

The Great Grid Upgrade

Chesterfield to High Marnham

Chesterfield to High Marnham

Planning Design & Access Statement

19 November 2025

nationalgrid

Contents

Executive summary	1
1. Introduction	5
1.1 Overview	5
1.2 Purpose of the PDAS and Statutory Requirements	5
1.3 Consenting Regimes	6
Existing Substation Removal Works	6
1.4 Pre-Application Consultation	8
Local Planning Authority Consultation	8
Public Consultation	8
1.5 Planning Application Submission	9
1.6 Report Structure	11
2. Context for the Scheme	13
2.1 Overview	13
2.2 Background to the Scheme	13
2.3 The Role of National Grid	14
2.4 Scheme Operation	15
2.5 Statutory Duties	15
2.6 The Horlock Rules	16
3. Description of the Development Site	18
3.1 Introduction	18
3.2 Site Location and Setting	18
3.3 Planning History	19
3.4 Historical Overview	22
JG Pears - Combined Heat and Power Plant	23
Solar photovoltaic farm	23
Hydrogen production plant	25
National Grid Substations	26
Conclusion	26
4. The Scheme	27
4.1 Introduction	27
4.2 Scheme Description	27
4.3 Rights of Way and Open Access Land	29
4.4 Overhead Line Works and Consenting Requirements	29

4.5	Construction and Commissioning	31
4.6	Operational Phase	35
4.7	Environmental mitigation and Biodiversity Net Gain (BNG)	35
5.	Design and Access Statement	37
5.2	Design Objectives	37
5.3	Technology Options	38
5.4	Scheme Design	38
	Access	42
5.5	Compliance with the Horlock Rules	43
6.	Planning Policy and Guidance	48
6.1	Introduction	48
6.2	Overview	48
6.3	Material Considerations	50
	Planning Practice Guidance (PPG)	54
	Consents and planning applications for National Energy Infrastructure Projects	55
	National Policy Statements and Need	55
6.4	Other Material Considerations	59
6.5	Summary	64
7.	Planning Assessment	66
7.1	Introduction	66
7.2	Principle of the Scheme	67
7.3	Design Overview (Layout, Design and External Appearance)	69
7.4	Ecology (including Arboriculture)	72
	Ecology (including Arboriculture) Conclusion	83
7.5	Landscape and Visual Character	84
	Landscape and Visual Character Conclusion	90
7.6	Historic Environment	91
	Historic Environment Conclusion	94
7.7	Traffic and Transport	96
	Traffic and Transport Conclusion	100
7.8	Air Quality	101
	Air Quality Conclusion	103
7.9	Noise and Vibration	103
7.10	Land and Ground Conditions	106
	Land and Ground Conditions Conclusion	110
7.11	Agriculture and Soils	111
	Agriculture and Soils Conclusion	114
7.12	Minerals	114
	Minerals Conclusion	115
7.13	Water Resources and Flood Risk	115
	Water Resources and Flood Risk Conclusion	118

7.14	Socioeconomics and Human Health	119
	Socioeconomics and Human Health Conclusion	123
7.15	Electromagnetic Fields	123
	Electromagnetic Fields Conclusion	124
8.	Planning Balance and Conclusion	125
8.1	Introduction	125
	Need for the Scheme	125
	Benefits of the Scheme	126
	Adverse impacts of the Scheme	127
	The Overall Planning Balance	128

Table 1.1	Supporting Documentation for Planning Application	9
Table 3.1	Planning History (from 2024 onwards)	20
Table 5.1	Accordance with the Horlock Rules	43
Table 7.1	Tree categories recorded	78
Table 7.2	Baseline area habitats	79
Table 7.3	Baseline Hedgerow	80
Table 7.4	Baseline Watercourse	81
Table 7.5	Post Development Habitat	81
Table 7.6	Post development hedgerow	82
Table 7.7	Post development watercourse	83

Figure ES1	High Marnham Site Location	3
Figure 3.1	High Marnham Site Location	18

References	129
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Appendix A	Planning Policy: Bassetlaw Local Plan
Appendix B	Planning Policy: Nottinghamshire Minerals Local Plan
Appendix C	Planning Policy: Nottinghamshire Waste Local Plan
Appendix D	Planning Policy: Material Considerations (SPD)
Appendix E	Proposed Draft Planning Conditions
Appendix F	Abbreviations
Appendix G	Glossary
Appendix H	Planning History

Executive summary

Overview of the Scheme and need

National Grid Electricity Transmission plc, referred to as 'National Grid' within this Planning, Design and Access Statement is applying for planning permission for a new 400kV substation on land near High Marnham.

In 2019 the Committee on Climate Change published its Net Zero report setting out recommendations to the UK government on long-term emissions targets for the UK. The government subsequently adopted the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which increased its pledge to achieve 100 per cent reduction in emissions by 2050. One of the ways this will be achieved is through decarbonisation, including moving away from fossil fuels providing energy to homes and businesses. Consistent with the government's Net Zero target, there has been, and continues to be, growth in the volume of renewable and zero carbon generation that is seeking to connect to the electricity transmission system. The UK government policy clearly sets out the critical requirement for significant reinforcement of the electricity transmission system to facilitate the connection of renewable energy sources and to transport electricity to where it is used. In particular, the British Energy Security Strategy (HM Government, 2022) sets targets for the connection of up to 50GW of offshore wind by the 2030s as a key part of a strategy for secure, clean and affordable British energy for the long term.

The works proposed near High Marnham form part of the Great Grid Upgrade which would enable the country to connect 50GW of green energy by 2030. National Grid is seeking permission for:

'Erection of a 400kV Air Insulated Switchgear (AIS) substation with one 400/275kV Supergrid Transformer (SGT) and one 400/33kV SGT. This will also include 16 bays, gantries, control and amenities building, permanent access roads, diesel generator, parking, drainage, lighting and CCTV, landscaping and biodiversity enhancement, and security fencing.'

The proposed works in its entirety comprises:

- AIS 400kV substation located within a compound measuring approximately 690m x 200m. This includes protection and control equipment, substation plant and new substation control infrastructure. This will include:
 - A 400/275kV Supergrid Transformer (SGT);
 - A 400/33kV SGT;
 - protection and control equipment;
 - substation plant;
 - substation control infrastructure; and
 - 10 overhead line gantries.
- 20 permanent buildings, ranging from 4m to 7.5m in height, 6.5m to 33.5m long, and 2.5m to 15m wide.
- Substation plant for controlling directing, switching and transforming high voltage electricity. This plant includes:

- AIS switchgear;
- Air Insulated Busbar (AIB) connecting the AIS switchgear to other plant;
- Capacitor Voltage Transformers (CVT);
- Cable Sealing Ends (CSEs);
- earth switches;
- surge arresters;
- diesel generator for emergency backup power;
- protection and control equipment;
- 2.4m high palisade security fence with a 4m high electric pulse fence installed behind the palisade fence; and
- Closed-circuit television (CCTV) surveillance.

