within 1 km
1360673	Grade II listed building	Stone Cottage	SP 73663 95072	Scoping Boundary
1360674	Grade II listed building	Keythorpe Hall	SK 76787 00261	Within 1 km
1360675	Grade II listed building	Orchard House	SK 75994 00828	Scoping Boundary
1360714	Grade II listed building	Shangton Hall Farmhouse	SP 71551 96168	Within 1 km
1360736	Grade II listed building	Fernie House	SP 71548 94582	Within 1 km
1360750	Grade II listed building	The Bell Inn	SP 72695 92675	Within 1 km
1360751	Grade II listed building	The Former Hanbury Schools with attached School Houses	SP 72504 93382	Within 1 km
1360752	Grade II listed building	Boundary Wall to The Old Rectory	SP 72364 93390	Within 1 km
1360765	Grade II listed building	Home Farm	SP 72261 93271	Within 1 km
1360828	Grade II listed building	Barn at The Old Rectory Gate Piers and south boundary wall of Paddock south west of The Old Rectory south boundary wall of Paddock south west of The Old Rectory	SP 74591 88895	Scoping Boundary
1360829	Grade II listed building	Upper Green Farmhouse	SP 74006 89027	Within 1 km
1360977	Grade II listed building	Skeffington Hall Well Head in Rear of Courtyard	SK 74171 02645	Scoping Boundary
1360978	Grade II listed building	Willow Cottage	SK 72075 02668	Within 1 km
1360979	Grade II listed building	23, Church Street	SK 71997 02594	Within 1 km
1360980	Grade II listed building	27, Church Street	SK 72019 02588	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1360981	Grade II listed building	The Gables	SK 71893 02749	Within 1 km
1360982	Grade II listed building	30, Church Street	SK 71931 02666	Within 1 km
1360983	Grade II listed building	Barn to rear of Number 38	SK 71916 02608	Within 1 km
1360985	Grade II listed building	5, Leicester Road	SK 71848 02867	Within 1 km
1360986	Grade II listed building	Number 8 and Boundary Wall	SK 71979 02938	Within 1 km
1360996	Grade II listed building	The Old Cottage Farmhouse	SK 74429 02500	Scoping Boundary
1360997	Grade II listed building	Skeffington Vale	SK 74007 01203	Scoping Boundary
1360998	Grade II listed building	Robin A Tiptoe Farmhouse	SK 77165 03958	Within 1 km
1361000	Grade II listed building	The Old Rectory and Boundary Wall	SK 74388 05451	Scoping Boundary
1361001	Grade II listed building	Outbuilding at Manor Farm	SK 74311 05449	Scoping Boundary
1361002	Grade II listed building	Halstead House and Outbuilding	SK 75356 05831	Scoping Boundary
1361005	Grade II listed building	The Maltings	SK 71986 02795	Within 1 km
1361006	Grade II listed building	Manor House and Boundary Wall	SK 71773 06674	Scoping Boundary
1361012	Grade II listed building	Lowesby Hall: Ha Ha Wall	SK 72140 07586	Scoping Boundary
1361013	Grade II listed building	Lowesby Hall: Wall to Kitchen Garden	SK 72284 07430	Scoping Boundary
1361029	Grade II listed building	Stableblock at Baggrave Hall	SK 69934 09010	Within 1 km
1361034	Grade II listed building	Ha Ha Wall	SK 74202 02555	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1361195	Grade II listed building	50, High Street	SP 73262 87424	Within 1 km
1361196	Grade II listed building	53-56, High Street	SP 73282 87399	Within 1 km
1361197	Grade II listed building	68, High Street	SP 73319 87311	Within 1 km
1361198	Grade II listed building	Manor House	SP 73949 87029	Scoping Boundary
1361199	Grade II listed building	5, Knights End Road	SP 74610 88734	Scoping Boundary
1361200	Grade II listed building	Gate Piers, Garden Wall of The Old House	SP 74165 86504	Scoping Boundary
1361202	Grade II listed building	8, Church Square	SP 73393 87299	Within 1 km
1361203	Grade II listed building	7-11, Church Street	SP 73320 87335	Within 1 km
1361204	Grade II listed building	Roman Catholic Church of Our Lady of Victories	SP 73120 87164	Within 1 km
1361205	Grade II listed building	11, Dingley Road	SP 74725 88855	Scoping Boundary
1361207	Grade II listed building	11-15, The Green	SP 74486 88768	Scoping Boundary
1361208	Grade II listed building	26, The Green	SP 74518 88813	Scoping Boundary
1361209	Grade II listed building	Wall and Gate Piers to north of Village Hall	SP 74596 88836	Scoping Boundary
1361218	Grade II listed building	15 and 16, Leicester Road	SP 72996 87756	Within 1 km
1361219	Grade II listed building	11, Main Street	SP 74396 88828	Scoping Boundary
1361220	Grade II listed building	Gazebo at Number 75, Upper House	SP 74016 88844	Within 1 km
1361221	Grade II listed building	5, Manor Road	SP 74334 88886	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1361222	Grade II listed building	51, Northampton Road	SP 73585 86926	Within 1 km
1361223	Grade II listed building	Church of St Nicholas	SP 74031 86948	Scoping Boundary
1361224	Grade II listed building	Little Bowden Post Office and Stores	SP 74025 86753	Scoping Boundary
1361225	Grade II listed building	5, The Square	SP 73462 87182	Within 1 km
1361226	Grade II listed building	12, The Square	SP 73430 87213	Within 1 km
1361227	Grade II listed building	30, 31 and 31a, High Street	SP 73225 87418	Within 1 km
1361228	Grade II listed building	33 and 34, High Street	SP 73216 87435	Within 1 km
1361230	Grade II listed building	3 Cast Iron Posts on pavement outside Number 36	SP 73211 87452	Within 1 km
1391418	Grade II listed building	K6 Telephone Kiosk	SK 72490 07521	Scoping Boundary
1393218	Grade II listed building	War Memorial Portico at The Cottage Hospital	SP 72981 87131	Within 1 km
1437759	Grade II listed building	Church Langton War Memorial	SP 72299 93288	Within 1 km
1439315	Grade II listed building	Tilton on The Hill War Memorial	SK 74342 05627	Scoping Boundary
1464499	Grade II listed building	Thorpe Langton War Memorial	SP 74065 92440	Scoping Boundary
1464666	Grade II listed building	Tugby and Keythorpe War Memorial	SK 76193 00985	Scoping Boundary
1475797	Grade II listed building	Market Harborough Ambulance Station	SP 73204 87336	Within 1 km
1000482	Grade II registered park and garden	Baggrave Hall	SK 69731 08857	1km
1000961	Grade II registered park and garden	Langton Hall	SP 71655 92637	1km

NHLE No.	Designation and Grade	Name	NGR	Location
1000962	Grade II registered park and garden	Lowesby Hall	SK 72109 07772	Scoping Boundary
1000965	Grade II registered park and garden	Quenby Hall	SK 70178 06272	1km
-	Conservation area	Market Harborough	-	Within 1 km
-	Conservation area	Billesdon	-	Within 1 km
-	Conservation area	Church Langton	-	Within 1 km
-	Conservation area	East Langton	-	Within 1 km
-	Conservation area	Great Bowden	-	Scoping Boundary
-	Conservation area	Lowesby	-	Scoping Boundary
-	Conservation area	Rolleston including New Inn	-	Scoping Boundary
-	Conservation area	Skeffington	-	Scoping Boundary
-	Conservation area	Slawston	-	Scoping Boundary
-	Conservation area	Tilton on the Hill	-	Scoping Boundary
-	Conservation area	Tugby	-	Scoping Boundary
-	Conservation area	Tur Langton	-	Within 1 km
-	Conservation area	Grand Union Canal	-	Within 1 km

Table 9A.5 Section 5 of the Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1002902	Scheduled monument	Roman villa	SP 90088 64944	1 km-3 km
1003875; 1001034	Scheduled monument; Grade II* registered park and garden	Site of manor house; Harrington	SP 77315 80295; SP 77298 80361	Scoping Boundary
1003876	Scheduled monument	Site revealed by aerial photography north of Easton Lodge	SP 89537 57105	1 km-3 km
1003891; 1289122	Scheduled monument; Grade II listed building	Braybrooke Bridge	SP 76519 84534	Scoping Boundary
1003895; 1293485	Scheduled monument; Grade I listed building	Tithe Barn	SP 89125 67743	1 km-3 km
1003899	Scheduled monument	Medieval village of Faxton	SP 78584 75327	Within 1 km
1006615	Scheduled monument	Manorial earthworks	SP 90505 62344	1 km-3 km
1006636	Scheduled monument	Romano-British settlement and pottery kilns west of Ecton North Lodge	SP 82221 65259	1 km-3 km
1006637	Scheduled monument	Roman villa 200m west of Doddington Mill	SP 87287 63572	Scoping Boundary
1009510	Scheduled monument	Earls Barton motte castle	SP 85161 63842	Scoping Boundary
1009513	Scheduled monument	Place House moat and fishpond	SP 84788 60612	Scoping Boundary
1011036	Scheduled monument	Walgrave moated site.	SP 80209 72336	1 km-3 km
1012162	Scheduled monument	Stoke Albany moated site and fishponds	SP 80770 87873	1 km-3 km
1012566	Scheduled monument	Old Hall moated site	SP 70861 87037	1 km-3 km
1013142	Scheduled monument	Beacon Hill motte castle	SP 90842 62930	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1014934	Scheduled monument	Bowl barrow 530m north east of Roe's Farm	SP 84029 61358	Within 1 km
1016318	Scheduled monument	Braybrooke Castle: the remains of a medieval moated manor and medieval settlement remains	SP 76887 84635; SP 76960 84361	Scoping Boundary
1016320; 1040748	Scheduled monument; Grade II listed building	Medieval cross 170m south west of Hall Farm	SP 88158 60980	Scoping Boundary
1017188	Scheduled monument	Kelmarsh medieval settlement	SP 73985 79467; SP 73382 79225; SP 73050 79262; SP 73135 79540; SP 73436 79409	1 km-3 km
1017190	Scheduled monument	Medieval settlement remains at East Farndon	SP 71814 85322; SP 71573 84949	1 km-3 km
1418334	Scheduled monument	Clipston medieval settlement	SP 70707 81468	1 km-3 km
1418583	Scheduled monument	Abandoned areas of Walgrave Medieval village	SP 80449 71924	1 km-3 km
1418685	Scheduled monument	Abandoned Medieval Village of Little Oxendon	SP 73049 84776	1 km-3 km
1040730	Grade I listed building	Harrowden Hall (Wellingborough Golf Club)	SP 88194 70855	Within 1 km
1040795	Grade I listed building	Church of St Mary	SP 90616 59204	1 km-3 km
1052127	Grade I listed building	Church of St Mary	SP 79422 91014	1 km-3 km

NHLE No.	Designation and Grade	Name	NGR	Location
1052135	Grade I listed building	Church of St Mary	SP 78866 87480	Within 1 km
1054010	Grade I listed building	Church of St John The Baptist	SP 71639 84757	1 km-3 km
1067000	Grade I listed building	Church of St Peter and St Paul	SP 81157 70929	1 km-3 km
1067012	Grade I listed building	Kelmarsh Hall	SP 73631 79602	1 km-3 km
1189610	Grade I listed building	Church of St Peter and St Paul	SP 88864 58819	1 km-3 km
1190018	Grade I listed building	Church of St Mary The Virgin	SP 85193 60520	Scoping Boundary
1190579	Grade I listed building	The Court Parlour	SP 86614 57091	1 km-3 km
1213539	Grade I listed building	Church of St Andrew	SP 82845 76523	Scoping Boundary
1213584	Grade I listed building	Anglican and Methodist Church of St Giles	SP 80306 83056	Within 1 km
1281745	Grade I listed building	Church Of St Peter	SP 80168 72009	1 km-3 km
1288778	Grade I listed building	Church of Holy Trinity	SP 81620 81144	Within 1 km
1288812	Grade I listed building	Rothwell Market House	SP 81669 81209	Within 1 km
1288885	Grade I listed building	Church of All Saints	SP 86003 74776	Scoping Boundary
1294095	Grade I listed building	Church of St Mary Magdalen	SP 86366 59137	Within 1 km
1294128	Grade I listed building	Church of St Mary Magdalene	SP 82861 63547	1 km-3 km
1294135	Grade I listed building	Flats 1, 2, 3, Porch House, Bell Tower, Cloisters, South Wing, Pediment, Corner House and Tower House at Dingley Hall	SP 77103 87782	Scoping Boundary
1294226	Grade I listed building	Church of All Saints	SP 85190 63814	Scoping Boundary
1371298	Grade I listed building	Castle Ashby	SP 86269 59249	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1371672	Grade I listed building	The Old Vicarage	SP 88171 64825	Scoping Boundary
1371761	Grade I listed building	Church of All Hallows	SP 89180 67960	1 km-3 km
1371787	Grade I listed building	Church of St Mary The Virgin	SP 90130 68043	1 km-3 km
1376651	Grade I listed building	Church of St Andrew	SP 78545 73120	1 km-3 km
1040598	Grade II* listed building	West End House	SP 89001 67829	1 km-3 km
1040619	Grade II* listed building	All Hallows Church Hall	SP 89119 67965	1 km-3 km
1040666	Grade II* listed building	Church of St Mary	SP 85952 72362	Scoping Boundary
1040668	Grade II* listed building	Orlingbury Hall and attached Wall and Outbuildings to north east	SP 86118 72174	Scoping Boundary
1040676	Grade II* listed building	Church of St Peter and Paul Church of St Peter and St Paul	SP 82167 67210	1 km-3 km
1040679	Grade II* listed building	Sywell Hall	SP 82281 67372	1 km-3 km
1040680	Grade II* listed building	Church of St Mary The Virgin	SP 86664 66174	Scoping Boundary
1040692	Grade II* listed building	Church of All Saints	SP 83846 66653	Scoping Boundary
1040699	Grade II* listed building	Mears Ashby Hall	SP 83977 66416	Scoping Boundary
1040722	Grade II* listed building	Church of St Peter	SP 88500 73947	1 km-3 km
1040732	Grade II* listed building	Statue approximately 30 metres north east of Harrowden Hall	SP 88233 70871	Within 1 km
1040733	Grade II* listed building	Statue approximately 60 metres south east of Harrowden Hall	SP 88258 70820	Within 1 km
1040746	Grade II* listed building	Grendon Hall	SP 88038 60823	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040750	Grade II* listed building	Church of St Leonard	SP 85068 69777	Scoping Boundary
1040756	Grade II* listed building	The Manor House	SP 82778 63402	1 km-3 km
1040771	Grade II* listed building	Church of All Saints	SP 88028 70846	Scoping Boundary
1040784	Grade II* listed building	22 High Street	SP 88835 58740	1 km-3 km
1040786	Grade II* listed building	Summerhouse approximately 250 metres north east of Ecton Hall	SP 83024 63752	1 km-3 km
1041535	Grade II* listed building	Church of St Andrew	SP 86616 57063	1 km-3 km
1041541	Grade II* listed building	The Old Rectory	SP 86420 57323	1 km-3 km
1041575	Grade II* listed building	Church Of St Peter	SP 83019 61045	1 km-3 km
1041584	Grade II* listed building	Church of St Margaret of Antioch	SP 83796 57983	1 km-3 km
1052146	Grade II* listed building	The Old House	SP 80494 88256	1 km-3 km
1067030	Grade II* listed building	Church of St Andrew	SP 75473 81421	Scoping Boundary
1067038	Grade II* listed building	Church of St Catherine	SP 76192 76814	1 km-3 km
1067857	Grade II* listed building	Church of St Mary The Virgin	SP 74916 76936	1 km-3 km
1189661	Grade II* listed building	Ecton Hall	SP 82939 63602	1 km-3 km
1189676	Grade II* listed building	Terrace Gardens	SP 86394 59225	Within 1 km
1189693	Grade II* listed building	Ecton House	SP 82844 63613	1 km-3 km
1189756	Grade II* listed building	The Manor House	SP 80692 87914	1 km-3 km
1189885	Grade II* listed building	The Menagerie	SP 86830 59378	Scoping Boundary
1189920	Grade II* listed building	Church of St Nicholas	SP 88115 64837	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1190526	Grade II* listed building	Gates, Gatepiers and Railings approximately 90 metres west of Harrowden Hall	SP 88100 70873	Scoping Boundary
1190552	Grade II* listed building	Church of St Mary	SP 87885 60446	Scoping Boundary
1191513	Grade II* listed building	United Reformed Church	SP 88978 68001	1 km-3 km
1191565	Grade II* listed building	The Old Rectory	SP 86140 72238	Scoping Boundary
1192006	Grade II* listed building	Wilby House	SP 86636 65946	Scoping Boundary
1213602	Grade II* listed building	Church of St Peter and Paul	SP 77838 80574	Scoping Boundary
1213737	Grade II* listed building	Loddington Hall	SP 81385 78433	Scoping Boundary
1213823	Grade II* listed building	The Orton Trust Workshop	SP 80566 79417	Scoping Boundary
1213989	Grade II* listed building	Former Rothwell United Reformed Church	SP 81374 80930	Within 1 km
1214178	Grade II* listed building	Church of All Saints	SP 83369 79008	Within 1 km
1286637	Grade II* listed building	Church of St Mary	SP 90875 63079	1 km-3 km
1286782	Grade II* listed building	The Hind Hotel	SP 89200 67778	1 km-3 km
1288810	Grade II* listed building	Jesus Hospital	SP 81676 81092	Within 1 km
1288918	Grade II* listed building	Church of St Leonard	SP 81462 78355	Scoping Boundary
1289054	Grade II* listed building	Church of St Andrew	SP 83718 75799	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1289058	Grade II* listed building	Cransley Hall	SP 82888 76605	Scoping Boundary
1289123	Grade II* listed building	Church of All Saints	SP 76466 84592	Scoping Boundary
1293700	Grade II* listed building	Manor Farmhouse	SP 85108 69753	Scoping Boundary
1293981	Grade II* listed building	Church of All Saints	SP 81199 88364	1 km-3 km
1367480	Grade II* listed building	Church of St Helen	SP 73557 83938	1 km-3 km
1370062	Grade II* listed building	Church of St Denys	SP 73522 79220	1 km-3 km
1371674	Grade II* listed building	The Manor House	SP 87930 70866	Scoping Boundary
1371694	Grade II* listed building	Church of St Mary	SP 87159 71679	Scoping Boundary
1371697	Grade II* listed building	Statue approximately 30 metres south east of Harrowden Hall	SP 88228 70825	Within 1 km
1371724	Grade II* listed building	Gatepier approximately 45 metres north east of The Old Rectory	SP 86135 72290	Scoping Boundary
1372349	Grade II* listed building	Church of All Saints	SP 76957 87696	Scoping Boundary
1372373	Grade II* listed building	Church of St Botolph	SP 80551 88294	1 km-3 km
1031339	Grade II listed building	Barn and Granary attached to west of Kites Hall	SP 79277 75853	Within 1 km
1040599	Grade II listed building	21 and 22, Oxford Street	SP 88743 67694	Within 1 km
1040604	Grade II listed building	Northamptonshire Province Royal Antediluvian Order of Buffaloes Club	SP 88826 68079	Within 1 km
1040605	Grade II listed building	Lamp Post approximately 6 metres north of the War Memorial	SP 88809 68134	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1040606	Grade II listed building	Lamp Post approximately 6 metres south of the War Memorial	SP 88799 68126	Within 1 km
1040607	Grade II listed building	Hatton House	SP 88776 68286	Within 1 km
1040608	Grade II listed building	Hatton Hall south and west Facades	SP 88714 68221	Within 1 km
1040609	Grade II listed building	Wall approximately 20 metres east of Hatton Hall	SP 88732 68234	Within 1 km
1040610	Grade II listed building	Manor House and Wall attached to north	SP 88712 68189	Within 1 km
1040621	Grade II listed building	Former Fox and Hounds Public House	SP 88898 68411	Within 1 km
1040642	Grade II listed building	42 and 43, Broad Green	SP 88803 68223	Within 1 km
1040643	Grade II listed building	62, Broad Green	SP 88855 68103	Within 1 km
1040644	Grade II listed building	Telford House	SP 88871 68088	Within 1 km
1040645	Grade II listed building	The Old Lodge	SP 88498 62109	Scoping Boundary
1040656	Grade II listed building	K6 Telephone Kiosk	SP 85244 63727	Scoping Boundary
1040667	Grade II listed building	Chest Tomb approximately 1 metre west of north Porch of Church of St Mary	SP 85940 72347	Scoping Boundary
1040681	Grade II listed building	Grey Walls	SP 86670 65992	Scoping Boundary
1040682	Grade II listed building	Gatepier approximately 35 metres south east of Wilby House	SP 86668 65959	Scoping Boundary
1040683	Grade II listed building	Dovecote approximately 10 metres west of Wilby House	SP 86623 65940	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040684	Grade II listed building	Manor House	SP 86777 66072	Scoping Boundary
1040687	Grade II listed building	Gargoyle adjacent to north west corner of Vestry of Church Of St Mary	SP 87144 71681	Scoping Boundary
1040688	Grade II listed building	97, Main Street	SP 87195 71688	Scoping Boundary
1040689	Grade II listed building	Manor House and attached Barn to east	SP 87125 71585	Scoping Boundary
1040690	Grade II listed building	School House	SP 87173 71706	Scoping Boundary
1040691	Grade II listed building	Church House	SP 83886 66686	Scoping Boundary
1040693	Grade II listed building	25, Ladys Lane	SP 83861 66598	Scoping Boundary
1040694	Grade II listed building	Amy's Cottage Tithe Barn Cottage	SP 83690 66807	Within 1 km
1040695	Grade II listed building	Manor Farmhouse	SP 83870 66878	Scoping Boundary
1040696	Grade II listed building	11, Paddock Lane	SP 83706 66557	Scoping Boundary
1040697	Grade II listed building	Hill Farmhouse	SP 83735 66443	Scoping Boundary
1040698	Grade II listed building	Barn and Cartsheds/Stables approximately 30 metres north west of Hill Farmhouse	SP 83682 66451	Within 1 km
1040700	Grade II listed building	Summer House approximately 50 metres south east of Mears Ashby Hall	SP 84035 66408	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040701	Grade II listed building	Ivy Cottage and attached Barn to east	SP 83992 66469	Scoping Boundary
1040702	Grade II listed building	Village Farmhouse and attached Barn and Cartsheds	SP 84075 66508	Scoping Boundary
1040703	Grade II listed building	Dovecote	SP 86149 72320	Scoping Boundary
1040704	Grade II listed building	6, Harrowden Road	SP 86052 72199	Scoping Boundary
1040705	Grade II listed building	Home Farmhouse	SP 86270 72316	Scoping Boundary
1040706	Grade II listed building	Gatepier approximately 40 metres north east of The Old Rectory	SP 86131 72287	Scoping Boundary
1040727	Grade II listed building	15, Kings Lane	SP 86902 71468	Scoping Boundary
1040728	Grade II listed building	Brownstones	SP 86911 71422	Scoping Boundary
1040729	Grade II listed building	Barn approximately 20 metres north east of Manor House	SP 87945 70874	Scoping Boundary
1040731	Grade II listed building	Chapel of St Hubert	SP 88181 70795	Within 1 km
1040734	Grade II listed building	Steps approximately 10 metres east of Harrowden Hall	SP 88208 70852	Within 1 km
1040735	Grade II listed building	Gazebo approximately 230 metres south east of Harrowden Hall	SP 88419 70754	Within 1 km
1040736	Grade II listed building	Wall approximately 60 metres north west of Harrowden Hall	SP 88119 70886	Within 1 km
1040737	Grade II listed building	26, Blackmile Lane	SP 88468 61075	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040738	Grade II listed building	29, Chequers Lane	SP 88148 60427	Scoping Boundary
1040739	Grade II listed building	Nos 8 and 10 and Wall attached to west	SP 87840 60447	Scoping Boundary
1040740	Grade II listed building	1-3, Church Way	SP 87893 60415	Scoping Boundary
1040741	Grade II listed building	Blacksmiths Cottage and attached Forge	SP 87847 60399	Scoping Boundary
1040742	Grade II listed building	2, Main Road	SP 87873 60200	Scoping Boundary
1040743	Grade II listed building	40, Main Road	SP 87974 60568	Scoping Boundary
1040744	Grade II listed building	The Half Moon Public House	SP 87988 60585	Scoping Boundary
1040745	Grade II listed building	54-58, Main Road	SP 88066 60685	Scoping Boundary
1040747	Grade II listed building	Marlow Hall at Grendon Hall	SP 88036 60824	Scoping Boundary
1040749	Grade II listed building	The Grange	SP 87732 60128	Scoping Boundary
1040761	Grade II listed building	1, Church Lane	SP 88192 64792	Scoping Boundary
1040762	Grade II listed building	Churchyard Cross approximately 25 metres south west of Church of St Nicholas	SP 88092 64808	Scoping Boundary
1040763	Grade II listed building	Manor Farmhouse	SP 88089 64910	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040764	Grade II listed building	Top Farm	SP 88396 64934	Scoping Boundary
1040765	Grade II listed building	Barn approximately 50 metres north east of Number 10	SP 88377 64978	Scoping Boundary
1040766	Grade II listed building	36-38, High Street	SP 88281 64831	Scoping Boundary
1040767	Grade II listed building	Stag's Head Public House	SP 88467 64987	Within 1 km
1040768	Grade II listed building	Archway Entrance and attached Barns to north of Grove Farmhouse	SP 88343 64822	Scoping Boundary
1040769	Grade II listed building	Stuart House	SP 88280 64795	Scoping Boundary
1040770	Grade II listed building	39, Lower Street	SP 88183 64692	Scoping Boundary
1040772	Grade II listed building	Chest Tomb approximately 10 metres south east of South Aisle of Church of All Saints	SP 85208 63796	Scoping Boundary
1040773	Grade II listed building	36, The Square	SP 85252 63693	Scoping Boundary
1040774	Grade II listed building	Number 40 and M and J Greatorex Shop	SP 85207 63706	Scoping Boundary
1040775	Grade II listed building	The Old Swan Public House	SP 85153 63739	Scoping Boundary
1040776	Grade II listed building	20-22, West Street	SP 85023 63796	Scoping Boundary
1040777	Grade II listed building	The Leys	SP 84960 63791	Scoping Boundary
1040778	Grade II listed building	Chapel Gardens	SP 85089 63790	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1040779	Grade II listed building	39, West Street	SP 84913 63753	Scoping Boundary
1040780	Grade II listed building	Sandpit Barn	SP 85888 65058	Scoping Boundary
1040801	Grade II listed building	Wall and Gatepier approximately 15 metres north west of The Manor House	SP 85374 63946	Scoping Boundary
1040802	Grade II listed building	The Manor House	SP 85388 63941	Scoping Boundary
1040803	Grade II listed building	10, London End	SP 84974 63565	Scoping Boundary
1040804	Grade II listed building	The Priory	SP 85154 63568	Scoping Boundary
1040805	Grade II listed building	Chest Tomb approximately 18 metres south of Chancel of Church of All Saints	SP 85212 63801	Scoping Boundary
1041571	Grade II listed building	Old Rectory Cottage	SP 85325 58592	Within 1 km
1041580	Grade II listed building	Chest Tomb approximately 6 metres south of Church of St Mary The Virgin	SP 85184 60509	Scoping Boundary
1041581	Grade II listed building	Place House Farmhouse	SP 84815 60612	Within 1 km
1041599	Grade II listed building	Former Engine House at Engine Pond	SP 85600 59472	Within 1 km
1041600	Grade II listed building	Gates, Gatepiers and Balustrading to Forecourt of Castle Ashby	SP 86223 59135	Within 1 km
1041601	Grade II listed building	Dovecote approximately 20 metres west of west Front of Castle Ashby	SP 86223 59249	Within 1 km
1041602	Grade II listed building	The Stable Block	SP 86186 59236	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1041603	Grade II listed building	Chest Tomb approximately 9 metres south of south east Angle of south Aisle of Church of St Mary Magdelene	SP 86374 59118	Within 1 km
1041604	Grade II listed building	Headstone approximately 11 metres west of south west Angle of south Aisle of Church of St Mary Magdelene	SP 86343 59124	Within 1 km
1041605	Grade II listed building	Remains of former Greenhouse, attached Monument, Wall, Gate and Gatepiers	SP 86362 59100	Within 1 km
1041606	Grade II listed building	The Palm House or Orangery	SP 86414 59074	Within 1 km
1041607	Grade II listed building	Camellia or Round House	SP 86314 58956	Within 1 km
1041608	Grade II listed building	Beehouse In Kitchen Garden to south east of Main Entrance	SP 86351 58883	Within 1 km
1041609	Grade II listed building	Terracotta Bridge	SP 86604 58818	Within 1 km
1041610	Grade II listed building	Bridge By Brickyard Lodge	SP 85938 59913	Scoping Boundary
1041611	Grade II listed building	Right Gatepier at east or Nevitt's Lodge	SP 87025 58987	Within 1 km
1041612	Grade II listed building	Knucklebone Arbour	SP 86917 58916	Within 1 km
1041613	Grade II listed building	43-46	SP 85940 59174	Within 1 km
1052109	Grade II listed building	Church of All Saints	SP 77205 90403	Scoping Boundary
1052110	Grade II listed building	The Manor House	SP 77074 90239	Scoping Boundary
1052111	Grade II listed building	Wall and Gatepier approximately 15 metres east of The Manor House	SP 77084 90249	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1052112	Grade II listed building	Weston Farmhouse	SP 77691 91352	Scoping Boundary
1052113	Grade II listed building	8, The Lane	SP 77526 91445	Scoping Boundary
1052114	Grade II listed building	Home Farmhouse	SP 77687 91497	Scoping Boundary
1052136	Grade II listed building	Headstone approximately 12 metres south of Chancel of Church Of St Mary	SP 78882 87466	Within 1 km
1052137	Grade II listed building	Boundary Post on North Side of Harborough Road at its junction with Braybrooke Road	SP 77255 87292	Scoping Boundary
1052138	Grade II listed building	The Thatched House	SP 78964 87313	Within 1 km
1052139	Grade II listed building	Outbuilding approximately 15 metres south west of Number 20 (The Thatched House)	SP 78936 87301	Within 1 km
1052140	Grade II listed building	Pair of Pumps 10 metres east of Number 3	SP 77047 87428	Scoping Boundary
1052141	Grade II listed building	The Stables, The Coach House, Hakewill Hall and attached Railings	SP 77191 87696	Scoping Boundary
1052142	Grade II listed building	Mounting Block approximately 5 metres North West of Hakewill Hall	SP 77149 87691	Scoping Boundary
1052143	Grade II listed building	Gatepier approximately 25 metres north east of Number 17 (not included)	SP 77062 87630	Scoping Boundary
1052145	Grade II listed building	Ice House approximately 100 metres north of Dingley Hall	SP 77119 87870	Scoping Boundary
1061659	Grade II listed building	Bridge over River Welland	SP 76679 92438	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1067028	Grade II listed building	Gates and Gatepiers approximately 50 metres west	SP 75488 81701	Scoping Boundary
1067029	Grade II listed building	Bosworth House	SP 75385 81689	Scoping Boundary
1075352	Grade II listed building	Kites Hall	SP 79288 75871	Within 1 km
1075353	Grade II listed building	Old Lodge and attached Bar	SP 79159 75261	Within 1 km
1189513	Grade II listed building	The Cottage	SP 84957 63590	Scoping Boundary
1189516	Grade II listed building	London End Farm	SP 84995 63582	Scoping Boundary
1189529	Grade II listed building	3 and 7, Sunnyside	SP 84938 63591	Scoping Boundary
1189592	Grade II listed building	31 and 31a West Street	SP 84975 63759	Scoping Boundary
1189599	Grade II listed building	33A and 35 West Street	SP 84942 63763	Scoping Boundary
1189604	Grade II listed building	Barn approximately 50 metres south west of Number 39	SP 84907 63716	Scoping Boundary
1189652	Grade II listed building	Thatched Cottage	SP 77033 87443	Scoping Boundary
1189666	Grade II listed building	Gatepier approximately 20 metres north east of Number 17 (not included)	SP 77066 87644	Scoping Boundary
1189712	Grade II listed building	Main Lodge, Dingley Hall and attached Pump and Outbuilding	SP 76792 87567	Scoping Boundary
1189714	Grade II listed building	Gatepiers, Wall and Gate approximately 14 metres west of	SP 76788 87571	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
		Number 42 (Main Lodge, Dingley Hall)		
1189727	Grade II listed building	The Laundry Building	SP 86202 59281	Scoping Boundary
1189816	Grade II listed building	Archway House or Birmingham Houses and attached Walls	SP 86378 58950	Within 1 km
1189830	Grade II listed building	Kitchen Garden	SP 86396 58818	Within 1 km
1189899	Grade II listed building	Wall and Gatepier approximately 10 metres east of The Manor House	SP 77087 90229	Scoping Boundary
1189903	Grade II listed building	East of Nevitts Lodge	SP 87028 58997	Within 1 km
1189913	Grade II listed building	Left Gatepier at east or Nevitt's Lodge	SP 87023 58984	Within 1 km
1189921	Grade II listed building	Crabtree Lodge	SP 77683 91332	Scoping Boundary
1189927	Grade II listed building	Chest Tomb and Headstone approximately 6 metres south of south Porch of Church of St Nicholas	SP 88118 64822	Scoping Boundary
1189930	Grade II listed building	George Row	SP 86028 59383	Scoping Boundary
1189931	Grade II listed building	Threefold	SP 85947 59090	Within 1 km
1189935	Grade II listed building	Hardwater Mill and The Cottage	SP 87597 63648	Scoping Boundary
1189937	Grade II listed building	The Cottage	SP 77709 91298	Scoping Boundary
1189996	Grade II listed building	42, High Street	SP 88266 64843	Scoping Boundary
1190004	Grade II listed building	Grove Farmhouse	SP 88377 64822	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1190021	Grade II listed building	55, High Street	SP 88220 64778	Scoping Boundary
1190024	Grade II listed building	Headstone approximately 5 metres south of Church of St Mary The Virgin	SP 85196 60503	Scoping Boundary
1190030	Grade II listed building	Manor Farmhouse	SP 85031 60679	Scoping Boundary
1190034	Grade II listed building	7, Lower Street	SP 88338 64767	Scoping Boundary
1190036	Grade II listed building	Moat Farmhouse	SP 84909 60665	Scoping Boundary
1190485	Grade II listed building	Gates, Gatepiers, Railings, Walls and attached Summerhouse extending to approximately 300 metres north, south and east of Harrowden Hall	SP 88286 70814	Within 1 km
1190514	Grade II listed building	Gatepier approximately 20 metres north west of Harrowden Hall	SP 88161 70879	Within 1 km
1190544	Grade II listed building	Old Farmhouse	SP 88331 61066	Scoping Boundary
1190588	Grade II listed building	5-7, Church Way	SP 87876 60410	Scoping Boundary
1190597	Grade II listed building	15, Church Way	SP 87792 60390	Scoping Boundary
1190604	Grade II listed building	38, Main Road	SP 87970 60531	Scoping Boundary
1190609	Grade II listed building	50, Main Road	SP 88024 60656	Scoping Boundary
1190611	Grade II listed building	80, Main Road	SP 88224 61056	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1190676	Grade II listed building	Gates and Gatepiers approximately 10 metres east of Grendon Hall	SP 87993 60831	Scoping Boundary
1190685	Grade II listed building	Hall Close Cottage	SP 88192 61080	Scoping Boundary
1190691	Grade II listed building	Manor Farmhouse	SP 87682 60278	Scoping Boundary
1190839	Grade II listed building	38, Broad Green	SP 88799 68263	Within 1 km
1190875	Grade II listed building	40, Broad Green	SP 88802 68241	Within 1 km
1190925	Grade II listed building	Numbers 2 and 3 and Barn attached to left	SP 88854 68059	Within 1 km
1191052	Grade II listed building	Dairy Cottage	SP 86957 71530	Scoping Boundary
1191077	Grade II listed building	65, Main Street	SP 87026 71593	Scoping Boundary
1191090	Grade II listed building	Gargoyle adjacent to south west corner of Vestry of Church Of St Mary	SP 87148 71671	Scoping Boundary
1191195	Grade II listed building	5, Duchess End	SP 84184 66564	Scoping Boundary
1191257	Grade II listed building	16, North Street	SP 83842 66862	Scoping Boundary
1191270	Grade II listed building	26, Paddock Lane	SP 83725 66562	Scoping Boundary
1191402	Grade II listed building	Crabtree Cottage Dale Farm Cottages	SP 84071 66593	Scoping Boundary
1191422	Grade II listed building	Wellingborough Grange Farmhouse and attached Barn	SP 86672 69581	Scoping Boundary
1191437	Grade II listed building	Barn approximately 40 metres north of Hill Farmhouse	SP 83737 66472	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1191450	Grade II listed building	Dovecote approximately 20 metres east of Mears Ashby Hall	SP 84005 66428	Scoping Boundary
1191471	Grade II listed building	1 and 1a, Hatton Gardens	SP 88776 68299	Within 1 km
1191478	Grade II listed building	Stables approximately 20 metres south of Mears Ashby Hall	SP 83983 66377	Scoping Boundary
1191518	Grade II listed building	No 2 (Top Farm) and No 4	SP 86046 72213	Scoping Boundary
1191529	Grade II listed building	The Cottage	SP 86043 72145	Scoping Boundary
1191535	Grade II listed building	No 3 and Barn adjoining Number 3	SP 85930 72276	Scoping Boundary
1191990	Grade II listed building	122, Main Road	SP 86754 66084	Scoping Boundary
1192012	Grade II listed building	Gatepier approximately 40 metres south east of Wilby House	SP 86670 65963	Scoping Boundary
1192028	Grade II listed building	The George Inn Public House and Barn attached to west	SP 86918 66223	Scoping Boundary
1192118	Grade II listed building	Cringle House	SP 89139 62833	Within 1 km
1203302	Grade II listed building	White Lodge Farmhouse	SP 81770 74181	Scoping Boundary
1213339	Grade II listed building	Bridge House	SP 76494 84548	Scoping Boundary
1213340	Grade II listed building	The Old Rectory	SP 76369 84338	Scoping Boundary
1213341	Grade II listed building	Wantage House and attached Short Flanking Walls	SP 76469 84651	Scoping Boundary
1213342	Grade II listed building	Pipwell Cottage	SP 76461 84301	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1213394	Grade II listed building	Bleak House	SP 76458 84256	Scoping Boundary
1213433	Grade II listed building	Holly House	SP 83640 75849	Scoping Boundary
1213451	Grade II listed building	Stables 2 metres south west of Rectory Farmhouse	SP 83707 75864	Scoping Boundary
1213453	Grade II listed building	Yeoman's House	SP 83456 75869	Scoping Boundary
1213454	Grade II listed building	Squires' Farmhouse	SP 83040 76718	Scoping Boundary
1213456	Grade II listed building	Garden Urn 5 metres south of south west corner of Cransley Hall	SP 82886 76582	Scoping Boundary
1213457	Grade II listed building	Garden Urn 5 metres south of south east Corner of Cransley Hall	SP 82908 76596	Scoping Boundary
1213480	Grade II listed building	K6 Kiosk 20 metres east of Number 25	SP 83469 75889	Scoping Boundary
1213540	Grade II listed building	Chest Tomb half a mile south of south aisle of Church of St Andrew	SP 82848 76503	Scoping Boundary
1213542	Grade II listed building	10, Church Lane	SP 82724 76589	Scoping Boundary
1213546	Grade II listed building	Monument 2 metres south west of south aisle of Church of St Giles	SP 80301 83042	Within 1 km
1213547	Grade II listed building	Chest Tomb 20 metres south east of Church of St Giles	SP 80317 83044	Within 1 km
1213580	Grade II listed building	White Hill Farmhouse	SP 83103 76818	Scoping Boundary
1213582	Grade II listed building	Services Club	SP 80252 83154	Within 1 km
1213601	Grade II listed building	Church House	SP 80312 83087	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1213603	Grade II listed building	Henry Hall's House	SP 77353 79988	Scoping Boundary
1213604	Grade II listed building	Slade Farmhouse	SP 77371 80000	Scoping Boundary
1213606	Grade II listed building	40-50, High Street	SP 77460 80134	Scoping Boundary
1213609	Grade II listed building	Old Manor House	SP 81604 78606	Scoping Boundary
1213610	Grade II listed building	32, Main Street	SP 81480 78471	Scoping Boundary
1213620	Grade II listed building	Three Chimneys	SP 82048 78722	Scoping Boundary
1213742	Grade II listed building	Stable Yard Cottages	SP 81463 78385	Scoping Boundary
1213743	Grade II listed building	Chest Tomb 15 metres south of Church of St Leonard	SP 81466 78333	Scoping Boundary
1213820	Grade II listed building	Loddington Farmhouse	SP 81696 78590	Scoping Boundary
1213824	Grade II listed building	Manor Farmhouse	SP 80542 79252	Scoping Boundary
1213825	Grade II listed building	The Cottage	SP 85850 74561	Scoping Boundary
1213828	Grade II listed building	Glebe House	SP 85934 74795	Scoping Boundary
1213833	Grade II listed building	Pytchley Lodge Farmhouse	SP 83436 73765	Scoping Boundary
1213912	Grade II listed building	Dower House	SP 85682 74777	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1213913	Grade II listed building	Pytchley Manor House	SP 85744 74755	Scoping Boundary
1213914	Grade II listed building	Pigeoncote, Coach House and stable 20 metres west of Pytchley House	SP 85625 74670	Scoping Boundary
1213916	Grade II listed building	Rustic Summerhouse 30 metres south of Pytchley House	SP 85681 74664	Scoping Boundary
1213917	Grade II listed building	Rothwell House Hotel	SP 81576 81241	Within 1 km
1213920	Grade II listed building	2 Barns 10 metres west of Numbers 3 and 3a	SP 81381 81255	Within 1 km
1213925	Grade II listed building	Pytchley Grange Farmhouse and short Flanking Fences and Gates	SP 85323 73387	Scoping Boundary
1213987	Grade II listed building	11, Desborough Road	SP 81350 81310	Within 1 km
1213990	Grade II listed building	Town Farmhouse	SP 81438 81221	Within 1 km
1213991	Grade II listed building	Stable and adjoining Barn 5 metres west of Number 37	SP 81415 81216	Within 1 km
1213994	Grade II listed building	Home Farmhouse	SP 81683 81126	Within 1 km
1213995	Grade II listed building	Lotus House Restaurant	SP 81724 81206	Within 1 km
1213996	Grade II listed building	Former Sunday School and adjoining House	SP 81652 81191	Within 1 km
1214075	Grade II listed building	Ashgate Cottage	SP 81485 81250	Within 1 km
1214076	Grade II listed building	Rothwell Manor House	SP 81542 81145	Within 1 km
1214077	Grade II listed building	Chest Tomb and Headstone 12 metres south of Chancel of Church of Holy Trinity	SP 81633 81135	Within 1 km
1214083	Grade II listed building	Chest Tomb 3 metres east of Chancel of Church of Holy Trinity	SP 81650 81167	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1214126	Grade II listed building	Chest Tomb 6 metres east of Chancel of Church of Holy Trinity	SP 81651 81162	Within 1 km
1214169	Grade II listed building	Former Co Op Stores	SP 81386 81091	Within 1 km
1214170	Grade II listed building	Newham Farmhouse	SP 81384 81070	Within 1 km
1214171	Grade II listed building	25–28 Market Hill	SP 81710 81164	Within 1 km
1214175	Grade II listed building	Manor Farmhouse and adjoining Railing	SP 83368 79059	Within 1 km
1214176	Grade II listed building	Rye Hill House	SP 83329 79060	Within 1 km
1214209	Grade II listed building	Thorpe Malsor Hall	SP 83365 78958	Within 1 km
1214211	Grade II listed building	Dairy and Game Larder at Thorpe Malsor Hall	SP 83332 78945	Within 1 km
1214212	Grade II listed building	Laundry, Stable Range and adjoining Garden Walls at Thorpe Malsor Hall	SP 83306 78926	Within 1 km
1214215	Grade II listed building	Haha 30 metres south of Thorpe Malsor Hall	SP 83369 78930	Within 1 km
1214216	Grade II listed building	Pigeoncote 75 metres south west of Thorpe Malsor Hall	SP 83317 78900	Within 1 km
1214219	Grade II listed building	1, Meeting Lane	SP 81446 80996	Within 1 km
1286795	Grade II listed building	Barn adjoining Manor House to west	SP 86788 66086	Scoping Boundary
1287024	Grade II listed building	The Cottage	SP 84105 66548	Scoping Boundary
1287052	Grade II listed building	The Griffins Head Public House	SP 84028 66508	Scoping Boundary
1288674	Grade II listed building	2, Meeting Lane	SP 81433 80990	Within 1 km
1288696	Grade II listed building	The Old Rectory	SP 83236 79016	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1288697	Grade II listed building	K6 Telephone Kiosk	SP 81535 78519	Scoping Boundary
1288712	Grade II listed building	Tomb Slab 12 metres east of Chancel of Church of Holy Trinity	SP 81666 81159	Within 1 km
1288713	Grade II listed building	Rowell Charter Inn	SP 81456 81095	Within 1 km
1288742	Grade II listed building	Chest Tomb 3 metres east of Vestry of Church of Holy Trinity	SP 81648 81171	Within 1 km
1288777	Grade II listed building	War Memorial	SP 81500 81112	Within 1 km
1288779	Grade II listed building	Chest Tomb 2 metres south of Chancel of Church of Holy Trinity	SP 81652 81146	Within 1 km
1288780	Grade II listed building	Chest Tomb 5 metres east of Chancel of Church of Holy Trinity	SP 81653 81158	Within 1 km
1288811	Grade II listed building	2, Market Hill	SP 81660 81243	Within 1 km
1288847	Grade II listed building	Keeper's Cottage	SP 85680 74739	Scoping Boundary
1288848	Grade II listed building	Pytchley House	SP 85661 74699	Scoping Boundary
1288851	Grade II listed building	Barn adjoining 3 and 3a	SP 81427 81247	Within 1 km
1288852	Grade II listed building	The Nunnery	SP 81407 81263	Within 1 km
1288882	Grade II listed building	The Thatched House	SP 85837 74559	Scoping Boundary
1288884	Grade II listed building	Old School House	SP 85826 74664	Scoping Boundary
1288887	Grade II listed building	Lodge Cottage	SP 86072 74809	Scoping Boundary
1288894	Grade II listed building	Leighton House	SP 81504 78423	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1288915	Grade II listed building	Boundary Wall and Gates at Loddington Hall	SP 81421 78388	Scoping Boundary
1288916	Grade II listed building	Loddington House	SP 81586 78543	Scoping Boundary
1288927	Grade II listed building	Lime Grove	SP 81685 78594	Scoping Boundary
1288929	Grade II listed building	Summerhouse 70 metres south of Loddington House	SP 81581 78500	Scoping Boundary
1288972	Grade II listed building	Mawsley Farmhouse	SP 81513 78518	Scoping Boundary
1288977	Grade II listed building	Appleton Farmhouse	SP 77656 80114	Scoping Boundary
1288997	Grade II listed building	Old Lodge Farmhouse	SP 82715 76579	Scoping Boundary
1289056	Grade II listed building	Rectory Farmhouse	SP 83671 75874	Scoping Boundary
1289067	Grade II listed building	23, High Street	SP 83457 75854	Scoping Boundary
1289084	Grade II listed building	2, Newton Way	SP 76526 84566	Scoping Boundary
1289125	Grade II listed building	The Gables	SP 83650 75746	Scoping Boundary
1293412	Grade II listed building	The Vicarage	SP 83943 66632	Scoping Boundary
1293430	Grade II listed building	Manor House	SP 83707 66653	Scoping Boundary
1293462	Grade II listed building	29, Ladys Lane	SP 83849 66619	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1293506	Grade II listed building	Barn north west side of Buckwell Green (Woolford Tyres)	SP 88600 68129	Within 1 km
1293511	Grade II listed building	West Farmhouse	SP 86897 71426	Scoping Boundary
1293582	Grade II listed building	62a and 63, Broad Green	SP 88860 68099	Within 1 km
1293620	Grade II listed building	41, Broad Green	SP 88803 68233	Within 1 km
1293738	Grade II listed building	Dovecote approximately 60 metres south east of Grendon Hall	SP 88045 60834	Scoping Boundary
1293754	Grade II listed building	6, Church Way	SP 87848 60457	Scoping Boundary
1293759	Grade II listed building	20, Church Way	SP 87734 60342	Scoping Boundary
1293977	Grade II listed building	Doddington Barn	SP 86521 64602	Scoping Boundary
1293989	Grade II listed building	Pair of Headstones approximately 15 metres north west of Church of All Saints	SP 88016 70863	Scoping Boundary
1293994	Grade II listed building	Fuchsia Cottage Tangelwood	SP 88354 64858	Scoping Boundary
1294037	Grade II listed building	Church of St Mary	SP 77800 91379	Scoping Boundary
1294041	Grade II listed building	South Lodge and attached Railing, Gatepier and Gate	SP 86215 58920	Within 1 km
1294087	Grade II listed building	Beehouse in Kitchen Garden to south west of Main Entrance	SP 86333 58890	Within 1 km
1294092	Grade II listed building	Bathstone Bridge	SP 86520 58665	Within 1 km
1294099	Grade II listed building	Memorial Cross in Churchyard of Church of St Mary Magdelene	SP 86373 59098	Within 1 km