The development of a new substation will enable National Grid to uprate the existing 275kV overhead lines to operate at 400kV between a new substation in Chesterfield (in North East Derbyshire) and High Marnham. This will allow additional power to flow through the grid, transferring green energy from where it is generated to where it is needed.

Application site and surrounding area

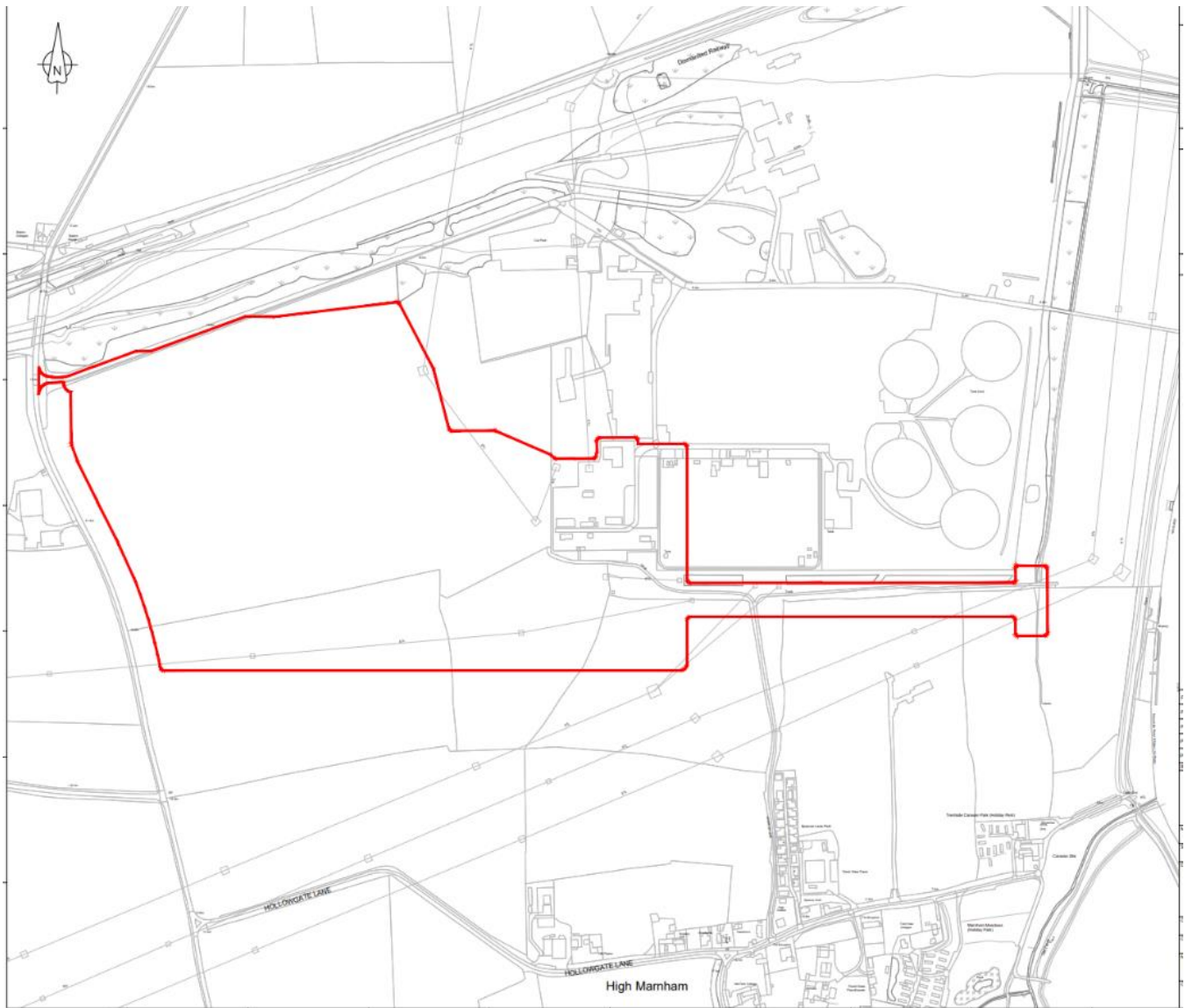
The High Marnham Site is approximately 36 hectares (ha) in size and is located on land intersecting with the existing 400kV and 275kV substations and adjoining the former High Marnham Power Station site, which has been decommissioned and removed. The existing layout and the boundary of the Site is shown on the Proposed Site Layout (Ref. PDD-203717-LAY-342).

The Site is within the administrative area of Bassetlaw District Council (BDC), centred on Ordnance Survey (OS) Grid Reference SK 801 708.

The Site's land use is currently predominantly arable agricultural land with associated boundary hedgerows which intersect and surround most, but not all, of the Site. The Site is bounded in part by an existing hedgerow around the existing 400kV substation. The High Marnham existing 400kV substation and 275kV substation are also located fully and partially within the Scheme boundary respectively and are approximately 500m north of the village of High Marnham and approximately 500m west of the River Trent. At the north west corner, there is an access road onto the local highway. The High Marnham existing 400kV substation and 275kV substation are also located partially within the Scheme boundary, and are approximately 500m north of the village of High Marnham and approximately 500m west of the River Trent. At the north west corner, there is an access road onto the local highway.

The Site is bounded by Fledborough Road off Main Street to the west and to the east by the former High Marnham Power Station site. To the north of the Site there is a disused railway line which is now hardstanding. The former railway line forms part of National Cycle Network Route 647, described by the Walk Wheel Cycle Trust as a 7.9-mile route which follows the former Lancashire, Derbyshire and East Coast railway line.

Figure ES1 High Marnham Site Location



Planning policy

Section 70(2) of the Town and Country Planning Act 1990 requires the local planning authorities in determining planning applications to have regard to the development plan, so far as is material to an application and to any other material considerations.

The Development Plan for the Scheme comprises the Bassetlaw Local Plan (2020-2038), Bassetlaw Local Plan Policies Map, Nottinghamshire County Council (NCC) Minerals Local Plan (Adopted 2021) and the NCC Waste Local Plan / Waste Core Strategy (Adopted 2002, partially replaced 2013).

National planning policy and guidance relevant to the Scheme includes the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2025), Environmental Improvement Plan 2023, and various government publications stemming from the Climate Change Act 2008 and the government's subsequent net zero targets.

Whilst the substation proposals at High Marnham will be determined in accordance with TCPA 1990, it is considered that NPSs for Energy are a material consideration for this proposal in emphasising the need for critical electricity infrastructure. .

In January 2024, the DESNZ designated revised NPSs for Energy. The relevant NPSs are:

- NPS EN-1 Overarching National Policy Statement for Energy
- NPS EN-5 National Policy Statement for Electricity Infrastructure Projects.

National Policy Statements EN-1 is clear at Paragraph 1.2.1 that the Energy National Policy Statements may be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended).

National Policy Statements EN-1 and EN-5 identify the need for new and reinforced electricity transmission infrastructure as a critical national priority to maintain security of supply and deliver the transition to net zero. The High Marnham substation forms part of National Grid's wider transmission reinforcement strategy identified through the Electricity System Operator's Holistic Network Design (HND) and subsequent Centralised Strategic Network Plan (CSNP), which together set out nationally critical reinforcements required to connect new offshore generation and strengthen the onshore 400kV network. The proposed substation provides a vital node in this system, supporting the transfer of renewable generation and system resilience across northern England. Consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route.

Planning assessment

As identified in national policy and the government's energy strategy there is an urgent and critical need to bring forward low carbon infrastructure to meet targets for decarbonisation and net zero. The Scheme would provide a crucial contribution to the delivery of these policy aims, by improving the existing electricity transmission network. The various specialist reports submitted within this application as part of an Environmental Appraisal Report (EAR) demonstrate that with the implementation of proposed mitigation measures, the residual impacts of development would not be significant, with aspects of a temporary nature being confined to the construction phase. Any long-term visual and environmental impacts are to be minimised through incorporating measures to reduce visual impact, which include a landscape mitigation scheme.

The proposed substation is consistent with relevant development plan policy (insofar as it is up to date having regard to national policy and other material considerations).

Overall, the need for, and benefits of the Scheme clearly outweigh its adverse impacts. The planning balance is firmly in favour of the Scheme and in accordance with the presumption in favour of sustainable development advanced in the NPPF, it is respectfully submitted that planning permission be granted.

1. Introduction

1.1 Overview

- 1.1.1 National Grid Electricity Transmission Plc (National Grid) is applying to Bassetlaw District Council (BDC) for full planning permission for the:
- ‘Erection of a 400kV Air Insulated Switchgear (AIS) substation with one 400/275kV Supergrid Transformer (SGT) and one 400/33kV SGT. This will also include 16 bays, , gantries, control and amenities building, permanent access roads, diesel generator, parking, drainage, lighting and CCTV, landscaping and biodiversity enhancement, and security fencing’ (the Scheme).*
- 1.1.2 National Grid owns and operates the high voltage transmission system in England and Wales. The system operates mainly at 400 kilovolts (kV) (400,000 volts) and 275 kilovolts (275,000 volts), connecting electricity generators to substations where the high voltages are transformed to lower voltages for onward distribution to homes and businesses via regional Distribution Network Operators (DNOs) which operate at a maximum of 132kV.
- 1.1.3 National Grid is the company licensed to transmit electricity in England and Wales, as granted under the Electricity Act 1989. Through this duty, National Grid is responsible for operating around 7,200km of overhead lines, 700km of underground lines and 340 primary substations. ”
- 1.1.4 National Grid is a statutory undertaker as defined under the Electricity Act 1989, the Town and Country Planning Act 1990 (TCPA 1990) and The Town and Country Planning (General Permitted Development) (England) Order 2015.
- 1.1.5 This Planning, Design and Access Statement (PDAS) is provided as part of the planning application for the Scheme in order to assist BDC, statutory consultees, and other interested parties in their consideration of National Grid’s proposals.
- 1.1.6 The PDAS sets out the context for the Scheme before summarising the relevant Development Plan policies and other material considerations against which the planning application will be determined.
- 1.1.7 The PDAS then assesses the extent to which the Scheme is in accordance with the relevant policies of the Development Plan and other material considerations before presenting the overall planning balance.
- 1.1.8 In conclusion, the PDAS confirms that the benefits of the Scheme would considerably outweigh the adverse impacts of constructing and operating the new substations.
- 1.1.9 The PDAS has been prepared by Arcadis on behalf of National Grid.

1.2 Purpose of the PDAS and Statutory Requirements

- 1.2.1 Part 3, Article 9 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 requires that a Design and Access Statement (DAS) is also submitted with most major planning applications, subject to specified exemptions, including engineering operations.

- 1.2.2 In accordance with Part 3, Article 9, this PDAS describes the evolution of the design of the Scheme, which has been informed by an iterative process of environmental, economic, and engineering analysis and assessment.
- 1.2.3 This PDAS is intended to provide the following main functions:
- provide a description of the Scheme;
 - summarise the proposed consents strategy and identify the means by which each Scheme component can be approved;
 - demonstrate the planning need case;
 - assess the proposals in the context of national and local planning policy; and
 - provide a summary of the outcomes of the environmental and technical assessments completed in support of the application.

1.3 Consenting Regimes

- 1.3.1 The planning application for the Scheme will be determined under section 70(2) of the TCPA 1990 and section 38(6) of the Planning and Compulsory Purchase Act 2004. Together, these provisions establish the statutory basis for decision making in the planning system. Section 70(2) requires the decision-maker to have regard to the provisions of the development plan and any other material considerations. Section 38(6) provides that decisions must be made in accordance with the development plan unless material considerations indicate otherwise.
- 1.3.2 The determining authority in this case is BDC, as the local planning authority (LPA).

Existing Substation Removal Works

- 1.3.3 Part of the existing 400kV substation on site will no longer be required once the new Substation has been built and is energised.
- 1.3.4 All redundant equipment within the existing 275kV substation and 400kV substation will be removed. The perimeter fence is to be retained for security purposes. Gravel or other suitable low maintenance substrate is to be installed across this part of the Site. Any known contamination or potential sources of contamination are to be removed/remediated, including assets below ground (such as oil-filled cables).
- 1.3.5 The works will be undertaken by National Grid utilising their Permitted Development Rights under Schedule 2, Part 15, Class B(f) of the Town and Country Planning (General Permitted Development) (England) Order 2015.

Overhead Line

- 1.3.6 In addition to the Scheme, ancillary works are needed to tie the proposed substation into the existing transmission network. These works comprise the construction of short sections of new 400kV overhead lines. these overhead line works do not form part of the planning application for the Scheme. Instead, these overhead line works will be consented separately under the consenting regime provided by Section 37 of the Electricity Act 1989 for the installation of overhead lines Environmental Impact Assessment Regulations.

- 1.3.7 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) define EIA development as either:
- Schedule 1 development, where an EIA is required; or
 - Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location, taking into account the selection criteria set out in Schedule 3, identified through the process of screening.
- 1.3.8 The Scheme does not fall under the activities listed in Schedule 1 of the EIA Regulations, and neither are substations specifically listed under the developments within Schedule 2.
- 1.3.9 The Scheme also does not fall within a sensitive area as defined by the EIA Regulations:
- land notified under Section 28(1) (sites of special scientific interest) of the Wildlife and Countryside Act (WCA) 1981;
 - a National Park within the meaning of the National Parks and Access to the Countryside Act 1949;
 - the Broads;
 - a property appearing on the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage;
 - a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979;
 - an area of outstanding natural beauty designated as such by an order made by Natural England under section 82(1) (areas of outstanding natural beauty) of the Countryside and Rights of Way Act 2000 as confirmed by the Secretary of State; and
 - a European site.
- 1.3.10 An EIA Screening Assessment was undertaken to consider the Scheme in relation to the criteria set out in Schedule 3 of the EIA Regulations. This assessment determined that significant effects on the environment are not likely to occur with the application of appropriate mitigation. A request for an EIA Screening Opinion was submitted to BDC on 18 December 2023, which confirmed in response on 5 February 2024 that the Scheme will not be subject to an Environmental Impact Assessment.
- 1.3.11 Since that Screening Opinion was issued, design development has progressed, and further detailed network analysis undertaken by National Grid has identified the need for two separate grid reinforcement projects. The High Marnham Site now falls within the scope of the Chesterfield to High Marnham Project, 'The Project', the purpose of which is to reinforce the electricity network by uprating the existing 275kV transmission lines to operate at 400kV. The Project requires the construction of the Scheme together with the construction of a new substation at Chesterfield (the Chesterfield Site).
- 1.3.12 The related but independent project, the Brinsworth to Chesterfield project, will reinforce the electricity network between Brinsworth and Chesterfield by uprating the existing 275kV transmission lines to operate at 400kV. This project will include the

construction of the Long Lane New 400kV substation, next to the M1 together with works to connect the Brinsworth to Chesterfield project to the new Chesterfield 400kV substation being delivered as part of the Project.