NHLE No.	Designation and Grade	Name	NGR	Location
1294106	Grade II listed building	Railings, Gate and Gatepiers bounding west side of Italian Garden	SP 86299 59055	Within 1 km
1294118	Grade II listed building	Estate Office including 10 Castle Ashby	SP 86198 59256	Within 1 km
1294153	Grade II listed building	The Dairy	SP 86198 59308	Scoping Boundary
1294156	Grade II listed building	Station Lodge	SP 86207 61302	Scoping Boundary
1294168	Grade II listed building	The Grange and attached Outbuildings and Railings	SP 76864 88948	Scoping Boundary
1294178	Grade II listed building	Studio approximately 10 metres south of Number 20 (The Thatched House)	SP 78950 87295	Within 1 km
1294181	Grade II listed building	22, Hermitage Road	SP 78945 87281	Within 1 km
1294186	Grade II listed building	The Old Rectory	SP 77098 87632	Scoping Boundary
1294195	Grade II listed building	34-36, West Street	SP 84947 63796	Scoping Boundary
1294212	Grade II listed building	The Old Rectory	SP 78679 87502	Within 1 km
1294217	Grade II listed building	Wall approximately 20 metres east of Number 24 (not included) and Number 26	SP 84942 63609	Scoping Boundary
1294247	Grade II listed building	Stags Head Public House	SP 85344 63926	Scoping Boundary
1294248	Grade II listed building	Wall and Gatepier approximately 15 metres north east of The Manor House	SP 85382 63955	Scoping Boundary
1342907	Grade II listed building	K6 Telephone Kiosk	SP 77708 91362	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1356934	Grade II listed building	Arthingworth Manor	SP 75526 81624	Scoping Boundary
1371260	Grade II listed building	Brickyard Lodge	SP 85916 59922	Scoping Boundary
1371261	Grade II listed building	Ice House In Castle Ashby Park	SP 86788 59262	Scoping Boundary
1371262	Grade II listed building	The Falcon Hotel	SP 86000 59554	Scoping Boundary
1371288	Grade II listed building	Headstone approximately 3 metres south of Church of St Mary The Virgin	SP 85198 60506	Scoping Boundary
1371289	Grade II listed building	The Old Rectory	SP 84937 60680	Scoping Boundary
1371299	Grade II listed building	The Water Tower	SP 86225 59275	Scoping Boundary
1371653	Grade II listed building	26, Park Street	SP 84916 63612	Scoping Boundary
1371654	Grade II listed building	Parish Church Hall	SP 85234 63800	Scoping Boundary
1371673	Grade II listed building	Dale Cottage	SP 88319 64779	Scoping Boundary
1371675	Grade II listed building	Wall, Gates, Gatepiers and Railings approximately 40 metres south and west of Church of All Saints	SP 85164 63777	Scoping Boundary
1371676	Grade II listed building	Rif-Rafs Cauldron Restaurant	SP 85229 63701	Scoping Boundary
1371677	Grade II listed building	Rose Cottage	SP 85103 63821	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1371678	Grade II listed building	28, West Street	SP 84988 63792	Scoping Boundary
1371679	Grade II listed building	33, West Street	SP 84960 63767	Scoping Boundary
1371680	Grade II listed building	41-43, West Street	SP 84904 63762	Scoping Boundary
1371690	Grade II listed building	No 17 and attached Outbuildings	SP 85507 63670	Scoping Boundary
1371691	Grade II listed building	L Green and Sons	SP 85317 63875	Scoping Boundary
1371695	Grade II listed building	Manor Farmhouse	SP 87872 70887	Scoping Boundary
1371696	Grade II listed building	Staff Cottages, Shop, Changing Rooms, Ancillary Buildings and attached Gatepier at Harrowden Hall	SP 88189 70896	Within 1 km
1371698	Grade II listed building	Statue Base approximately 60 metres north east Of Harrowden Hall	SP 88266 70863	Within 1 km
1371699	Grade II listed building	Gates, Gatepiers and Railings approximately 300 metres east of Harrowden Hall	SP 88514 70793	Within 1 km
1371700	Grade II listed building	Wentworth Farmhouse	SP 88058 70824	Scoping Boundary
1371701	Grade II listed building	Chest Tomb approximately 3 metres north of north Aisle of Church of St Mary	SP 87879 60457	Scoping Boundary
1371702	Grade II listed building	16-18, Church Way	SP 87769 60384	Scoping Boundary
1371703	Grade II listed building	Grendon House	SP 88620 61539	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1371710	Grade II listed building	South Lodge Farmhouse	SP 83850 63471	Within 1 km
1371713	Grade II listed building	Wilby Cottage	SP 86606 65832	Scoping Boundary
1371716	Grade II listed building	Little Harrowden House and attached Barn	SP 87195 71728	Scoping Boundary
1371717	Grade II listed building	Hanjague House	SP 87315 71746	Scoping Boundary
1371718	Grade II listed building	15, Bakehouse Lane	SP 83906 66740	Scoping Boundary
1371719	Grade II listed building	Churchyard Wall approximately 10 metres south and east of Church of All Saints	SP 83859 66703	Scoping Boundary
1371720	Grade II listed building	31, Ladys Lane	SP 83851 66635	Scoping Boundary
1371721	Grade II listed building	11, North Street	SP 83884 66850	Scoping Boundary
1371722	Grade II listed building	The Old Farmhouse	SP 84074 66717	Scoping Boundary
1371723	Grade II listed building	Barn approximately 30 metres south of The Farmhouse (not included)	SP 86310 72260	Scoping Boundary
1371734	Grade II listed building	39, Broad Green	SP 88802 68250	Within 1 km
1371735	Grade II listed building	44 and 45, Broad Green	SP 88805 68212	Within 1 km
1371746	Grade II listed building	Barns approximately 40 metres east of The Old Rectory	SP 86167 72288	Scoping Boundary
1371747	Grade II listed building	10, The Green	SP 85992 72366	Scoping Boundary
1371748	Grade II listed building	Stables, Coach House approximately 15 metres north east of Orlingbury	SP 86140 72215	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
		Hall, attached Wall and Outbuilding 10 metres south west of The Old Rectory		
1371755	Grade II listed building	War Memorial and attached Wall	SP 88803 68132	Within 1 km
1371756	Grade II listed building	The Sycamores	SP 88691 68139	Within 1 km
1371757	Grade II listed building	37, Broad Green	SP 88776 68271	Within 1 km
1371758	Grade II listed building	Wall and Gatepiers approximately 20 metres south and east of Hatton Hall	SP 88731 68192	Within 1 km
1371759	Grade II listed building	Barn south west side of Buckwell Green (Woolford Tyres)	SP 88615 68116	Within 1 km
1371763	Grade II listed building	Wardens Flat and Communal Facilities at Palmer Court	SP 88736 68272	Within 1 km
1371775	Grade II listed building	Maylands and attached Wall	SP 88610 68103	Within 1 km
1371790	Grade II listed building	39 and 40 Oxford Street	SP 88698 67732	Within 1 km
1372350	Grade II listed building	Gatepiers, Wall and Gate approximately 16 metres west of Number 42 (Main Lodge, Dingley Hall)	SP 76770 87577	Scoping Boundary
1372375	Grade II listed building	Hillside Cottage	SP 77220 90449	Scoping Boundary
1372376	Grade II listed building	Sutton Bassett House	SP 77108 90248	Scoping Boundary
1372377	Grade II listed building	1, Northlea	SP 77922 91491	Scoping Boundary
1372378	Grade II listed building	8, The Green	SP 77684 91318	Scoping Boundary
1392598	Grade II listed building	K6 Telephone Kiosk	SP 86018 72353	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
1393917	Grade II listed building	18 and 20, Lower Street	SP 80213 83109	Within 1 km
1400809	Grade II listed building	Thor Missile Site at former RAF Harrington including the Pyrotechnic Store and Classified Storage Building to the west of the three Emplacements.	SP 77396 78108	Within 1 km
1426571	Grade II listed building	Great Cransley War Memorial	SP 83091 76773	Scoping Boundary
1428139	Grade II listed building	Desborough War Memorial	SP 80289 83128	Within 1 km
1433006	Grade II listed building	Grendon War Memorial	SP 87910 60435	Scoping Boundary
1433007	Grade II listed building	Earls Barton War Memorial	SP 85205 63762	Scoping Boundary
1440985	Grade II listed building	Wilby War Memorial	SP 86701 66156	Scoping Boundary
1441349	Grade II listed building	Castle Ashby War Memorial	SP 85986 59534	Scoping Boundary
1000385	Grade I registered park and garden	Castle Ashby	SP 85761 57901	Scoping Boundary
1000392	Grade II* registered park and garden	Great Harrowden Hall	SP 88496 71141	Scoping Boundary
1001663	Grade II* registered park and garden	Rushton Hall	SP 83469 82597	1 km-3 km
1001712	Grade II* registered park and garden	Kelmarsh Gardens and Parkland	SP 73609 79598	1 km-3 km
-	Conservation area	Brampton Ash	-	Within 1 km
-	Conservation area	Braybrooke	-	Scoping Boundary
-	Conservation area	Cransley	-	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
-	Conservation area	Desborough	-	Within 1 km
-	Conservation area	Harrington	-	Scoping Boundary
-	Conservation area	Loddington	-	Scoping Boundary
-	Conservation area	Pytchley	-	Scoping Boundary
-	Conservation area	Rothwell	-	Within 1 km
-	Conservation area	Thorpe Malsor	-	Within 1 km
-	Conservation area	Weston by Welland	-	Scoping Boundary
-	Conservation area	Great Doddington	-	Scoping Boundary
-	Conservation area	Earls Barton	-	Scoping Boundary
-	Conservation area	Grendon	-	Scoping Boundary
-	Conservation area	Mears Ashby	-	Scoping Boundary
-	Conservation area	Orlingbury	-	Scoping Boundary
-	Conservation area	Wellingborough	-	Within 1 km
-	Conservation area	Castle Ashby	-	Scoping Boundary
-	Conservation area	Hardwick	-	Scoping Boundary

NHLE No.	Designation and Grade	Name	NGR	Location
	Conservation area	Broughton	-	Scoping Boundary

9B.Heritage Survey Strategy

Contents

9B.	Heritage Survey Strategy	9B-1
9B.1	Introduction	9B-1
9B.2	Avoidance Measures and Principles for Scoping of Surveys	9B-1
9B.3	Study Area	9B-2
9B.4	Data Sources	9B-2
9B.5	Initial Baseline	9B-2
9B.6	Heritage Survey Strategy	9B-3

	Table 9B.1 Heritage Survey Strategy	9B-3
--	-------------------------------------	------

9B. Heritage Survey Strategy

9B.1 Introduction

- 9B.1.1 This survey strategy describes the approach to the collection of Historic Environment baseline survey data for the Weston Marsh to East Leicestershire project (the Project). The Project is being developed by National Grid Electricity Transmission (NGET) to increase the ability of the transmission system to provide the required capacity between the North, the Midlands and the South. The Project forms part of a major programme of reinforcement of the electricity transmission system to accommodate major increases in power flows, helping take power generated from low carbon sources (especially from offshore wind) to areas of consumer demand across the UK.

9B.2 Avoidance Measures and Principles for Scoping of Surveys

- 9B.2.1 Integrating the following avoidance measures into the Project design where possible will assist in defining the scope of constraints and the potential requirement for field survey:
- Avoidance of statutory designated sites (scheduled monuments, listed buildings and conservation areas).
 - Avoidance of non-statutory designated sites (Registered Parks and Gardens, Registered Battlefields).
 - Retention and protection of Important Hedgerows.
- 9B.2.2 If these commitments are achieved, it is likely that significant adverse effects upon important heritage features can be avoided or minimised. Where avoidance is not possible, then survey of the relevant features is likely to be required.
- 9B.2.3 **Appendix 4A Initial Outline Code of Construction Practice** (CoCP) has been prepared to accompany the Scoping Report and will be updated for the Preliminary Environmental information Report (PEIR) and the Environmental Statement (ES). The Outline CoCP will specify the high-level commitments for the purpose of avoiding or mitigating impacts upon heritage assets. This will include the requirement for the production of an Outline Construction and Environment Management Plan (CEMP) to provide further detail regarding the commitments to mitigation. The Outline CEMP will set out the commitment to further detailed mitigation measures, such as the protection of designated heritage assets, sensitive design within historic landscapes and appropriate working methods to ensure avoidance of damage.
- 9B.2.4 In defining the scope of field survey, the strategy has considered where the commitment to these measures will avoid likely significant effects upon sensitive heritage assets.
- 9B.2.5 The strategy also acknowledges that, even where features are avoided or standard mitigation measures are adopted, there may continue to be a risk of impacts to the

historic environment. Therefore, the avoidance measures alone are not sufficient to rule out surveys.

9B.3 Study Area

9B.3.1 The study area for surveys will be determined by the Project stage:

- Year 1: surveys will comprise walkover survey of the preferred Route Corridor defined in the Scoping Report. These walkovers will be from Public Rights of Way (PRoW), to provide an early assessment of the viability of specific survey methods in the context of existing ground cover and land use.
- Year 2: geophysical survey will be undertaken for the refined proposed route alignment defined at Design Freeze 2 (for PEIR and Statutory Consultation) and account for feedback received during engagement with statutory bodies and public consultation. This will be at locations where permanent direct impacts are expected, e.g. tower locations, and substations. Following this, targeted trial trenching of anomalies within the area of geophysics would be undertaken to inform the ES and enable the design of appropriate mitigation measures. Consultation with Historic England and the local authority archaeological advisors will inform the scope and methodology for the surveys.
- Year 3: If required, this stage would allow the completion of Year 2 surveys.

9B.3.2 Should part(s) of the refined proposed route alignment defined at Design Freeze 2 where permanent direct impacts are expected not be accessible for survey and/or archaeological investigation, the ES will detail and assess any necessary flexibility and mitigation required to accommodate risk and inform decision-making.

9B.4 Data Sources

9B.4.1 Data sources to inform surveys are as follows:

- Walkover- National Heritage List England (NHLE), Historic Environment Record (HER) data.
- Geophysical survey- NHLE, HER, walkover survey field observations.
- Trial trenching - NHLE, HER, walkover survey field observations, geophysical survey.

9B.5 Initial Baseline

9B.5.1 The survey requirements have been established through the review of data available:

- Listed Buildings.
- Scheduled Monuments.
- Registered Parks and Gardens.
- Conservation Areas.

9B.5.2 These datasets enabled the wider context of the corridor to be evaluated at a high level, primarily related to the settings of heritage assets that might be altered by the presence of new transmission infrastructure.

9B.6 Heritage Survey Strategy

Table 9B.1 Heritage Survey Strategy

Description	Timing
Indicative baseline • Designated assets (NHLE). • Non-designated assets (HER data). • Historic Landscape Character assessment. • Historic mapping. • Archive sources. Data reviewed for the option appraisal and scoping indicated the large number of scheduled monuments, listed buildings, register parks and gardens and conservation areas in the Scoping Boundary - these were taken into consideration within the preferred corridor, avoiding direct impacts. These served to indicate a high potential for significant archaeological remains to exist, as well as historic landscape features that are required to be characterised to inform the Environmental Impact Assessment (EIA).	Year 1 – July to November 2025.
Scope and rationale Provides the baseline understanding of heritage assets to scope and undertake field-based surveys. The assessment would be undertaken for the whole of the preferred corridor to inform the ES, to avoid issues by design where possible and develop the preferred corridor for statutory consultation, form the basis of engagement with Stakeholders and narrow the scope of subsequent surveys.	
Method The historic environment desk-based assessment (HEDBA) will be undertaken in line with the Chartered Institute for Archaeologists Standard and guidance for historic environment desk-based assessment (2020). The HEDBA will form the primary Historic Environment Appendix to the Cultural Heritage chapter within the PEIR and ESA.	

Description	Timing
Indicative baseline • Historic and modern Aerial Photographs (AP) • LiDAR data	Year 1- November 2025 – March 2026.
Scope and rationale Provides the baseline understanding of known heritage assets and can enable previously unknown assets to be identified. Assists with option development and defining the scope of later field-based surveys. It will enable National Grid to identify initial areas of interest to avoid in design development of the preferred corridor, and provide the evidence base to present to stakeholders when refining and scoping the extent of geophysical survey to be undertaken.	
Method The AP and LiDAR will be undertaken in line with the Chartered Institute for Archaeologists Standard and guidance for historic environment desk-based assessment (2020), where relevant to the specific focus of the study.	
Walkovers	
Indicative baseline • Statement of significance for heritage assets.	To inform PEIR and ES. Year 1- April 2026 to May 2026.
Scope and rationale • Sense check of desk-based studies; presence/absence of assets. • Visits to designated and non-designated heritage assets identified as potentially experiencing changes to their settings; setting description to form part of each asset's Statement of Significance.	
Method Team of two visiting site, use of professional judgement. To be undertaken from PRow where possible, but access to private land might be required.	

Description	Timing	
Geophysical Survey		
Indicative baseline Survey will provide information about the presence of buried archaeological remains that could be impacted by the construction of the Project.	To inform trial trenching design.	Year 2 – September 2026 to November 2026.
Scope and rationale Scope of survey to be agreed with Historic England and the local authority archaeological advisors, but likely to be required for substation sites and a 100m buffer from tower locations. Surveys could enable a degree of micro-siting of infrastructure in the design to reduce direct impacts on buried archaeological remains as embedded mitigation.	To inform ES.	For arable fields the survey season for geophysics is broadly August to March due to crop height.
Method Chartered Institute for Archaeologists Standard and guidance for Standard and guidance for archaeological geophysical survey (2020).		
Trial Trenching		
Indicative baseline Information about the nature and significance of buried known and unknown? archaeological remains.	To inform ES.	Year 2-3 - November 2026 to March 2027.
Scope and rationale Likely to be approximately 2% of key areas expected to experience direct impacts - tower footprints and substations. This scope will be agreed with Historic England and the local authority archaeological advisors wherever possible. National Grid would seek to demonstrate to consultees that impacts have been avoided by design, for instance compounds and haul routes being constructed on imported material rather than requiring excavation and therefore avoid the requirement to trench these areas. Trenching will enable mitigation measures to be designed and to inform the programme risk to construction.		

Description	Timing
Method	
Trial trenching will comprise the mechanical excavation of trenches, hand excavation of archaeological features, mechanical backfilling, followed by technical reports describing the findings and interpretations of the investigation. The trial trenching will be undertaken according to the Chartered Institute for Archaeologists Universal guidance for archaeological field evaluation (2023).	
The trial trenching will include both ‘blank’ areas from the geophysical survey and areas of known archaeological potential.	

10A. Water Framework Directive Screening and Scoping Assessment

Contents

10A1. Introduction	10A-1
10A1.1 Background	10A-1
10A1.2 Study Area	10A-1
10A1.3 Introduction to the Water Framework Directive	10A-1
10A2. Methodology	10A-3
10A2.1 WFD Methodology	10A-3
Stage 1: Screening	10A-3
Stage 2: Scoping	10A-3
Stage 3: Impact Assessment	10A-4
10A2.2 Mitigation Commitments	10A-4
10A2.3 WFD Compliance Checks	10A-4
10A2.4 WFD Derogation	10A-5
10A2.5 Desk Study	10A-5
10A2.6 Field Survey	10A-5
10A2.7 Assumptions and Limitations	10A-6
10A3. WFD Screening	10A-8
10A3.1 WFD Screening Overview	10A-8
10A3.2 Screening of WFD Water Bodies	10A-8
10A3.3 Screening of Activities	10A-11
10A3.4 Summary of WFD Screening Assessment	10A-18
10A4. WFD Scoping	10A-19
10A5. Conclusion	10A-21
10A.1 WFD River Water Body Catchments	10A-23
10A.2 WFD Groundwater Bodies	10A-23

Table 10A.1 Screening of WFD water bodies	10A-8
Table 10A.2 Screening of Activities	10A-11
Table 10A.3 WFD scoping of the Project’s Components Activities Against WFD Quality Elements	10A-19

References	10A-22
Figures	10A-23

10A1. Introduction

10A1.1 Background

10A1.1.1 This Water Framework Directive (WFD) Screening and Scoping Assessment has been produced alongside the Environmental Impact Assessment (EIA) Scoping Report (hereafter referred to as the 'Scoping Report') for The Weston Marsh to East Leicestershire Project (hereafter referred to as the 'Project').

10A1.1.2 The Project is described in **Chapter 4 Description of the Project**.

10A1.2 Study Area

10A1.2.1 For the purposes of this assessment, and consistent with the **Chapter 10 Water Environment** of the Scoping Report, a general Study Area of approximately 500 m from the Scoping Boundary has been considered to identify water bodies that are hydrologically connected to the Project and therefore have the potential to be impacted by the Project. However, given that water quality impacts may propagate downstream, where relevant the assessment also considers a wider Study Area to as far downstream as a potential impact may influence the quality or quantity of water available for any water features. This will be defined further as the EIA progresses, but for this scoping exercise a few kilometres has been used. This is based on professional judgement and is the distance within which it is considered there is the potential for adverse impacts to occur. It should also be noted that the Study Area for the FRA may cover a wider area than 500 m beyond the Order Limits, in order to also include reaches of the watercourse upstream/downstream of the site that may impact or be impacted by the site. This will be defined at later stages of assessment and within the Environmental Statement (ES).

10A1.2.2 The Scoping Boundary and the Study Area interacts with multiple WFD water body (river) catchments as illustrated on **Figure 10A.1 WFD Surface Water Bodies** and **Figure 10A.2 WFD Groundwater Bodies**.

10A1.3 Introduction to the Water Framework Directive

10A1.3.1 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 10A.1), hereafter referred to as the 'Water Framework Directive (WFD)', aims to protect and enhance the water environment.

10A1.3.2 The WFD takes a holistic approach to sustainable management of the water environment by considering interactions between surface water, groundwater and water-dependent ecosystems. Ecosystem conditions are evaluated according to interactions between classes of biological, chemical, physico-chemical and hydromorphological elements known as 'Quality Elements'.

10A1.3.3 Under the WFD, 'water bodies' are the basic management units, defined as all or part of a river system or aquifer. Water bodies form part of a larger 'river basin district' (RBD), for which 'River Basin Management Plans' (RBMPs) are used to summarise

baseline conditions and set broad improvement objectives. RBMPs are produced every six years, in accordance with the river basin management planning cycle. The current RBMPs are Cycle 3 that were published in 2022.

- 10A1.3.4 In England, the Environment Agency is the competent authority for implementing the WFD, although objectives are delivered in partnership with other public bodies and private organisations, for example local planning authorities, water companies, rivers trusts, and private landowners and developers.
- 10A1.3.5 The Environment Agency is also responsible for managing flood risk and other activities on Main Rivers. Lead Local Flood Authority (LLFA) or Internal Drainage Boards (IDBs) are typically responsible for consenting activities that may affect the flow of Ordinary Watercourses. Local planning and highway authorities are typically responsible for highways drains, and landowners are typically responsible for ditches and watercourses within their property including piped watercourses and culverts (i.e. they have riparian ownership). While the Environment Agency is ultimately responsible for enforcing the WFD on any water body, local planning authorities and other regulating bodies are required to consider RBMPs when exercising their statutory functions.
- 10A1.3.6 As part of its regulatory and statutory consultee role on planning applications and environmental permitting (under the Environmental Permitting Regulations (England and Wales) 2016) (Ref 10A.2), the Environment Agency and WFD-partnering organisations must consider whether proposals for new developments have the potential to:
- Cause a deterioration of any quality element of a water body from its current status or potential; and/or
 - Prevent future attainment of good status or potential where not already achieved.
- 10A1.3.7 Regulation 33 of the WFD states that public bodies '*must, in exercising their functions so far as affecting a river basin district, have regard to - (a) the river basin management plan for that district as approved under regulation 31, and (b) any supplementary plan prepared under regulation 32.*' The Scheme must therefore reflect water body improvement priorities as outlined in the Humber RBMP (Ref 10A.3) and Anglian RBMP (Ref 10A.4).
- 10A1.3.8 In determining whether a development is compliant or non-compliant with the WFD objectives for a water body, the Environment Agency and partnering organisations must also consider the conservation objectives of any Protected Areas (i.e. European sites or water dependent Sites of Special Scientific Interest) and adjacent WFD water bodies, where relevant.

10A2. Methodology

10A2.1 WFD Methodology

- 10A2.1.1 There are no fixed methods for WFD assessment. The nature of the water environment and the breadth of the legislation mean that assessments are tailored to proposals on a case-by-case basis.
- 10A2.1.2 The following general guidance is available which has been applied for this assessment:
- Environment Agency (2016a). Water Framework Directive risk assessment. How to assess the risk of your activity. (Ref 10A.5).
 - Environment Agency (2016b). Protecting and improving the water environment. Water Framework Directive compliance of physical works in rivers. (Ref 10A.6).
 - The Planning Inspectorate (2024), Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive. (Ref 10A.7).
- 10A2.1.3 A stepwise approach consisting of screening, scoping and impact assessment phases is generally followed in order to: (a) rationalise the levels of WFD assessment and impact mitigation that are required; and (b) verify that proposals meet the requirements of the WFD. The general approach is described by the Planning Inspectorate (2024): Advice on the Water Framework Directive and briefly summarised below. The stepwise approach means that not all WFD assessment stages are necessarily required.

Stage 1: Screening

- 10A2.1.4 Screening identifies the extent to which a proposed development is likely to affect water bodies. Where impacts are 'screened out' from further assessment, this is clearly justified.
- 10A2.1.5 The screening stage:
- Shows all relevant WFD water bodies on a map or plan.
 - Identifies the zone or zones of influence based on specific activities and/or characteristics of a proposed development that could affect the identified water bodies.
 - Identifies any specific activities and/or characteristics of the proposed development that have been screened out and why.
- 10A2.1.6 Screening may find that no further consideration of WFD matters is needed. For example, where water bodies are not located within the development's zone of influence or where no impact pathways exist.

Stage 2: Scoping

- 10A2.1.7 After screening, the scope of further assessment is determined if required.

10A2.1.8 The scoping stage involves:

- An initial assessment to identify the risks from a proposed development to receptors within the zone of influence, based on the relevant water bodies and their water quality elements.
- Identification of those water bodies where a more detailed impact assessment is needed.

Stage 3: Impact Assessment

10A2.1.9 The impact assessment is a detailed assessment of the water bodies and activities carried forward from the WFD screening. It is set within the context of the appropriate RBMPs and includes:

- Identification of water bodies that are potentially affected, directly or indirectly, or at risk from a proposed development.
- The baseline characteristics of the water bodies affected.
- A description of the proposed development and the aspects of the development considered within the scope of the WFD assessment.
- The methods used to determine and quantify the scale of WFD impacts.
- An assessment of the risk of deterioration, where Article 4.7 may apply if the proposed development may risk deterioration in status or prevent achievement of good status.
- An explanation of any mitigation required and how it is secured.
- An explanation of any enhancements and/or positive contributions to the RBMP objectives proposed and how they would be secured.
- Where a derogation is required, information to justify the case for derogation.
- Identification of any areas of non-compliance.

10A2.2 Mitigation Commitments

10A2.2.1 Proposed mitigation activities relied upon to demonstrate compliance at any of the stages referred to above must be appropriately defined and sufficiently secured.

10A2.3 WFD Compliance Checks

10A2.3.1 All of the staged assessments summarised above consider potential risk sources, pathways and receptors with regards to the following checks for compliance with WFD objectives:

- Works will not lead to deterioration in the quality of a water body.
- Works will not prevent the future improvement of a water body.
- Works will not impact a protected nature conservation area or priority habitat.
- Works will not impact a protected or priority species.
- Potential cumulative impacts have been considered.

- Opportunities have been sought to improve the water environment.

10A2.4 WFD Derogation

- 10A2.4.1 Where WFD impact assessment identifies potential risks to WFD objectives that cannot reasonably be avoided or mitigated, the legislation includes mechanisms for derogation. WFD Regulation 17 and Regulation 19 set out stringent and ‘last resort’ planning and legal processes for WFD derogation that are case specific and would be beyond the scope of this assessment. Case review of any proposed justification by an applicant would be a matter for the Secretary of State and is likely to require a substantial body of multi-disciplinary evidence.

10A2.5 Desk Study

- 10A2.5.1 A desk-based study was carried out to capture information pertaining to the Project and support the understanding of water environment baseline conditions. Review of relevant information relating to the Study Area was undertaken to develop a baseline overview for WFD catchments, water bodies and surrounding areas. This focuses on WFD classification of relevant water bodies. For a full summary of the water environment baseline conditions for the Study Area please refer to **Chapter 10 Water Environment** of this Scoping Report.

10A2.6 Field Survey

- 10A2.6.1 At the time of writing, no site walkovers have been undertaken, and so it is not possible to establish in detail the baseline conditions of watercourses local to the Project. Site walkover surveys will be undertaken at later stages and reported in the Environmental Statement (ES) and WFD Impact Assessment. Although surveys can be undertaken at any time of year, it is currently proposed to visit the site at more optimal times when there is likely to be better visibility of watercourse channels.
- 10A2.6.2 The walkover surveys will focus on surface watercourses within the Study Area, observing their current character and condition, the presence of existing risks, and seek to identify any potential pathways for construction and operation impacts from the Project. These observations would then be considered within the context of the WFD to establish a baseline for each of the Hydromorphological Quality Elements.
- 10A2.6.3 Where it is not possible to survey a crossing location or structure due to access constraints or visibility issues (e.g. dense vegetation), a nearby proxy location will be surveyed. However, some watercourses may be small, ephemeral and flow only intermittently, and it may not be possible to identify all of these in the field or observed when flowing.
- 10A2.6.4 At this scoping stage, and taking into consideration the nature of the Project and degree of risk to the water environment, no water quality monitoring or aquatic ecological surveys are proposed. Where available, background data from routine Environment Agency monitoring that underpins the current WFD classifications for each watercourse will be used to inform the baseline. This is considered an appropriate and standard approach. Water quality monitoring is only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results, which is not considered the case here. Therefore,

no water quality sampling is proposed to support the water environment and WFD assessment.

10A2.7 Assumptions and Limitations

- 10A2.7.1 The location and layout of infrastructure (including access track routes and the need to cross any watercourses, location and size of site compounds, construction methodologies and mitigation), have not yet been determined. This is of particular importance when considering impacts associated with temporary watercourse crossings for access, the quality of surface water runoff, impacts to hydromorphology and channel hydraulics. At this scoping stage it is assumed that the protection of water environment receptors would be taken into account within the iterative design process, including the choice of crossing methodology and use of good practice methodologies for construction. An Initial Outline Code of Construction Practice (CoCP) has been produced to support the Scoping Report and is provided in **Appendix 4A Initial Outline Code of Construction Practice**. It has been produced to set out control and management measures that will be undertaken during construction of the Project.
- 10A2.7.2 Culvert installations may be required for temporary access tracks to cross ditches and watercourses. Detail on the type of temporary or permanent access crossing to be used over watercourses is not confirmed at this scoping stage. Therefore, applying the precautionary principle and reflecting a reasonable worst-case scenario, it has been assumed that crossings will be pipe culverts. The size and depth of a culvert is dependent upon the dimensions of the crossing, sensitivity, and importance of the watercourse. As the Project develops assessment of the impact at each crossing point will be undertaken and a suitable crossing type agreed with statutory consultees. This may include clear span structures for larger or more sensitive watercourses, with the culvert hierarchy applied elsewhere.
- 10A2.7.3 At this scoping stage it is proposed that the new power line will be entirely overhead. However, if any undergrounding of the line is required, the scope of the assessment will include identification of any watercourse crossings and then the determination of a suitable crossing method. For example, this may include a combination of non-intrusive (e.g. Horizontal direction drill) or intrusive techniques (e.g. open-cut) and determination of the minimum depth the cables will be placed below the bed (e.g. 1.5 m in line with FRAP exemption criteria). There may also need to be some consideration of the heat that may be given off by cables, although at this stage it is considered that this would not result in any significant change to water temperature in water features.
- 10A2.7.4 It is assumed that the iterative design process will allow water receptors to be avoided and a suitable drainage strategy developed that includes attenuation and treatment of runoff, as required. New surface water outfalls are expected from the proposed new substations. At this scoping stage, and again applying a precautionary approach, it is assumed that these would be to watercourses via new engineered outfalls. The future drainage design for the Project will consider the opportunity for infiltration or, if this is not possible, the inclusion of ditches to avoid new engineered structures along receiving watercourses.
- 10A2.7.5 At the time of writing, it is not known whether there would be a need for a permanent foul drainage solution from the proposed new substations. If required, options may include connecting to the nearest available public sewer or a self-contained

independent non-mains domestic storage and/or treatment system. Iterative design and assessment will consider the options and adopt a precautionary worst-case approach. However, it is assumed that there will be no local discharge to a watercourse. Similarly, it is assumed that if a potable water supply is required at the proposed new substation sites, that this would not involve an abstraction from a local source but would be connected to the mains supply.

10A3. WFD Screening

10A3.1 WFD Screening Overview

10A3.1.1 The purpose of the WFD screening stage is to identify a zone of influence of the Project and to determine whether that influence has the potential to adversely impact upon WFD water body receptors. The screening stage also identifies specific components of the Project that could affect receptor water bodies’ WFD status and carries them forward to subsequent stages of the assessment process. Water body receptors or activities that are screened out are not carried forward, and justification is provided.

10A3.2 Screening of WFD Water Bodies

10A3.2.1 The Project interacts with a number of WFD surface water and groundwater bodies. WFD Screening of these water bodies is provided in **Table 10A.1**. Smaller tributaries within each of the WFD water body catchments that may be impacted by the Project are considered in this assessment. Any other remaining downstream water bodies not mentioned below are considered sufficiently far downstream to avoid impacts of the Project or would not interact with the Project and are therefore screened out of further assessment.

Table 10A.1 Screening of WFD water bodies

Water Body	WFD IDs	Screening Outcome	Justification
Surface water bodies			
Vernatt’s Drain	GB205031050705	In	The Scoping Boundary interacts with these water bodies. Thus, there is a risk to WFD quality elements and the ecological and chemical status of each receptor water body from activities that would interact with the local watercourse network during the construction and operation phases of the Project. Potential impacts would include intrusive access track crossings, receiving surface water runoff, spillages, fine sediment and organic material. Therefore, these water bodies are screened in for further assessment. However, this is based on a precautionary
The Glen’s	GB105031050720		
Black Sluice IDB draining to the South Forty Foot Drain	GB205030051515		
Old Beck	GB105030051540		
East Glen River	GB105031055480		
West Glen - Upper	GB105031050450		
The Tham	GB105031055510		
Witham – headwaters to conf Cringle Bk	GB105031050650		
Smite from Source to Dalby Brook	GB104028047240		
Eye from Source to Langham Brook	GB104028047610		

Water Body	WFD IDs	Screening Outcome	Justification
Freeby Brook Catchment (trib of Eye)	GB104028047580	assessment due to limitations on available Project information at this early stage. It is possible that once further Project information is known this initial screening decision could be altered.	
Thorpe Brook Catchment (trib of Eye)	GB104028047590		
Scalford Brook Catchment (trib of Wreake)	GB104028047600		
Welby Brook Catchment (trib of Wreake)	GB104028047570		
Great Dalby Brook Catchment (trib of Wreake)	GB104028047510		
Eye / Wreake from Langham Brook to Soar	GB104028047550		
Austen Dyke Catchment (trib of Wreake)	GB104028047560		
Queniborough Brook Catchment (trib of Wreake)	GB104028047450		
Eye Brook	GB105031050550		
Stonton Brook	GB105031050460		
Langton Brook	GB105031045620		
Welland - headwaters to conf Jordan	GB105031045630		
Jordan (Welland)	GB105031045600		
Welland - conf Jordan to conf Langton Bk	GB105031045610		
Welland - conf Langton Bk to conf Gwash	GB105031050580		
Welland (Transitional)	GB530503100400		
Ise - Upper	GB105032045200		
Slade Brook	GB105032045170		
Loddington Arm (Ise)	GB105032045150		
Pytchley Brook	GB105032045110		
Hardwick Brook	GB105032045100		
Harrowden Brook (Nene)	GB105032045080		

Water Body	WFD IDs	Screening Outcome	Justification
Swanspool Brook	GB105032045070	In	There are potential impacts to groundwater bodies from excavations for the construction of substation and potential for dewatering from construction. Therefore, groundwater bodies are screened in for further assessment.
Sywell Brook	GB105032045430		
Nene - conf Brampton Branch to conf Ise	GB105032045050		
Grendon Brook	GB105032045330		
Castle Ashby Arm (Grendon Brook)	GB105032045030		
Grendon Brook	GB105032045040		
Groundwater bodies			
Welland Limestone Unit B	GB40502G446000	In	There are potential impacts to groundwater bodies from excavations for the construction of substation and potential for dewatering from construction. Therefore, groundwater bodies are screened in for further assessment.
Welland Mid Jurassic Unit	GB40501G445300		
Welland Limestone Unit A	GB40501G445900		
Witham Limestone Unit A	GB40501G444800		
Witham Lias	GB40502G401400		
Soar – Secondary Combined	GB40402G990600		
Lower Trent Erewash – Secondary Combined	GB40402G990300		
Welland Lower Jurassic Unit	GB40502G304000		
Warwickshire Avon – Secondary Mudrocks	GB40902G990900		
Nene Mid Lower Jurassic Unit	GB40502G402400		
Northampton Sands	GB40501G445500		

10A3.3 Screening of Activities

The Project comprises a number of activities, some of which present a potential risk to the WFD status of water bodies. These components and activities are listed in **Table 10A.2** together with a screening assessment.