- 1.3.13 The potential for cumulative effects with the uprating works for the Project and the works required for the Brinsworth to Chesterfield project and other committed developments is considered in Section 3 of the EIA Screening Report.
- 1.3.14 In accordance with Regulation 6(1) of the EIA Regulations, National Grid has requested an updated EIA Screening Opinion to establish whether the Scheme would be likely to have significant effects on the environment by virtue of factors such as its nature, size or location, thereby determining whether or not the Scheme is EIA development. The EIA Screening Request was issued to BDC on 31 October 2025 (Bassetlaw District Council Reference 25/01241/SCR). In submitting this request National Grid's assessment is that the Scheme remains non-EIA development assuming a new screening opinion confirming this has not issued before the TCPA is submitted.

1.4 Pre-Application Consultation

Local Planning Authority Consultation

- 1.4.1 The Applicant has engaged in pre-application discussions with BDC. Meetings were held with BDC on the following dates:
- 9 November 2023 to provide an introduction to the Scheme and to discuss anticipated planning application requirements.
 - 18 June 2024 to provide an update on the Scheme.
- 1.4.2 The advice received from BDC has been taken into account when finalising this planning application.

Public Consultation

- 1.4.3 The Applicant carried out pre-application public consultation to introduce the Scheme, and to provide local communities and key stakeholders with an opportunity to learn more about the Scheme and put questions to the project team.
- 1.4.4 Public consultation ran for four weeks between Monday 22 April to Monday 20 May 2024. An online webinar was held on 24 April 2024 and in-person public consultation events were held in South Clifton, Newark on 26 April and Normanton on Trent on 27 April 2024. Feedback could also be provided via a consultation website, freephone Community Relations helpline and a feedback email address.
- 1.4.5 Details of the feedback received and how National Grid has considered that feedback are summarised in this PDAS.
- 1.4.6 Further information on the public consultation process can be found in the Statement of Community Involvement.

1.5 Planning Application Submission

- 1.5.1 This PDAS and other supporting documentation have been prepared to ensure that sufficient information is available to BDC to determine the application for the Scheme.
- 1.5.2 The application has been prepared in accordance with TCPA 1990 and The Town and Country Planning (Development Management Procedure) (England) Order 2015, local validation requirements and the pre-application advice from the relevant LPA.
- 1.5.3 The application site is located entirely within the boundaries of BDC, which is therefore the determining LPA for this application.
- 1.5.4 The planning application for the Scheme comprises the following plans and documents in Table 1.1. These should be read in conjunction with this PDAS.

Table 1.1 Supporting Documentation for Planning Application

Plan / Document	Reference
Application Form and Ownership Certificates	
Site Location Plan	PDD-203717-LAY-301
High Marnham 400kV Substation – Block Plan	PDD-203717-LAY-340
High Marnham 400kV Substation – Existing Site Layout Plan	PDD-203717-LAY-341
High Marnham 400kV Substation – Proposed Plan	PDD-203717-LAY-342
Overall Layout (Planning Version)	PDD-203717-LAY-330
Proposed Site Layout - Substation Works	PDD-203717-LAY-333
Control & Amenities Floor & Roof Plans	PDD-203717-LAY-343
Proposed Block Plan - Substation Works	PDD-203717-LAY-344
Typical Fencing Details	PDD-203717-LAY-346
Access Road Sections and Details Sheet 1	PDD-203717-LAY-348
Drainage Layout (Planning Version)	PDD-203717-LAY-328
High Marnham Overall Elevations Sheet 1	PDD-203717-ELE-322
High Marnham Overall Elevations Sheet 2	PDD-203717-ELE-323
High Marnham Building Elevations Sheet 1	PDD-203717-ELE-324
High Marnham Building Elevations Sheet 2	PDD-203717-ELE-325
High Marnham Building Elevations Sheet 3	PDD-203717-ELE-326
Earthworks Layout and Cross Sections	PDD-203717-LAY-321
External Lighting Plan	PDD-203717-LAY-331
External Lighting Plan (Sheet 2)	PDD-203717-LAY-332

Supporting documentation

1.5.5 As well as the comprehensive set of plans listed in Table 1.1, the application is also supported by a range of technical documents to ensure that the relevant policies and material issues are considered. These are as follows:

- Planning, Design and Access Statement (this document);
- Environmental Appraisal Report (EAR) comprising:
 - Ecological Assessment (accompanied by a Biodiversity Report);
 - Landscape and Visual Assessment;
 - Cultural Heritage and Archaeology (accompanied by a Heritage Desk-Based Assessment);
 - Air Quality (accompanied by an Air Quality Assessment);
 - Water Resources and Flood Risk;
 - Land and Ground Conditions;
 - Noise and Vibration (accompanied by an Operational Noise Impact Assessment);
 - Traffic and Transport;
 - Agriculture and Soils (accompanied by an Agricultural Impact Assessment);
 - Socioeconomics and Human Health; and
 - Cumulative Impact Assessment.

1.5.6 The EAR comprises the following appendices:

- Glossary and Abbreviations (Appendix A)
- Methodology (Appendix B)
- Propose Site Layout (Appendix C)
- Outline Construction Environmental Management Plan (OCEMP) (Appendix D)
- Drawings (Appendix E)
- Ecology Report (Appendix F)
- Biodiversity Net Gain Report (Appendix G)
- Landscape Proposals and Visualisations (Appendix H)
- Gazetteer of Cultural Heritage Receptors (Appendix I)
- Cultural Heritage Desk Based Assessment (Appendix J)
- Construction Dust Assessment and Methodology (Appendix K)
- Air Quality Model Verification (Appendix L)
- Substation Flood Risk Assessment (Appendix M)
- Substation Surface Water Drainage Strategy (Appendix N)

- Substation Ground Conditions and Contaminated Land Desk Study Report (Appendix O)
- Noise Impact Assessment (Appendix P)
- Outline Construction Traffic Management Plan (OCTMP) (Appendix Q)
- Substation Outline Agricultural Land Classification Report (Appendix R)
- Substation Outline Soil Management Plan (Appendix S)
- Substation Arboricultural Impact Assessment (Appendix T)
- Outline Site Waste Management Plan (OSWMP) (Appendix U)