Table 10A.2 Screening of Activities

Activity/Component	Description	Screening Outcome	Justification
60 km of new 400 kV overhead transmission line	New overhead line supported on towers c. 50-60 m in height and placed approximately every 350 m. The current preferred option is for the towers to be a steel lattice design.	In	The new overhead line would need to be supported on towers, the construction of which, and permanent placement of foundations, could have temporary and permanent adverse impacts on any nearby water receptors or groundwater. To mitigate these risks, towers should avoid water features and be positioned away from the top of the bank by a sufficient distance (e.g. 15 m). Overflight of watercourses by the overhead line should also be as perpendicular as possible, water features and the overhead line should ideally cross the channel perpendicular to the flow, at a narrow point in both the channel and any floodplain, and at sufficient height above the channel and banks. However, at this stage the final position of towers has not yet been determined, and there are competing factors that need to be considered when siting them. Construction works can be effectively managed using standard protection measures and details of what these are expected to be are set out in Appendix 4A Initial Outline Code of Construction Practice. Finally, there would be no permanent impacts on WFD quality elements from the new overhead line during operation.
A new 400 kV substation to be built in the vicinity of the existing 4VK 400 kV overhead line near	The precise location and layout of the substation will be confirmed through further design, assessment, and	In	During construction of the substation, there is potential for works to cause temporary and local impacts to water quality from sediment laden runoff or from the accidental spillage of polluting substance. To ensure compliance with WFD objectives, infrastructure should not be located within close

Activity/Component	Description	Screening Outcome	Justification
Corby Glen, South Kesteven (WMEL-A)	consideration of stakeholder feedback. During construction, activities will include: soil stripping, earthworks and excavations; use and refuelling of plant and vehicles; temporary works (e.g. spoil storage). The permanent foul, oily water, including below ground oil separator, and surface water drainage systems would be installed once the preparatory works are complete. Reinforced concrete bunds would be installed for each supergrid transformer (SGT) and would comprise a perimeter concrete wall, a base slab continuous with the wall and a central plinth for supporting the SGT. The bunds act as a secondary oil containment measure.		proximity of a watercourse and the CoCP (Appendix 4A Initial Outline Code of Construction Practice) includes measures to mitigate the risk of water quality impacts to watercourses. The proposed substations will have large areas of impermeable surfaces which have the potential during operation to increase the volume and rate of surface water runoff to any receiving watercourses, which also has implications for downstream flood risk. A Flood Risk Assessment (FRA) and Drainage Strategy will be prepared to provide for the attenuation of surface water runoff from areas of hardstanding associated with substations, and further details can be found in Chapter 10 Water Environment of the Scoping Report. In accordance with planning policy guidance, runoff from the Project would be attenuated to ensure no increase in surface water discharge rates to watercourses and to provide water quality treatment of runoff water. New engineered outfalls may be required, where infiltration is not proposed or ditches cannot be used for the final connection to a watercourse. However, until the above mitigation is confirmed within the design this activity will remain screened in for assessment for potentially impacted water bodies.
A new 400 kV substation to be built in the vicinity of the existing ZA 400 kV OHL near Ab Kettleby, Melton (WMEL-B)	Substations will typically be unmanned during operation. However, some sites are to be manned permanently or temporarily. Thus, there may be a need for a potable water supply or foul drainage provision.	In	During construction of the substation, there is potential for works to cause temporary and local impacts to water quality from sediment laden runoff or from the accidental spillage of polluting substance. To ensure compliance with WFD objectives, infrastructure should not be located within close proximity of a watercourse and the CoCP (Appendix 4A Initial Outline Code of Construction Practice) includes measures to mitigate the risk of water quality impacts to watercourses. The proposed substations will have large areas of impermeable surfaces which have the potential during operation to increase the volume and rate of surface water runoff to any receiving watercourses, which also has implications for downstream flood

Activity/Component	Description	Screening Outcome	Justification
			risk. A FRA and Drainage Strategy will be prepared to provide for the attenuation of surface water runoff from areas of hardstanding associated with substations, and further details can be found in Chapter 10 Water Environment of the Scoping Report. In accordance with planning policy guidance, runoff from the Project would be attenuated to ensure no increase in surface water discharge rates to watercourses and to provide water quality treatment of runoff water. New engineered outfalls may be required, where infiltration is not proposed or ditches cannot be used for the final connection to a watercourse. However, until the above mitigation is confirmed within the design this activity will remain screened in for assessment for potentially impacted water bodies. Until the above mitigation is confirmed within the design, this activity will remain screened in for assessment for potentially impacted WFD water bodies.
New substation infrastructure to connect to the existing 400 kV 4ZM transmission line that runs south east of Sleaford towards King's Lynn and the existing 400 kV 2WS transmission line that runs east of Spalding towards a Tee Point with the 400 kV 4ZM transmission line between Sleaford and King's Lynn (Weston Marsh)	The precise location and layout of the substation infrastructure will be confirmed through further design, assessment, and consideration of stakeholder feedback. During construction, activities will include: soil stripping, earthworks and excavations; use and refuelling of plant and vehicles; temporary works (e.g. spoil storage). The permanent foul, oily water, including below ground oil separator, and surface water drainage systems would be	In	During construction of the substation infrastructure, there is potential for works to cause temporary and local impacts to water quality from sediment laden runoff or from the accidental spillage of polluting substance. To ensure compliance with WFD objectives, infrastructure should not be located within close proximity of a watercourse and the CoCP (Appendix 4A Initial Outline Code of Construction Practice) includes measures to mitigate the risk of water quality impacts to watercourses. The proposed substation infrastructure will have large areas of impermeable surfaces which have the potential during operation to increase the volume and rate of surface water runoff to any receiving watercourses, which also has implications for downstream flood risk. A FRA and Drainage Strategy will be prepared to provide for the attenuation of surface water runoff from areas of hardstanding associated with substations, and further details can be found in Chapter 10

Activity/Component	Description	Screening Outcome	Justification
substation infrastructure)	installed once the preparatory works are complete. Reinforced concrete bunds would be installed for each supergrid transformer (SGT) and would comprise a perimeter concrete wall, a base slab continuous with the wall and a central plinth for supporting the SGT. The bunds act as a secondary oil containment measure. Substations will typically be unmanned during operation. However, some sites are to be manned permanently or temporarily. Thus, there may be a need for a potable water supply or foul drainage provision.		Water Environment of the Scoping Report. In accordance with planning policy guidance, runoff from the Project would be attenuated to ensure no increase in surface water discharge rates to watercourses and to provide water quality treatment of runoff water. New engineered outfalls may be required, where infiltration is not proposed or ditches cannot be used for the final connection to a watercourse. However, until the above mitigation is confirmed within the design this activity will remain screened in for assessment for potentially impacted water bodies.
Reconductoring of approximately 66 km of the existing ZA 400 kV overhead line from WMEL-B to the existing Grendon substation		Out	It is unlikely that there would be any impact to WFD water bodies from this activity, providing standard mitigation measures as set out in Appendix 4A Initial Outline Code of Construction Practice are implemented, and assuming that if any towers need to be replaced, the new structure avoids water features. Therefore, on this basis it is proposed to screen out this component of the Project, although it will be kept under review and the design progresses.
Replacement of short sections of existing 400 kV overhead line and local changes to the lower voltage distribution networks to facilitate the construction of the new overhead line and substations		Out	It is unlikely that there would be any impact to WFD water bodies from this activity, providing standard mitigation measures as set out in Appendix 4A Initial Outline Code of

Activity/Component	Description	Screening Outcome	Justification
			Construction Practice are implemented, and so it is proposed to be screened out of further assessment.
Temporary construction compounds	This would contain construction worker welfare facilities, a site office, limited parking, wheel wash area, plant and machinery storage, Heavy Goods Vehicle (HGV)/delivery turning area and waste storage areas. The number of compounds is not yet known.	In	During construction, there would be a temporary increase in areas of hardstanding which could increase surface water runoff to watercourses. Temporary drainage would be required during construction and should include measures to address silt runoff. Compounds are also likely to include fuel stores and parking for plant and cars. Additionally, new structures should not be located within close proximity of surface water bodies so that there are no mechanisms for hydromorphological impact to surface water bodies. Potable water supply will be needed for welfare facilities as well as foul drainage. At this stage it is assumed that potable water will be from a mains supply and there would be no local abstraction. Similarly, foul water would either be directed to the public sewer or would be captured within a sealed cess pit and/or temporary facilities (e.g. portable welfare units) and treated off-site (i.e. no discharge to any watercourse).
Access tracks	Existing accesses to be used where possible. New two-way stone access track/haul roads typically 9-10 m wide, with storage and drainage, typical swathe of 21 m. Stone laid on geotextile membrane or interlocking panels. Culvert installations may be required for temporary access tracks to cross ditches and watercourses. The size and depth of a culvert is dependent upon the dimensions of the	In	The construction of access tracks over watercourses will likely cause temporary physical disturbance and impacts on flow regimes. The creation of new temporary culverts should be avoided. Where the crossing of watercourses is required, a clear span bridge should instead be used with the abutments set back from the top of the bank surrounding the watercourse that way any foundations that are required can be built without physically impacting the channel. However, in some circumstances it may be proportionally expensive to provide clear span structures and it may be possible to justify a culvert. If culverts are proposed then it should be done so with a view to maintain connectivity along the watercourse for aquatic species and riparian mammals, where these are shown to be present. Adverse impacts can be done by applying the culvert hierarchy. For example, arch culverts maintain the existing bed and

Activity/Component	Description	Screening Outcome	Justification
	crossing, sensitivity, and importance of the watercourse.		natural substrate can be provided through temporary watercourse crossings using box culverts. Temporary culverts will be sized to reflect the span, width and estimated flow characteristics of the watercourse under peak flow conditions and be kept free from debris. Access structures will need to be built online and so a dry working area will need to be provided and the watercourse flow over-pumped or flumed during culvert installation. Additionally, access tracks may provide a source of fine and other contaminants which may have impacts on WFD quality element receptors. Once the works are complete the temporary structures will be removed and the bed and banks of the watercourse reinstated, potentially with some enhancement over baseline. Further details are provided in Chapter 10 Water Environment of the Scoping Report. The route of the access tracks, the watercourses they may interact with, and the mode of watercourse crossing are unknown at the time of writing. Thus, until there is a confirmed detailed design that demonstrates that the recommendations outlined above will be followed, this activity must be screened in for this stage of assessment.
Abnormal Indivisible Loads (AILs)	Abnormal Indivisible Loads (AILs) would be required to enable construction of the on-site substation, the ES would confirm the number and suggested routing of these movements, which are unknown at this stage.	Out	If the AILs cross watercourses and there is a need for any works to the existing structure, that could have impacts but would be included with the point described above. In terms of traffic related water quality pollution risks, the number of temporary construction traffic movements would not be material to the traffic flows expected on local roads and thus there would not be any material increase in the pollution risk to any receiving watercourse from local road runoff.
Tower working areas	Tower working areas would typically be 70 m x 70 m. They would either be stone laid on a	In	The tower working areas may cause temporary and local impacts to water quality from sediment laden runoff or from the accidental spillage of polluting substance.

Activity/Component	Description	Screening Outcome	Justification
	geotextile or formed of interlocking panels. There will typically be three towers for every kilometre of overhead line.		During construction, there would be a temporary increase in areas of hardstanding which could increase surface water runoff to watercourses. To ensure compliance with WFD objectives, infrastructure should not be located within close proximity of a watercourse and the CoCP (see Appendix 4A Initial Outline Code of Construction Practice) should include measures to mitigate the risk of water quality impacts to watercourses. However, until the above mitigation is confirmed within the design, this activity will remain screened in for assessment for potentially impacted water bodies.

10A3.4 Summary of WFD Screening Assessment

10A3.4.1 Thirty-eight WFD surface water bodies and eleven groundwater bodies are within the 500 m potential zone of influence of the Project and have therefore been 'screened in' for WFD assessment.

10A3.4.2 The Project's activities have also been screened for potential WFD risks, considering likely design and standard mitigation. The outcome of activity screening was that six of the broad activities associated with the Project pose significant risks to local water bodies, sensitive water habitats or WFD objectives. These activities are:

- a new 400 kV substation to be built in the vicinity of the existing 4VK 400 kV overhead line near Corby Glen, South Kesteven (WMEL-A);
- a new 400 kV substation to be built in the vicinity of the existing ZA 400 kV overhead line near Ab Kettleby, Melton (WMEL-B);
- new substation infrastructure to connect to the existing 400 kV 4ZM transmission line that runs south east of Sleaford towards King's Lynn and the existing 400 kV 2WS transmission line that runs east of Spalding towards a Tee Point with the 400 kV 4ZM transmission line between Sleaford and King's Lynn (Weston Marsh substation infrastructure);
- temporary construction compounds;
- access tracks where they cross watercourses; and
- tower working areas where these are in close proximity to water features or works above watercourses.

10A4. WFD Scoping

10A4.1.1 The WFD scoping stage defines the level of detail required for further WFD assessment. This includes identifying risks to the WFD receptors from the Project components that were screened in, in **Table 10A.2**. The scoping stage assessment is presented in **Table 10A.3**.

Table 10A.3 WFD scoping of the Project's Components Activities Against WFD Quality Elements

WFD Quality Element	Scoping Outcome	Justification
Biological Quality Elements		
Fish	In	Potential new culverts for access track crossings could have an impact on longitudinal connectivity of watercourses and therefore impact fish migration. Possible increase in fine sediment and organic material to water bodies and potential chemical spillages during construction could affect water quality and therefore impact fish.
Invertebrates	In	Possible increase in fine sediment and organic material to water bodies and potential chemical spillages during construction could affect water quality and therefore impact invertebrates. In-channel works for construction of new temporary culverts may cause direct mortality of invertebrates.
Macrophytes and phytobentos	In	In-channel works for construction of new temporary culverts may cause the removal of macrophytes. Fine sediment from construction runoff can smother macrophytes and temporarily increase turbidity that can affect potential for photosynthesis. Chemical herbicides may be used to control weed growth on earth stockpiles.
Physico-chemical Quality Elements		
Thermal Conditions	In	Potential for new culverts could increase shading of watercourses and therefore impact thermal conditions but only locally.
Oxygenation Conditions	In	Possible increase in fine sediment and organic material delivered to water body from construction activities, chemical spills or changes in flow due to temporary impoundments or blockages could result in a localised impact on dissolved oxygen conditions.
Salinity	Out	Although the use of de-icing salts on impermeable surfaces during construction and operation and cold weather cannot be ruled out, it is unlikely to be applied frequently and would only have a temporary and localised impact on salinity in receiving watercourses.

WFD Quality Element	Scoping Outcome	Justification
Acidification	In	Should a significant chemical spillage occur during construction there is the potential for the pH of the receiving watercourse to be temporarily altered.
Nutrient Conditions	In	Runoff from construction activities and access tracks may increase sediment loads and organic material to watercourses. There is also the potential for spillages of foul wastewater from welfare facilities.
Hydromorphological Quality Elements		
Quantity and Dynamics of Flow	In	Potential new culverts for access tracks could have an impact on flow dynamics within watercourses.
Connection to Groundwater Bodies	Out	It is unlikely that any activities would present a barrier to connection with groundwater bodies. Pipe and box culverts will create a barrier and the loss of the hyporheic zone of the watercourse, but this will be over a relatively short reach that would not be significant at the water body level.
River Continuity	In	Potential new culverts for access track crossings could present a disruption to watercourse continuity.
River Depth and Width Variation	In	Potential new culverts for access track crossings could cause local changes in channel profile, affecting river depth and width variation.
Structure and Substrate of the River Bed	In	Potential new culverts could negatively impact on the structure and substrate of the river bed.
Groundwater Quality Elements		
Quantitative Elements	In	There are potential temporary impacts from groundwater ingress to excavations that may locally lower groundwater levels.
Chemical Elements	In	There is the potential for adverse impacts to groundwater from temporary construction works, especially where there are excavations or piled foundations. If surface water runoff from the proposed substations is drained to ground or watercourse via unlined SuDS or ditches there could be new pathways along which chemical pollutants could travel.

10A5. Conclusion

- 10A5.1.1 This WFD Screening and Scoping Assessment has been prepared to identify potential risks of the Project to the status and objectives of WFD water bodies. At this stage it has been determined that all WFD water bodies within the Study Area should be screened in.
- 10A5.1.2 This WFD Screening and Scoping assessment has concluded that there are potential risks from the Project to the WFD objectives of those water bodies screened in. A scoping review has been undertaken to identify which WFD elements may be at risk from Project activities.
- 10A5.1.3 Overall, the risks of impacts to WFD water bodies and compliance with WFD objectives is considered to be low, and it is likely that all WFD risks can be designed out or mitigated. However, until designs affecting water bodies including appropriate mitigation measures become available, risks to WFD objectives cannot be ruled out. This assessment therefore concludes, on a precautionary basis, that a WFD Impact Assessment will need to be undertaken to demonstrate WFD compliance.

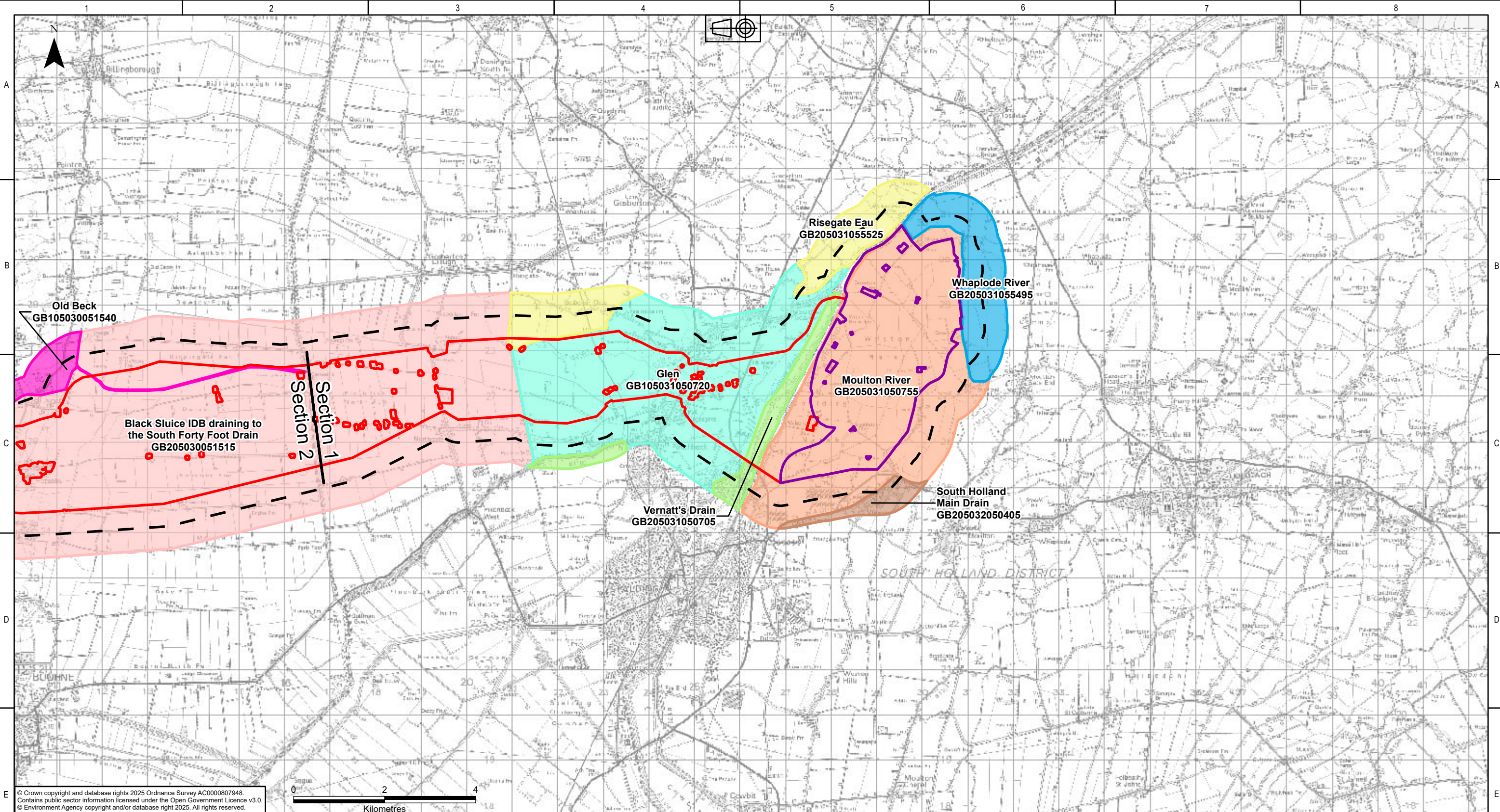
References

- Ref 10A.1 His Majesties Stationary Office, (2017). *Water Environment (Water Framework Directive) (England and Wales) Regulations 2017*. [online] Available at: <https://www.legislation.gov.uk/ukxi/2017/407> [Accessed August 2025].
- Ref 10A.2 His Majesties Stationary Office (2016). *The Environmental Permitting (England and Wales) Regulations 2016*. [online] Available at: <https://www.legislation.gov.uk/ukxi/2016/1154> [Accessed August 2025].
- Ref 10A.3 Environment Agency, (2022). *Humber river basin district river management plan: updated 2022*. [online] Available at: <https://www.gov.uk/guidance/anglian-river-basin-district-river-basin-management-plan-updated-2022> [Accessed August 2025].
- Ref 10A.4 Environment Agency, (2022). *Anglian river basin district river management plan: updated 2022*. [online] Available at: <https://www.gov.uk/guidance/anglian-river-basin-district-river-basin-management-plan-updated-2022> [Accessed 11 August 2025].
- Ref 10A.5 Environment Agency, (2016a). *Water Framework Directive risk assessment: How to assess the risk of your activity*. [online] Available at: <https://www.gov.uk/government/publications/water-framework-directive-how-to-assess-the-risk-of-your-activity> [Accessed 11 August 2025].
- Ref 10A.6 Environment Agency (2016b). Protecting and improving the water environment. Water Framework Directive compliance of physical works in rivers.
- Ref 10A.7 Planning Inspectorate, (2024). *Advice on the Water Framework Directive*. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-water-framework-directive> [Accessed 11 August 2025]
- Ref 10A.8 Environment Agency, (2025). *Catchment Data Explorer*. Available at: <https://environment.data.gov.uk/catchment-planning/> [Accessed 11 August 2025].

Figures

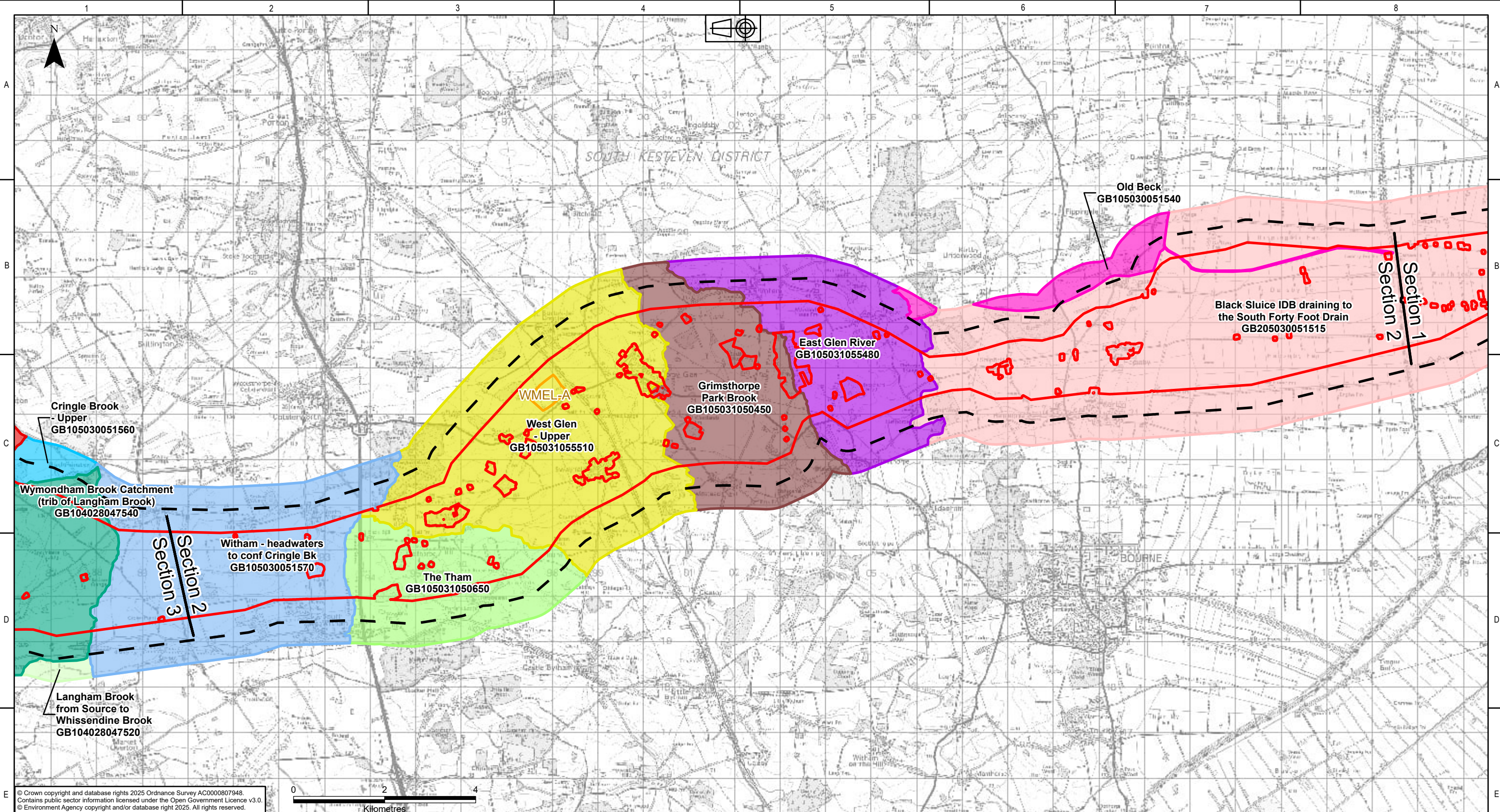
10A.1 WFD River Water Body Catchments

10A.2 WFD Groundwater Bodies

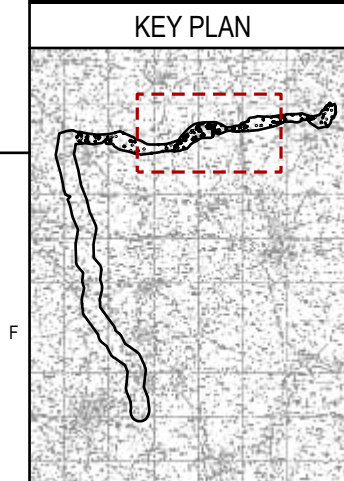


© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.

KEY PLAN 		Legend - Scoping Boundary - Sections 500m Study Area - Refined Weston Marsh Substation Siting Zone - River Water Body Catchments - Black Sluice IDB draining to the South Forty Foot Drain - Glen - Moulton River - Old Beck - Risegate Eau - South Holland Main Drain - Vernatt's Drain - Whaplode River	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>P01.01</td><td>29/10/2025</td><td>First issue</td><td></td><td>OT</td><td>DM</td><td>HJ</td><td>CS</td></tr><tr><td>Rev.</td><td>Date</td><td>Comment</td><td></td><td>Des</td><td>Drw by</td><td>Check</td><td>Appr.</td></tr></table>																																																																																	P01.01	29/10/2025	First issue		OT	DM	HJ	CS	Rev.	Date	Comment		Des	Drw by	Check	Appr.	nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA AECOM ARUP Designed O.TUCKER Drawn D.MOSNEANU	Site Weston Marsh to East Leicestershire Title Scoping Report: Figure 10A.1 WFD Surface Water Bodies Purpose of issue For Information Status S2 Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000051 NGET Drawing No. N/A Sheet 1 of 5 Size A3 Checked H.JENNER Approved C.STOCKS Date 29/10/2025 Scale 1:80,000 Revision P01
P01.01	29/10/2025	First issue		OT	DM	HJ	CS																																																																																														
Rev.	Date	Comment		Des	Drw by	Check	Appr.																																																																																														



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.



Legend	
	Scoping Boundary
	Sections
	500m Study Area
	Substations Siting Area
River Water Body Catchments	
	Black Sluice IDB draining to the South Forty Foot Drain
	Cringle Brook - Upper
	East Glen River
	Eye from Source to Langham Brook
	Grimsthorpe Park Brook
	Langham Brook from Source to Whissendine Brook
	Old Beck
	The Tham

P01.01	29/10/2025	First issue		OT	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

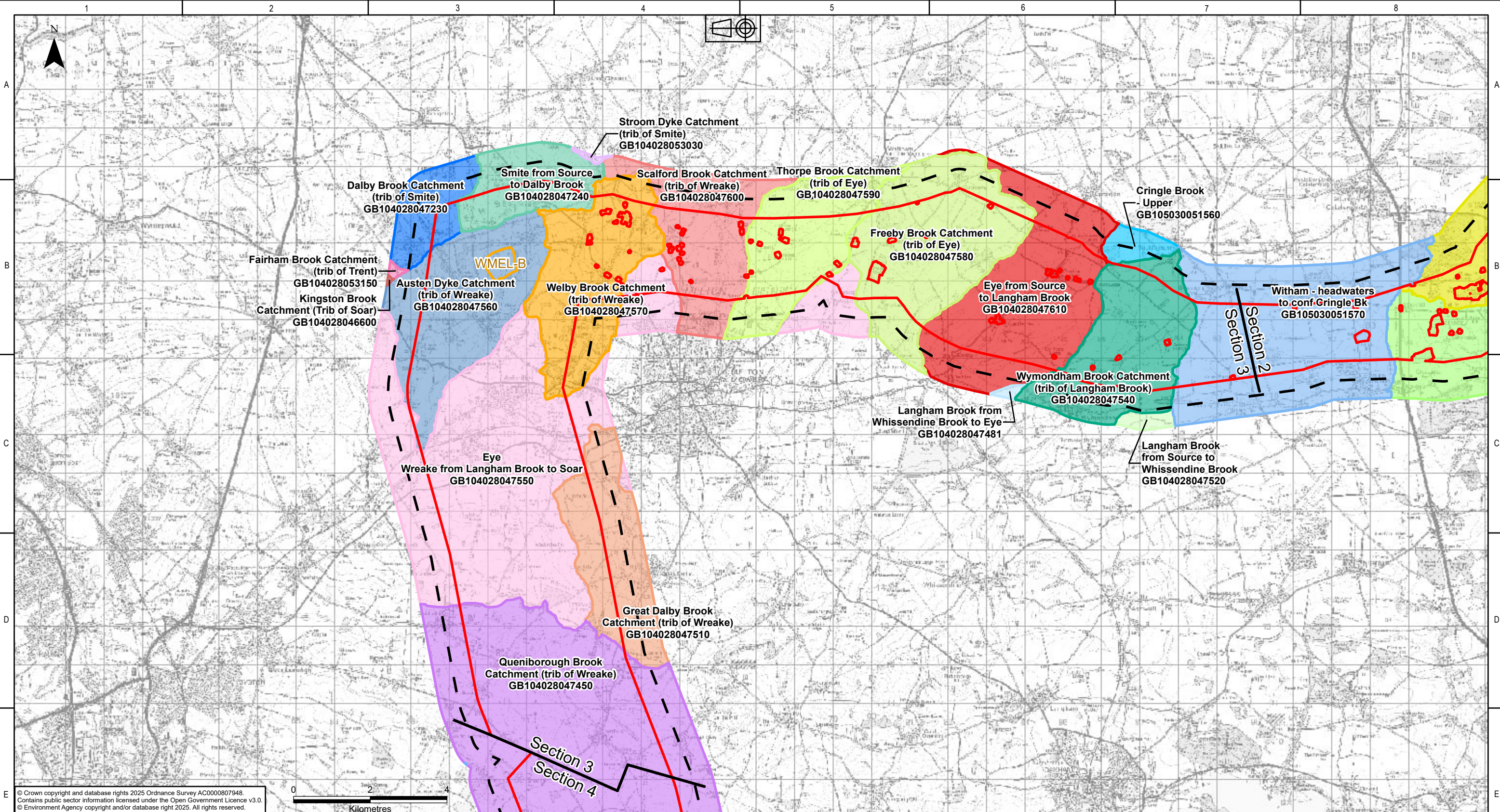
AECOM

ARUP

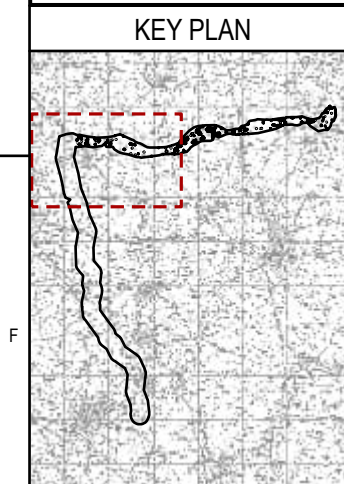
Designed
O.TUCKER

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 10A.1 WFD Surface Water Bodies	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000051	
NGET Drawing No. N/A	Sheet 2 of 5
Checked H.JENNER	Approved C.STOCKS
Date 29/10/2025	Scale 1:80,000
	Size A3
	Revision P01



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.



- Legend**
- Scoping Boundary
 - Sections
 - 500m Study Area
 - Substations Siting Area
 - River Water Body Catchments
 - Austen Dyke Catchment (trib of Wreake)
 - Cringle Brook - Upper
 - Dalby Brook Catchment (trib of Smite)
 - Eye / Wreake from Langham Brook to Soar
 - Eye from Source to Langham Brook
 - Fairham Brook Catchment (trib of Trent)
 - Freeby Brook Catchment (trib of Eye)
 - Great Dalby Brook Catchment (trib of Wreake)
 - Kingston Brook Catchment (Trib of Soar)
 - Langham Brook from Source to Whissendine Brook
 - Langham Brook from Whissendine Brook to Eye
 - Queniborough Brook Catchment (trib of Wreake)
 - Scaford Brook Catchment (trib of Wreake)
 - Smite from Source to Dalby Brook
 - Stroom Dyke Catchment (trib of Smite)
 - Syston Brook Catchment (trib of Wreake)
 - The Tham
 - Thorpe Brook Catchment (trib of Eye)
 - Welby Brook Catchment (trib of Wreake)
 - West Glen - Upper
 - Witham - headwaters to conf Cringle Bk
 - Wymondham Brook Catchment (trib of Langham Brook)

P01.01	29/10/2025	First issue		OT	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

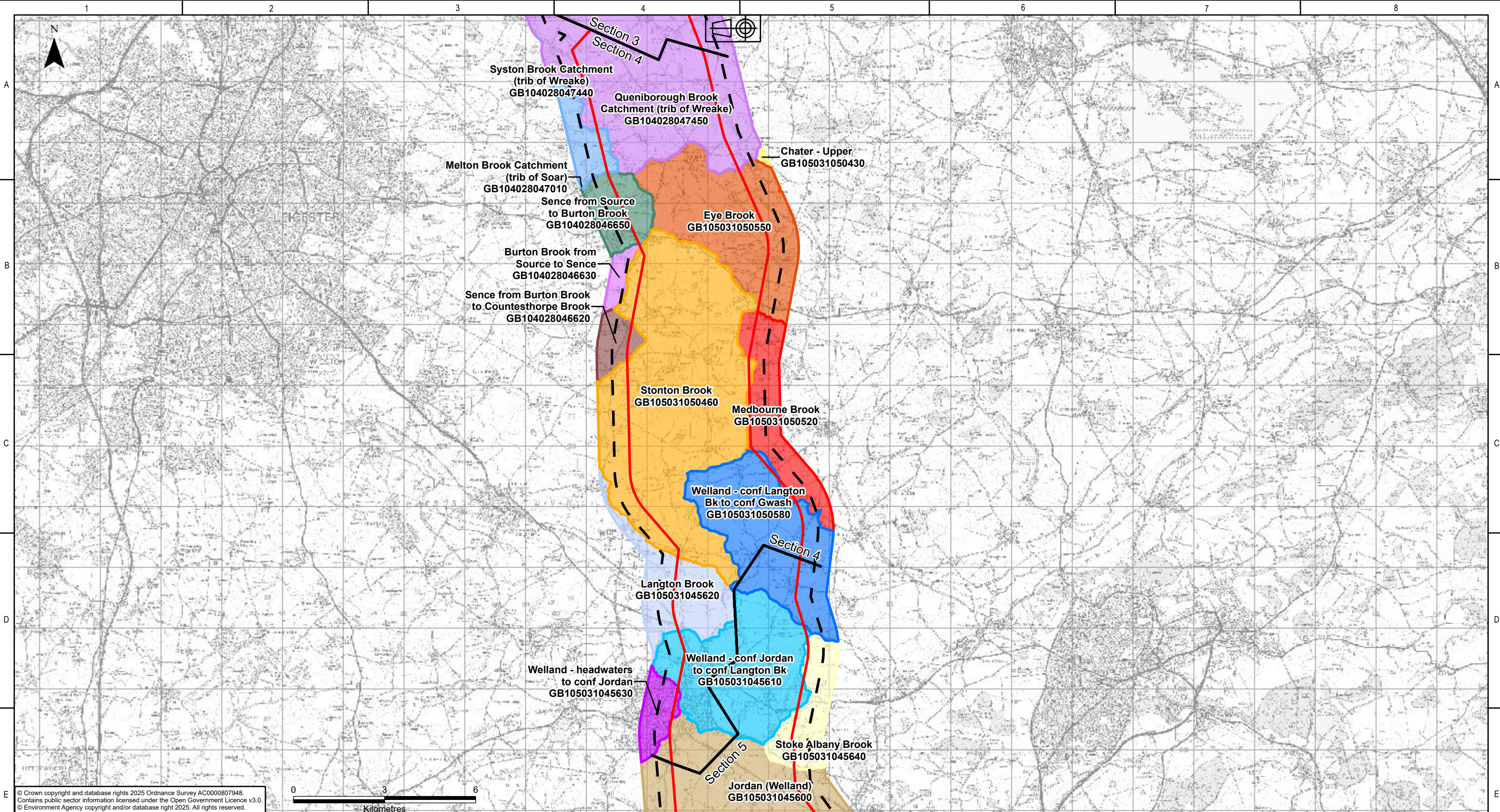
AECOM

ARUP

Designed
O.TUCKER

Drawn
D.MOSNEAU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 10A.1 WFD Surface Water Bodies	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000051	
NGET Drawing No. N/A	Sheet 3 of 5
Size A3	
Checked H.JENNER	Approved C.STOCKS
Date 29/10/2025	Scale 1:95,000
Revision P01	



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.