1.5.7 The following additional reports have been provided in addition to the EAR:

- Electric and Magnetic Fields (EMF) Report
- Statement of Community Involvement

1.6 Report Structure

1.6.1 The PDAS should be read in conjunction with the plans, drawings and the accompanying supporting information provided with the planning application. Following this introduction (Section 1) the structure is as follows:

- Section 2 provides background information relating to the context for the Scheme, including in respect of National Grid and its statutory duties and introduces the Horlock Rules (National Grid Company plc, 2009).
- Section 3 provides details of the Site context and surrounding area.
- Section 4 gives a description of the Scheme and the need for the development.
- Section 5 presents the Design and Access Statement.
- Section 6 reviews the current planning policy context for the Scheme including relevant Development Plan policies, national planning policy and guidance and other material considerations including the environmental and technical reports which support the application.
- Section 7 assesses the proposal in terms of its compliance with the Development Plan, national planning policy and guidance and other material considerations.
- Section 8 presents the planning balance and overall conclusions, confirming that permission should be granted.
- Appendix A: includes a summary of relevant planning policies from the Bassetlaw District Council Local Plan
- Appendix B: includes a summary of relevant planning policies from the Nottinghamshire County Council's Minerals Local Plan
- Appendix C: includes extracts of relevant policies from Nottinghamshire County Council's Waste Local Plan
- Appendix D: includes a summary of relevant policies from Material Planning Considerations from the Development Plan

- Appendix E: Suggested planning conditions for consideration should the planning application be approved.
- Appendix F: Abbreviations
- Appendix G: Glossary
- Appendix H: Planning History

2. Context for the Scheme

2.1 Overview

2.1.1 This section of the PDAS:

- introduces the background and rationale for the Scheme;
- outlines the role of National Grid;
- describes the current operation and principles underpinning the Scheme;
- details National Grid's statutory duties;
- introduces the Horlock Rules; and

2.2 Background to the Scheme

2.2.1 Rising electricity demand is expected as power generation for residences, business operations and transport undergoes transformation. The UK government has committed to reach net zero emissions by 2050. This means achieving a balance between the greenhouse gases put into the atmosphere and those taken out. Decarbonising the energy system is vital to achieve net zero; the fossil fuels that once powered the economy is to be replaced with sources of low-carbon electricity.

2.2.2 There is an increased growth forecast in offshore wind capacity in Scotland and the North East of England, as well as increasing power flows to and from European power grids. This would put pressure on the existing network, such that reinforcement of the transmission network has been identified as necessary to secure the operation of the transmission system and ensure reliable, economic and long-term supply.

2.2.3 To achieve this, National Grid needs to upgrade the high voltage power network in England to connect these new sources of offshore energy to the energy network. These plans are part of the biggest overhaul of the energy network in a generation, the Great Grid Upgrade, which would see significant investment and improvement in the nation's energy infrastructure as the UK continues its transition towards net zero and more sources of low carbon power are developed.

2.2.4 The Great Grid Upgrade comprises 17 major infrastructure projects that would both scale up the grid and update existing networks. It would enable National Grid to carry more clean, secure energy from where it is generated to where it is needed.

2.2.5 The Scheme forms part of the Project, with the Project being delivered by National Grid as part of the Great Grid Upgrade. The purpose of the Project is to uprate the existing 275kV transmission overhead lines between Chesterfield and High Marnham to operate at 400kV. The Project also includes the construction of new substations at both High Marnham (the Scheme) and Chesterfield (the Chesterfield Site).

2.2.6 The proposed 400kV substation at High Marnham is a key component of the Chesterfield to High Marnham reinforcement project which is specifically referenced in the Clean Power 2030 Report by the National Energy System Operator (NESO)

(2024) as one of four projects which, if not delivered by 2030, would have a significant impact on the ability of the country to deliver clean power. This Project will include the construction of the High Marnham 400kV substation, consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route.

- 2.2.7 The Scheme proposals will support the UK's net zero target by reinforcing the electricity transmission network between the north of England and the Midlands and facilitate the distribution of planned offshore wind generation to regional and local levels, allowing clean green energy to be carried across the network.
- 2.2.8 Further information on the need for the Scheme is provided in Section 8 of this statement.

2.3 The Role of National Grid

- 2.3.1 National Grid Group companies sit at the heart of Great Britain's energy system, connecting millions of people and businesses to the energy they use every day. National Grid Group's operations in the UK include: National Grid Electricity Transmission, which owns the high voltage transmission system in England and Wales; National Grid Electricity Distribution (formerly Western Power Distribution), which owns and operates electricity distribution networks in the Midlands, the South West and Wales, and National Grid Ventures, which owns and operates energy businesses in competitive markets, including sub-sea interconnectors. The Applicant for the Scheme is National Grid Electricity Transmission plc.

National Grid Electricity Transmission plc (National Grid)

- 2.3.2 National Grid holds the Transmission Licence for England and Wales, and its statutory duty is to develop and maintain an efficient, coordinated and economical system of electricity transmission and to facilitate competition in the generation and supply of electricity, as set out in the Electricity Act 1989.
- 2.3.3 National Grid, as the regulated provider of electricity transmission services in England and Wales, is regulated by the Office of Gas and Electricity Markets (Ofgem). Transmission services include maintaining reliable electricity supplies and offering to construct new transmission system assets for new connections to the National Electricity Transmission System (NETS).

National Energy System Operator (NESO)

- 2.3.4 The National Energy System Operator (NESO) is the electricity system operator for Great Britain. NESO ensures electricity is always where it is needed, and the transmission network remains stable and secure in its operation.
- 2.3.5 As of 1 October 2024, NESO became a public body and is wholly owned by the Secretary of State. It was formerly part of National Grid plc and called the National Grid Electricity System Operator (ESO).
- 2.3.6 NESO has been established to act as the independent organisation responsible for planning Great Britain's energy system, looking after and operating the electricity and gas networks while also offering expert advice to the sector's decision-makers.

2.4 Scheme Operation

- 2.4.1 Electricity is transmitted by National Grid at 400kV and 275kV linking generators with major centres of demand. At these centres of demand, the high voltage of the transmission network is transformed to 132kV and below for delivery into the local distribution networks. The key role of this transmission system is to connect the electricity generators' power stations with regional DNOs which then supply businesses and homes. In return for the connection, users of the transmission network pay a tariff to National Grid. This revenue is then used to maintain, improve and invest in the transmission network.

2.5 Statutory Duties

- 2.5.1 National Grid holds the Transmission Licence for England and Wales and is thus obligated to develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the generation and supply of electricity, as set out in the Electricity Act 1989, licensed under section 6(1)(b). As such, National Grid is bound by legal obligations set out in the Electricity Act 1989 and its associated licence.
- 2.5.2 Under section 9(2) of the Act, National Grid has a duty to:
- develop and maintain an efficient, co-ordinated and economical system of electricity transmission; and
 - facilitate competition in the supply and generation of electricity.
- 2.5.3 As a licence holder National Grid has specific duties to uphold in relation to the desirability of preserving amenity of certain aspects of the environment and to mitigate the effects of its activities on the environment under Section 38 and Schedule 9 of the Electricity Act 1989.
- 2.5.4 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(1) requires that the licence holder, in the formulation of proposals to transmit electricity:
- '(a)...shall 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
- '(b)...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'.*
- 2.5.5 "Section 40 of the Natural Environment and Rural Communities Act 2006, meanwhile, sets out that "A public authority which has any functions exercisable in relation to England must from time to time consider what action the authority can properly take, consistently with the proper exercise of its functions, to further the general biodiversity objective". National Grid serves a public function and Section 40 of this Act therefore also applies in the context of the Scheme.