KEY PLAN

Legend

Scoping Boundary

Sections

500m Study Area

River Water Body Catchments

Burton Brook from Source to Sence

Chater - Upper

Eye Brook

Ise - Upper

Jordan (Welland)

Langton Brook

Medbourne Brook

Melton Brook Catchment (trib of Soar)

Queniborough Brook Catchment (trib of Wreake)

Sence from Burton Brook to Countesthorpe Brook

Sence from Source to Burton Brook

Stoke Albany Brook

Stanton Brook

Syston Brook Catchment (trib of Wreake)

Welland - conf Jordan to conf Langton Bk

Welland - conf Langton Bk to conf Gwash

Welland - headwaters to conf Jordan

P01.01	29/10/2025	First issue	OT	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.

nationalgrid

National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Designed
O.TUCKER

Drawn
D.MOSNEANU

Site

Weston Marsh to East Leicestershire

Title

Scoping Report:
Figure 10A.1
WFD Surface Water Bodies

Purpose of issue
For Information

Status
S2

Drawing No.
WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000051

NGET Drawing No.
N/A

Sheet 4 of 5

Size
A3

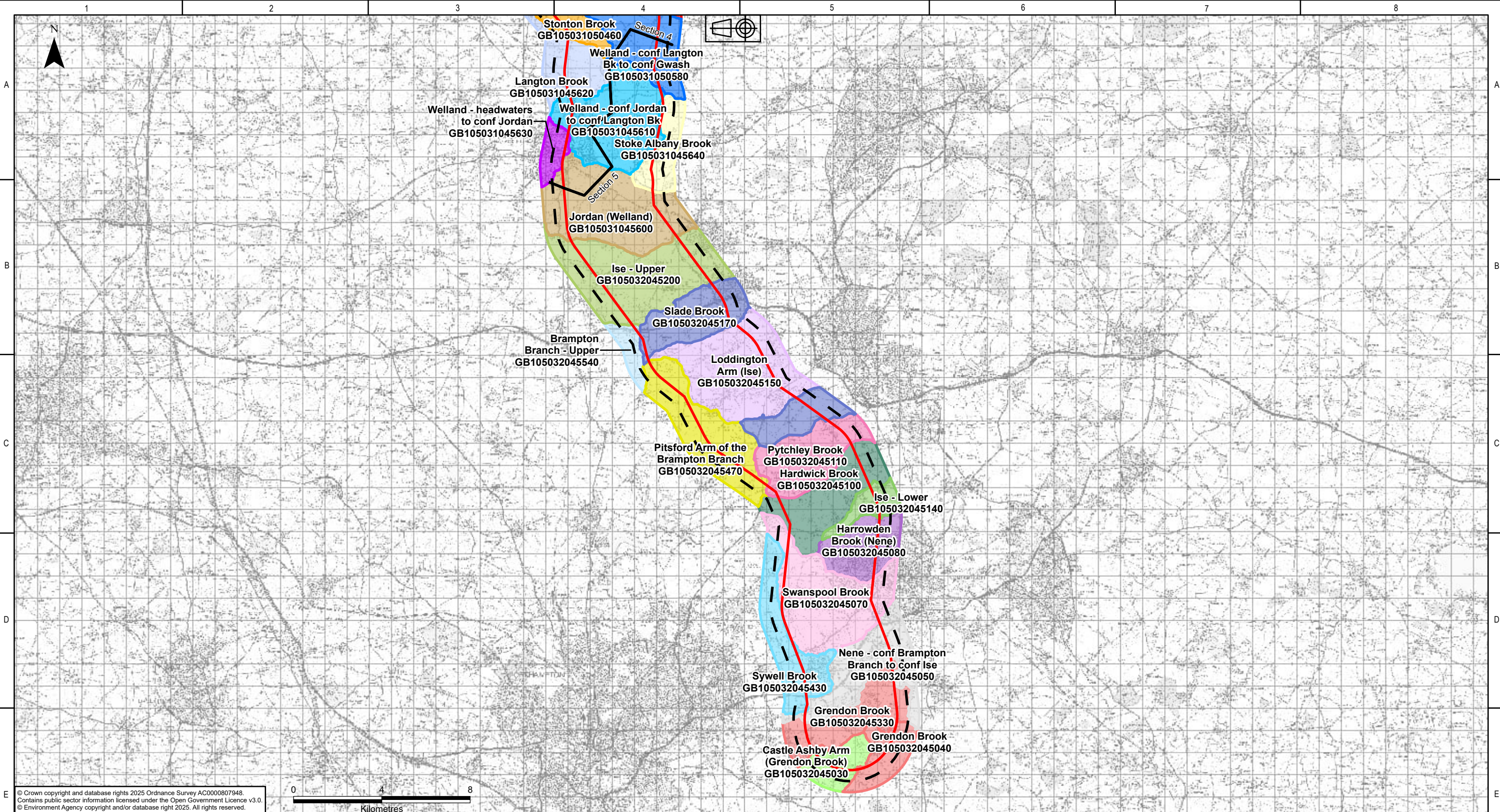
Checked
H.JENNER

Approved
C.STOCKS

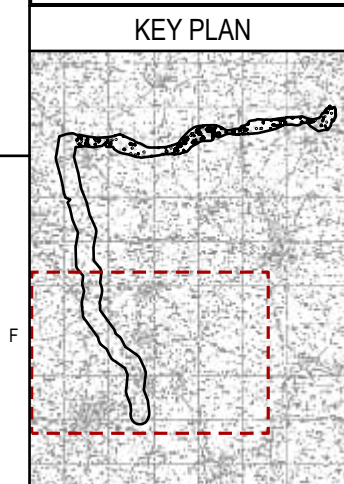
Date
29/10/2025

Scale
1:120,000

Revision
P01



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.



Legend	
	Scoping Boundary
	Sections
	500m Study Area
River Water Body Catchments	
	Brampton Branch - Upper
	Castle Ashby Arm (Grendon Brook)
	Grendon Brook
	Hardwick Brook
	Harrowden Brook (Nene)
	Ise - Lower
	Ise - Upper
	Jordan (Welland)
	Langton Brook
	Loddington Arm (Ise)
	Medbourne Brook
	Nene - conf Brampton Branch to conf Ise
	Pitsford Arm of the Brampton Branch
	Pytchley Brook
	Slade Brook
	Stoke Albany Brook
	Stonton Brook
	Swanspool Brook
	Sywell Brook
	Welland - conf Jordan to conf Langton Bk
	Welland - conf Langton Bk to conf Gwash
	Welland - headwaters to conf Jordan

P01.01	29/10/2025	First issue		OT	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

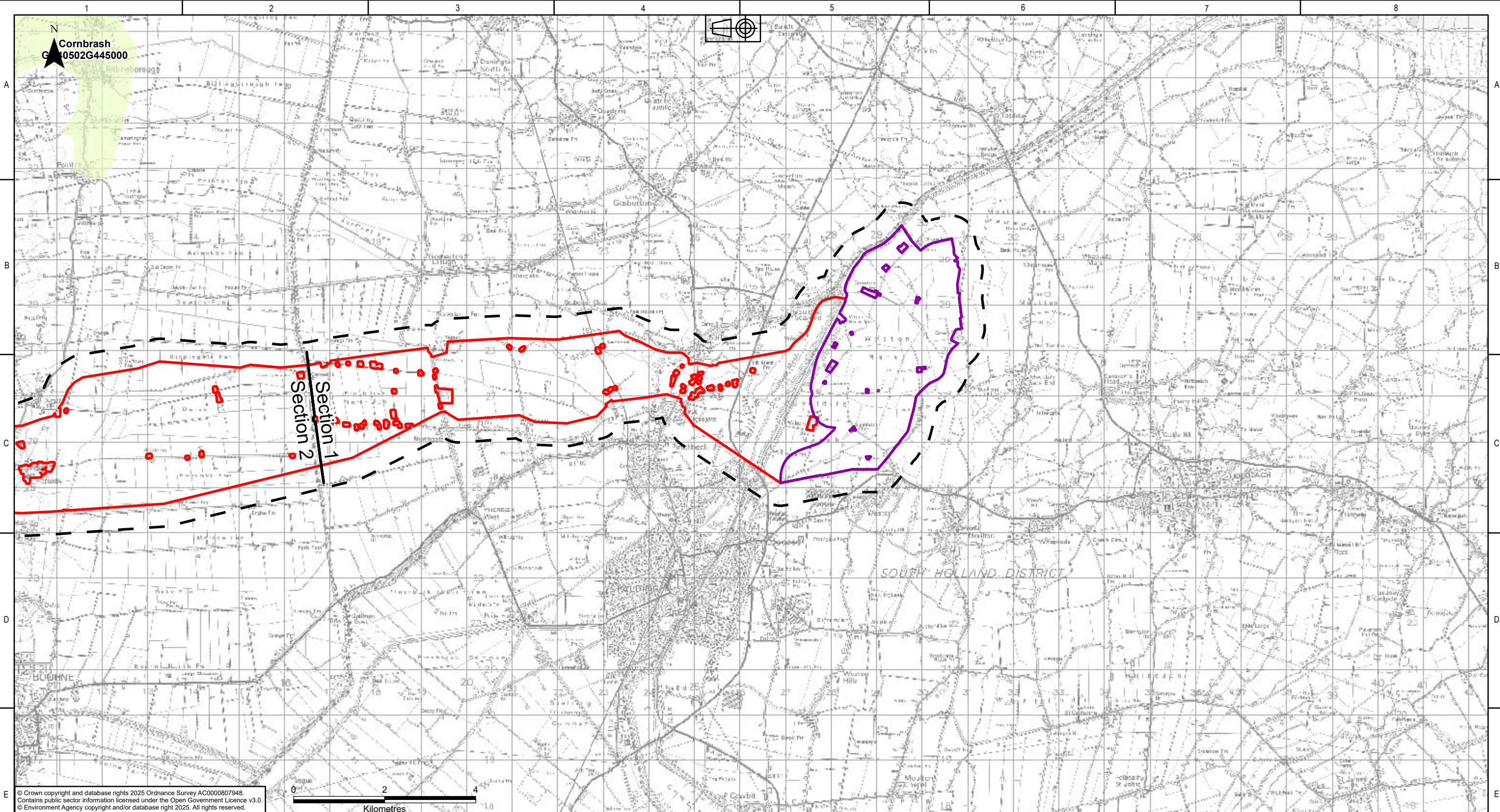
AECOM

ARUP

Designed
O.TUCKER

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 10A.1 WFD Surface Water Bodies	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000051	
NGET Drawing No. N/A	Sheet 5 of 5
Size A3	
Checked H.JENNER	Approved C.STOCKS
Date 29/10/2025	Scale 1:165,000
Revision P01	

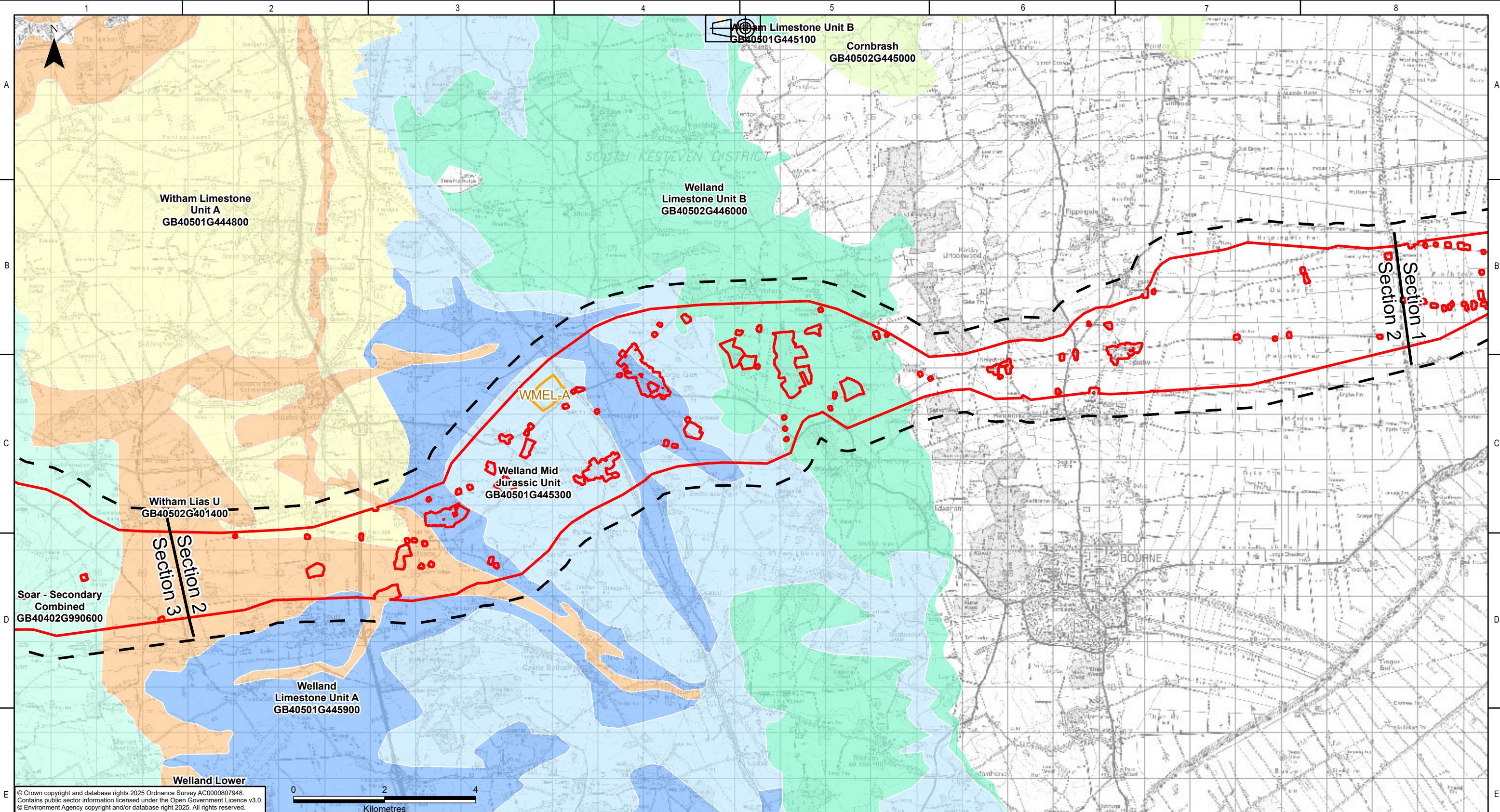


KEY PLAN

Legend

- Scoping Boundary
- Sections
- 500m Study Area
- Refined Weston Marsh Substation Siting Zone
- Groundwater Bodies
- Cornbrash

								nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire	
								AECOM		Title Scoping Report: Figure 10A.2 WFD Groundwater Bodies	
								ARUP		Purpose of issue For Information	
										Status S2	
										Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000052	
										NGET Drawing No. N/A	
										Sheet 1 of 5	
										Size A3	
P01.01				29/10/2025		First issue		OT		DM	
Rev.				Date		Comment		Des		Drw by	
								Check		Appr.	
								Designed O.TUCKER		Drawn D.MOSNEANU	
								Checked H.JENNER		Approved C.STOCKS	
								Date 29/10/2025		Scale 1:80,000	
										Revision P01	



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.

KEY PLAN

Legend

- Scoping Boundary
- Sections
- 500m Study Area
- Substations Siting Area
- Groundwater Bodies
 - Cornbrash
 - Soar - Secondary Combined
 - Welland Limestone Unit A
 - Welland Limestone Unit B
 - Welland Lower Jurassic Unit
 - Welland Mid Jurassic Unit
 - Witham Lias U
 - Witham Limestone Unit A
 - Witham Limestone Unit B

P01.01	29/10/2025	First issue		OT	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.

nationalgrid

National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Site

Weston Marsh to East Leicestershire

Title

Scoping Report:
Figure 10A.2
WFD Groundwater Bodies

Purpose of issue

For Information

Status

S2

Drawing No.

WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000052

NGET Drawing No.

N/A

Sheet 2 of 5

Size

A3

Designed

O.TUCKER

Drawn

D.MOSNEANU

Checked

H.JENNER

Approved

C.STOCKS

Date

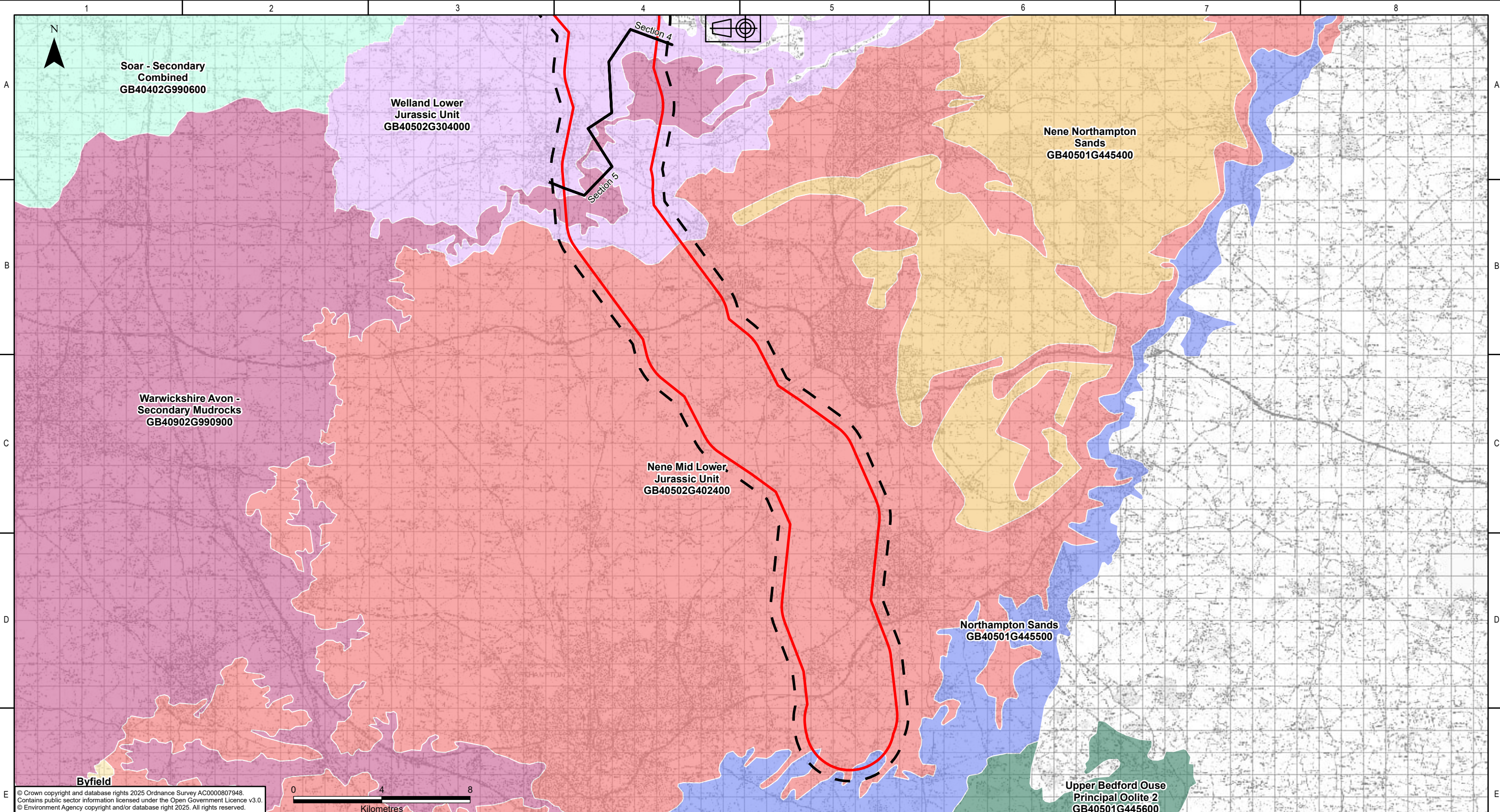
29/10/2025

Scale

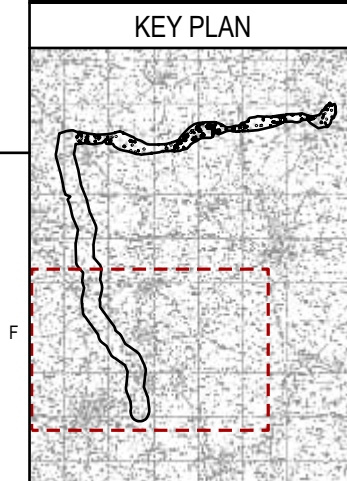
1:80,000

Revision

P01



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.
© Environment Agency copyright and/or database right 2025. All rights reserved.



Legend	
	Scoping Boundary
	Sections
	500m Study Area
Groundwater Bodies	
	Byfield Jurassic
	Nene Mid Lower Jurassic Unit
	Nene Northampton Sands
	Northampton Sands
	Soar - Secondary Combined
	Upper Bedford Ouse Principal Oolite 2
	Warwickshire Avon - Secondary Mudrocks
	Welland Lower Jurassic Unit

P01.01	29/10/2025	First issue	OT	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Designed
O.TUCKER

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 10A.2 WFD Groundwater Bodies	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000052	
NGET Drawing No. N/A	Sheet 5 of 5
Size A3	
Checked H.JENNER	Approved C.STOCKS
Date 29/10/2025	Scale 1:165,000
Revision P01	

12A. Agriculture and Soils Survey Strategy

Contents

12A.1	Introduction	12A-1
12A.2	Avoidance Measures and Principles for Scoping of Surveys	12A-1
12A.3	Study Area	12A-2
12A.4	Data Sources	12A-2
12A.5	Initial Baseline	12A-2
12A.6	Surveys Required	12A-3

12A.1 Introduction

- 12A.1.1 This survey strategy relates to the potential effects of the Weston Marsh to East Leicestershire project (the Project) on soils resources and agricultural land classification (ALC). The Project is being developed by National Grid Electricity Transmission (NGET) to increase the ability of the transmission system to provide the required capacity between the North, the Midlands and the South. The Project forms part of a major programme of reinforcement of the electricity transmission system to accommodate major increases in power flows, helping take power generated from low carbon sources (especially from offshore wind) to areas of consumer demand across the UK.

12A.2 Avoidance Measures and Principles for Scoping of Surveys

- 12A.2.1 Soils are typically considered a non-renewable resource because of the very long periods required for soil formation. Soils classification in England and Wales is described by soil series, which groups soils with similar horizons and characteristics. Soil series develop from similar parent materials, under similar climatic and vegetational conditions. Similar soil series are grouped in soil associations. Soil associations provide a description of the soil resource.
- 12A.2.2 ALC divides land into five grades based on its productivity, flexibility and efficiency. 'Best and Most Versatile' (BMV) land is defined as grades 1, 2 and subgrade 3a. Non-BMV land is defined as sub grade 3b, and grades 4 and 5. The ALC system is used as a basis to assess the impact of development proposals on agricultural land.
- 12A.2.3 ALC is the only standard method for classifying the quality of agricultural land in England and Wales. Land is assessed according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. The 1:250,000 scale Provisional ALC mapping, which is available via the Government's geographic information website (Ref 12A.1), is the most current and detailed published ALC. However, these data pre-date the revised ALC methodology issued in 1988 (Ref 12A.4) and as a result, the data does not provide a distinction between ALC Subgrades 3a (BMV) and 3b (non-BMV). Additionally, the scale of the mapping is such that it does not pick up variations in ALC grade for areas less than approximately 80 ha. The Provisional ALC mapping therefore provides an indication of the land quality in the region, but the extent and distribution of BMV agricultural land within the Study Area cannot be defined from the Provisional mapping alone.
- 12A.2.4 The overarching National Policy Statement (NPS) for Energy (EN1, paragraphs 5.11.12 and 5.11.13) requires that applicants seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5). Applicants should also identify any effects and seek to minimise impacts on soil health and protect and improve soil quality taking into account any mitigation measures proposed.
- 12A.2.5 The National Planning Policy Framework (NPPF) (Ref 12A.5) is clear that local authorities should seek to discourage development on BMV land. The Natural England Technical Information Note (TIN) 04910 (Ref 12A.6) summarises the

position of Natural England, which is a statutory consultee when areas of BMV greater than 20 ha are affected by development.

12A.3 Study Area

- 12A.3.1 At scoping, the Scoping Boundary includes the substation sites and preferred corridor, using existing mapped data of the soil resource and ALC, with no surveys proposed at this project stage.
- 12A.3.2 Following scoping, substation sites will be confirmed, and it is anticipated that the corridor will be refined to draft Order Limits typically around 100-200 m wide in simple overhead line sections. Field survey of the substation sites is proposed at this stage.
- 12A.3.3 It is anticipated that at this stage a high-quality model of preliminary ALC data will be available from Natural England (Ref 12A.7). This will provide data for PEIR. The model of preliminary ALC data employs data based on 50 m raster squares and employs more data, relative to the 1:250,000 the pre-1988 provisional ALC map.
- 12A.3.4 Subsequently field survey, using specialist sub-consultant surveyors is proposed to assist micro-siting of infrastructure, based on design freeze for statutory consultation, to be presented in the PEIR.

12A.4 Data Sources

- 12A.4.1 Soils may be described according to soil association. Soil associations are groups of soil types that occur typically together in the landscape. The information is mapped by the Soil Survey of England and Wales and is available to purchase digitally (NATMAP) from Cranfield University. It is proposed to acquire NATMAP data. Associated with this data is a freely available analysis of soil characteristics (Soilscapes), also developed by Cranfield University (Ref 12A.2).
- 12A.4.2 For scoping, the provisional ALC data, within Magic map, has been used to provide indicative guidance on ALC grades.
- 12A.4.3 Natural England is to present more accurate ALC grading for England than is provided in the published ALC mapping, that will include subdivision of Grade 3 land into Subgrades 3a and 3b. This updated preliminary data relies on a model developed by Cranfield University to provide predictive ALC data, which follows the methodology applied, by Cranfield University, across Wales.
- 12A.4.4 Cranfield modelled data is no longer available to purchase commercially but has historically been used for approved planning applications for grid connection corridors, with a planning condition that field survey is undertaken post-consent for a defined working corridor.
- 12A.4.5 It is proposed to appoint specialist sub-consultant surveyors for field surveys of substation locations, following design freeze for statutory consultation, to inform the PEIR. Field survey is additionally proposed in agricultural fields for tower locations to assist with micro-siting, if there is evidence for the presence of BMV land.

12A.5 Initial Baseline

- 12A.5.1 Baseline soil information will include information relating to soil associations (the soil resource) and the ALC.

- 12A.5.2 The Scoping Boundary includes confirmed BMV land to the eastern part (extensive mapping of provisional grades 1 and 2) and likely BMV land in the central and western extent.
- 12A.5.3 The extensive distribution of BMV land in the east of the preferred corridor means that BMV land cannot be avoided and use of provisional data at EIA Scoping, and expected future modelled data from Natural England for PEIR, are appropriate to identify the worst-case scenario impact assessment.
- 12A.5.4 Field survey of soils within the substation sites is proposed for the PEIR. Field survey of soils at tower locations, where micro-siting to avoid BMV land is possible, will be undertaken to inform the ES.

12A.6 Surveys Required

- 12A.6.1 Field surveys are proposed at PEIR stage for substation sites, and will be undertaken to inform design and assessment for the towers, with the findings to be reported in the ES.
- 12A.6.2 The raw survey information, to be provided in a report and shapefiles, would be interpreted by AECOMArup soils specialists against ISEP guidelines (2022): A New Perspective on Land and Soil in Environment Impact Assessment to produce figures and determine the significance of effects (Ref 12A.3).

References

- Ref 12A.1 Department for Environment, Food & Rural Affairs (no date) MAGIC. [online] Available at: <https://magic.defra.gov.uk/> (Accessed: 8 August 2025).
- Ref 12A.2 Cranfield Soil and Agrifood Institute (no date) Soilscales Viewer [online] Available at: <https://www.landis.org.uk/soilscales/> (Accessed: 8 August 2025)
- Ref 12A.3 Institute of Sustainability and Environmental Professionals (2022). A New Perspective on Land and Soil in Environmental Impact Assessment. (Not available online)
- Ref 12A.4 MAFF (1988) Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for grading the quality of agricultural land. [online] Available at: <http://publications.naturalengland.org.uk/publication/6257050620264448> (Accessed: 8 August 2025)
- Ref 12A.5 Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework (NPPF). [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf (Accessed: 8 August 2025)
- Ref 12A.6 Natural England (2012) Technical Information Note TIN049. Agricultural Land Classification: protecting the best and most versatile agricultural land. Available at: <https://publications.naturalengland.org.uk/publication/35012> (Accessed: 8 August 2025)
- Ref 12A.7 Natural England (2019) Provisional Agricultural Land Classification. [online] Available at <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::provisional-agricultural-land-classification-alc-england/about> (Accessed: 8 August 2025)

18A. Climate Change Resilience Screening Assessment

Contents

18A. Climate Change Resilience Screening Assessment	18A-1
18A.1 Introduction	18A-1
18A.2 Regulatory and Planning Context	18A-2
18A.3 Methodology	18A-2
Study Area	18A-2
Data Sources	18A-3
CCR Screening Assessment Methodology	18A-3
Identification of receptors	18A-4
Identification of potential climate change hazards – existing and future baseline	18A-6
Identification of potential climate change impacts	18A-9
Identification of design and control measures	18A-9
Assumptions and Limitations	18A-10
18A.4 Baseline and future climate conditions	18A-10
18A.5 CCR Screening Assessment	18A-16
18A.6 Conclusion	18A-37
Table 18A.1 Description of climate change receptors identified as part of the Project	18A-4
Table 18A.2 List of climate hazards considered in this assessment, hazard definitions, applicable thresholds and rationale for inclusion	18A-6
Table 18A.3 Summary of baseline and future climate conditions	18A-11
Table 18A.4 CCR screening assessment summary: construction phase	18A-17
Table 18A.5 CCR screening assessment summary: operation phase	18A-23
References	18A-38

18A. Climate Change Resilience Screening Assessment

18A.1 Introduction

18A.1.1 This Screening Assessment has been prepared to support **Chapter 18 Climate Change** of the Scoping Report for the Weston Marsh to East Leicestershire Project (the Project). It presents the findings of a screening assessment (hereafter referred to as the 'Climate Change Resilience (CCR) Screening Assessment') of the potential impacts of current and future climate change on the construction, operation, and maintenance of the Project. The Project is described in **Chapter 4 Description of the Project**.

18A.1.2 This screening assessment:

- reviews relevant legislation, policy and guidance that has informed the scope and methodology of the CCR screening assessment;
- sets out the existing and future environmental baseline conditions, established from desk studies;
- presents results of the CCR screening assessment, based on the information gathered and the analysis and assessments to date at this early design stage; and
- identifies the Design and Control Measures that could prevent, minimise, reduce or offset the possible climate change impacts and summarises recommendations.

18A.1.3 The following key terms and definitions relating to the CCR screening assessment are used:

- Climate hazard – a weather or climate related event which has potential to cause harm to receptors or infrastructure assets.
- Climate change impact – an impact from a climate hazard which affects the ability of the receptor or infrastructure asset to maintain its function or purpose.
- Embedded measures – this refers to modifications to the location, design or operation of the Project identified during the iterative design process to prevent or reduce likely adverse impacts, and that are an inherent part of the Project. In addition, best practice/industry standard measures are also a form embedded mitigation.
- Control and management measures – as described in **Appendix 4A Initial Outline Code of Construction Practice**.
- Design and control measures – refers to both the embedded measures and control and management measures.

18A.2 Regulatory and Planning Context

- 18A.2.1 Legislation and policy relevant to the Project and this CCR screening assessment is presented below. Further detail is outlined in **Chapter 2 Regulatory and Planning Policy Context and Appendix 2A National and Regional Policy, Appendix 2B Key Legislation and Appendix 2C Local Policy**.

Planning Policy

National Policy Statements

- 18A.2.2 National Policy Statements (NPSs) set out the primary policy tests against which the application for a DCO for the Project would be considered. The relevant NPSs are the Overarching NPS for Energy (EN-1) (Ref 18A.1) and the NPS for Electricity Networks Infrastructure (EN-5) (Ref 18A.2) set out how the NPSs concerning electricity networks infrastructure are relevant to the CCR screening assessment.
- 18A.2.3 Relevant guidance and standards that have informed this CCR screening assessment are listed below:
- The Institute of Sustainability and Environmental Professionals (ISEP) Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (Ref 18A.3). This has been used to define the methodology for this high-level CCR assessment.
 - UKCP18 Science and user guidance reports (Ref 18A.4). This user guidance and associated reports have been used to inform the current and future baseline conditions.

18A.3 Methodology

Study Area

- 18A.3.1 The Study Area for this assessment is the land within the Scoping Boundary, as described in **Chapter 4 Description of the Project** and illustrated on **Figure 1.2 Scoping Boundary**.
- 18A.3.2 Consideration has been given to climate change receptors (infrastructure and assets) identified and future asset typologies for which consent is being sought.
- 18A.3.3 The temporal scope is the duration of the construction phase and operational and maintenance phases, as set out below:
- **Construction phase:** construction works are anticipated to commence in 2030 for a duration of approximately four years. To assess the likely impacts of climate change on the construction stage, climate projections for the 2030s (2016 - 2045) time-period have been used for construction activities, to represent a reasonable worst-case approach. It is noted that there would also be operational activities of the Project post-2033, which is captured by 2030 projections.
 - **Operation and maintenance phase:** the design life of the Project is assumed to be 40 years from 2034, however it is typically unusual for elements of National Grid's electricity transmission system to be decommissioned and sites reinstated. In general, assets will be replaced towards the end of their design life (which

varies depending on the asset and its condition throughout its operational life). To assess the likely impacts of climate change on the operation stage, available UK Climate Projections for the 2040s, 2050s, and 2065s time periods have been used. This aligns with data currently available from the Met Office UK Climate Projections 2018 (UKCP18) 'regional' 12 km land projections, which provides data up until the period ending 2079. Projections beyond 2080 are subject to uncertainty associated with modelling constraints and assumptions. See Section 18A.3.13 for further information.

- 18A.3.4 As detailed in **Chapter 4, Description of the Project**, the decommissioning of the Project has been scoped out of the environmental assessment.

Data Sources

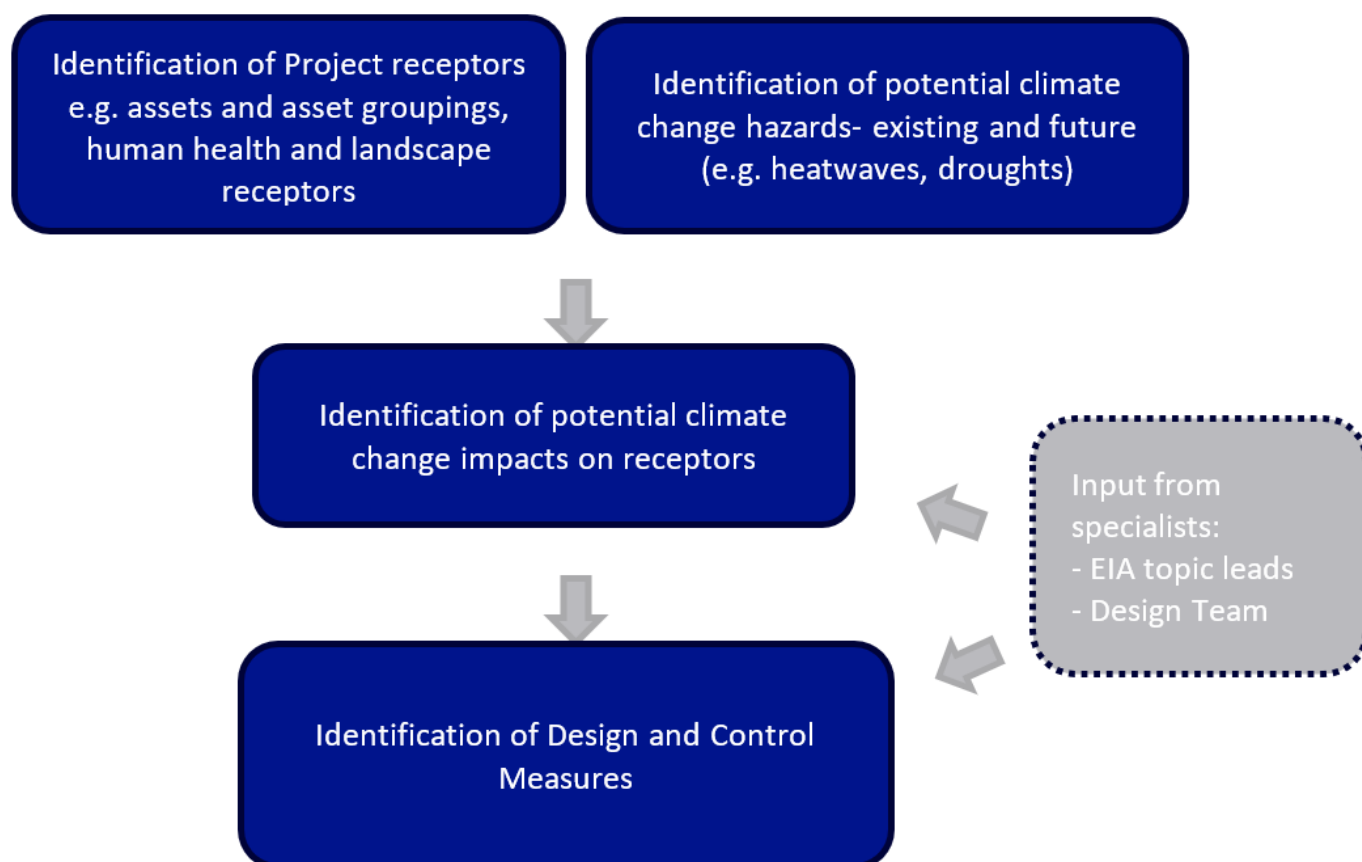
- 18A.3.5 The information to inform this CCR screening assessment is sourced from a combination of Project specific information available at the current design stage alongside desk-based research for the Study Area in line with relevant legislation, policy and guidance. Key data sources include:
- UK Climate Change Risk Assessment (2022) (Ref 18A.5) - This has been used to inform an understanding of climate risks that could impact electricity transmission network infrastructure.
 - National Grid Electricity Transmission Climate Change Adaptation Report (2021) (Ref 18A.6) - This report, carried out by National Grid Electricity Transmission, has been used to inform an understanding of the climate risks that could impact Great Britain's electricity transmission network infrastructure and the design and control measures identified from a whole system perspective.
 - UK Climate Projections (UKCP18) – User Interface for probabilistic projections (Ref 18.7) and The Met Office Climate Data Portal (Ref 18.8), both using Regional (UKCP18 Regional (12 km) models) and factsheets. UKCP18 is the latest projection dataset for the UK, produced by the UK Met Office.
 - HadUK-Grid Met Office (Ref 18A.9) – HadUK-Grid is an observational gridded dataset produced by the UK Met Office. The gridded data sets are based on the archive of UK weather observations held at the Met Office.
 - United Kingdom Climate Risk Indicators data – Provides information on future change to indicators of climate risks across the UK, including wildfire daily hazard assessment data which provides a five-day summary for wildfire that could affect the UK, based on UKCP18 projections (Ref 18A.10).
 - Met Office State of the UK Climate (2022) (Ref 18A.11).
 - National Grid Group plc: Annual Report and Accounts (2024/25) (Ref 18A.12).

CCR Screening Assessment Methodology

- 18A.3.6 This section presents the methodology used for screening climate change risks on climate change receptors that may arise from the construction, operation, and maintenance of the Project.
- 18A.3.7 The methodology applied for the CCR screening assessment, as outlined in **Image 18A.1** CCR screening assessment methodology uses a combination of quantitative

and qualitative information for climate change projections, and qualitative information related to the potential impacts.

Image 18A.1 CCR screening assessment methodology



18A.3.8 The sections below outline the method shown in the diagram in more detail and provides details on assessment criteria.

Identification of receptors

18A.3.9 The key receptors considered in this assessment include Principal Project Infrastructure (a portfolio of assets defined in **Chapter 4 Description of the Project**); human health receptors and environmental receptors. **Table 18A.1** provides further information on receptors identified and groupings. It is considered that receptors identified for the construction phase would be temporary i.e. only considered vulnerable for the construction phase, and those identified for the operation phase would be receptors in situ for the proposed design life of the Project.

Table 18A.1 Description of climate change receptors identified as part of the Project

Phase	Receptor groupings	Description
Construction	Materials and equipment for construction of built assets	Equipment on site for construction purposes e.g. diggers.

Phase	Receptor groupings	Description
	Access routes to construction site	Access routes within the Scoping Boundary.
	Stockpiles	Stocks of materials on site for construction purposes e.g. earth stockpiles.
	Temporary structures	Construction structures including site compounds, works cabins and security fencing.
	Human health receptors	Construction worker and site users.
	Environmental receptors	Landscaping, planting and any habitat creation that will be provided as part of the Project.
Operation	Assets: Overhead Lines	Conductors supported by towers: Conductors: Wires attached to the end of a set of insulators. Insulators: the most common industry standard is either glass, porcelain, or polymeric. Associated telemetry and controls. <i>Assumed design life: 80+ years for overhead line circuits and 25-40 years for insulators.</i>
	Assets: Towers	Structures used to carry overhead electrical conductors, insulators and fittings. Towers are either suspension towers, from which the conductor is simply suspended, or tension towers, which are more robust structures that hold conductors in tension where the alignment of an overhead line changes direction or to maintain tension in long straight sections of the route. It is likely that the proposed towers for the Project would comprise steel lattice structures. Indicative tower heights will be provided within the Environmental Statement (ES), which will be limited by a vertical Limit of Deviation (LoD) to be defined through the development of the Project. For the purposes of the current stage of the Project and to inform scoping, the use of steel lattice structures has been assumed. Alternative tower designs may also be considered, where mitigation (e.g. for landscape and visual effects) is required. Where this is the case, the resilience of the asset to extreme weather and climate change will be considered during the detailed design stage. Further embedded design measures will be considered as the Project design evolves, through engagement with the engineering design team, to ensure extreme weather and climate related impacts are minimised where

Phase	Receptor groupings	Description
		possible. Measures will be incorporated into the future development of Project design principles. <i>Assumed design life: 40 years.</i>
	Assets: substations	The Project would include two new 400 kV substations named WMEL-A and WMEL-B, and substation infrastructure at Weston Marsh which could include up to two additional substations. There are two main types of substations; Air Insulated Switchgear (AIS) substations and Gas Insulated Switchgear (GIS) substations. For the purposes of the current stage of the Project and to inform scoping, the use of AIS substations has been assumed. AIS substations composing electrical disconnect switches or circuit breakers used to control, protect and isolate electrical equipment.
	Human health receptors	Operational workers undertaking maintenance works.
	Environmental receptors	Landscaping, planting and any habitat creation that will be provided as part of the Project.

Identification of potential climate change hazards – existing and future baseline

- 18A.3.10 Existing literature on climate change such as the UK Climate Change Risk Assessment (Ref 18A.5) and National Grid's Climate Change Adaptation Report (Ref 18A.6) along with UKCP18 data outputs for the Scoping Boundary have been used to identify potential climate hazards that may affect the geographical location of the Project. See Section 18A.3.5 for further information on data sources. For each climate hazard identified, and where appropriate, a threshold has been defined to identify when the weather event has the potential to cause harm, alongside a rationale for selection. **Table 18A.2** sets out the identified climate change hazards.

Table 18A.2 List of climate hazards considered in this assessment, hazard definitions, applicable thresholds and rationale for inclusion

Climate Hazard Identified	Definition	Threshold Identified	Rationale
High temperatures: Extreme high temperatures	Number of days per year when maximum daily temperature is above the threshold.	Days above 30°C	Threshold identified in National Grid Climate Change Adaptation Report (Ref 18A.6).
High temperatures: Heatwaves	Number of times per year when both	Maximum daily temperature above	Threshold identified in National Grid

Climate Hazard Identified	Definition	Threshold Identified	Rationale
	maximum and minimum daily temperature remain above thresholds for several days.	30°C and minimum daily temperature above 20°C for three consecutive days.	Climate Change Adaptation Report (Ref 18A.6). To align with Met Office definition of a heatwave (Ref 18A.13), a period of at least three consecutive days has been used.
Temperature change: Mean temperature	N/A – assessed qualitatively using UKCP18 probabilistic projections (Ref 18A.7).		
Low temperatures Extreme Low Temperatures	Number of days per year when maximum daily temperatures is below the threshold	Days below 0 °C	Threshold identified to account for icing days in line with the Met Office definition for days of icing days (Ref 18A.8).
Low temperatures Freeze thaw days	Number of days per year when temperature cycles above and below freezing in the same day	Maximum daily temperatures above 0°C and minimum daily temperatures below 0°C in the same day.	Threshold identified to account for frost days in line with the Met Office definition for days of air frost (Ref 18A.14).
Drought	An ‘absolute’ drought is defined essentially on the basis of rainfall deficiency.	Period of at least 15 consecutive days or more where there is less than 0.2 mm of rainfall.	Threshold identified to account for meteorological drought in line with the Met Office definition (Ref 18A.8).
Precipitation Mean precipitation	N/A – assessed qualitatively using UKCP18 probabilistic projections annual precipitation anomaly (Ref 18A.8).		
High winds and storms (including compound events)	N/A – Climate hazard associated with wind is assessed qualitatively using UKCP18 ‘Wind’ factsheet (Ref 18A.15). Storminess has been considered as a factor of summer and winter compound events. UK data from the past four decades has not shown any significant trends in storminess based on maximum gust speeds to determine thresholds. There is high uncertainty in climate projections of wind due to the complexity and challenges within climate models to simulate wind.		