2.6 The Horlock Rules

- 2.6.1 The Horlock Rules (National Grid Company plc, 2009) outline the methodology and recommendations for designing and positioning substations, alongside CSE compounds and line entries. When evaluating potential new electricity infrastructure projects, National Grid assesses the extent to which various options adhere to or diverge from these regulations. These guidelines complement National Grid's Holford Rules guidelines on the routing of high voltage transmission lines and where appropriate should be used in conjunction with them.
- 2.6.2 Although the Horlock Rules are not planning policy, National Policy Statement for Electricity Networks Infrastructure (EN-5) ('NPS EN-5') (Department for Energy Security and Net Zero (DESNZ), 2024a) states at paragraph 2.9.18 that the Horlock Rules 'guidelines for the design and siting of substations [...] should be embodied in the applicants' proposals for the infrastructure associated with new overhead lines'. The Horlock Rules were established in 2009 by National Grid in pursuance of its duties under Schedule 9 of the Electricity Act 1989.
- 2.6.3 National Grid devised the Horlock Rules (National Grid, 2009) in 2003 and updated them in 2009 in pursuance of the duties under Schedule 9 of the Electricity Act 1989. The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions, to avoid or reduce the environmental effects of such developments.
- 2.6.4 The Horlock Rules state that:
- in the development of system options including new substations, consideration must be given to environmental issues from the earliest stage to balance the technical benefits and capital cost requirements, against the consequential environmental effects, in order to avoid (as far as possible) adverse effects (Rule 1);
 - the siting of substations, sealing end compounds and line entries should seek to avoid areas of the highest amenity, cultural or scientific value through the overall planning of the system connections (Rule 2);
 - areas of local amenity value, important existing habitats and landscape features should be protected as far as reasonably practicable (Rule 3);
 - siting of substations, extensions and associated proposals should take advantage of the screening provided by landform and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum (Rule 4);
 - proposals should keep visual, noise and other environmental effects to a minimum (Rule 5);
 - the land use effects of proposals should be considered when planning the siting of substations or extensions (Rule 6);
 - in the design of new substations or line entries, early consideration should be given to the options available for terminal towers, equipment, buildings and ancillary development appropriate to individual locations (Rule 7);

- space should be used effectively to limit the area required for development, consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation (Rule 8);
- design of access roads, perimeter fencing, earth shaping, planting and ancillary development should form an integral part of the site layout and design to fit in with the surroundings (Rule 9);
- in open landscapes especially, high voltage line entries should be kept, as far as possible, visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance (Rule 10); and
- the inter-relationship between towers and substation structures and background and foreground features should be studied to reduce the prominence of structures from main viewpoints. Where practicable, the exposure of terminal towers on prominent ridges should be minimised by siting towers against a background of trees rather than open skylines (Rule 11).

3. Description of the Development Site

3.1 Introduction

3.1.1 This section of the PDAS provides an overview of the application site and its setting.

3.2 Site Location and Setting

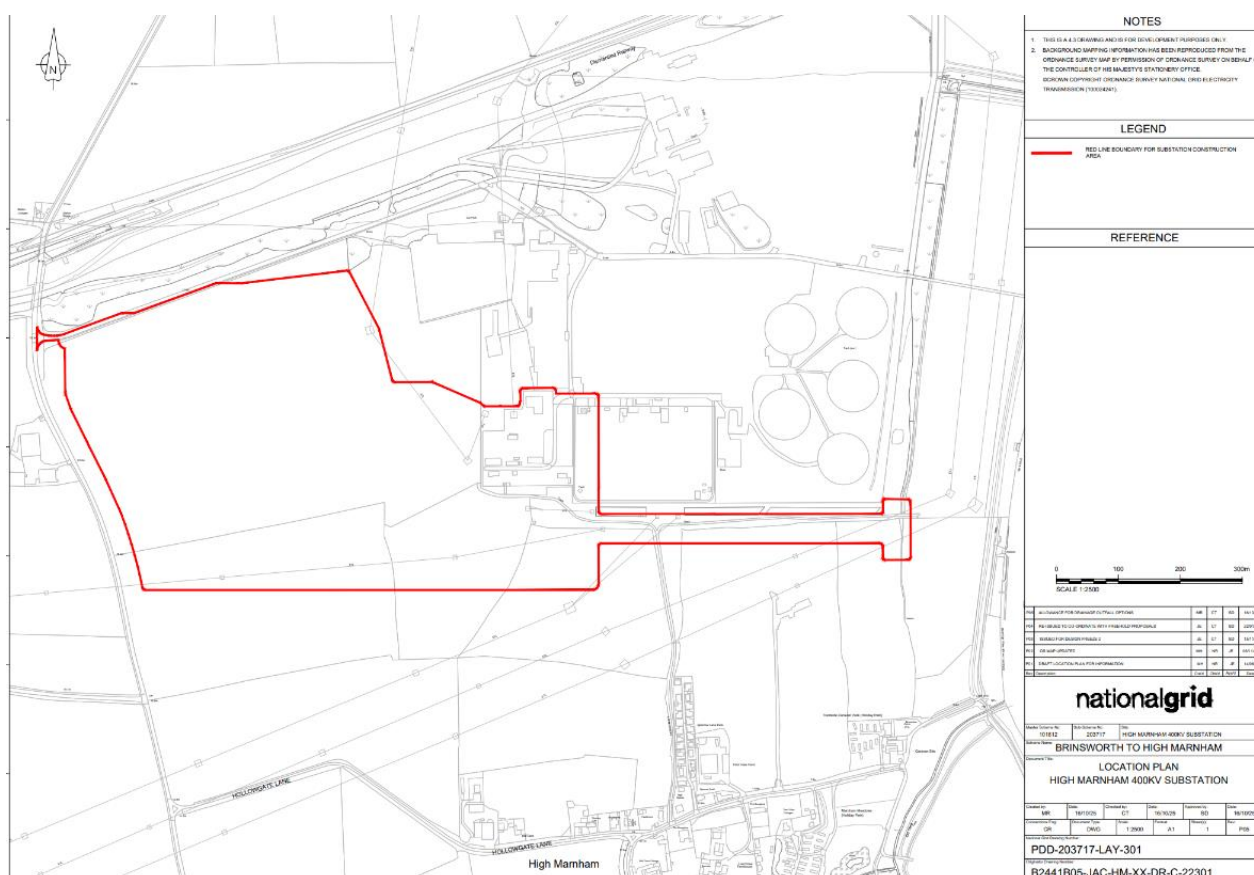
3.2.1 The extent of the Site is 36ha. The Site is located on land intersecting with the existing 400kV and 275kV substations and adjoining the former High Marnham Power Station site, which has been decommissioned and removed.