Climate Hazard Identified	Definition	Threshold Identified	Rationale
	Wind related hazards, and summer and winter compound hazards are subject to high uncertainty as there is lack of agreement in the outputs from the climate models.		
Wildfire	Any uncontrolled vegetation fire which requires a decision, or action, regarding suppression (Ref 18A.16).	N/A No threshold identified for wildfires.	Any wildfire occurrence has the potential to cause harm therefore; no thresholds have been identified. The daily hazard assessment presents a 5-day summary of potential risk for the average case scenario.
Lightning	N/A – assessed qualitatively using professional judgement based on UKCP18 factsheets (Ref 18A.17) Lightning events are subject to high uncertainty as there is lack of agreement in the outputs from the climate models.		
Flood Risk	N/A – further information on how coastal, tidal and fluvial flood risk has been considered is contained in Chapter 10 Water Environment .		
Sea Level Rise	N/A – assessed qualitatively using UKCP18 factsheets (Ref 18A.17).		

Existing baseline

- 18A.3.11 The existing baseline is the historic climate as defined in terms of temperature, rainfall, and other climatic factors.
- 18A.3.12 Baseline data gathered for the CCR screening assessment is based on information on historic climatic conditions from the Met Office HadUK-Grid 12 km² observational data which the Scoping Boundary intersects for the time period 1981 – 2010. The Met Office HadUK-Grid is a set of gridded climate variables derived from meteorological station data that covers the UK, to allow data comparison from climate projections and across a country, administrative regions and river basins.

Future baseline

- 18A.3.13 Future baseline data gathered for the CCR screening assessment has been obtained from the Met Office UK Climate Projections 2018 (UKCP18) for England, and regionally, for the East Midlands. For the purpose of this assessment, projections for the temporal scope for the following average climate variables have been obtained and analysed from UKCP18 (under the Representative Concentration Pathway (RCP) 8.5 high emission scenario resulting in a global average temperature increase of 2- 4°C for a 50th percentile probability of hazard occurring depending on the year assessed) for the 12 km² grid squares across the Scoping Boundary:

- Temperature related hazards: Extreme high temperatures; heatwaves; extreme low temperatures; and freeze-thaw days.
- 18A.3.14 For the purpose of this assessment, probabilistic projections have been analysed from UKCP18:
- Mean temperatures;
 - Mean precipitation; and
 - High winds and storms (including compound events).
- 18A.3.15 UKCP18 factsheets qualitative information has been used for the following hazards:
- Lightning; and
 - Wildfire.
- 18A.3.16 In addition to the climate hazards identified, **Chapter 10 Water Environment** considers the potential flood risk impacts of coastal, fluvial and surface water flooding on water receptors that may arise during the construction, operation and maintenance of the Project. It also provides allowances for future climate change impacts over the Project lifetime. See **Chapter 10 Water Environment** for more information. **Chapter 11 Geology and Hydrogeology** considers how climate change and variations could impact aquifer recharge, groundwater levels, and flow gradients. See **Chapter 11 Geology and Hydrogeology** for more information.

Identification of potential climate change impacts

- 18A.3.17 Once climate change hazards were identified, the likelihood of the climate change hazard occurring has been considered alongside the vulnerability of the receptor to the identified hazard to identify any potential impacts. The potential for a climate hazard is determined based on the receptor location and whether that location could be susceptible to the specific hazard being considered e.g. flooding from tidal sources (i.e. coastal flooding) would not apply to locations inland. Given the early design stage, the specification and locations of individual assets are not yet determined. This exercise was therefore undertaken for asset groupings present across the Scoping Boundary based on professional judgment.

Identification of design and control measures

- 18A.3.18 Embedded measures and control and management measures relevant to potential climate change impacts (appropriate to the current stage of the design) have been identified through discussions with the design team, EIA technical discipline leads and the National Grid Strategic Infrastructure team.
- 18A.3.19 A range of standard measures for the Project will be adopted throughout the duration of the construction phase. An Initial Outline Code of Construction Practice (CoCP) is provided in **Appendix 4A Initial Outline Code of Construction Practice**. Measures relevant to the control and management of impacts that could affect climate are identified in **Table 18A.4 and Table 18A.5** below (refer to **Appendix 4A** for the full description of each measure).

Assumptions and Limitations

18A.3.20 The CCR Screening assessment has been informed by the following principal assumptions and limitations:

- The assessment is affected by assumptions associated with climate modelling and climate change projections, incorporated in UKCP18. Climate projections take into account uncertainty due to natural variability and an incomplete understanding of the climate system and its imperfect representation in models. The projections do this by giving the probabilities of a range of possible outcomes, as estimated by scientific methodology. While the global projections provide a range of climate futures, they cannot cover all potential future climate outcomes. For example, there is uncertainty in climate models and regarding how global climatic trends will be reflected at the regional scale. There is also uncertainty in the relationship between changes in climate hazards and the respective response in terms of asset performance.
- Information on climate change impacts on lightning is not available in UKCP18 for the 12 km regional nor 25 km probabilistic data and therefore a qualitative assessment has been provided based on UKCP18 factsheets. Lightning flash rate data has more recently been released as part of the higher resolution UKCP local 2.2 km data, however it is not currently available via the UKCP18 User Interface, instead the headline findings have been used.
- UKCP18 data for the 'regional' 12 km projections, which provide information on local climate impacts within a defined 12 km square location is only available up to 2079. This data has been used to generate the information provided in **Table 18A.3**.
- Assessments made in relation to 'hazard likelihood' and 'impact' have relied on professional judgement and evidence gathered through discussions with National Grid Electricity Transmission and other environmental topic assessments.

18A.3.21 Any existing assets that are owned / operated by NGET that fall within the Scoping Boundary but are not being modified as part of the Project, are assumed to be maintained in line with NGET's existing management practices and therefore do not form part of the assessment. NGET assesses current physical climate risks to their assets and operations through a number of ways, including through the Task Force for Climate Related Financial Disclosures (Ref 18A.18), supported by climate modelling based on UKCP18, and through the Defra Adaptation Power Reporting (Ref 18A.19). Measures identified to respond to climate risks, and effective measures that have been employed on other NGET projects are assumed to apply to this Project.

18A.4 Baseline and future climate conditions

18A.4.1 **Table 18A.3** presents a summary of the baseline and future climate conditions for the Scoping Boundary

Table 18A.3 Summary of baseline and future climate conditions

Climate Hazard	Baseline summary Timescales: (1981-2010)	Future summary Timescales: 2030s, 2040s (2026-2055), 2050s (2036-2065), 2070s (2050-2079) RCP8.5 50th percentile
High temperatures: Extreme high temperatures	England-wide: Average annual number of days above 30°C is rare for most locations, occurring less than once every five years. Higher occurrence in east England. East Midlands: Average annual number of days above 30°C occurs approximately one day per year.	England-wide: The projections for the 2040s and 2070s show a clear increase in average annual number of days per year above 30°C for most locations in England. East Midlands: The projections for the 2040s and beyond show an increase in the average annual number of days per year above the 30°C threshold to multiple occurrences per year. A larger increase is expected for the 2070s when compared to the 2040s.
High temperatures: Heatwaves	England-wide: Using the defined threshold level, occurrences of heatwaves did not occur in the in the data analysed.	England-wide: The projections show an increase, especially in South East England and major urban centres (e.g. London, Birmingham and Manchester). For example, by the 2070s in London there are more than two events per year. East Midlands: The projections for the 2040s and beyond show a slight increase in instances of heatwaves. A larger increase is expected for the 2070s when compared to the 2040s.
Temperature change: Mean temperature	Baseline information not provided with probabilistic projections.	England-wide: Average mean temperatures for England are expected to increase across all scenarios compared to the baseline. East Midlands: In the 2050s: Winter mean temperatures show a 1.5-2.5°C increase compared to the baseline (1981-2010)

Climate Hazard	Baseline summary Timescales: (1981-2010)	Future summary Timescales: 2030s, 2040s (2026-2055), 2050s (2036-2065), 2070s (2050-2079) RCP8.5 50th percentile
		Summer mean temperatures show a 2-3°C increase compared to the baseline (1981-2010). In the 2070s: Winter mean temperatures show a 2.5-3.5°C increase compared to the baseline (1981-2010). Summer mean temperatures show a 4-5°C increase compared to the baseline (1981-2010).
Low temperatures Extreme low Temperatures	England-wide: Occurs multiple times per year in most UK locations. East Midlands: Occurs multiple times per year (approximately 3-4 days per year).	England-wide: The projections show a clear decrease. For example, by the 2070s, in most locations in the UK on average it occurs zero days per year. A larger decrease is expected for the 2070s when compared to the 2040s. Cold extremes while rare, may still occur. East Midlands: The projections for the 2040s and beyond show a reduction in the average annual number of days per year below the 0°C threshold to 0 to 1 day per year.
Low temperatures Freeze thaw Days	England-wide: Common in most UK locations. Only around the coast and in London does freeze-thaw occur fewer than thirty days per year. East Midlands: Freeze-thaw days occur around 55 days per year.	England-wide: The projections show a considerable decrease in occurrences. East Midlands: Freeze-thaw days decrease by around 20 days per year by the 2070's. A larger decrease in occurrence is expected for the 2070s compared to the 2040s.
Drought	England-wide: Drought events are regional in nature and can vary considerably in time and extent. They are typically rare across the majority of England, with the south east most at risk.	England-wide: Drought durations, intensities and severities are all projected to increase in most UK catchments and UKCP18 projections indicate warmer, wetter winters and hotter, drier summers for the UK.

Climate Hazard	Baseline summary Timescales: (1981-2010)	Future summary Timescales: 2030s, 2040s (2026-2055), 2050s (2036-2065), 2070s (2050-2079) RCP8.5 50th percentile
	East Midlands: The East Midlands is the one of the driest region in the UK. In the baseline, for the middle region of the proposed Project alignment, there is a Drought Severity Index baseline of 7.8.	East Midlands: Summer rainfall is predicted to decrease by 10% by 2060 (RCP8.5, 50th percentile) and 25% by 2080 (RCP8.5, 50th percentile), which will exacerbate the potential for drought conditions. The Drought Severity Index is projected to rise to 14.8 per 12-month accumulation by 2070 (RCP8.5, 50th percentile).
Precipitation Mean precipitation	Chapter 10 Water Environment provides an overview of hydrology and flood risk for the Project Scoping Boundary. Key headlines summarised below: The average annual total rainfall baseline in the locality of the Project was 614 mm, based on the Wittering station record (NGR TF044025) (located approximately 19.5 km from the draft Order Limits, southeast of Melton Mowbray. This is lower than the Midlands regional average (1991-2020) of 810 mm. The highest monthly average precipitation was recorded during August (60 mm) and October (63 mm). The driest months were March (39 mm) and February (39 mm). See baseline conditions, Chapter 10 Water Environment for an overview of hydrology and flood risk for the Scoping Boundary	England-wide: Precipitation levels are projected to increase in winter months but decrease during summer months. The precipitation changes are generally greater in the south of the UK where the precipitation might decrease up to 40% in summer and increase up to around 30% in winter. Increases in seasonal precipitation link to the increase in river flood hazards. East Midlands: In the 2040s: Winter mean precipitation shows a -5 to +% increase compared to the baseline (1981-2000). Summer mean precipitation shows a 0 to 20% decrease compared to the baseline (1981-2000). In the 2070s: Winter mean precipitation shows a 0 to 25% increase compared to the baseline (1981-2000). Summer mean precipitation shows a 0 to 30% decrease compared to the baseline (1981-2000).

Climate Hazard	Baseline summary Timescales: (1981-2010)	Future summary Timescales: 2030s, 2040s (2026-2055), 2050s (2036-2065), 2070s (2050-2079) RCP8.5 50th percentile
High winds	Baseline information not provided with probabilistic projections.	England-wide: Climate Projections indicate that there are no compelling trends, and any increases in wind speeds are modest compared to interannual variability.
Summer and winter compound events	England-wide: Similar to high winds, compound events (high winds and precipitation occurring at the same time) are more likely to occur in some locations on the west of England and Wales.	England-wide: Climate projections indicate a slight increase in the occurrence of summer compound events, with a larger increase for the 2070s than the 2030s. Under future climate conditions the regions which already experience these events are expected to see an increase in their frequency.
Lightning	England-wide: In most UK locations there are 50 to 80 6-hour periods per year in which lightning occurs. Occurrence is lower near the coast and particularly the east coast.	England-wide: Climate Projections indicate that lightning is projected to increase in spring and summer, decrease in autumn, and shows little change in winter.
Flood risk: tidal, fluvial and surface water	Chapter 10 Water Environment provides an overview of hydrology and flood risk for the Project Scoping Boundary. Key headlines are summarised under 'Flood Risk'. See baseline conditions, Chapter 10 Water Environment for an overview of hydrology and flood risk for the Scoping Boundary	Chapter 10 Water Environment provides an overview of hydrology and flood risk for the Project Scoping Boundary.
Sea level rise	East Midlands: The Scoping Boundary comprises land within the Fens, the majority of which is below 50m above sea level, with reliance on wider flood defences to mitigate the hazard of flooding associated with sea level rise. This area has been assigned an	England-wide: Sea level is rising over the whole of the England coastline. Sea level rise is expected to reach approximately 1 metre under RCP8.5. Increases in coastal flooding hazards are attributed to the sea level rise throughout the century.

Climate Hazard	Baseline summary Timescales: (1981-2010)	Future summary Timescales: 2030s, 2040s (2026-2055), 2050s (2036-2065), 2070s (2050-2079) RCP8.5 50th percentile
	area known as Flood Zone 3a, which has a high (0.5% or greater annual) probability of tidal flooding. See baseline conditions, Chapter 10 Water Environment for an overview of hydrology and flood risk for the Scoping Boundary.	East Midlands: Increase in sea level could be 0.7 m or greater(RCP8.5) by the end of the century.
Wildfire	England-wide: Baseline information not provided with probabilistic projections. There is limited mention of wildfires and fogs in most recent The State of the UK Climate Report (Ref 18A.11). East Midlands: For the Wildfire Daily Hazard Assessment, the baseline suggests that there are 30 days where wildfire index is within the 'Very High Danger' thresholds .	Projected hotter conditions, prolonged higher temperatures and more frequent periods of water scarcity are likely to increase wildfire risk across the UK. East Midlands (Lincolnshire): By the 2050s, there is projected to be an increase in Wildfire: Daily Hazard Assessment to 63 days (RCP8.5, 50th percentile), increasing further to 92 days (RCP8.5, 50th percentile) by the 2080s.

18A.5 CCR Screening Assessment

18A.5.1 **Table 18A.4** and **Table 18A.5** present the results of this CCR Screening assessment.

Table 18A.4 CCR screening assessment summary: construction phase

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
Materials and equipment for construction of built assets: equipment	Extreme high temperatures and heatwaves	High temperatures or prolonged heat could impact the operational performance of equipment and may result in delays to construction programme.	Where possible, avoid using machinery and equipment in the hottest part of the day to avoid potential overheating. Ensure equipment is stored correctly and maintained as per operating guidance.
	Extreme low temperatures	Low temperatures could impact the operational performance of equipment and may result in delays to construction programme.	Ensure equipment is stored correctly and maintained as per operating guidance. Due to projected decreases in colder weather periods related to climate change this is not anticipated to result in a substantial impact.
	High winds and storms (including summer and winter compound events)	Damage to materials and construction equipment may result in delays to construction programme and associated costs and/or unacceptable safety risks.	Where possible, avoid using machinery and equipment in high winds and storms. Ensure equipment is stored correctly and maintained as per operating guidance.
	Flood risk: tidal and fluvial	Heavy precipitation could lead to localised flooding impacting equipment on site and resulting in delays to construction programme and associated costs.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): W07: requiring the contractor(s) to subscribe to the Environment Agency's Floodline service, and implement appropriate flood risk management plans.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
Materials and equipment for construction of built assets: Structures and stockpiles	High winds and storms (including summer and winter compound events)	High winds and summer and winter compound events may lead to an increased risk of dust generation or erosion of stockpiles, and an increased risk of surface water run-off and contamination.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): CC03: requiring the contractor(s) to pay due consideration to the impacts of extreme weather events and related conditions during construction. CC04: requiring the contractor(s) to consider all measures deemed necessary and appropriate to manage severe weather events. GG20: requiring earthworks and stockpiled soil to be protected by covering, seeding, or using water suppression where appropriate. Chapter 10 Water Environment outlines measures to reduce the risk of pollution of the water environment during construction through removing pathways between sources and receptors.
		High winds may lead to damage to temporary construction structures e.g. fencing.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure):

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
			GG26: requiring fencing to be regularly inspected and maintained and removed as part of the demobilisation unless otherwise specified.
	Flood risk: tidal, fluvial and surface water	Increased risk of flooding could lead to erosion of stockpiles resulting in siltage of drainage assets.	Chapter 10 Water Environment outlines measures to reduce the risk of pollution of the water environment during construction through removing pathways between sources and receptors.
Access routes to construction site e.g. to tower and substation locations via temporary access tracks and temporary working areas	Extreme low temperatures	Viability of, and access to construction sites could be temporarily compromised due to icy conditions leading to associated disruption or hinderance of construction processes resulting in delays to construction programme and associated costs.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): GG24: requiring an Emergency Action Plan to be developed in case of unplanned events. CC04: requiring the contractor to consider all measures deemed necessary and appropriate to manage severe weather events. As appropriate, construction method statements should also consider severe weather events where risks have been identified. Due to projected decreases in colder weather periods related to climate change, this is not anticipated to result in a substantial impact.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Flood risk: tidal, fluvial and surface water	Viability of, and access to construction sites could be temporarily compromised leading to associated disruption or hinderance of construction processes resulting in delays to construction programme and associated costs.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): GG24: requiring an Emergency Action Plan to be developed in case of unplanned events.
	Wildfires	Viability of, and access to construction sites temporarily compromised and associated disruption or hinderance of construction processes resulting in delays to construction programme and associated costs.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): CC05: requiring an early warning system for wildfire detection and evacuation procedures.
Human health: Workers at construction sites	Extreme high temperatures and heatwaves	Increased heat stress/heat exhaustion for workers may lead to unacceptable safety risks.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): CC03: requiring the contractor(s) to pay due consideration to the impacts of extreme weather events and related conditions during construction.
	Extreme low temperatures	Possible negative health implications for workers on construction site may lead to unacceptable safety risks.	
	High winds and storms (including summer and winter compound events)	Increased risk of windblown debris may lead to unacceptable safety risks.	

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Flood risk: tidal, fluvial and surface water	Heavy precipitation may lead to Localised flooding and unacceptable safety risks.	CC04: requiring the contractor(s) to use a short to medium range weather forecasting service to inform short to medium term programme management, environmental control and impact mitigation measures. GG05: requiring construction workers to undergo training to increase their awareness of environmental issues as applicable to their role on the project. GG24: requiring an Emergency Action Plan to be developed in case of unplanned events. W07: requiring the contractor(s) to subscribe to the Environment Agency's Floodline service.
Wildlife		Occurrences of wildfires in surrounding areas for construction workers may lead to unacceptable safety risks (e.g. smoke inhalation and in extreme cases harm to health).	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts including (refer to Appendix 4A for the full description of each measure): CC05: requiring an early warning system for wildfire detection and evacuation procedures for construction workers to be implemented alongside fire safety measures. GG24: requiring an Emergency Action Plan to be developed in case of unplanned events.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
Environmental receptors	Drought	Drought conditions may reduce water supplies required during construction e.g. impacts on the ability utilise to dust suppression measures	CC02 – requiring a Carbon Efficiency Plan, including reducing water use. AQ01 : requiring the development of a Dust Management Plan with measures to minimise dust.
	Flood risk: tidal, fluvial and surface water	Increased risk of precipitation leading to flooding could result in erosion of stockpiles and mobilisation of contamination to the surrounding environment.	Chapter 10 Water Environment outlines measures to reduce the risk of pollution of the water environment during construction through removing pathways between sources and receptors.

Table 18A.5 CCR screening assessment summary: operation phase

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
Substations	Extreme high temperatures and heatwaves	Increased occurrences of high temperatures could lead to: Overheating of substation transformers, resulting in reduced capacity and life expectancy of the asset, in extreme cases, catastrophic failure. Overheating of associated plant resulting in reduced capacity and life expectancy of the asset, in extreme cases, asset failure. Reduced soil moisture, increasing soil resistivity, resulting in a reduction of earthing system effectiveness. reduced capacity of conductors (the wires which carry the electricity from substations). Ground movement which can impact on ground mounted structures such as transformer bases and switch house foundations, and cause breakage of earthing tape through shrinkage of susceptible soils. Increased electricity demand during heatwaves could overload substation transformers resulting in tripping and loss of supply.	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within temperature parameters. Acceptable temperature parameters to be confirmed with the design team at the detailed design stage. Existing robust earthing systems should be effective in mitigating the risk. Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (including geology and hydrology) (refer to Appendix 4A for the full description of each measure): GH01: on intrusive ground investigations and assessment prior to construction to inform the detailed foundation and design of substations. In line with NGET Adaptation Reporting Power (ARP) report submission, the operator shall continue to monitor potential climate impacts on substations and seek to understand and make changes to NGET Policy, Procedure and Design Standards as necessary.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Extreme low temperatures	Occurrences of extreme low temperatures could lead to reduction in operational performance of equipment within the substation.	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within particular temperature parameters. In line with NGET ARP report submission, the operator shall continue to monitor potential climate impacts on substations and seek to understand and make changes to NGET Policy, Procedure and Design Standards as necessary.
	Freeze-thaw-days	Occurrences of freeze-thaw days and /or rapid fluctuations in ambient temperatures could lead to: Increased erosion of asset foundations; and Localised ground movement, resulting in impacts to asset integrity.	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within particular temperature parameters. Due to projected decreases in colder weather periods related to climate change this is not anticipated to result in a substantial impact. Existing risk management and resilience frameworks should be sufficient to manage any impacts.
	High winds and storms (including summer and winter compound events)	High winds could increase the risk of: Wind-borne debris and may lead to faults and damage to substation assets; and Atmospheric salt being transported from coastal areas which may lead to increased corrosion of metal structures and salt build up on conductors which could lead to arcing.	Existing NGET design standards account for extreme weather conditions. Substation Equipment is designed to be resilient to a wind speed of 34 m/s (76 mph). NGET have seen instances of recent storm activities that have equalled and exceeded these standards, but the network and assets have performed as designed. NGET policy PS(T) 023 sets out requirements for primary insulation to be used in National Grid substations taking into account environmental conditions and project drivers.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Lightning	Lightning events could result in short-circuit faults, triggering electrical protection and circuit breakers. In extreme events, lightning strikes could lead to asset damage. Power surges may result in wider damages to the asset infrastructure.	National Grid Technical Specification (TS) 2.01 Part 1 (Relevant Electrical Standards - RES) Substations – Part 1 – Procedural (Ref 18A.21), sets out the earthing requirements to manage the potential impact of lightning strikes on substation assets. In line with NGET ARP report submission (Ref 18A.6.), the operator shall continue to monitor potential climate impacts on substations and seek to understand and make changes to NGET Policy, Procedure and Design Standards as necessary.
	Sea level rise	Sea level rise could ultimately lead to inundation of substation assets and routes that provide access to those assets.	Chapter 10: Water Environment states that a Flood Risk Assessment (FRA) will be produced to inform the project design and the findings of the ES. The FRA will examine future flood risk over the development lifetime, and identify mitigation measures required to ensure flood resilience, taking climate change into account (in line with Environment Agency guidance). There is a potential interdependency on third party owned and operated flood defences to reduce the risk of incursion from sea level rise.
	Flood risk: tidal, fluvial and surface water	Periods of heavy rainfall could lead to: Localised flooding and water ingress into assets which may result in damage to assets and wider network issues such as loss transmission. Temporary works (such as access tracks and storage) and towers are located in Flood Zones 2 and 3 , although it is expected impermeable surface will be minimal and due to	Chapter 10 Water Environment states that a FRA will be produced to inform the project design and the findings of the ES. The FRA will examine future flood risk over the development lifetime, and identify mitigation measures required to ensure flood resilience, taking climate change into account (in line with Environment Agency guidance). Substation siting zones provide opportunity for siting a substation in areas of lowest flood risk as far as possible, considering the distribution of flood risk

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
		setback distances, floodplain storage is expected to be negligible and the WMEL-A and WMEL-B substations are located in Flood Zone 1 and impacted by a surface water flow path. The Siting Zone for the proposed Weston Marsh substation infrastructure is located entirely within an extensive area of Flood Zone 3, although defended flood extents show reduced flood risk within the Siting Zone. The location of the Weston Marsh substation infrastructure is yet to be defined within the Siting Zone; it is possible that there may be surface water flow paths near or within the location. Overwhelming of drainage substation systems; and Localised flooding which could result in stranded assets e.g. viability of, and access to assets may be temporarily compromised resulting in delays to maintenance or emergency repair activities (this may be a particular issue in the lower lying Fenland region, where flooding can persist over many weeks).	along the preferred route corridor, and taking into account other environmental and engineering constraints. Further embedded design measures will be developed as the Project design evolves. This includes a minimum set-back distance between towers and watercourses, flood mitigation measures for those substations which must, through further design development, be located in higher flood risk areas due to a lack of alternative lower flood risk sites, and drainage design for substations to ensure no increase in flood or pollution risk arising from Site runoff. There is a potential interdependency on third party owned and operated flood defences to reduce the risk of incursion from sea level rise.
	Wildfire	Occurrences of wildfires and associated smoke could damage	Wildfires impacting substations are mitigated to an extent through current NGET vegetation management policies (including use of Vegetation Management

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
		conductors and may result in in arcing and tripping of circuits.	Optimisation where applicable) (Ref 18A.22). These policies do not currently extend to potential fire risk from arable land and peat.
	Drought	Specific sites on the project may be on substrate that is particularly vulnerable to drought and ground movement that could impact substation building infrastructure and other assets. Drought conditions could lead to reduced soil moisture which increases soil resistivity and a reduction in earthing system effectiveness. Where earthing design parameters are exceeded, system and public safety issues can arise with reduced touch potential distances or failure to fully dissipate fault current, leaving exposed metal components inside and outside the site boundary live.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (including geology and hydrology) (refer to Appendix 4A for the full description of each measure). GH01: on intrusive ground investigations and assessment to be undertaken prior to construction to inform the detailed foundation design of substations. Monitoring plans should be implemented to refine understanding of risk occurring to ensure appropriate measures and response times are developed. Existing robust earthing systems should be effective in mitigating the risk.
Towers	Extreme high temperatures and heatwaves	Periods of extreme high temperatures and heatwaves could lead to: Drying out of the soil can lead to increased erosion potential; Ground movement impacting on tower foundations and cause breakage of earthing tape through shrinkage of susceptible soils; and Reduced soil moisture, increasing soil resistivity, resulting in a reduction of earthing system effectiveness.	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (including geology and hydrology) (refer to Appendix 4A for the full description of each measure): GH01: on intrusive ground investigations and assessment to be undertaken prior to construction to inform the detailed foundation design of substations. It is anticipated that most tower foundations along the route will be formed of 'piled' foundations, to mitigate

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
			this risk. Where ground conditions are not considered to be suitable, pad foundations may be specified. This will be considered further within the detailed design stage. Continue to monitor and make changes to Policy, Procedure and Design Standards as necessary. Include requirements for regular maintenance and inspections following extended periods of high temperatures. Existing robust earthing systems should be effective in mitigating the risk.
	Freeze-thaw-days	Occurrences of freeze-thaw days and /or rapid fluctuations in ambient temperatures could lead to: Increased erosion of asset foundations; and Localised ground movement, resulting in impacts to asset integrity.	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within temperature parameters. Acceptable temperature parameters to be confirmed with the design team at the detailed design stage. Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (including geology and hydrology) (refer to Appendix 4A for the full description of each measure). GH01: on intrusive ground investigations and assessment to be undertaken prior to construction to inform appropriate geotechnical design. It is anticipated that most tower foundations along the route will be formed of 'piled' foundations, to mitigate this risk. Where ground conditions are suitable, pad foundations may be specified. Further embedded design measures will be considered as the Project design evolves, through engagement with the

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
			engineering design team, to ensure extreme weather and climate related impacts are minimised where possible. Measures will be incorporated into the future development of Project design principles. Due to projected decreases in colder weather periods related to climate change this is not anticipated to be a substantial risk moving forward. Existing risk management and resilience frameworks should be sufficient to manage any impacts.
	High winds and storms (including summer and winter compound events)	High winds could increase the risk of wind-borne debris and may lead to damage to towers.	Existing NGET design standards account for extreme wind conditions and consider different wind speeds and directions. The analysis does not consider the cumulative effects of windstorms, but does consider several variables/scenarios and takes into account tower elevation and land cover assumptions. NGET is currently undertaking further innovation and analysis as part of the Whole Energy System Resilience Vulnerability Assessment (Ref 18A.23) programme, and emerging outputs of this research should be considered during the detailed design stage. The risk of falling trees and other vegetation to be managed through current NGET vegetation management policies (including use of Vegetation Management Optimisation where applicable) (Ref 18A.22). Chapter 8 Ecology and Biodiversity states that micro-siting of towers would take into account swing of the overhead lines to avoid or minimise loss of woodland and trees.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Lightning	In extreme events, lightning strikes to exposed tower assets could result in surges that could cause circuits to trip. Extreme cases of lightning strikes could lead to physical damage to the assets.	Earth wire is designed to provide some shielding to the phase conductors and absorb the current of a direct lightning strike, with this fault current being distributed along the earth wire and into the ground via towers and the substation earth mats. Protection and control measures for equipment for the network should continue to be monitored to manage the future level of risk of the hazard occurring.
	Sea level rise	Sea level rise could ultimately lead to inundation of tower assets or routes that provide access to those assets. However, it is unlikely that this hazard will represent a vulnerability to the operational phase of the Project due to the Project location. However, there may be areas of the Fens, which are below 50m of current mean sea level. See Chapter 10 Water Environment for more information.	Chapter 10 Water Environment states that a FRA will be produced to inform the project design and the findings of the ES. The FRA will examine future flood risk over the development lifetime, and identify mitigation measures required to ensure flood resilience, taking climate change into account (in line with Environment Agency guidance). There is a potential interdependency on third party owned and operated flood defences to reduce the risk of incursion from sea level rise.
	Flood risk: tidal, fluvial and surface water	High velocity flood events could lead to: Scour of tower foundations, exert significant loads on structure and may result in damage to the tower structures; and riverbank or drainage ditch erosion in the vicinity of towers, undermining foundations.	Chapter 10 Water Environment states that a FRA will be produced to inform the project design and the findings of the ES. The FRA will examine future flood risk over the development lifetime, and identify mitigation measures required to ensure flood resilience, taking climate change into account (in line with Environment Agency guidance). Further embedded design measures will be developed as the Project design evolves. This includes a proposed minimum set-back distance between towers and watercourses.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
			Suitable corrosion and pH resistant concrete formulas will be utilised for tower foundations to minimise the risk, such that the new infrastructure and structures are not susceptible to significant effects resulting from ground instability or chemical damage of concrete, including flood risk. The water environment assessment within the ES will be supported by a FRA, which will consider the impacts of climate change on future flood risk (including reservoir flooding) and will be assessed in line with the most up to date Environment Agency guidance.
	Wildfire	Occurrences of wildfires could result in damage to towers and earthwire. However, typically tower structures are designed to withstand high temperatures.	Towers will be constructed from materials that are compliant with national fire standards. Further embedded design measures will be considered as the Project design evolves, through engagement with the engineering design team, to ensure extreme weather and climate related impacts are minimised where possible. Measures will be incorporated into the future development of Project design principles. Wildfires impacting substations are mitigated to an extent through current NGET vegetation management policies (including use of Vegetation Management Optimisation where applicable) (Ref 18A.22). These policies do not currently extend to potential fire risk from arable land and peat.
	Drought	Increasing temperatures will, without precipitation, lead to drying of the ground causing it to shrink. Any structures built on this ground will be	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (including

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
		subject to movement which, as well as being amplified by the height of the structure, can lead to instability of the foundations. Towers are more vulnerable to this movement. Earthing tape may also be broken through ground movement. As moisture in the soil reduces the soil resistivity increases, reducing the effectiveness of the earthing system. Where earthing design parameters are exceeded, system and public safety issues can arise with reduced touch potential distances or failure to fully dissipate fault current, leaving exposed metal components inside and outside the site boundary live.	geology and hydrology) (refer to Appendix 4A for the full description of each measure): GH01: on intrusive ground investigations and assessment to be undertaken prior to construction to inform appropriate geotechnical design. It is anticipated that most tower foundations along the route will be formed of 'piled' foundations, to mitigate this risk. Where ground conditions are suitable, pad foundations may be specified. This will be considered further within the detailed design stage. Existing robust earthing systems should be effective in mitigating the risk.
Overhead lines	Extreme high temperatures and heatwaves	Increased occurrences of high temperatures and heatwaves could lead to: Thermal expansion of conductors and overhead lines that could lead to increased line sag that exceeds the overhead line UK design parameters, resulting in increased number of incidents where clearance limits are compromised and need for maintenance downtime, reducing network capacity; and reduced ability for the conductor to operate at maximum efficiency (as the core	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within particular temperature parameters in line with SQSS Code Documents (Ref 18A.25). The SQSS Code Documents include operational criteria and management measures that address conditions that could increase the likelihood of a overhead line fault (e.g. high winds, lightning, very high or low ambient temperatures, high precipitation and flooding). Overhead line and support structures to be designed in accordance with BS EN 50341-2-9 (2017) National Normative Aspects and Technical Specifications to ensure the minimum ground to conductor clearances are maintained.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
		temperature increases so does resistance within the conductor reducing its ability to carry current, thus reducing its capacity).	Overhead line ratings vary across the seasons to take account of ambient temperature variations to ensure that lines are not overloaded. Ratings are typically lower in the Summer as a result. Typically, overhead line circuits are not run close to their maximum ratings for long periods of time for the purpose of fault contingency. Dynamic Line Rating may be used, where temperature and sag sensors on overhead lines allow line ratings to be changed in real time to respond to daily or even hourly variations in ambient temperature, as opposed to seasonal ratings currently used on the majority of lines. Further embedded design measures will be considered as the Project design evolves, through engagement with the engineering design team, to ensure extreme weather and climate related impacts are minimised where possible. Measures will be incorporated into the future development of Project design principles. Additionally, future requirements should be included for regular maintenance and inspections following extended periods of high temperatures.
	Extreme low temperatures	Occurrences of extreme low temperatures could lead to: Ice and snow gathering on overhead line and insulators and may cause snow sleeves and/or flashover faults icing phenomena; increased mechanical tension resulting in line sag; and a reduction in operational performance of equipment.	Network assets to be manufactured to National Grid and international standards (where relevant) and designed to operate within particular temperature parameters. Due to projected decreases in colder weather periods related to climate change, this is not anticipated to be a substantial risk.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	High winds and storms (including summer and winter compound events)	High winds could increase the risk of wind-borne debris and may lead to damage to the overhead line.	Access to overhead lines may be restricted during a wind event but it is considered unlikely to have a severe impact on fault response due to the resilience of the network and relatively short storm duration. The risk of falling trees and other vegetation to be managed through current NGET vegetation management policies (including use of Vegetation Management Optimisation where applicable) (Ref 18A.22). NGET is currently undertaking further innovation and analysis as part of the Whole Energy System Resilience Vulnerability Assessment (Ref 18A.23) programme, and emerging outputs of this research should be considered during the detailed design stage. Any identified measures to minimise this potential risk will be incorporated into the future development of Project design principles.
	Lightning	Lightning events could result in short-circuit faults, triggering electrical protection and circuit breakers. In extreme events, lightning strikes on exposed overhead line could lead to asset damage.	Earth wire is designed to provide some shielding to the phase conductors and absorb the current of a direct lightning strike, with this fault current being distributed along the earth wire and into the ground via towers and the substation earth mats. Over voltages and flashovers may still occur with lightning strikes on overhead lines but these faults will be cleared by protection systems which will open the breakers at each end of the line before closing them again shortly after, known as delayed auto reclose.

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
			Protection and control measures for equipment for the network should continue to be monitored to manage the future level of risk of hazard occurring.
	Wildfire	Occurrences of wildfires and associated smoke could damage conductors and may result in in arcing and tripping of circuits. Occurrences of wildfires could damage operational telecommunication systems and may result in faults, inability to control the network, or loss of power generation / supply.	Wildfires impacting overhead lines are mitigated to a large extent via current NGET vegetation management policies. Operation and maintenance plans for the Project should include requirements for inspections following wildfire. There is currently no mitigation available to reduce the risk of smoke causing arcing within conductors. A fire safety procedure should be developed for the operational phase that includes risks of wildfire.
Human Health receptors	Extreme high temperatures and heatwaves	Increased heat stress/heat exhaustion for maintenance workers may lead to unacceptable safety risks for maintenance workers.	Managed through adherence to NGET's health and safety procedures for operations and maintenance activities.
	Extreme low temperatures	Possible negative health implications for maintenance workers may lead to unacceptable safety risks for maintenance workers.	
	High winds and storms (including summer and winter compound events)	Increased risk of windblown debris may lead to unacceptable safety risks for maintenance workers.	

Identified receptors	Climate change hazard	Potential climate change impact	Design and control measures identified
	Flood risk: tidal, fluvial and surface water	Heavy precipitation may lead to localised flooding and unacceptable safety risks for maintenance workers.	
	Wildfires	Occurrences of wildfires in surrounding areas for maintenance workers may lead to unacceptable safety risks (e.g. smoke inhalation and in extreme cases harm to health).	
Environmental receptors: landscape		Increased temperatures and drought conditions could compromise the landscape design (e.g. plants and shrubs die)	Appendix 4A Initial Outline Code of Construction Practice outlines measures relevant to the control and management of potential climate impacts (refer to Appendix 4A for the full description of each measure): GG07: requiring a Construction Environmental Management Plan (CEMP) and a Landscape and Ecological Management Plan (LEMP) to be produced prior to construction. LV01: on the retention of vegetation where practicable, and planting of native shrub. LV02: requiring the contractor(s) to apply the relevant protective principles set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition, and construction.

18A.6 Conclusion

- 18A.6.1 This CCR screening assessment sets out the potential climate change impacts on the Project, identified at this early design stage. As identified above, there are a number of design and control measures that are considered at this early design stage to mitigate against any potential significant effects of climate change in the construction, operation and maintenance phases, which include:
- **High temperatures and heatwave impacts on overhead line** - The Project will be designed to existing National Grid standards, which include consideration of high temperatures. National Grid also undertakes regular inspections of the network using thermal imaging to assess damage from weather.
 - **Salt transport potential** – as the eastern end of the Project would be located in close proximity to tidally influenced watercourses and within relative proximity to the coast, there is potential for salt (transported by wind) to build up on conductor components and result in potential corrosion and arcing issues. The Project will be designed to existing National Grid standards, which include guidelines and practices to ensure the longevity and reliability of electrical assets exposed to high salt content including corrosion control measures.
 - **Wildfire impacts on assets** –Standard procedures and guidance including those provided by the National Grid’s Transmission Network Control Centre Operation and incident response team would be followed, and safety zones around assets identified. The Project would include standoff distances from wooded areas and landscape planting, in order to minimise the risk of vegetation contacting the overhead line and potentially igniting a fire. Should weather conditions during construction or maintenance become hot and dry for a long period of time, further consideration would be given to hot work activity locations. Maintenance plans would include requirements for inspections following wildfire.
 - **High winds and compound event impacts on towers and overhead line** - Overhead lines could be subject to high wind speeds; however, these are designed to meet current safety standards. If in an extreme scenario the overhead line were to be damaged, the monitoring system would detect the fault within milliseconds and the circuit would be tripped. This would occur before the overhead line (conductor) hits the ground and there would be no resulting risk of electrocution or fire. NGET is currently undertaking further innovation and analysis as part of the Whole Energy System Resilience Vulnerability Assessment (Ref 18A.23) programme, and emerging outputs of this research would be considered during the detailed design stage.
- 18A.6.2 Taking account of the design and control measures, significant effects on the environment are not likely as a result of the Project’s vulnerability to climate change and no further assessment is required in the ES.

References

- Ref 18A.1 Department for Energy Security & Net Zero (2024). Overarching National Policy Statement for energy (EN-1), London: GOV.UK. [online] Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1> [Accessed 21 July 2025].
- Ref 18A.2 Department for Energy Security & Net Zero (2024). National Policy Statement for electricity networks infrastructure (EN-5), London: GOV.UK. [online] Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5> [Accessed 21 July 2025].
- Ref 18A.3 Institute of Sustainability and Environmental Professionals (2020). Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation. [Accessed 21 July 2025].
- Ref 18A.4 Met Office (2018) UKCP18 Science Overview Report. [online] Available at: <https://www.metoffice.gov.uk/pub/data/weather/uk/ukcp18/science-reports/UKCP18-Overview-report.pdf> [Accessed 21 July 2025].
- Ref 18A.5 HM Government (2022). UK Climate Change Risk Assessment 2022. London: GOV.UK. [online] Available at: <https://assets.publishing.service.gov.uk/media/61e54d8f8fa8f505985ef3c7/climate-change-risk-assessment-2022.pdf> [Accessed 21 July 2025].
- Ref 18A.6 National Grid (2021). Climate Change Adaptation Report, National Grid Electricity Transmission. National Grid plc, Warwick. [online] Available at: <https://www.nationalgrid.com/electricity-transmission/document/143211/download> [Accessed 21 July 2025].
- Ref 18A.7 Met Office (2018). UKCP User Interface (UI) Products. [online] Available at: https://ukclimateprojections-ui.metoffice.gov.uk/products/form/LS3_Subset_01. [Accessed 7 August 2025].
- Ref 18A.8 Met Office (2023, updated 2025). Met Office Climate Data Portal. [online] Available at: <https://climatedataportal.metoffice.gov.uk/>. [Accessed 7 August 2025].
- Ref 18A.9 Met Office (2018). HADUK Grid Overview. [online] Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/data/haduk-grid/overview>. [Accessed 21 July 2025].
- Ref 18A.10 The UK Climate Resilience Programme (2024). Climate Risk Indicators. [online] Available at: <https://uk-cri.org/> [Accessed 21 July 2025].
- Ref 18A.11 Kendon et al. (2023) State of the UK:2022. [online] Available at: <https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.8167> [Accessed 21 July 2025].
- Ref 18A.12 National Grid (2025). Annual Report and Accounts 2024/25. [online] Available at: <https://www.nationalgrid.com/document/560311/download> [Accessed 21 July 2025].
- Ref 18A.13 Met Office (2024). What is a heatwave?. [online] Available at: <https://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/temperature/heatwave> [Accessed 21 July 2025].

- Ref 18A.14 Met Office (2024) Charting the UK's changing climate. [online] Available at: <https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/weather-and-climate-news/2021/9120-new-climate-normal> [Accessed 21 July 2025].
- Ref 18A.15 Met Office (2021). UKCP18 Factsheet: Wind. [online] Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-fact-sheet-wind_march21.pdf [Accessed 21 July 2025].
- Ref 18A.16 UK Climate Risk. Wildfire Briefing. [online] Available at: <https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA3-Briefing-Wildfire.pdf> [Accessed 21 July 2025].
- Ref 18A.17 Met Office (2021). UKCP18 Factsheet: Sea level rise and storm surge. [online] Available at: <https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-fact-sheet-sea-level-rise-and-storm-surge.pdf> [Accessed 21 July 2025].
- Ref 18A.18 Task Force on Climate-related Financial Disclosures (2017). Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures. [online] Available at <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf> [Accessed 6 August 2025].
- Ref 18A.19 Department for Environment Food and Rural Affairs (2023). Consultation on the Fourth Round of the Climate Adaptation Reporting Power. [online] Available at <https://consult.defra.gov.uk/climate-change-adaptation/fourth-round-adaptation-reporting-power/> [Accessed 6 August 2025].
- Ref 18A.20 National Grid Energy Transmission (July 2021). Climate Change Adaptation Report [online]. Available at: <https://www.nationalgrid.com/electricity-transmission/document/143211/download> [Accessed 21 July 2025].
- Ref 18A.21 National Grid (2018) National Grid Technical Specification TS 2.01 Part 1 (RES) Substations – Part 1 – Procedural. [online] Available at: https://www.nationalgrid.com/sites/default/files/documents/TS_2.01_Part%201_RES_i1.pdf [Accessed 21 July 2025]
- Ref 18A.22 National Grid (2025) Assessing Forest Condition To Limit Vegetation Removal Near Our Assets. [online] Available at: <https://www.nationalgrid.com/responsibility/assessing-forest-condition-limit-vegetation-removal-near-assets> [Accessed 21 July 2025]
- Ref 18A.23 Energy Networks Association (2023). National Grid Whole Energy System Resilience Vulnerability Assessment. [online] Available at: https://smarter.energynetworks.org/projects/10061033-nget-whole-energy-system-resilience-vulnerability-assessment-sifiesrr-rd2_discovery/ [Accessed 21 July 2025].
- Ref 18A.24 Environment Agency (2025). Press Release: West and East Midlands move into drought. [online] Available at <https://www.gov.uk/government/news/west-and-east-midlands-move-into-drought> [Accessed 6 August 2025].

Ref 18A.25 National Grid (2012). National Electricity Transmission System Security and Quality of Supply Standard, Version 2.2. [online] Available at: <https://www.nationalgrideso.com/document/215581/download> [Accessed 21 July 2025].

19A. Major Accidents and Disasters Scoping Table

Contents

19A. Major accidents and disasters scoping table	19A-1
Table 19A.1 Major accidents and disasters scoping table	19A-1

19A. Major accidents and disasters scoping table

Table 19A.1 Major accidents and disasters scoping table

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Natural hazards	Geophysical	Earthquakes	Earthquakes in the UK are moderately frequent but are unlikely to be powerful enough to inflict severe damage. The British Geological Society (BGS) acknowledges that although the UK is distant from the nearest tectonic plate boundary, the Mid-Atlantic Ridge, earthquakes in the UK occur as crustal stresses within the tectonic plates are relieved by movement occurring on pre-existing fault planes. One of the driving forces is regional compression, caused by the motion of the Earth's tectonic plates and uplift, resulting from the melting of the ice sheets that covered many parts of the UK thousands of years ago. The Project is not considered to be vulnerable to earthquakes of the level experienced in the UK. It is also unlikely to trigger earthquakes.	No
Natural hazards	Geophysical	Volcanic activity	According to the National Risk Register – 2020 (Ref 19A.1), there are a number of volcanoes across Europe that could affect the UK, especially volcanoes in Iceland (such as Bárðarbunga and Eyjafjallajökull) due to their proximity to the UK and because there are frequent eruptions. Due to prevailing winds, they have potential to blow ash and gas towards the UK. It is highly unlikely that an ash cloud could significantly impact on any aspect of the Project.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Natural hazards	Geophysical	Landslides	The BGS is the definitive source of landslide information in Great Britain. The National Landslide Database shows there have been 103 landslides recorded within the Project Scoping Boundary; 17 in Section 3 located in the area south Holwell and in the area north of Six Hill Lane; 75 in Section 4 located in between Tilton on the Hill and Tugby/Rolleston; and 11 spread out through Section 5. The Project does not involve the formation of deep cuts/high embankments. In designing the Project to applicable standards, resources and receptors would not be put at a greater risk as a consequence of the Project.	No
Natural hazards	Geophysical	Sinkholes	The superficial and bedrock geology within the Project Scoping Boundary is described in Chapter 11 Geology and Hydrogeology. Due to the nature of the superficial and bedrock geology within the Scoping Boundary, sinkholes are unlikely and therefore the Project is not at risk of this natural hazard.	No
Natural hazards	Hydrology	Tidal flooding	The Flood Risk Assessment (FRA) to be undertaken as part of ES Chapter 10 Water Environment will assess the vulnerability of the Project to flood risk and the risk that the Project could increase flood risk elsewhere. National Grid designs its infrastructure to either withstand a flood event or to be raised up out of the floodplain. The construction of the Project will incorporate appropriate post construction surface water management and land drainage systems if necessary. The detailed scope of the FRA will be agreed with relevant stakeholders, but the construction, operation, and maintenance of the Project is not considered to be susceptible to flooding and is unlikely to cause flooding elsewhere.	No
Natural hazards	Hydrology	Fluvial flooding		
Natural hazards	Hydrology	Pluvial flooding		
Natural hazards	Hydrology	Groundwater Flooding		
Natural hazards	Hydrology	Avalanches	Avalanches are not considered relevant given the location of the Project.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Natural hazards	Climatological and meteorological	Cyclones, hurricanes, typhoons, storms and gales	Cyclones, hurricanes, typhoons do not typically occur in the UK. Storms and gales could result in damage to the overhead line, however, they will be designed in line with UK standards which take into account environmental conditions including exposure to UK weather conditions. The risk is not significantly different to other similar infrastructure in the locality.	No
Natural hazards	Climatological and meteorological	Thunderstorms	Storms of sufficient severity to cause damage to infrastructure are very rare in the UK. Lightning could potentially strike above ground installations including towers. However, these have earthing protection against lightning strikes as set out in existing Technical Standards. Storms could be a source of high wind speeds. Underground cables would not be liable to the effects of high winds. Overhead lines could be subject to high wind speeds; however, these are designed to meet current safety standards. If in an extreme scenario the overhead line were to be damaged, the monitoring system would detect the fault within milliseconds and the circuit would be tripped. This would occur before the overhead line (conductor) hits the ground and there would be no resulting risk of electrocution or fire. Therefore, there is no increased risk from or to the Project.	No
Natural hazards	Climatological and meteorological	Extreme temperatures: heatwaves, low (sub-zero) temperatures and heavy snow	This type of event could expose site infrastructure to greater heat intensity and exposure to sunlight. Heavy snow could cause disruption to workers and delivery vehicles and drivers during construction. High temperature records are now being broken across the UK with increasing frequency. Data sourced from the UK Met Office summarises the highest daily maximum temperature in the UK is 40.3°C, recorded in Coningsby, Lincolnshire in July 2022.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			The lowest daily minimum temperature on record in the UK is -27.2°C recorded in Altnaharra, Scotland in December 1995. In late February and early March 2018, the UK experienced a spell of severe winter weather with very low temperatures and significant snowfall. Climate change is set to lead to more extreme events over the coming years. The Project will be designed to existing National Grid standards, which include consideration of high temperatures. National Grid also undertakes regular inspections of the network using thermal imaging to assess damage from weather. Therefore, there is no increased risk from or to the Project.	
Natural hazards	Climatological and meteorological	Droughts	Drought has the longest advance warning times of the severe weather types. The Project would not be vulnerable to drought.	No
Natural hazards	Climatological and meteorological	Severe space weather: solar flares	The energy from solar flares reaches Earth within a few minutes and can cause radio blackouts.	No
Natural hazards	Climatological and meteorological	Severe space weather: solar energetic particles	Solar energetic particles arrive at Earth around 15 minutes to a few hours after they occur and cause solar radiation storms which can potentially harm astronauts and impact electronics. CMEs travel slowly and can take between 14 hours and up to four days to reach Earth and cause geomagnetic storms with many impacts including localised disruptions to power grids.	
Natural hazards	Climatological and meteorological	Severe space weather: coronal mass ejections (CMEs)	However, in designing the Project to applicable standards, resources and receptors would not be put at a greater risk as a consequence of the Project.	
Natural hazards	Climatological and meteorological	Fog	Fog is one of the most common weather conditions in the UK, particularly throughout autumn and winter. Severe disruption to transport occurs when the visibility falls below 50 m over a wide area. Should fog become an issue during the construction or maintenance phases due to visibility, work	

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			would cease, where it is not safe to continue until conditions improve. Therefore the Project would not lead to any increased risk of a major accident or disaster from fog.	
Natural hazards	Climatological and meteorological	Wildfires: forest fire, bush/brush, pasture	In 2018, fire and rescue services dealt with a number of wildfires across the country. Security Scotland also experiences large, rural wildfires, most recently seen in Dumfries and Galloway in 2020. The Project would include standoff distances from wooded areas and landscape planting, in order to minimise the risk of vegetation contacting the overhead line and potentially igniting a fire. Should weather conditions during construction or maintenance become hot and dry for a long period of time, further consideration would be given to hot work activity locations. Therefore the Project would not lead to any increased risk of a major accident or disaster from wildfires.	No
Natural hazards	Climatological and meteorological	Poor air quality	Between 27 June and 7 July 2006, and between 13 and 23 July of the same year, the UK experienced two periods of extended hot weather with associated elevated ozone and harmful airborne particles. In the first episode, the combination of heatwave conditions, poor air quality and worsening of people's pre-existing conditions led to up to 540 deaths and up to 700 hospital admissions. The same factors led to up to 630 deaths and up to 830 hospital admissions in the second episode. Periods of elevated pollution over a widespread area, and lasting more than two days, can occur around 5 to 10 times a year dependent on seasonal weather conditions. The proposed scope of the air quality assessment is set out in Chapter 14 Air Quality. Potentially significant air quality effects from the Project are limited to temporary impacts during construction, which can be mitigated and managed through appropriate measures.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			During operation of the Project there is unlikely to be any effect on air quality as maintenance vehicles would be very few and there are no emissions associated with the operation of the Project itself. Therefore, there is no increased risk from or to the Project.	
Natural hazards	Biological	Disease epidemics: viral bacterial parasitic fungal prion	The construction and operation of the Project would not give rise to any disease epidemics. The development itself would be constructed following all necessary guidance and restrictions in place at the time of its construction.	No
Natural hazards	Biological	Animal Diseases: Bird Flu Bluetongue	The Project would not be a source of any disease epidemics and spread during any outbreak would be controlled through containment of infected animals including prohibition of transportation. The Project will adopt strict biosecurity protocols when working between livestock/poultry farms as set out in measure ref AS07 of Appendix 4A Initial Outline Code of Construction Practice .	No
Natural hazards	Biological	Plants	Standard control measures would be implemented by the appointed contractor during construction to handle and dispose of any diseased or invasive plants to prevent their spread. Measures, as set out in B04 of Appendix 4A Initial Outline Code of Construction Practice would be put in place for the Project.	No
Technological or manmade hazards	Societal	Extensive public demonstrations which could lead to violence and loss of life.	The Project is located in a largely rural area of the UK, and despite isolated cases of civil unrest, the UK is considered to be a politically stable country. The Project should not lead to civil unrest, widespread damage to societies and economies and is unlikely to require largescale multi-faceted humanitarian assistance.	No
Technological or manmade hazards	Societal	Widespread damage to societies and economies		

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Technological or manmade hazards	Industrial and urban accidents	Major accident hazard chemical sites	There are no sites that fall under the COMAH Regulations 2015 within proximity to the Project. The closest COMAH site is Scott Bader UK Limited, located approximately 2 km east of the Scoping Boundary for Section 5. The Project would not lead to any increased risk of a major accident or disaster from a COMAH site.	No
Technological or manmade hazards	Industrial and urban accidents	Major accident hazard pipelines	The Project would not lead to any increased risk of a major accident or disaster from a major accident hazard pipeline. Any pipeline crossings would comply with existing safety requirements.	No
Technological or manmade hazards	Industrial and urban accidents	Nuclear	Nuclear sites are designed, built, and operated so that the likelihood of releases of radiological material in the UK is extremely low. The Project is not located near any nuclear sites therefore would not lead to any increased risk of a major accident or disaster from a nuclear site.	No
Technological or manmade hazards	Industrial and urban accidents	Fuel storage	There are no fuel storage sites located within the Scoping Boundary, therefore the Project would not lead to any increased risk of a major accident or disaster from a fuel storage site.	No
Technological or manmade hazards	Industrial and urban accidents	Dam breaches	There are no reservoirs within the Scoping Boundary and the Project would not lead to any increased risk of a dam breach. Potential risks from reservoir flooding will be considered in the FRA. The Project is not expected to lead to any increased risk of major accident or disaster from reservoir flooding.	No
Technological or manmade hazards	Industrial and urban accidents	Mines and storage caverns	There are no Mining Remediation Authority Mine Entries located within the Scoping Boundary. The Project is not likely to lead to any increased risk of a major accident or disaster from mines and caverns.	No
Technological or manmade hazards	Industrial and urban accidents	Fires	Fires could be initiated by construction or maintenance related activities however standard control measures would be implemented by the appointed contractor to manage the	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			risk of fire. Measure GG21 of Appendix 4A Initial Outline Code of Construction Practice prohibits bonfires and the burning of water material on site. The Project is not likely to lead to any increased risk of a major accident or disaster from fires.	
Technological or manmade hazards	Transport accidents	Road	Transport accidents occur across the UK on a daily basis. During construction there will be an increase in heavy construction plant and equipment on the local road network which would form the entry and exit points for construction traffic and therefore may increase the risk of road traffic accidents. Access points will incorporate appropriate visibility splays, turning radii and speed limit reductions where necessary/appropriate. Measures TT01, TT02, TT03 of Appendix 4A Initial Outline Code of Construction Practice set out measures to control and manage construction traffic on the highway network. A Transport Assessment will be undertaken to support the application for development consent and a Construction Traffic Management Plan will be implemented during construction, describing mitigation measures where identified. The operation of the Project would not result in increased traffic flow or changes to traffic composition which could have an adverse impact on highway safety. The Project is not likely to lead to any increased risk of a major accident or disaster from road traffic accidents.	No
Technological or manmade hazards	Transport accidents	Rail	There are railway lines within the Scoping Boundary. The design of the railway crossing would be agreed with Network Rail and would comply with existing safety requirements, to protect the railway line. The Project is not likely to lead to any increased risk of a major accident or disaster from rail accidents.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Technological or manmade hazards	Transport accidents	Waterways	The Project is not likely to lead to any increased risk of a major accident or disaster from marine vessel accidents. For navigable rivers that the Project needs to cross, the design will comply with existing safety requirements to protect the waterways.	No
Technological or manmade hazards	Transport accidents	Aviation	The Project is not likely to lead to any increased risk of a major accident or disaster from aviation accidents. An aviation report will be produced to identify all airfields and airstrips (identified in Chapter 16 Socioeconomics, Recreation and Tourism) and will set out potential issues for each. Routeing and design of the Project where possible will allow these airfields/airstrips to continue to operate safely.	No
Technological or manmade hazards	Pollution accidents	Air	The proposed scope of the air quality assessment is set out in Chapter 14 Air Quality . The Project is not likely to lead to any increased risk of a major accident or disaster from air pollution accidents.	No
Technological or manmade hazards	Pollution accidents	Land	Measures GG08, GG24, W02, and GH05 in Appendix 4A Initial Outline Code of Construction Practice will ensure control and management measures are in place to prevent pollution from the construction of the Project. The Project is not likely to lead to any increased risk of a major accident or disaster from land pollution accidents.	No
Technological or manmade hazards	Pollution accidents	Water	Measures GG08, GG24, W02, and GH05 in Appendix 4A Initial Outline Code of Construction Practice will ensure control and management measures are in place to prevent pollution from the construction of the Project. The Project is not likely to lead to any increased risk of a major accident or disaster from water pollution accidents.	No
Technological or manmade hazards	Utilities failure	Electricity during construction	Above-ground electrical transmission lines are present within the Scoping Boundary. During construction, any work required near electric overhead power lines would be	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			adequately controlled and appropriate site-specific risk assessments completed which would consider such aspects as: - the voltage and height; - size and reach of any machinery or equipment; - safe clearance distances required; - site conditions such as undulating terrain; and - competence, supervision, training and briefing to staff. The Project is not likely to lead to any increased risk of a major accident or disaster from an electricity utilities failure.	
Technological or manmade hazards	Utilities failure	Electricity during operation	There is a potential major accident involving electrocution during the operation and maintenance phase if there were to be a failure of the transmission infrastructure, or at the substations. Electrocution hazards are primarily protected by good design of the electrical systems and safe systems of work. The National Emergency Plan for Downstream Gas & Electricity sets out arrangements between government, industry, the regulator and other parties for safe and effective management of downstream gas and electricity supply emergencies and the Project will adhere to this plan for safe and effective operation.	No
Technological or manmade hazards	Utilities failure	Gas	Gas transmission pipelines do intersect with the Project Scoping Boundary; however, the Project is not likely to lead to any increased risk of a major accident or disaster from a gas utilities failure. For any works in close proximity to gas pipelines, the appropriate safe methods of work would be agreed with the pipeline operator and suitable risk assessment undertaken.	No
Technological or manmade hazards	Utilities failure	Water supply	The Project would be designed and constructed to appropriate design standards which include crossing of other utilities. Including consultation and agreement of protective	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			provisions with the asset owners. The Project is not likely to lead to any increased risk of a major accident or disaster from a water supply utilities failure.	
Technological or manmade hazards	Utilities failure	Sewage system	The Project would be designed and constructed to appropriate design standards which include crossing of other utilities. Including consultation and agreement of protective provisions with the asset owners. The Project is not likely to lead to any increased risk of a major accident or disaster from a sewage system utilities failure.	No
Technological or manmade hazards	Malicious attacks	Chemical Biological Radiological Nuclear	There is the potential for hostile acts against the Project and the associated workforce, which could occur at any stage of the lifecycle of the Project. National Grid take safety and security very seriously and work closely with the police and security services when designing equipment and the security measures needed to protect them and the Project will adhere to these guidelines.	No
Technological or manmade hazards	Engineering accidents and failures	Cyber	According to the National Risk Register 2020 (Ref 19A.1), cyber-attacks occur almost constantly on key national and commercial electronic information, control systems and digital industries. National Grid has security standards in place based on industry recognised standards to achieve high standards of adaptive and responsive cyber security. The Project is not likely to lead to any increased risk of a major accident or disaster from cyber-attacks.	No
Technological or manmade hazards	Engineering accidents and failures	Infrastructure	There is potential for the above ground structures (e.g. towers and overhead lines) to collapse during the operation and maintenance phase albeit a very small risk as appropriate Health and Safety would be adhered to on site. The primary mitigation is to ensure that the elements of the Project are designed in accordance with National Grid standards, industry good practice and the anticipated environmental conditions, therefore minimising risk of collapse.	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
Technological or manmade hazards	Engineering accidents and failures	Bridge failure	Routeing of construction traffic would take account of structural requirements such as weight limits or height restrictions. Condition assessments would also be undertaken in advance where appropriate. Therefore, the Project is not likely to lead to any increased risk of a major accident or disaster from bridge failure.	No
Technological or manmade hazards	Engineering accidents and failures	Flood defence failure	As the Project is an overhead line it will not need to cross flood defences therefore there would be no risk of failure. The Project is not likely to lead to any increased risk of a major accident or disaster from a flood defence failure.	No
Technological or manmade hazards	Human error	Buried strike to existing buried services	The protection of buried services is achieved through existing safety controls embedded during the design and construction stages. These include analysis of up-to-date service information to identify the location of services, holding discussions with service providers to agree protective provisions and managing the risks to services. Measures to manage risk include undertaking service location surveys to track where services are located on the ground. Works would also take into consideration Health and Safety and Environment (HSE) guidance (2014) (Ref 19A.2) which provides advice on how to reduce any direct risks to people's health and safety, as well as the indirect risks arising through damage to services. These existing measures reduce the risk to as low as reasonably practicable for the Project to cause a service strike through human error. The Project is not likely to lead to any increased risk of a major accident or disaster from buried strike to existing buried services.	No
Technological or manmade hazards	Human error	Damage to underground cable	Underground cables that may form part of the Project are placed at a minimum depth of 1.1 m (deep enough so as not to be affected by agricultural activities). The cables and ducts are placed in cement-bound sand with a tile over the top as added protection. Landowners would be made aware of the	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			route of the cable and associated place over the cable. In the extremely unlikely event that the cable was damaged, the fault would be reported in milliseconds through the monitoring system and the system would be auto-isolated, making it safe pending investigations. The Project is not likely to lead to any increased risk of a major accident or disaster from damage to underground cables.	
Technological or manmade hazards	Human error	Crane operation	Geotechnical investigations would be undertaken to identify the stability/suitability of the ground beneath where the crane would be placed, having an appropriately designed crane base plate, and using trained staff to operate the crane. The Project is not likely to lead to any increased risk of a major accident or disaster from crane operation.	No
Technological or manmade hazards	Sabotage or arson	Sabotage or arson on proposed infrastructure during construction and operation	During construction, the working areas would have security fencing around the sites and only authorised personnel would be admitted to the sites. Outside of working hours, it is anticipated that the sites would have the proper security measures such as: security guard/CCTV to check for trespassers that could result in sabotage or arson. There is the potential for hostile acts against the Project and the associated workforce, which could occur at any stage of the lifecycle of the Project. National Grid take safety and security very seriously and work closely with the police and security services when designing equipment and the security measures needed to protect them. There is no history of terrorist threat to towers and overhead lines in the UK. Even so, damage to overhead lines, towers and substations, however caused, can be repaired more quickly than damage to underground cables. This makes overhead lines more resilient and flexible than buried assets. Critical infrastructure substations are designed with security and safety in mind and need to meet strict requirements for approval by National Grid. Therefore, the Project is not likely to lead to any	No

Major event group	Major event category	Major event type	Basis of decision to scope in/out	Proposed to be scoped in?
			increased risk of a major accident or disaster from sabotage or arson.	
Technological or manmade hazards	Explosion	Unexploded Ordnance (UXO)	UXO surveys will be undertaken, and if a UXO is found appropriate measures will be taken to remove it. Therefore, the Project is not likely to lead to any increased risk of a major accident or disaster from unexploded ordnance.	No

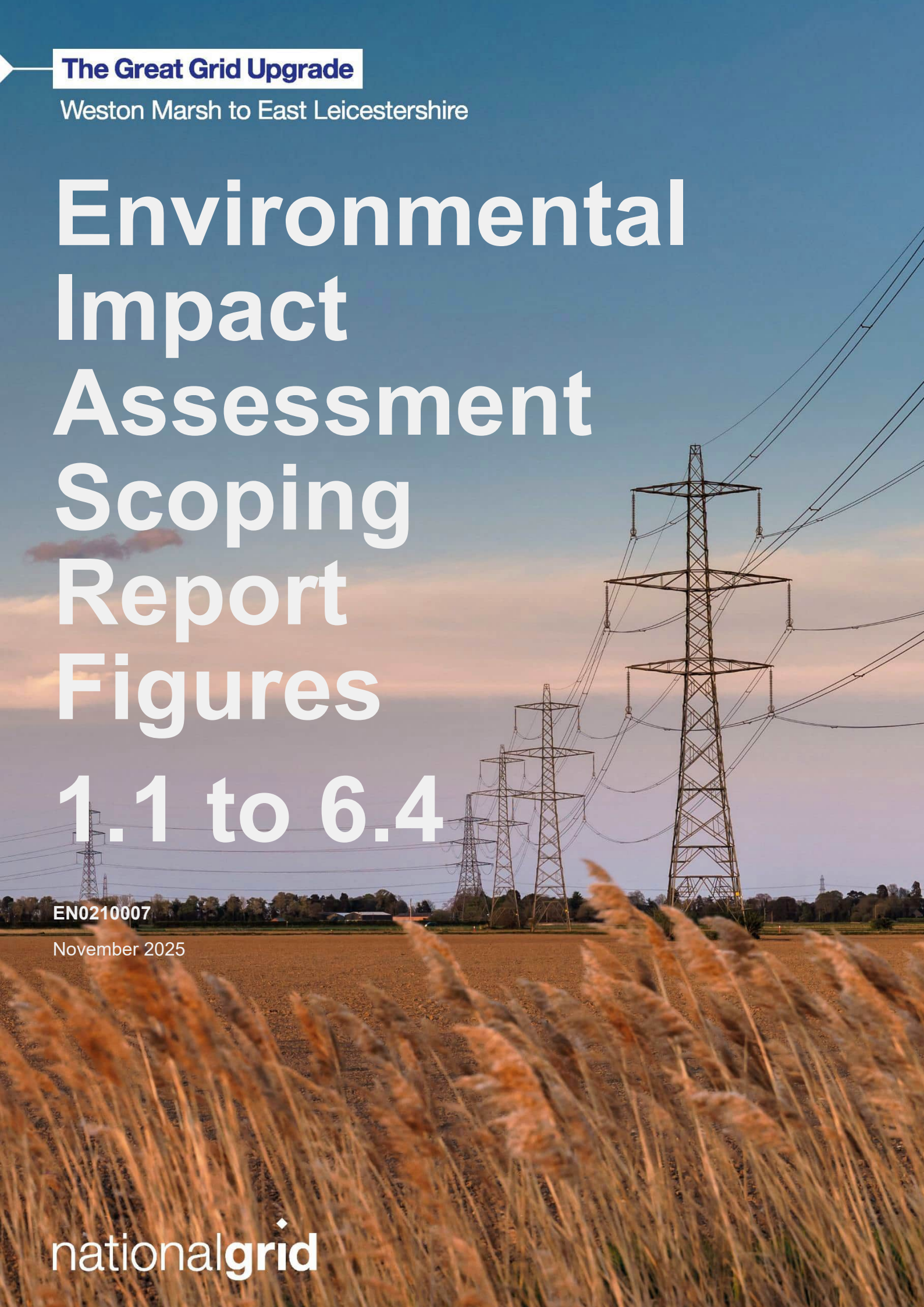
References

Ref 19A.1 HM Government (2023) National Risk Register. [online] Available at: CCS's National Risk Register 2023 (publishing.service.gov.uk). [Accessed 18 July 2025].

Ref 19A.2 Health and Safety Executive (2014) Management of health and safety in the workplace. [online] Available at: Management of health and safety in the workplace: 2014 - GOV.UK (www.gov.uk). [Accessed 18 July 2025].

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com



The Great Grid Upgrade

Weston Marsh to East Leicestershire

Environmental Impact Assessment Scoping Report Figures 1.1 to 6.4

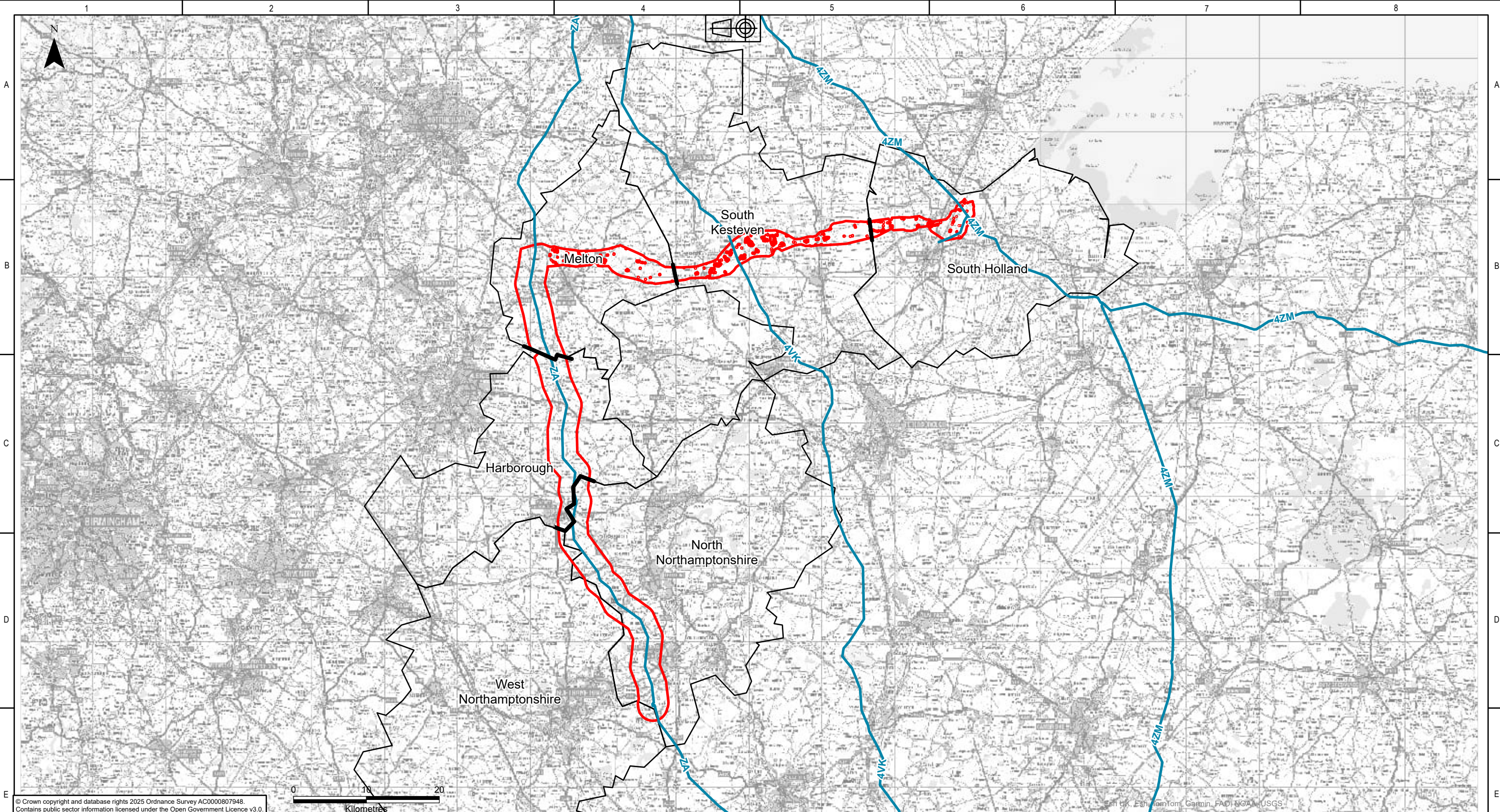
EN0210007

November 2025

nationalgrid

Contents

Figure 1.1	Site Location Plan
Figure 1.2	Scoping Boundary
Figure 3.1	Routeing and Siting Study Area
Figure 3.2	Preliminary Corridors (Overhead Line)
Figure 3.3	WMEL-A Substation Siting Zones
Figure 3.4	WMEL-B Substation Siting Zones
Figure 3.5	Route Options
Figure 3.6	Comparative Appraisal Sections
Figure 3.7	Overhead Line Graduated Swathe
Figure 3.8	WMEL -A Substation Graduated Swathe
Figure 3.9	WMEL-B Substation Graduated Swathe
Figure 3.10	End-To-End Solution
Figure 6.1	Proposed Landscape Study Area
Figure 6.2	Landscape Constraints
Figure 6.3	National Landscape Character
Figure 6.4	Regional Landscape Character



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



- Legend
- Scoping Boundary
 - Sections
 - Lower Tier/Unitary Authority Boundaries
 - Existing 400kV Overhead Line

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

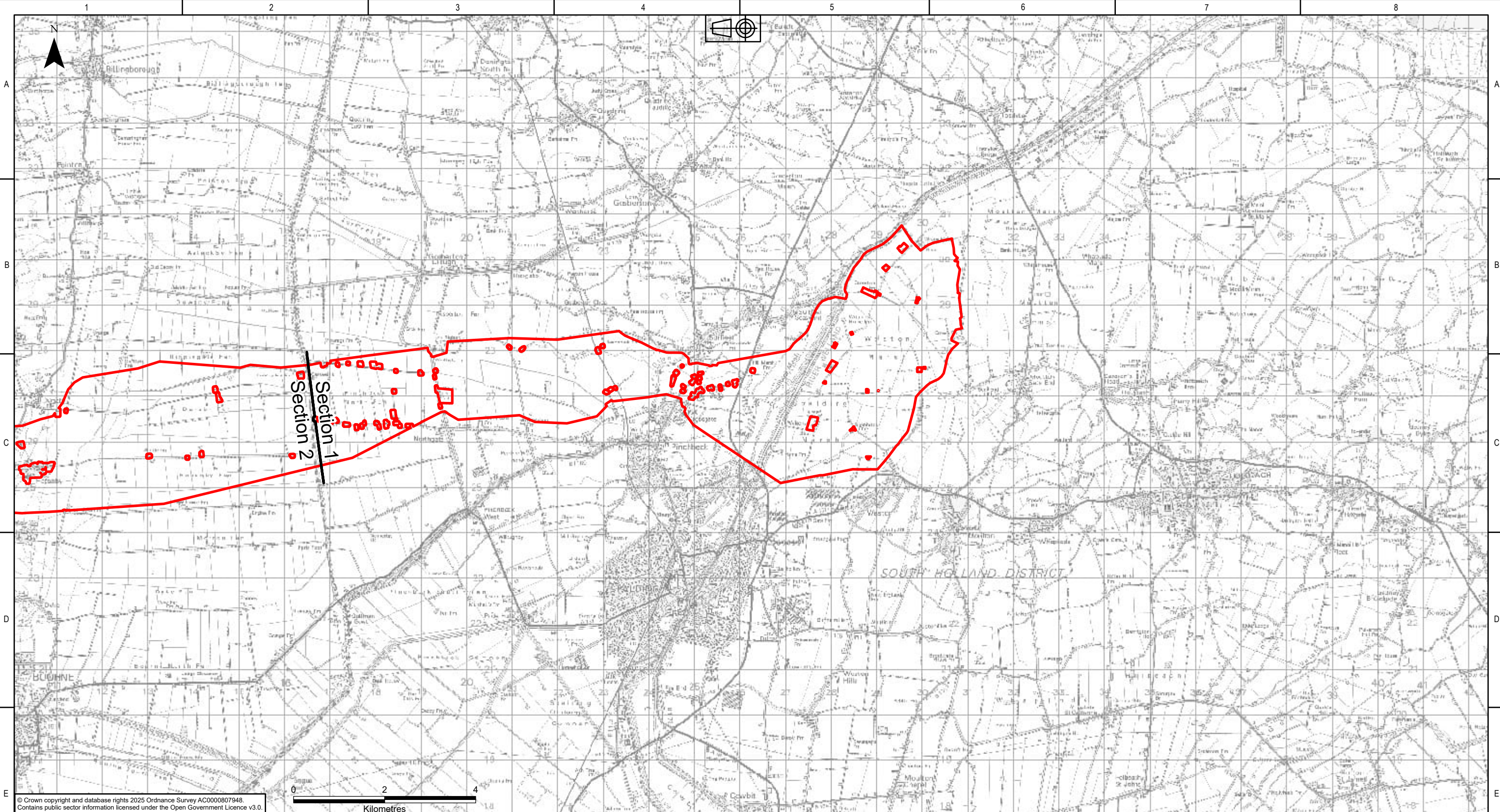
AECOM

ARUP

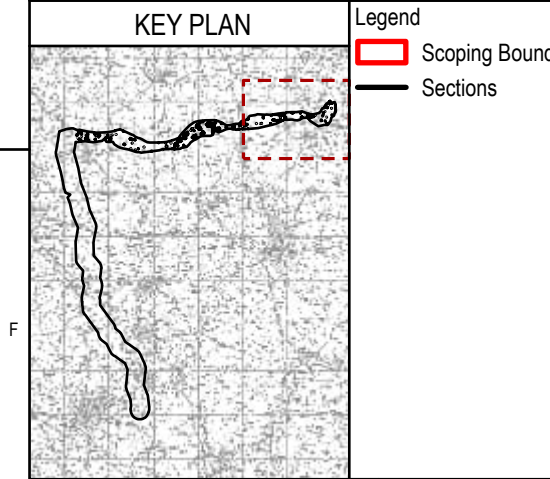
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 1.1 Site Location Plan with Existing Overhead Line	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000007	
NGET Drawing No. N/A	Size A3
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:500,000
Revision P01	



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



- Legend**
- ▭ Scoping Boundary
 - Sections

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

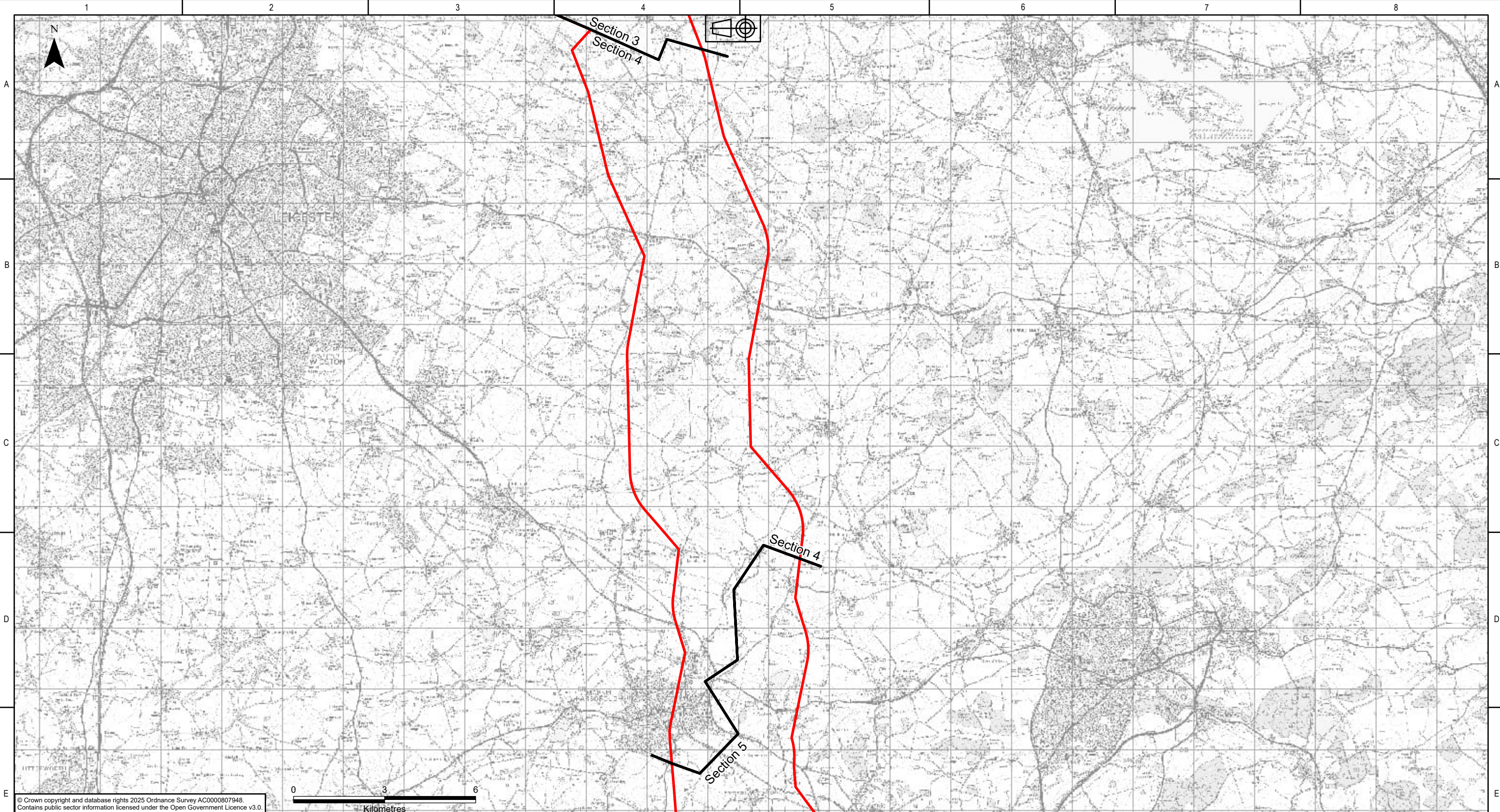
AECOM

ARUP

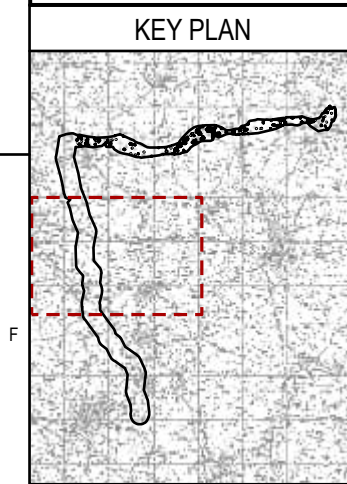
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 1.2 Scoping Boundary	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000008	
NGET Drawing No. N/A	Sheet 1 of 5
Size A3	
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:80,000
Revision P01	