3.2.2 The Site is currently predominantly arable agricultural land with associated boundary hedgerows which intersect and surround most, but not all, of the Site. The Site is bounded in part by an existing hedgerow around the existing 400kV substation. The High Marnham existing 400kV substation and 275kV substation are also located partially within the Scheme boundary, and are approximately 500m north of the village of High Marnham and approximately 500m west of the River Trent. At the north west corner, there is an access road onto the local highway.

3.2.3 The Site is bounded by Fledborough Road off Main Street to the west and to the east by the former High Marnham Power Station site. To the north of the Site there is a disused railway line which is now hardstanding.

3.2.4 The Site location is illustrated in Figure 3.1 below.

Figure 3.1 High Marnham Site Location



- 3.2.5 The Site topography is generally flat, ranging from 9m – 17m Above Ordnance Datum (AOD). The western and southern parts of the Site are gently sloped. The Site landscape is gently undulating and generally open with hedgerows and trees delineating field boundaries. The existing pylons and substation are visible within the Site, backclothed by tree planting along the River Trent. The Site is visible from gaps in the roadside hedgerows such as field gates or the main entrance to the Site.
- 3.2.6 There are no statutory ecology designated sites within the Site. The Marnham Railway Yard candidate Local Wildlife Site (LWS) and Fledborough to Harby Dismantled Railway LWS are located 100m to the north of the Site.
- 3.2.7 The Site is not located within areas designated nationally or locally for their landscape value. There are no Areas of National Landscapes or National Parks within 2km of the Site.
- 3.2.8 There are no World Heritage Sites, Scheduled Monuments, Registered Battlefields or Registered Parks and Gardens within 2km of the Site. There are no listed buildings within the Site, but there are three listed buildings within a 1km of the Site.
- 3.2.9 The Site is not within an Air Quality Management Area.
- 3.2.10 There are a number of residential receptors within 500m of the Site boundary, the nearest being 400m to the south in High Marnham. Fledborough House Farm is 500m to the north. Most residential receptors in the area are separated from the Site by agricultural parcels and vegetation.
- 3.2.11 No Environment Agency designated main rivers are located within the Site. The River Trent (Environment Agency main river) is located 165m to the east of the Site.
- 3.2.12 As shown on the GOV.UK Flood Mapping Tool, the majority of the Site lies within Flood Zone 1. This is land defined as having a low probability of flooding from rivers and the sea, with an annual chance of flooding of less than 0.1 per cent (1 in 1,000). The eastern part of the Site lies partially within Flood Zone 2 and Flood Zone 3 (defined as having an annual chance of flooding greater than 1 per cent (1 in 100)). In the wider area, the floodplain of the River Trent is located to the north, east and south of the Site.
- 3.2.13 Provisional Agricultural Land Classification (ALC) mapping shows all of the Site to be mapped as Grade 3. Detailed ALC mapping shows the land mapped as a mixture of ALC Grades 2, 3a and 3b with overall, approximately half being of best and most versatile (BMV) quality (Grade 2 and 3a), predominantly in the west of the Scheme boundary.
- 3.2.14 There are no Noise Important Areas within the Site or the surrounding area (see Chapter 10 of the EAR).
- 3.2.15 There are no Public Rights of Way (PRoWs) within the Site. Three PRoWs and National Cycle Route (NCR) 647 are located within 500m of the Site.

3.3 Planning History

- 3.3.1 Table 3.1 below provides a review from BDC's online planning register of previous planning submissions on or in immediate proximity to the proposed substation site.

- 3.3.2 The Site's periphery has a history of agriculture to the north, residential dwellings to the south, whilst the site itself has a long history of approval for electricity instillations, as demonstrated by the planning history set out in Appendix H and summarised from 2024 onwards in Table 3.1 below.
- 3.3.3 Those applications shown by italics directly overlap with the sites red line boundary, those shown in bold directly relate to the PDAS. Those applications referenced with an 'X', are indications that the information was not available on BDC's planning applications search webpage.

Table 3.1 Planning History (from 2024 onwards)

Reference	Proposal	Decision	Decision Date
24/00049/COND	Discharge of Conditions 16, 18 and 20 on P/A 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works	Part discharge	09/02/2024
24/00324/COND	Discharge of Conditions 8 and 19 of P.A. 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works	Grant	07/05/2024
24/00436/NMA	Non Material Amendment to 21/01147/FUL to Change to the Timing Requirement of Condition 8 in the Closure of Existing Field Access.	Grant	21/05/2024
24/00100/COND	Discharge of Conditions 6 (Traffic Management) and 22 (Landscaping) of P.A. 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	24/05/2024

Reference	Proposal	Decision	Decision Date
24/00123/COND	Discharge of Condition 19 of PA 21/01147/FUL Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	24/05/2024
24/00266/COND	Discharge of Condition 23 on P/A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	03/06/2024
24/00660/COND	Discharge Condition 11 on 23/00801/FUL- Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works.	Grant	02/08/2024
24/00445/COND	Discharge Condition 22 on P.A 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works.	Grant	04/09/2024
24/01027/COND	Discharge Condition 6 and 14 on P.A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	03/10/2024
24/00717/SCR	Screening Opinion - Proposed Battery Energy Storage Systems (BESS) Substation and Associated Infrastructure and Works	Not EIA Development	13/11/2024
23/00748/HAZ	Application for Hazardous Substances Consent for the proposed storage of a maximum of 4.9 tonnes of Hydrogen	Grant	17/02/2025
24/01138/FUL	Battery Energy Storage System, Substation, Associated Infrastructure and Works	Grant	27/06/2025

Reference	Proposal	Decision	Decision Date
25/00387/SCR	<i>Request for an Environmental Impact Assessment (EIA) Screening Opinion for High Marnham BESS: A Battery Energy Storage System (BESS) with a Storage Capacity of up to 400 Megawatts (MW)</i>	<i>Awaiting</i>	-
25/00639/FUL	<i>The Construction, Operation and Decommissioning of a Battery and Energy Storage System (BESS) and Associated Infrastructure</i>	<i>Awaiting</i>	-

3.4 Historical Overview

- 3.4.1 Historically, the broader site functioned as High Marnham Power Station, a coal-powered facility that became fully operational in June 1962. The plant operated until its decommissioning in 2003, although the cooling towers remained standing until their demolition in 2012. The site was instrumental in the UK's energy sector, hosting the first 400kV super grid link in the National Grid, connecting the power station to the Monk Fryston substation near Selby Fork. The construction and decommissioning has since left a majority of the situated area as a brownfield site which has slowly been developed upon. In large part, development has followed suit with the longstanding use of the site which set a precedent for energy and electrical infrastructure in the area.
- 3.4.2 As illustrated in Table 3.1, the site and its adjacent land have consistently secured approval for electricity and energy installations. Shown earliest in 1992 on Bassetlaw's Council Application Webpage, this began with planning application 30/92/00008, which established a 400kV Double Busbar Substation and associated overhead line diversions. The application was renewed under planning application 30/97/00002, and in 2000, planning application 30/00/00004 led to the extension of the existing 400kV Substation.
- 3.4.3 The area has since seen significant expansion, favouring energy-based projects linked to High Marnham Power Station. The former High Marnham Power Station was decommissioned in 2003 with the final site clearance taking place in 2012, with the demolition of the cooling towers. Since then, the wider area has seen major planning applications including B8 (Storage or Distribution) Use and B2 (General Industrial) Use. The following energy related applications on adjacent land include applications for:
- combined heat and power plant;
 - construction and operation of a solar photovoltaic farm;
 - green hydrogen production plant; and
 - substations.