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



Legend

- Scoping Boundary
- Sections

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

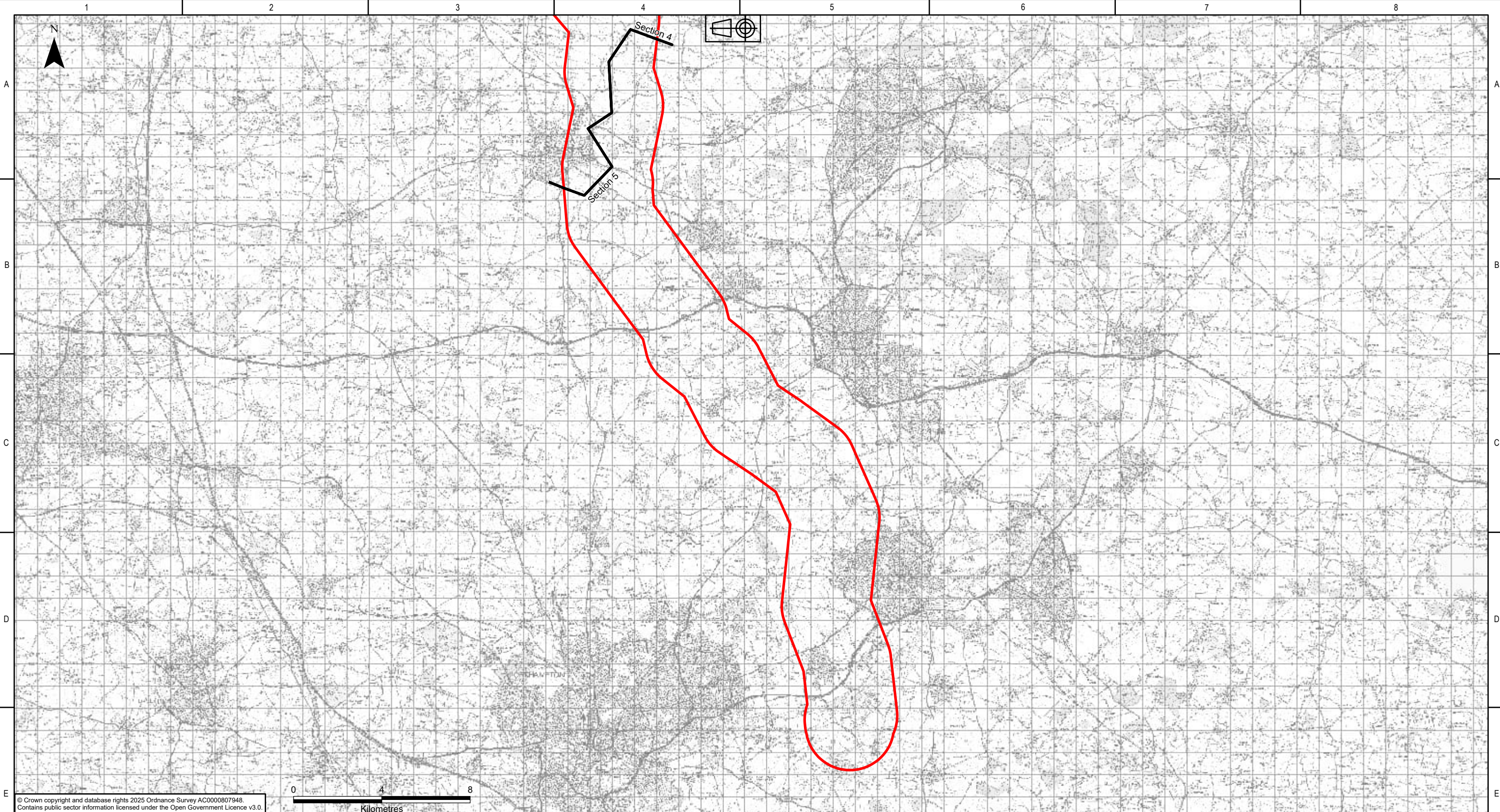
AECOM

ARUP

Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 1.2 Scoping Boundary	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000008	
NGET Drawing No. N/A	Sheet 4 of 5 Size A3
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:120,000 Revision P01

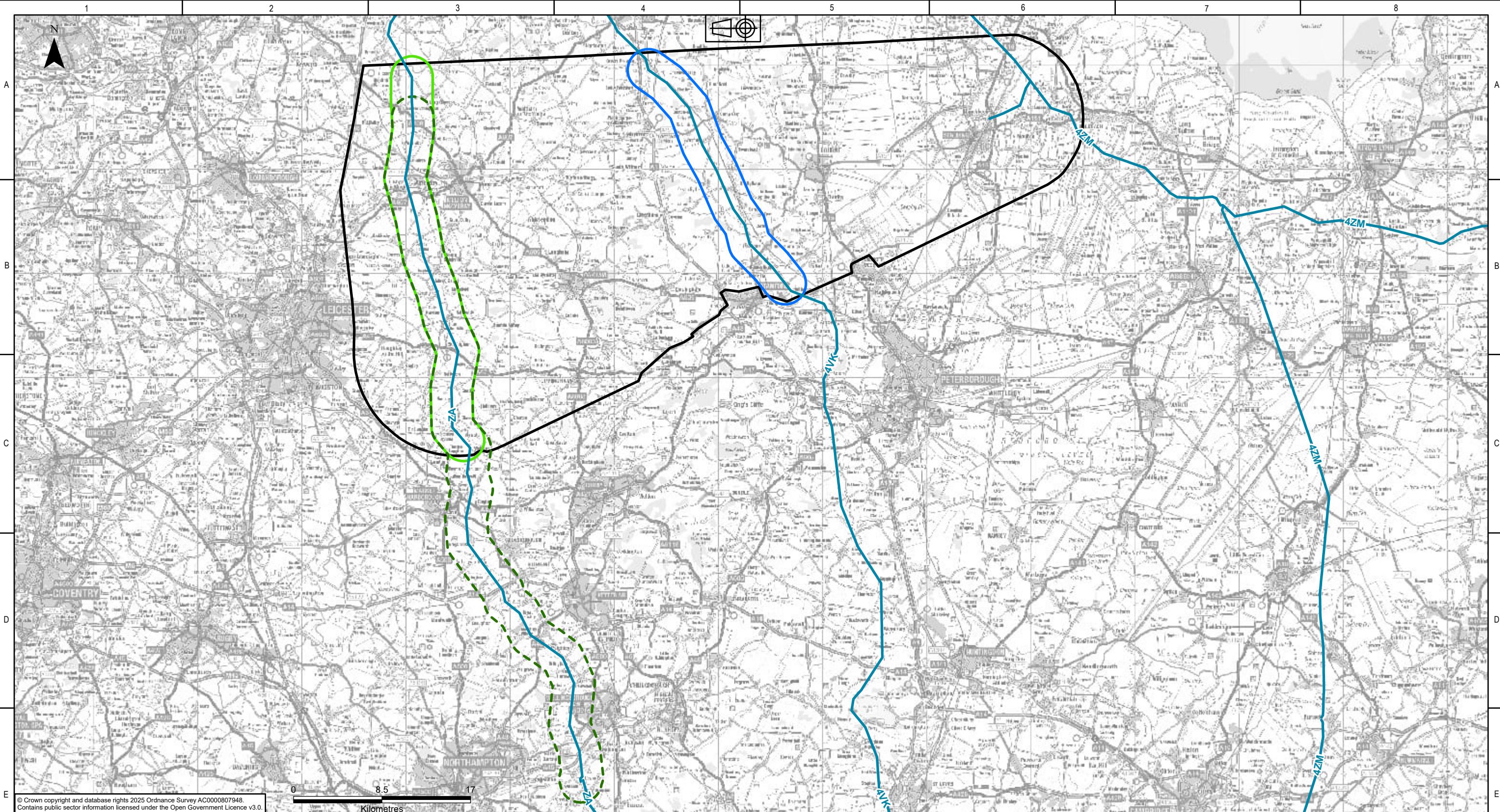


KEY PLAN

Legend

- Scoping Boundary
- Sections

							nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire						
							AECOM ARUP		Title Scoping Report: Figure 1.2 Scoping Boundary						
									Purpose of issue For Information	Status S2					
									Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000008						
									NGET Drawing No. N/A	Sheet 5 of 5	Size A3				
P01.01	27/10/2025	First issue			IM	DM	HJ	CS	Designed I.MEYRICK	Drawn D.MOSNEANU	Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:165,000	Revision P01
Rev.	Date	Comment			Des	Drw by	Check	Appr.							



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.

KEY PLAN		Legend									nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire						
		Overhead Line Study Area									 		Title Scoping Report: Figure 3.1 Routing and Siting Study Area						
		Reconductoring Search Area																	
		WMEL-B Substation Study Area																	
		WMEL-A Substation Study Area																	
		Existing 400kV Overhead Line																	
													Purpose of issue For Information		Status S2				
													Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000009						
													NGET Drawing No. N/A		Size A3				
													Designed I.MEYRICK	Drawn D.MOSNEANU	Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:350,000	Revision P01
		Rev.		Date		Comment				Des			Drw by	Check	Appr.				



KEY PLAN

Legend

- Overhead Line Study Area
- WMEL-A Substation Search Area
- Substation Siting Zone
- Substation Siting Area
- Existing 132kV Overhead Line
- Existing 400kV Overhead Line
- Preliminary Corridor 1

P01.01				27/10/2025	First issue	IM	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.			

nationalgrid

National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

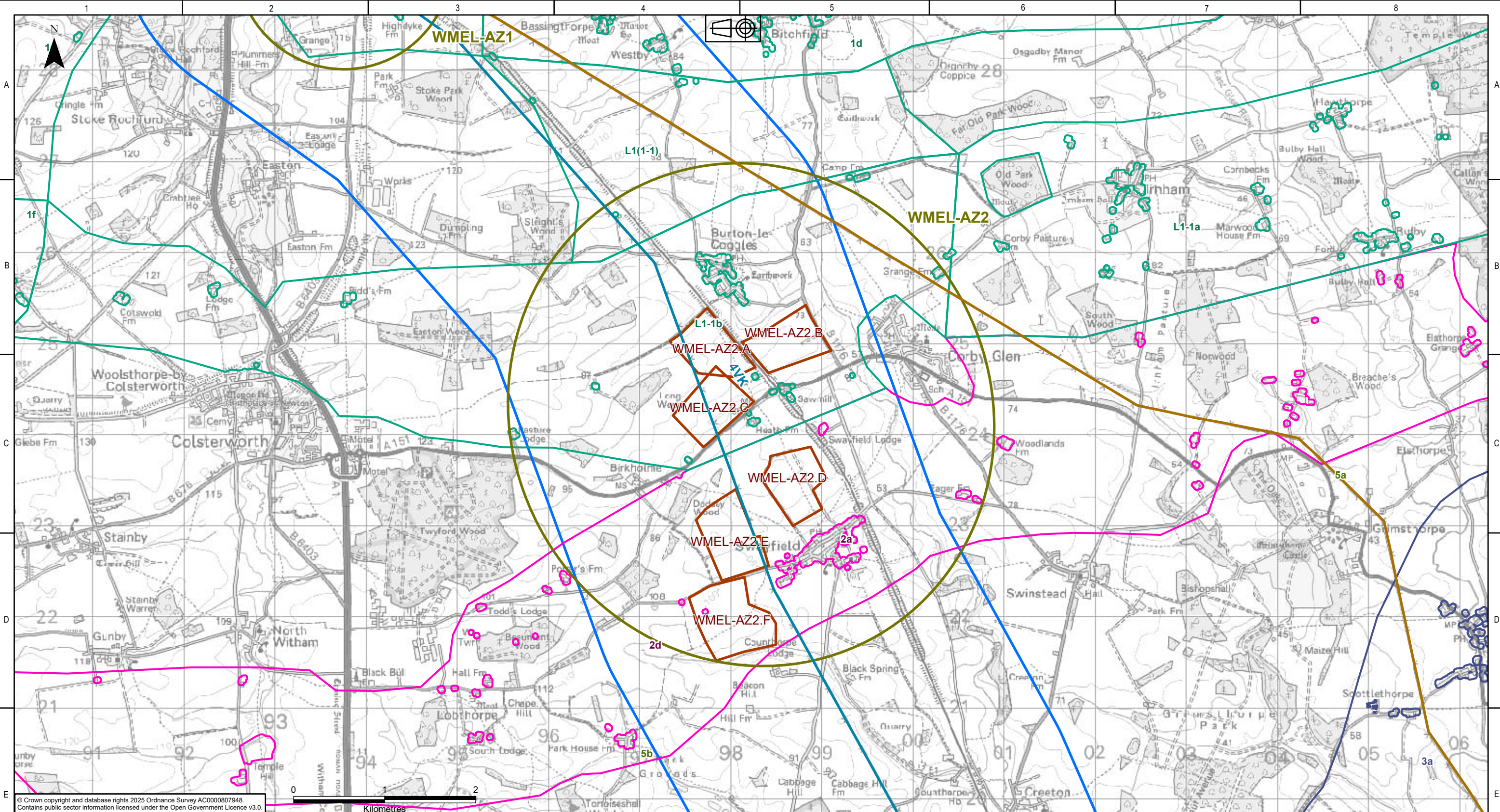
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site
Weston Marsh to East Leicestershire

Title
Scoping Report:
Figure 3.3
WMEL-A Substation Siting Zones

Purpose of issue For Information	Status S2			
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000011				
NGET Drawing No. N/A	Sheet 1 of 4	Size A3		
Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:20,000	Revision P01



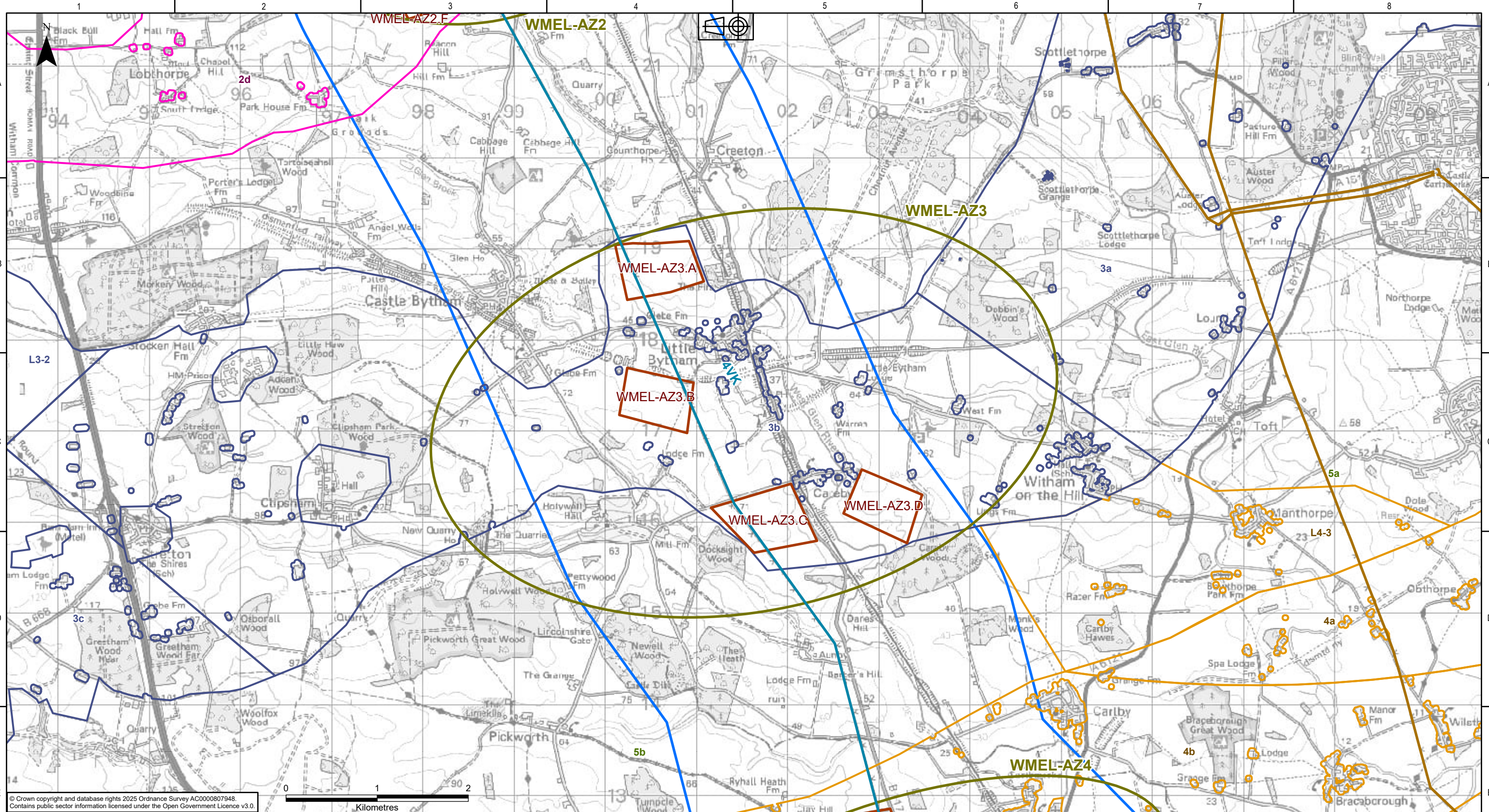
© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.

KEY PLAN

Legend

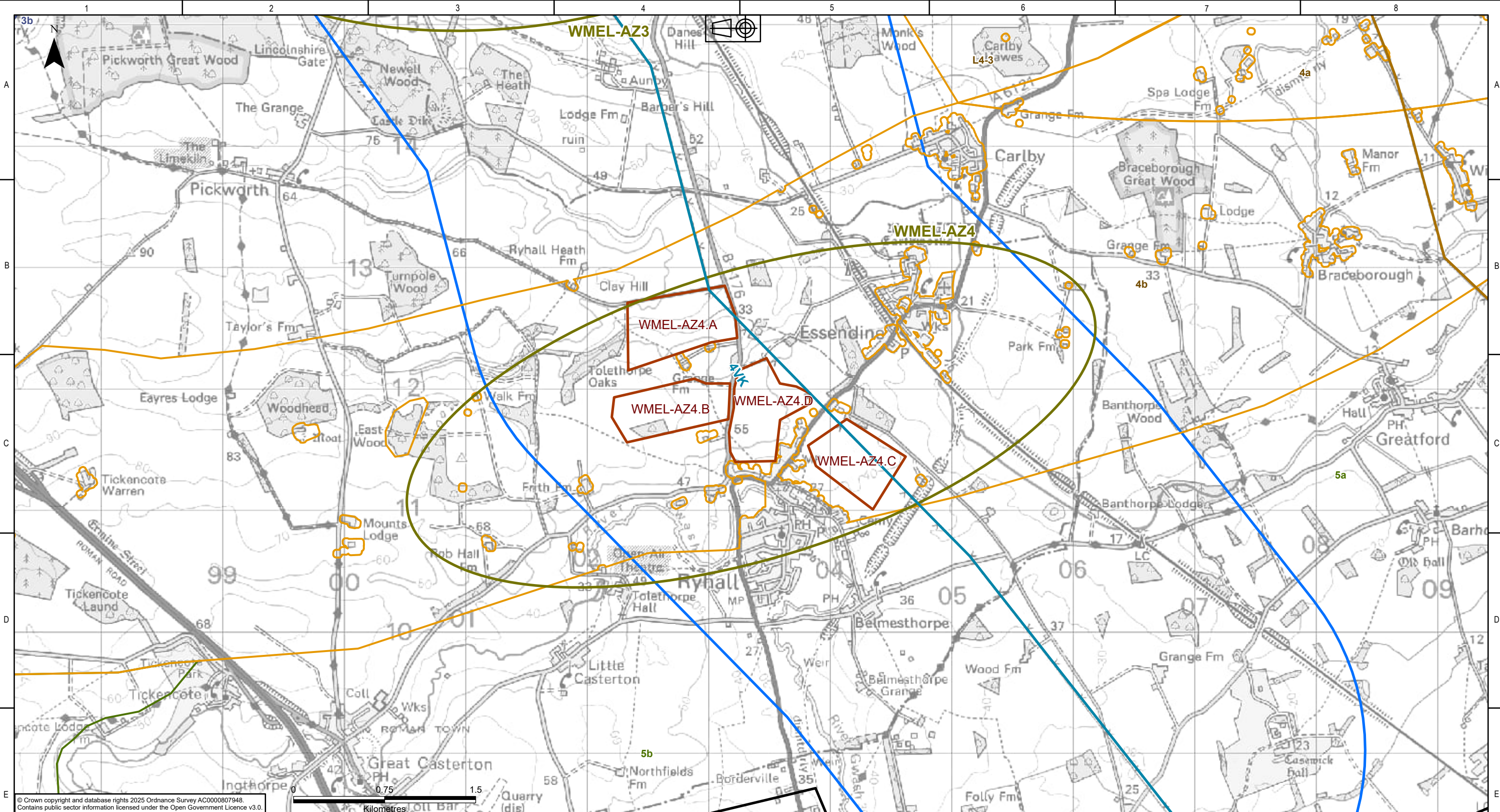
- Overhead Line Study Area
- WMEL-A Substation Search Area
- Substation Siting Zone
- Substation Siting Area
- Existing 132kV Overhead Line
- Existing 400kV Overhead Line
- Preliminary Corridor 1
- Preliminary Corridor 2
- Preliminary Corridor 3

								nationalgrid		Site Weston Marsh to East Leicestershire				
								Contractor		Title Scoping Report: Figure 3.3 WMEL-A Substation Siting Zones				
								AECOM ARUP		Purpose of issue For Information		Status S2		
				Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000011		NGET Drawing No. N/A				Sheet 2 of 4	Size A3			
P01.01	27/10/2025	First issue		IM	DM	HJ	CS	Designed I.MEYRICK	Drawn D.MOSNEANU	Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:40,000	Revision P01
Rev.	Date	Comment		Des	Drw by	Check	Appr.							

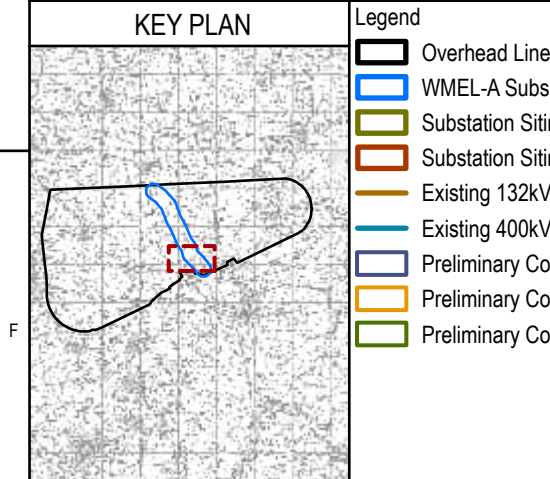
[illegible]

P01.01	27/10/2025	First issue	IM	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.

Designed I.MEYRICK	Drawn D.MOSNEANU	Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:40,000	Revision P01
-----------------------	---------------------	---------------------	----------------------	--------------------	-------------------	-----------------



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



Legend	
	Overhead Line Study Area
	WMEL-A Substation Search Area
	Substation Siting Zone
	Substation Siting Area
	Existing 132kV Overhead Line
	Existing 400kV Overhead Line
	Preliminary Corridor 3
	Preliminary Corridor 4
	Preliminary Corridor 5

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

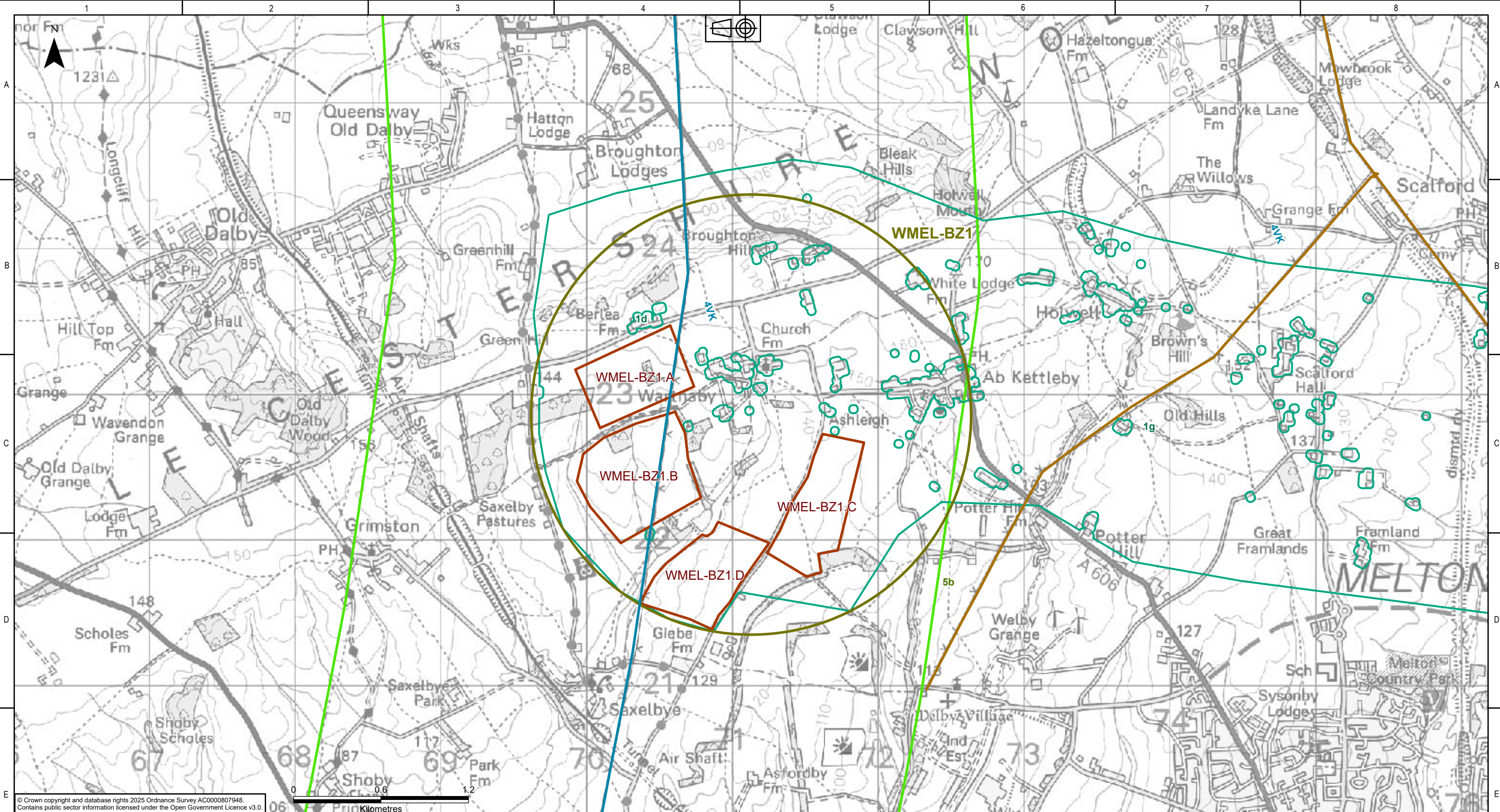
AECOM

ARUP

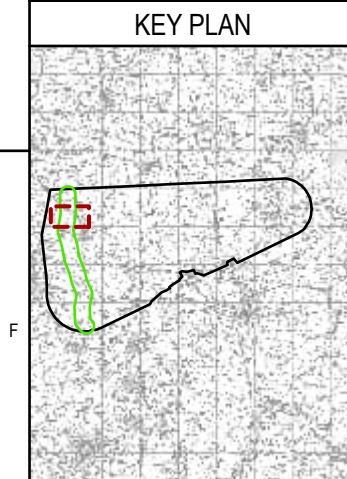
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 3.3 WMEL-A Substation Siting Zones	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000011	
NGET Drawing No. N/A	Sheet 4 of 4
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:30,000
Size A3	Revision P01



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



Legend	
	Overhead Line Study Area
	WMEL-B Substation Search Area
	Substation Siting Zone
	Substation Siting Area
	Existing 132kV Overhead Line
	Existing 400kV Overhead Line
	Preliminary Corridor 1

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

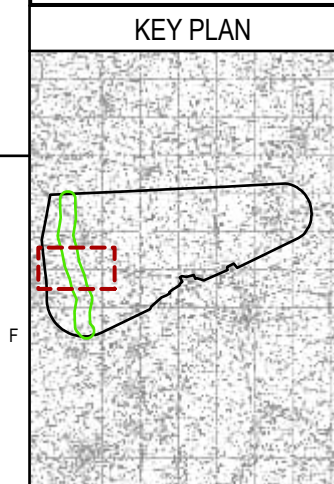
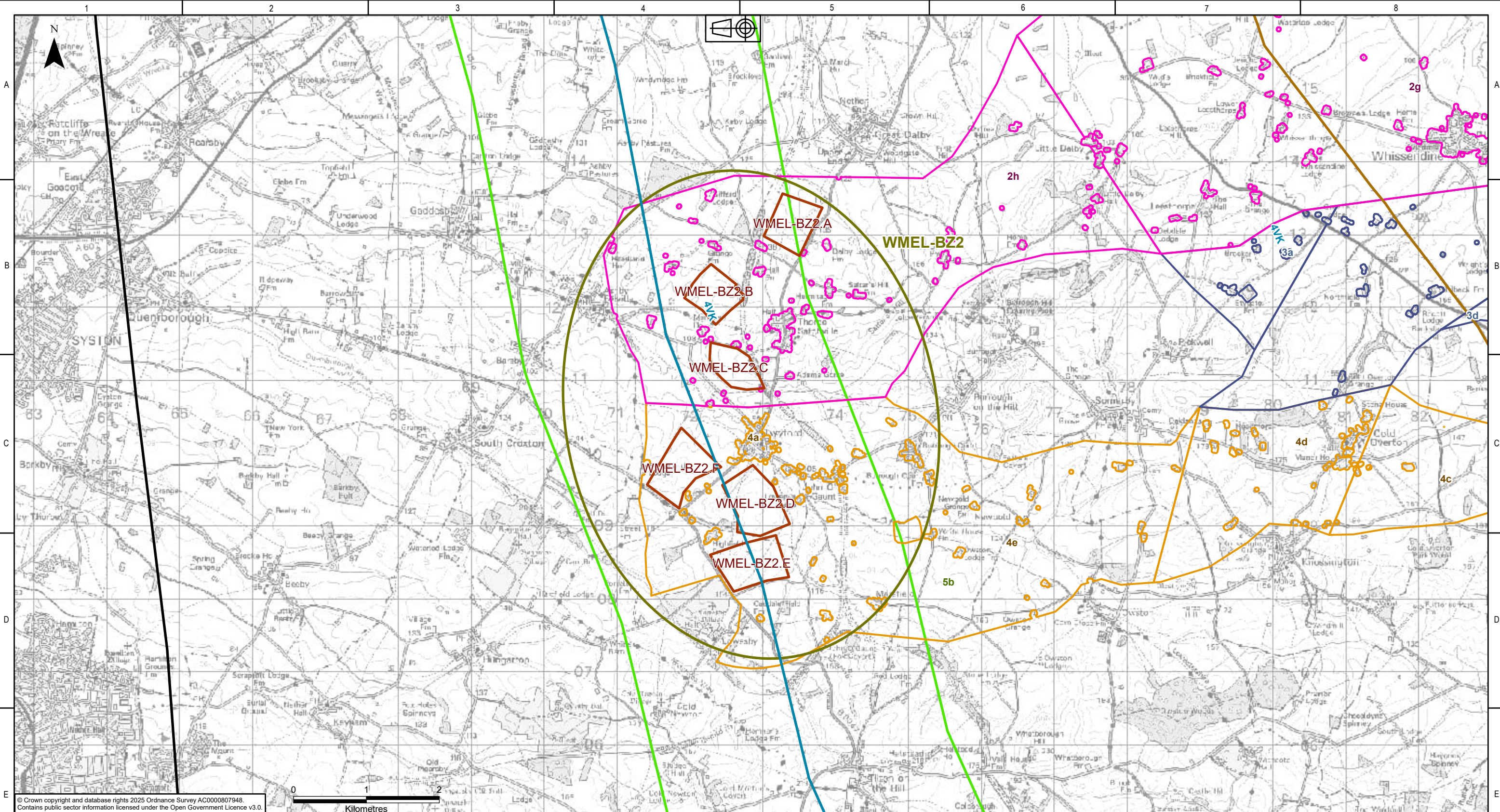
Contractor

AECOM
ARUP

Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 3.4 WMEL-B Substation Siting Zones	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000012	
NGET Drawing No. N/A	Sheet 1 of 3
Size A3	Revision P01
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:25,000



Legend	
	Overhead Line Study Area
	WMEL-B Substation Search Area
	Substation Siting Zone
	Substation Siting Area
	Existing 132kV Overhead Line
	Existing 400kV Overhead Line
	Preliminary Corridor 2
	Preliminary Corridor 3
	Preliminary Corridor 4

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

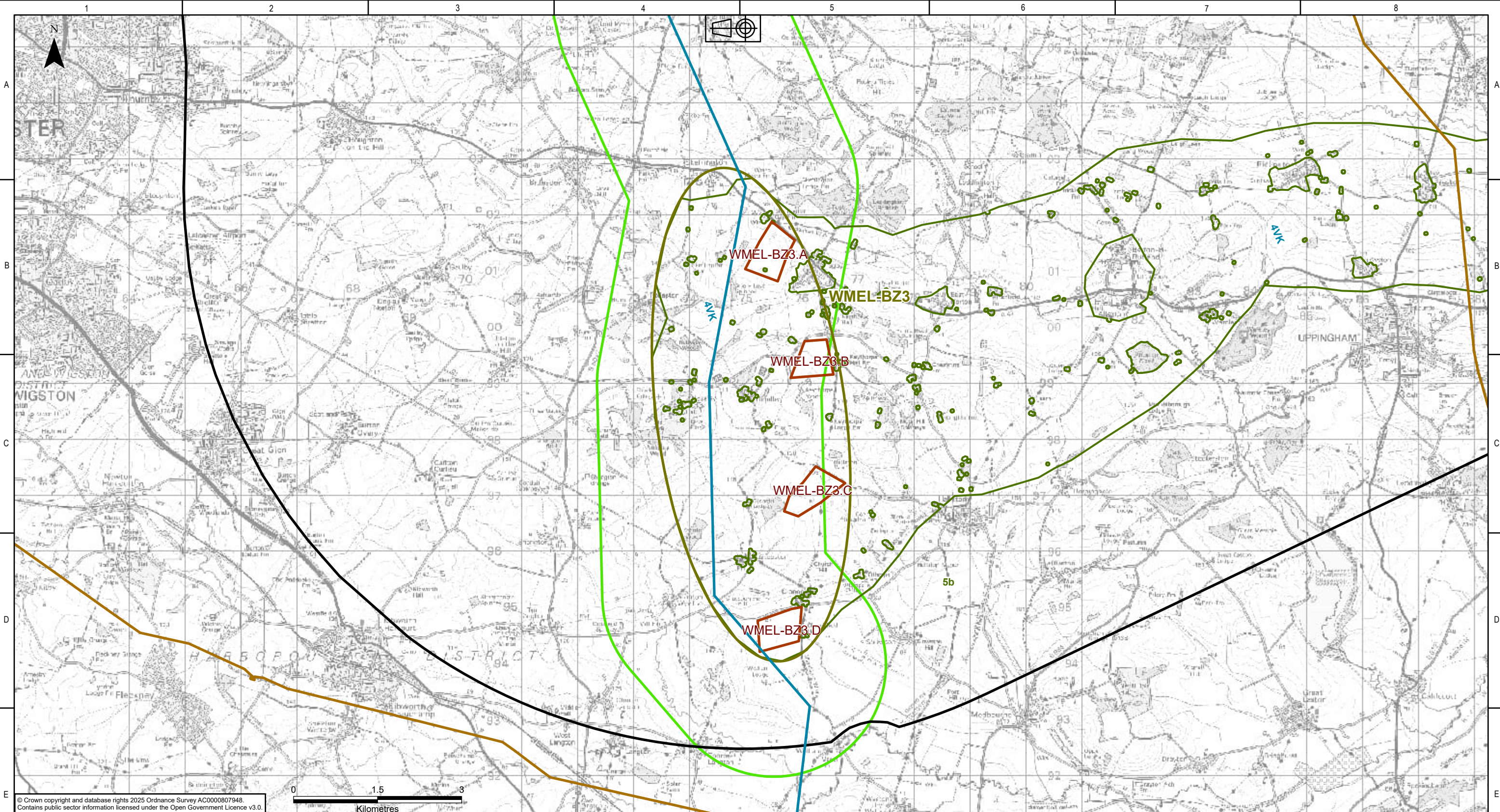
Contractor

AECOM
ARUP

Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 3.4 WMEL-B Substation Siting Zones	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000012	
NGET Drawing No. N/A	Sheet 2 of 3
Size A3	
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:50,000
Revision P01	



KEY PLAN

Legend

- Overhead Line Study Area
- WMEL-B Substation Search Area
- Substation Siting Zone
- Substation Siting Area
- Existing 132kV Overhead Line
- Existing 400kV Overhead Line
- Preliminary Corridor 5

P01.01	27/10/2025	First issue	IM	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.

nationalgrid

National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

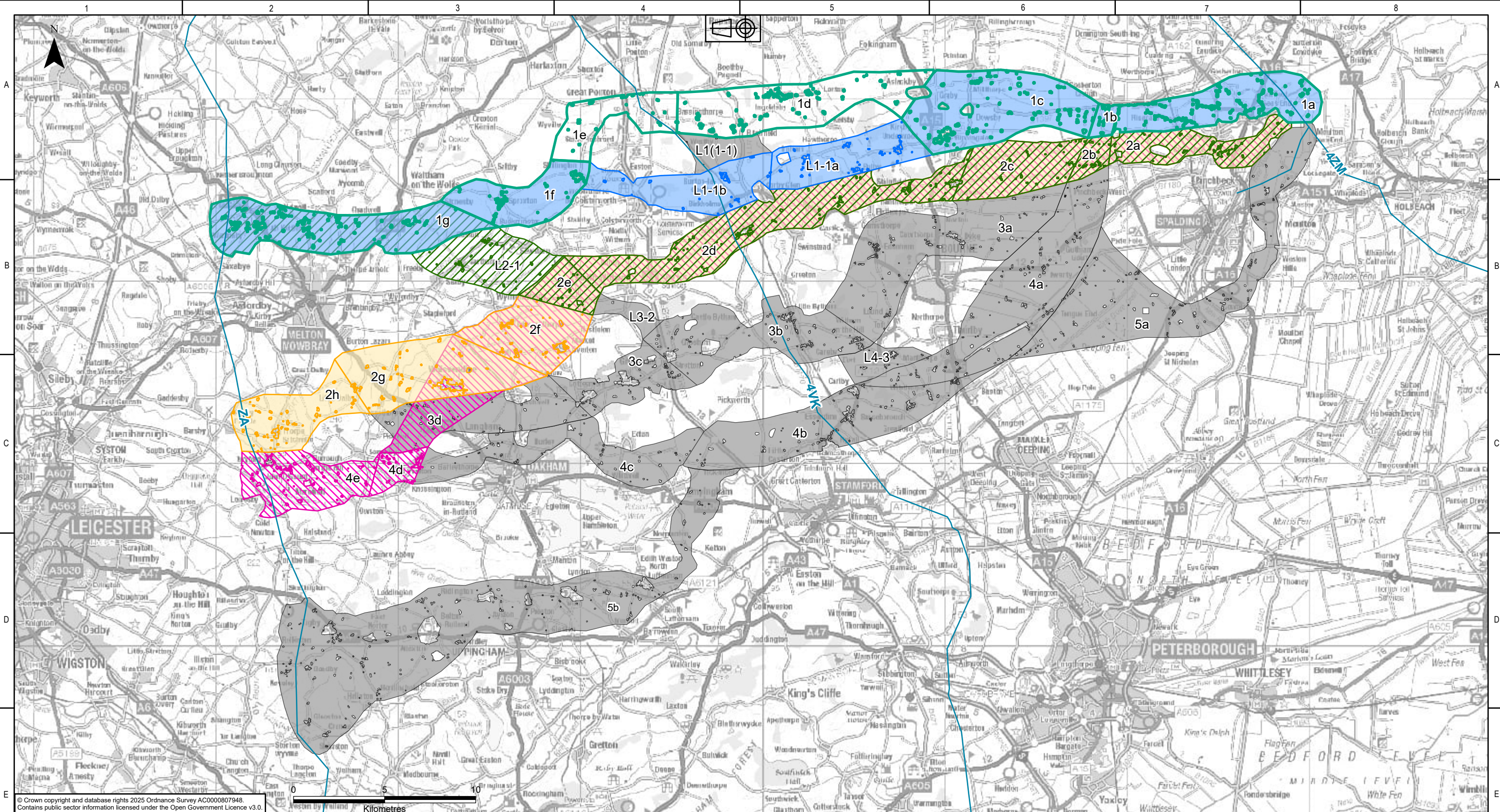
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site
Weston Marsh to East Leicestershire

Title
Scoping Report:
Figure 3.4
WMEL-B Substation Siting Zones

Purpose of issue For Information	Status S2			
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000012				
NGET Drawing No. N/A	Sheet 3 of 3	Size A3		
Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:65,000	Revision P01



KEY PLAN

Legend

- Existing 400kV Overhead Line
- Route Option 1
- Route Option 2
- Route Option 3
- Route Option 4
- Route Option 5
- Other Preliminary Corridors

P01.01				27/10/2025	First issue		IM	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.			

nationalgrid

National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Designed

I.MEYRICK

Drawn

D.MOSNEANU

Site

Weston Marsh to East Leicestershire

Title

Scoping Report:
Figure 3.5
Route Options

Purpose of issue

For Information

Status

S2

Drawing No.

WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000013

NGET Drawing No.

N/A

Size

A3

Checked

H.JENNER

Approved

C.STOCKS

Date

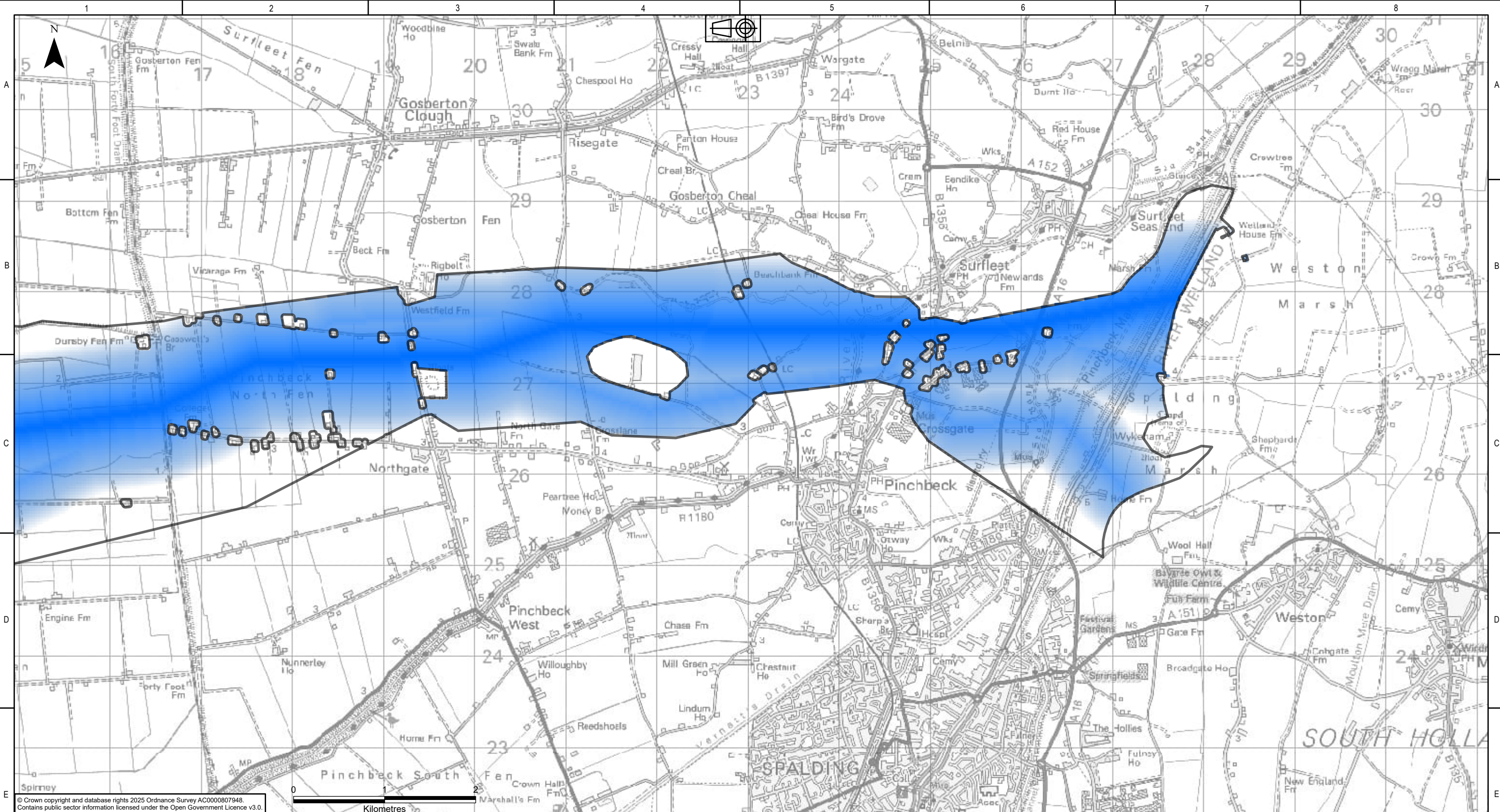
27/10/2025

Scale

1:200,000

Revision

P01



KEY PLAN

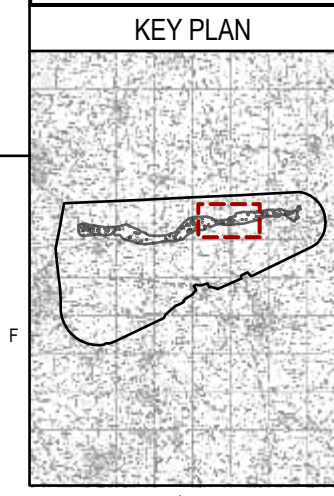
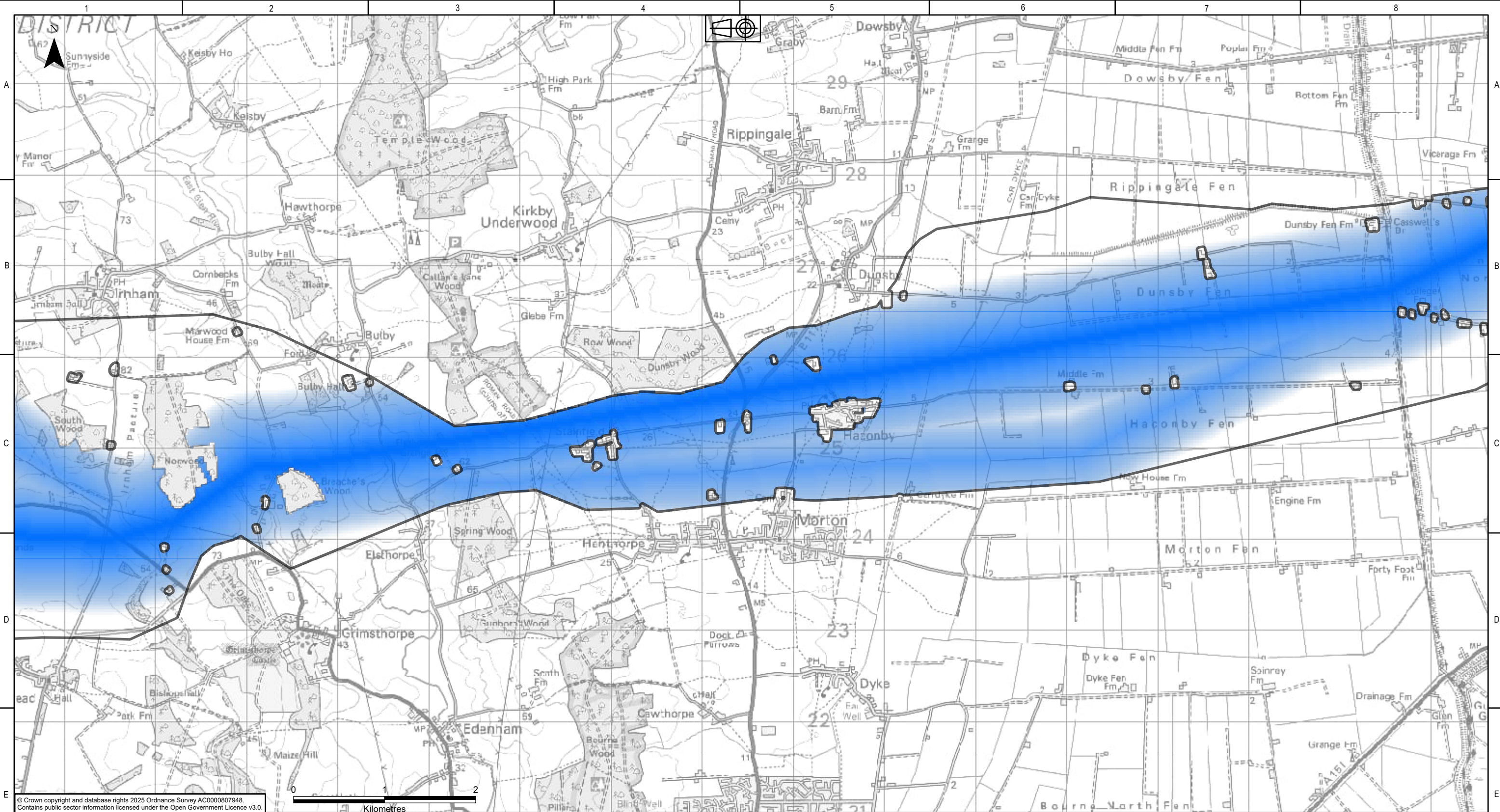
Legend

Emerging Preferred Route Option

Lower Likelihood

Higher Likelihood

							nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA Contractor AECOM ARUP Designed I.MEYRICK Drawn D.MOSNEANU		Site Weston Marsh to East Leicestershire Title Scoping Report: Figure 3.7 Overhead Line Graduated Swathe Purpose of issue For Information Status S2 Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000015 NGET Drawing No. N/A Sheet 1 of 5 Size A3 Checked H.JENNER Approved C.STOCKS Date 27/10/2025 Scale 1:40,000 Revision P01		
P01.01	27/10/2025	First issue	IM	DM	HJ	CS					
Rev.	Date	Comment	Des	Drw by	Check	Appr.					



Legend

Emerging Preferred Route Option
Lower Likelihood

Higher Likelihood

P01.01	27/10/2025	First issue	IM	DM	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

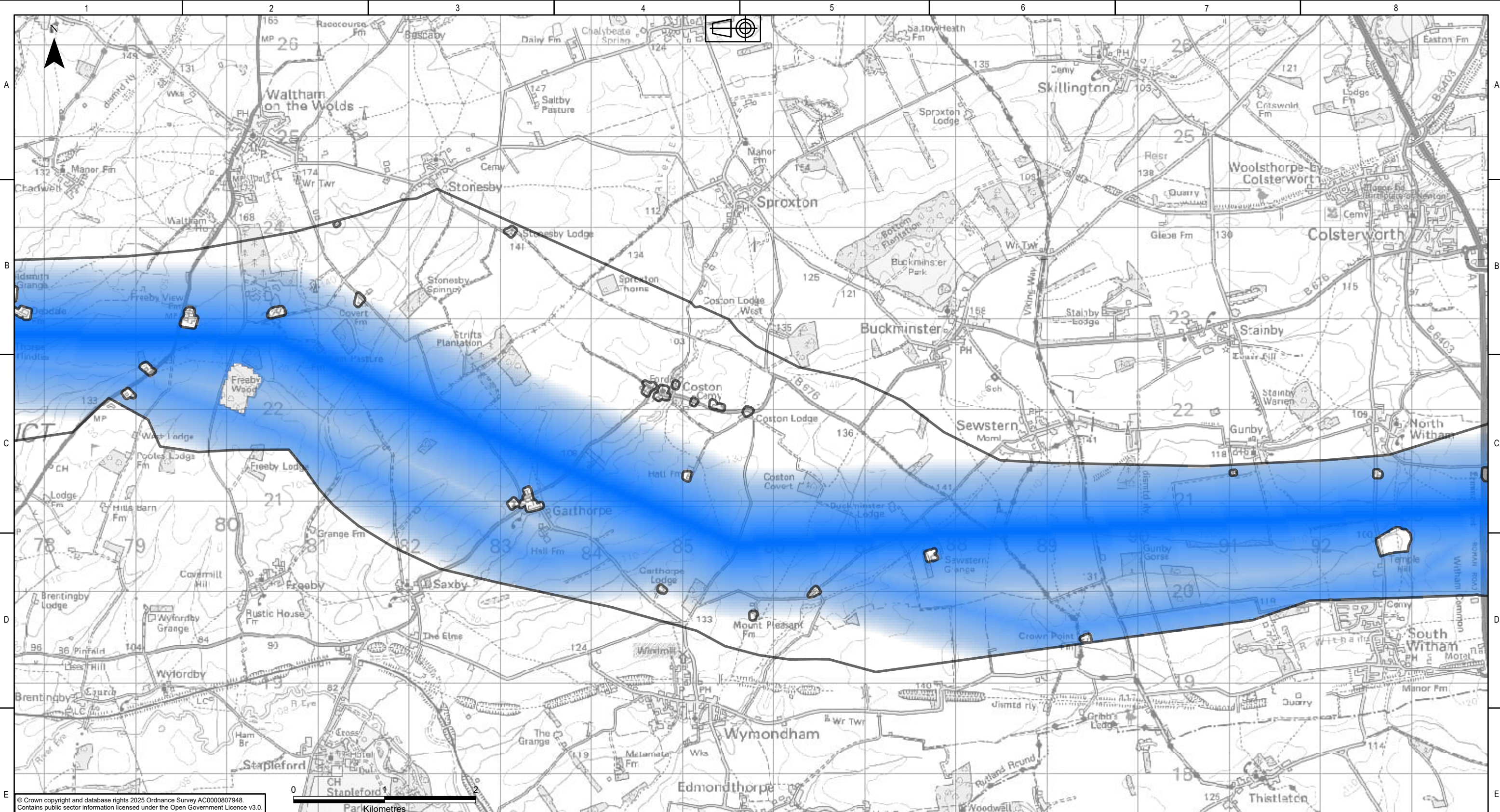
AECOM

ARUP

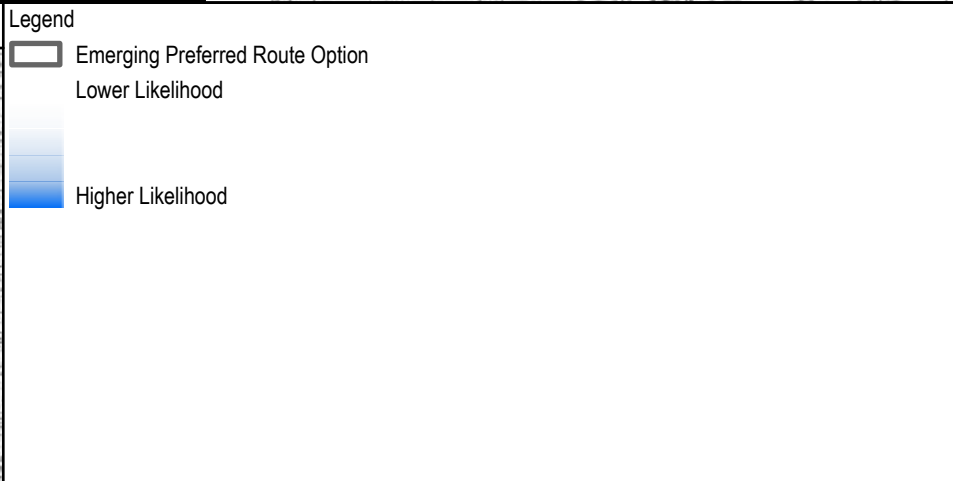
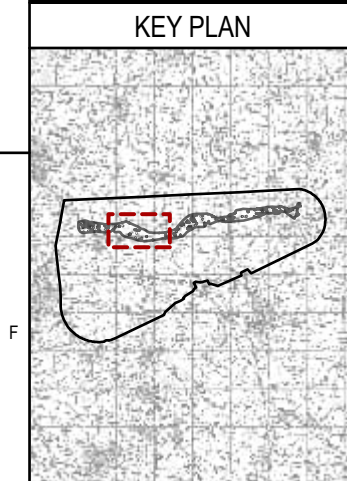
Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 3.7 Overhead Line Graduated Swathe	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000015	
NGET Drawing No. N/A	Sheet 2 of 5
Size A3	Revision P01
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:40,000



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



P01.01	27/10/2025	First issue		IM	DM	HJ	CS
Rev.	Date	Comment		Des	Drw by	Check	Appr.

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

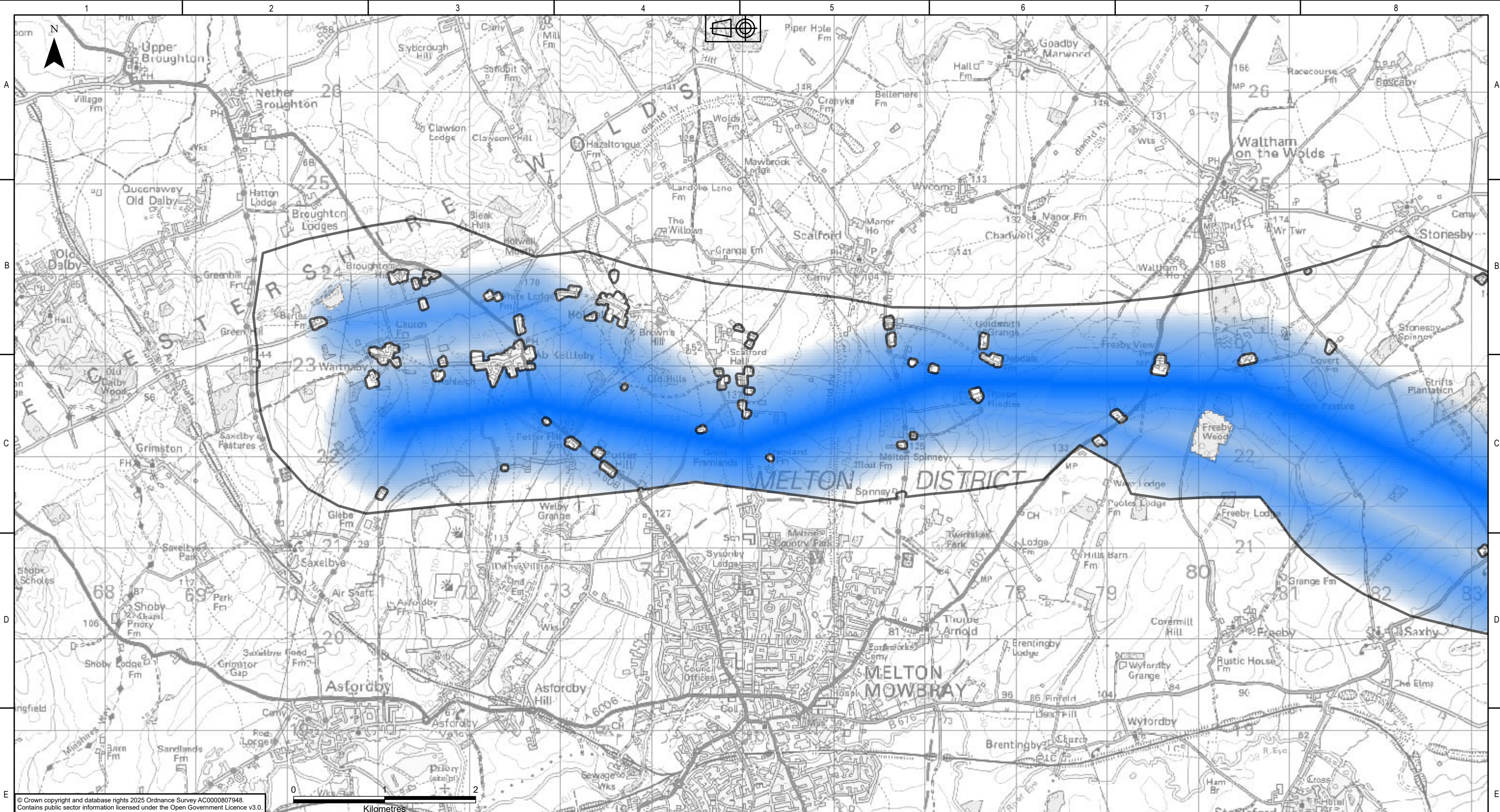
AECOM

ARUP

Designed
I.MEYRICK

Drawn
D.MOSNEANU

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 3.7 Overhead Line Graduated Swathe	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000015	
NGET Drawing No. N/A	Sheet 4 of 5
Checked H.JENNER	Approved C.STOCKS
Date 27/10/2025	Scale 1:40,000
Size A3	Revision P01

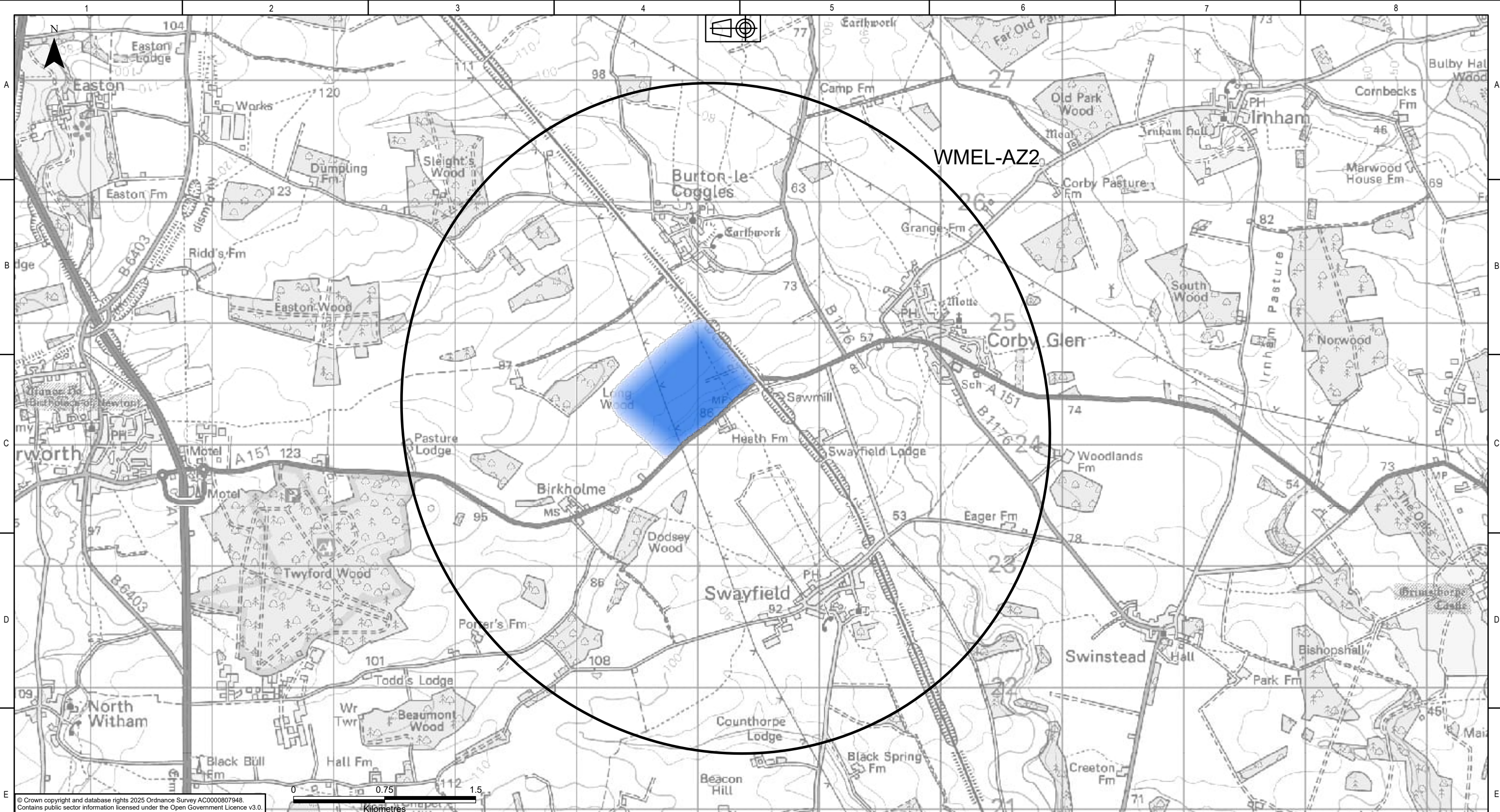


KEY PLAN

Legend

- Emerging Preferred Route Option
- Lower Likelihood
- Higher Likelihood

								nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire	
								AECOM ARUP		Title Scoping Report: Figure 3.7 Overhead Line Graduated Swathe	
				Contractor		Purpose of issue For Information				Status S2	
								Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000015		Revision P01	
								NGET Drawing No. N/A		Sheet 5 of 5	
								Designed I.MEYRICK		Date 27/10/2025	
								Drawn D.MOSNEANU		Scale 1:40,000	
								Checked H.JENNER		Approved C.STOCKS	
								Date 27/10/2025		Revision P01	



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.

KEY PLAN

Legend

WMEL-AZ2 Siting Zone

Lower Likelihood

Higher Likelihood

P01.01	27/10/2025	First issue	IM	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.

nationalgrid

National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Designed
I.MEYRICK

Drawn
D.MOSNEAU

Site

Weston Marsh to East Leicestershire

Title

Scoping Report:
Figure 3.8
WMEL-A Substation Graduated Swathe

Purpose of issue
For Information

Status
S2

Drawing No.
WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000016

NGET Drawing No.
N/A

Size
A3

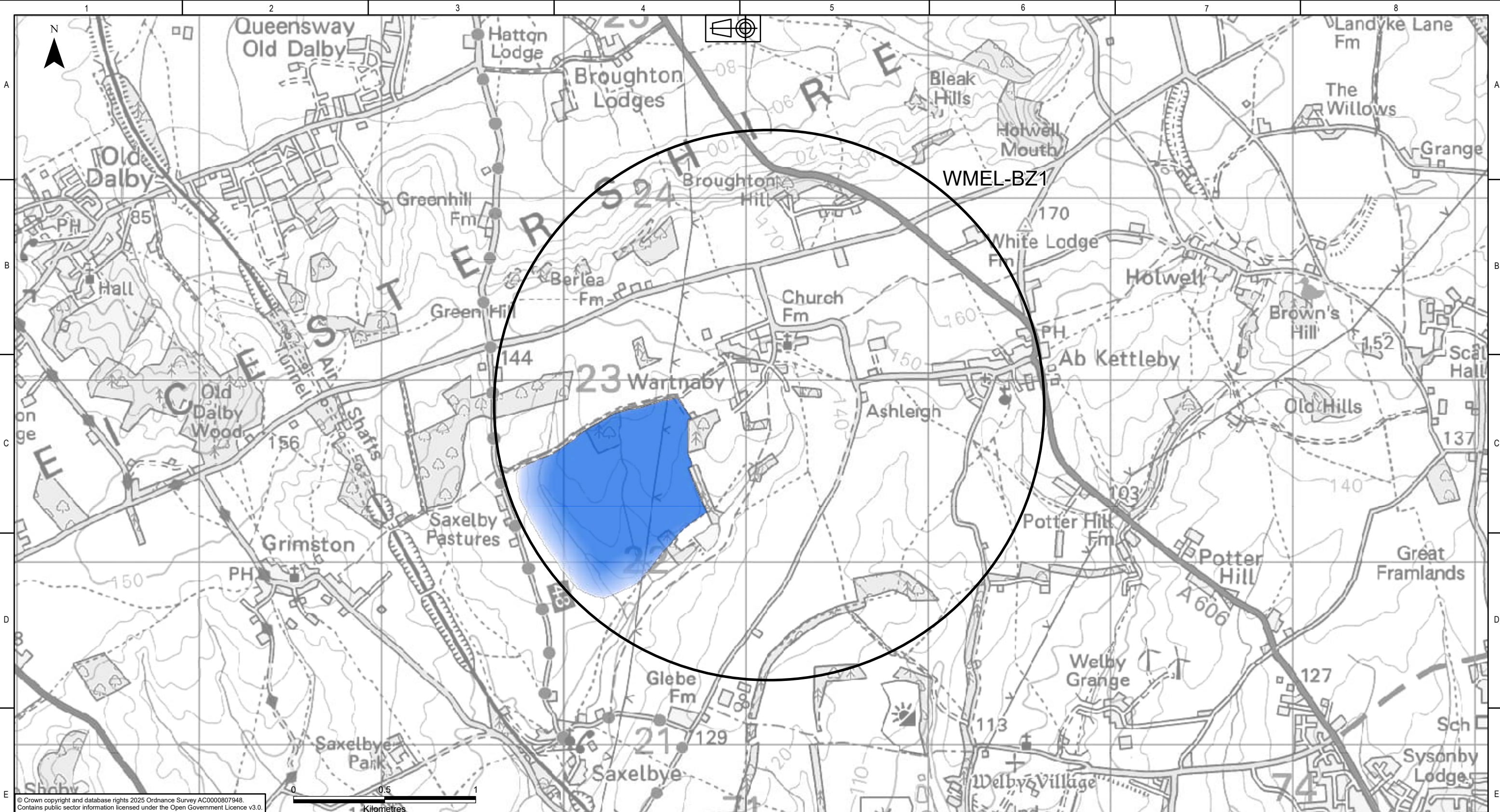
Checked
H.JENNER

Approved
C.STOCKS

Date
27/10/2025

Scale
1:30,000

Revision
P01



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.

KEY PLAN

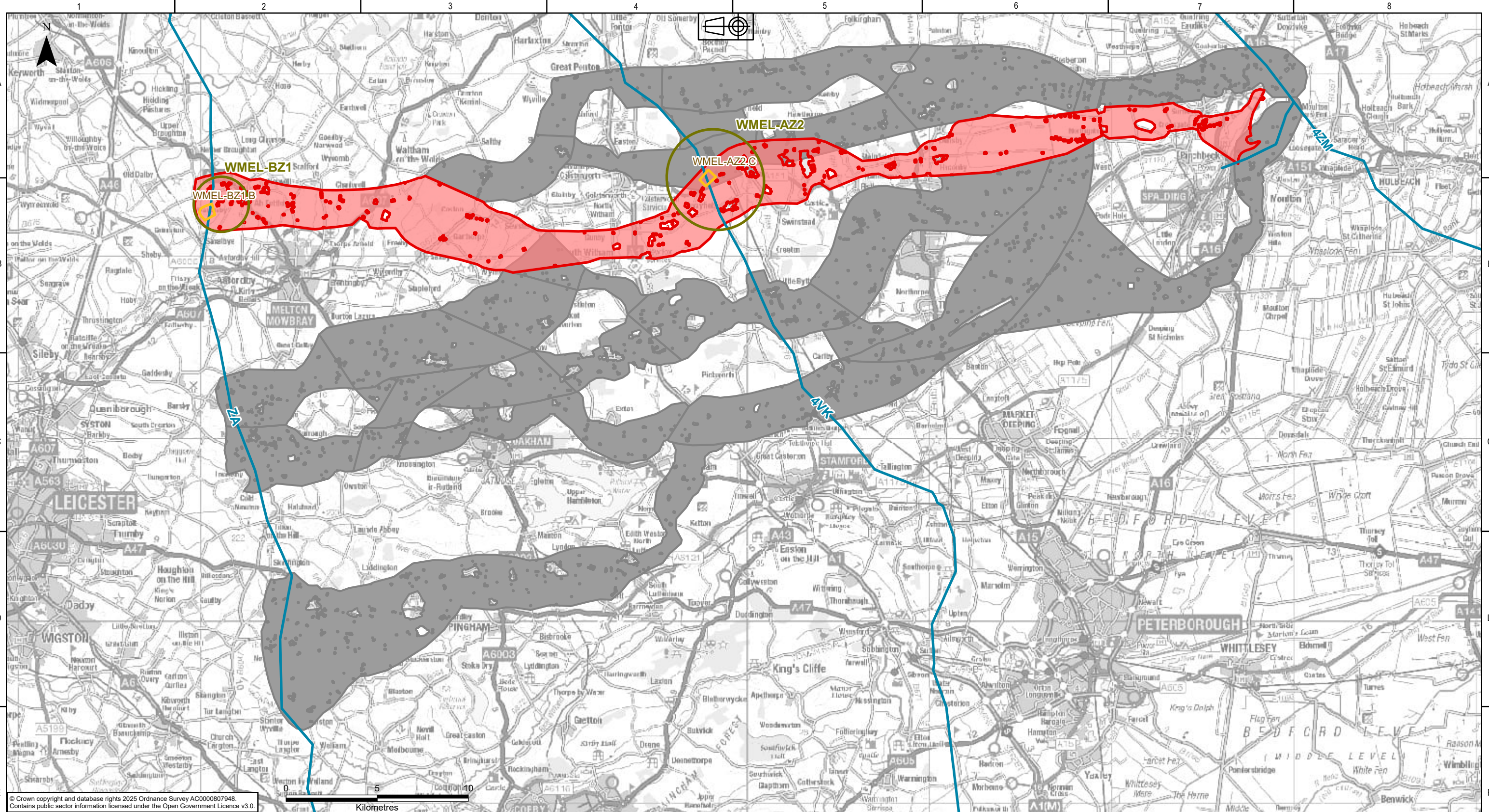
Legend

WMEL-BZ1 Siting Zone

Lower Likelihood

Higher Likelihood

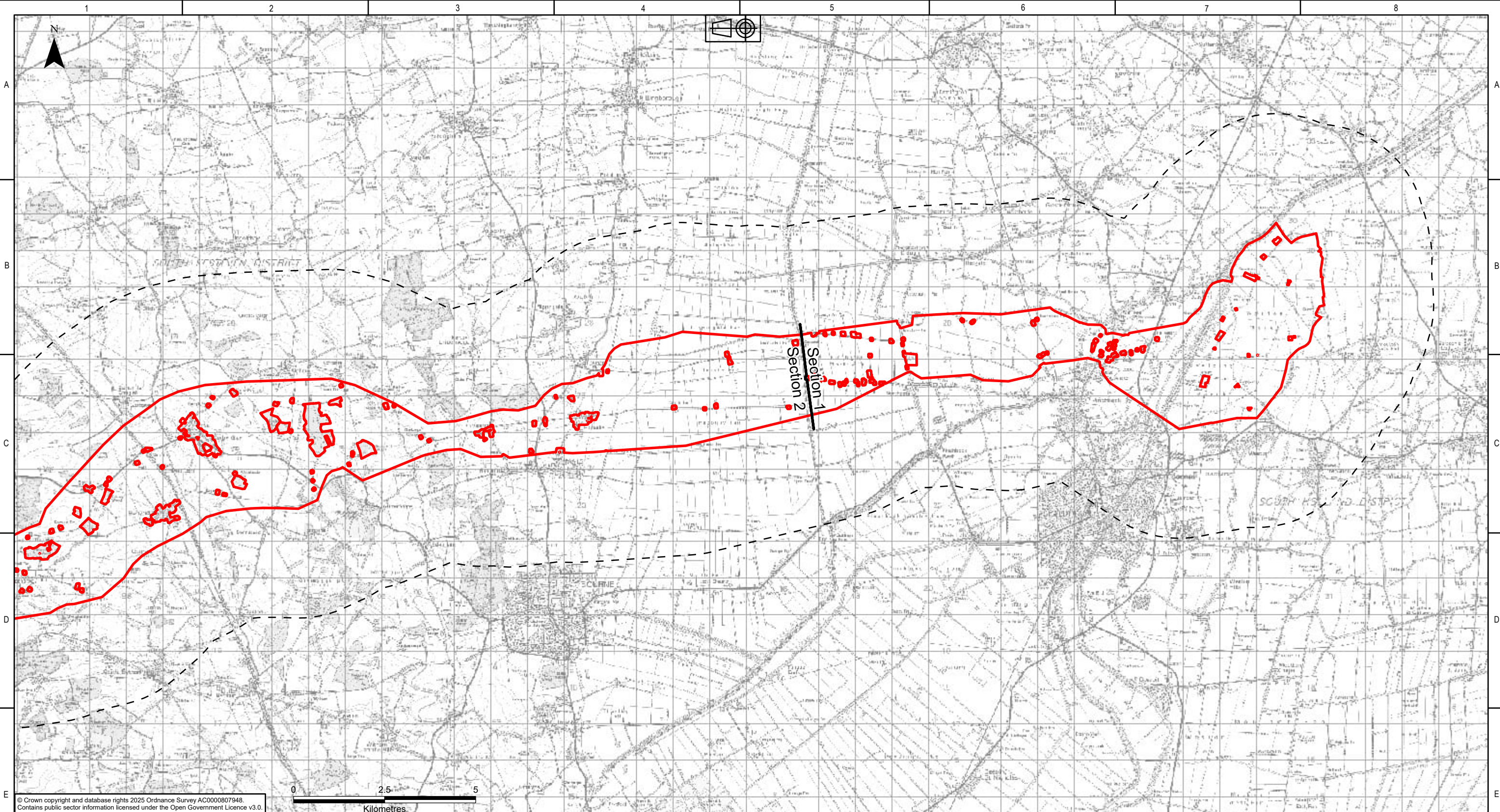
								nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA				Site Weston Marsh to East Leicestershire															
								Contractor AECOM ARUP				Title Scoping Report: Figure 3.9 WMEL-B Substation Graduated Swathe															
								Purpose of issue For Information				Status S2															
								Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000017																			
								NGET Drawing No. N/A				Size A3															
P01.01		27/10/2025		First issue		IM		DM		HJ		CS		Designed I.MEYRICK		Drawn D.MOSNEANU		Checked H.JENNER		Approved C.STOCKS		Date 27/10/2025		Scale 1:20,000		Revision P01	
Rev.		Date		Comment		Des		Drw by		Check		Appr.															



KEY PLAN		Legend										nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA							Site Weston Marsh to East Leicestershire																	
		Emerging Preferred Route Option										Contractor AECOM ARUP							Title Scoping Report: Figure 3.10 End to end solution																	
		Other Preliminary Corridors																																		
		Emerging Preferred Substation Siting Area																																		
		Emerging Preferred Substation Siting Zone																																		
		Existing 400kV Overhead Line																	Purpose of issue For Information				Status S2													
		Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000018																	NGET Drawing No. N/A				Size A3													
		P01.01		27/10/2025		First issue		IM		DM									HJ		CS		Designed I.MEYRICK		Drawn D.MOSNEANU		Checked H.JENNER		Approved C.STOCKS		Date 27/10/2025		Scale 1:200,000		Revision P01	
		Rev.		Date		Comment		Des		Drw by									Check		Appr.															

P01.01	27/10/2025	First issue	IM	DM	HJ	CS
Rev.	Date	Comment	Des	Drw by	Check	Appr.

nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire				
Contractor AECOM ARUP		Title Scoping Report: Figure 3.10 End to end solution				
		Purpose of issue For Information	Status S2			
		Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000018				
		NGET Drawing No. N/A	Size A3			
Designed I.MEYRICK	Drawn D.MOSNEAU	Checked H.JENNER	Approved C.STOCKS	Date 27/10/2025	Scale 1:200,000	Revision P01



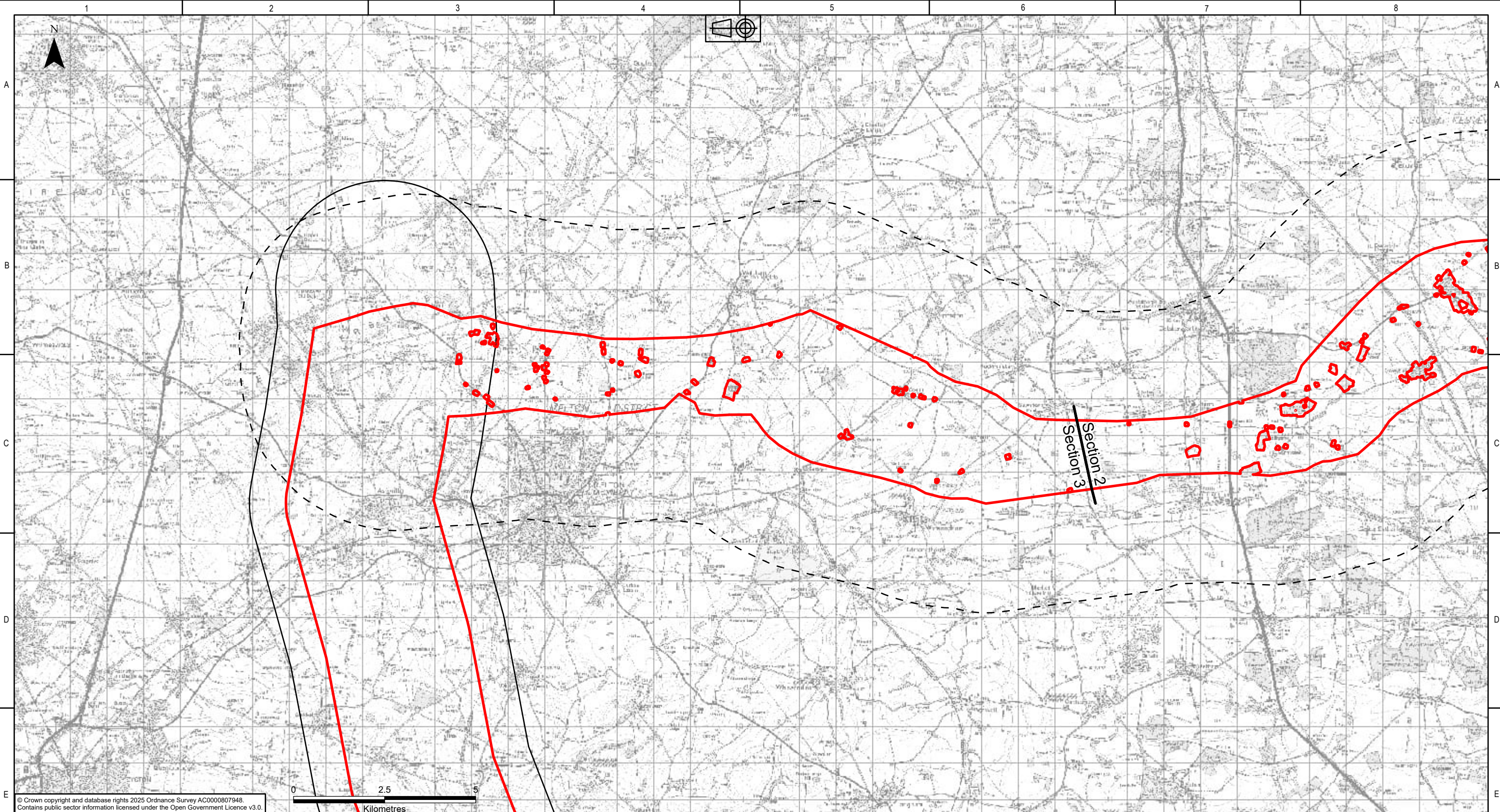
© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.

KEY PLAN

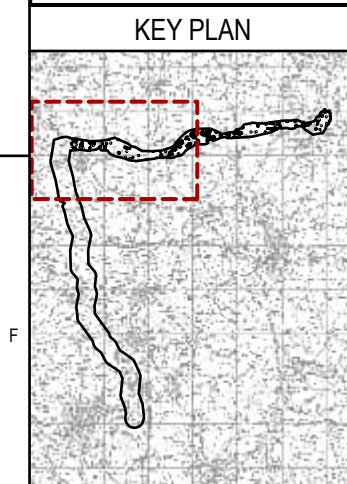
Legend

- Scoping Boundary
- Sections
- Overhead Line Study Area

								nationalgrid National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA		Site Weston Marsh to East Leicestershire	
								AECOM		Contractor	
								ARUP		Title Scoping Report: Figure 6.1 Initial Landscape Study Area	
										Purpose of issue For Information	
										Status S2	
										Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000019	
										NGET Drawing No. N/A	
										Sheet 1 of 5	
										Size A3	
P01.01		29/10/2025		First issue		JD LL HJ CS		Designed J.DEVENNY		Drawn L.LINE	
Rev.		Date		Comment		Des Drw by Check Appr.		Checked H.JENNER		Approved C.STOCKS	
								Date 29/10/2025		Scale 1:100,000	
								Revision P01			



© Crown copyright and database rights 2025 Ordnance Survey AC0000807948.
Contains public sector information licensed under the Open Government Licence v3.0.



- Legend
- Scoping Boundary
 - Sections
 - Overhead Line Study Area
 - Reconductoring Study Area

P01.01	29/10/2025	First issue	JD	LL	HJ	CS	
Rev.	Date	Comment	Des	Drw by	Check	Appr.	

nationalgrid
National Grid plc, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA

Contractor

AECOM

ARUP

Designed
J.DEVENNY

Drawn
L.LINE

Site Weston Marsh to East Leicestershire	
Title Scoping Report: Figure 6.1 Initial Landscape Study Area	
Purpose of issue For Information	Status S2
Drawing No. WMEL-AAJ-ENVS-ZZZZZZ-DRW-ES-000019	
NGET Drawing No. N/A	Sheet 2 of 5
Checked H.JENNER	Approved C.STOCKS
Date 29/10/2025	Scale 1:100,000
Size A3	Revision P01