JG Pears - Combined Heat and Power Plant

- 3.4.4 JG Pears (JGP) transforms difficult to treat animal by-products to create highly valued fats, oils and protein products for the pet feed, agricultural feed and biofuel sectors.
- 3.4.5 JG Pears has made a number of investments in its operations at Low Marnham to enhance efficiency and reduce carbon dioxide emissions. Since early 2018, JGP has operated its Combined Heat and Power (CHP) plant at Low Marnham, achieving self-sufficiency for most of its heat and energy needs while exporting surplus electricity to the National Grid via the existing High Marnham substation. Although not primarily an electricity application, the CHP plant can serve as a case study for major planning applications in the area.
- 3.4.6 The application, under reference 30/11/0005 for aforementioned Biomass Combined Heat and Power Plant, including auxiliary boilers, silos, new offices, revised trailer/car parking, and other associated works, was initially refused due to concerns that its scale, mass, and height would have an unacceptable visual impact on the countryside, detracting from the character and appearance of the area. However, upon appeal (Ref. APP/A3010/A/13/2201459, Alternative Ref. 13/00034/S36), the decision was overturned. The appeal recognised that while the proposal would have an urbanising effect on the rural landscape and did not fully adhere to local policies safeguarding landscape character, it would cause less than substantial harm to considerations including significant local heritage assets such as St Wilfrid's Church and the Grange. Additionally, it was acknowledged that the proposal would modestly support the government's climate change and energy policies. Ultimately, the Secretary of State concluded that the proposal aligns with the development plan and constitutes a sustainable form of development according to the Framework's policies.
- 3.4.7 Since then, in 2015, under planning application 15/01136/FUL, the laying of underground 33KV electricity was granted that saw the linking of the premises of JGP, Low Marnham and the National Grid Switchyard in High Marnham. The route was later partially amended in 2016, under 16/00903/FUL due to a landowner's death which delayed legal approvals for the cable route, requiring an alternative path to avoid construction delays. The electricity link provides the opportunity to import as well as export electricity from and to the national grid.
- 3.4.8 In 2017, under application reference 17/00057/FUL, a proposal for an Electricity Transformer and Associated Works at the Switchyard was submitted to facilitate the connection of an electricity cable link between JGP's premises at Low Marnham, and the switchyard at High Marnham. This scheme stemmed from the development of the CHP plant (application reference 30/11/0005).

Solar photovoltaic farm

- 3.4.9 Also shown support on adjacent land is the provision for energy infrastructure in the form of solar farms. Applications 21/01147/FUL and 22/00707 are detailed below.
- 21/01147/FUL – Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure at Land north and south Tuxford**
- 3.4.10 Determined not to require an Environmental Impact Assessment under reference 21/00376/SCR and approved through planning application 21/01147/FUL, permission for a Solar Farm and Battery Storage Facility, along with associated infrastructure on land north and south of Tuxford Road, was granted in 2021. The solar installation,

designed to generate up to 49.9 MW for the National Grid, incorporates an underground cable connection to the existing High Marnham Substation, enabling the transmission of renewable energy to the electricity grid.

- 3.4.11 The Planning Committee Report highlighted this application's positive contribution to clean energy generation, supporting efforts to reduce greenhouse gas emissions and meet future energy consumption needs. While these benefits were central to the justification of its approval, it is worth noting that visual impacts were partially mitigated by the temporary nature of the solar farm, which was granted a 40-year operational lifespan. Although the application to which the PDAS refers does not share the same timescale, it nonetheless reflects the area's broader support for energy-related infrastructure.

22/00707 – The construction and operation of a Solar Photovoltaic (PV) Farm with other Associated Infrastructure including Substations, Security Cameras, Fencing, Storage Containers, Access Tracks and Landscaping at land adjoining former High Marnham Power Station

- 3.4.12 National Grid's proposed 400kV substation is on land which received consent from BDC in June 2023 for a solar farm development.
- 3.4.13 JGP submitted a proposal for the construction and operation of a solar photovoltaic farm in 2022, later granted permission. The Committee Report highlights that the primary development management policy relevant to this application was Policy DM10 of the Bassetlaw Core Strategy, now replaced by Policy ST49. As written within the report, while there is general support from BDC for renewable energy, certain requirements must be met for a balanced decision. The report acknowledges the benefits of the site's proximity to previous energy developments and how the new proposal aligns with this established precedent.
- 3.4.14 Regarding amenity, the Committee Report agreed with the Landscape and Visual Impact Assessment submitted with the application, which acknowledged that whilst the site sits within an area mainly characterised as having a rural character, none of the landscapes are visually unique or of significant value. It was further noted that despite there being some negative visual intrusion in areas south of the site, these were not deemed unacceptably harmful. Collectively, the proposed solar photovoltaic farm was deemed appropriate.
- 3.4.15 Residential amenity impacts were also noted to be expected as minimal with appropriate management during construction. Amenity concerns were also expected to be negligible once operational. Highway considerations were also deemed appropriate, provided conditions were met.
- 3.4.16 In terms of ecology, the impact on local designations were indicated as not concerning, although there was sensitivity regarding the BMV agricultural land. The proposal overcomes these concerns as it does not result in permanent agricultural land loss, with continued sheep grazing maintaining some agricultural use. It is not clear whether the related benefits represented in this PDAS will be viewed similarly.
- 3.4.17 In determining the solar farm planning application, BDC considered that the impact on heritage assets arising from that proposal was limited and outweighed by the benefits delivered by that project. An archaeological assessment concluded a low probability of discovering heritage assets, except for medieval remains, which have a medium probability. With three conditions for a comprehensive mitigation strategy, the proposal aligned with local and national policy.

- 3.4.18 Overall, the proposal was significantly favourable due to its contribution to the UK's carbon net-zero goals, generating enough energy to power approximately 11,000 homes. While it involves the temporary loss of 50 per cent of the site's BMV agricultural land and impacts several non-designated heritage assets, the harm is considered "less than substantial". The temporary agricultural impact is mitigated by sheep grazing and eventual restoration of the land, making impacts reversible. The public benefits include renewable energy generation, biodiversity enhancements and economic growth, which outweigh the identified harms. The proposal complies with national and local policies, with any minor policy conflicts being substantially outweighed by the benefits to renewable energy and biodiversity.
- 3.4.19 While the proposal associated with this PDAS also contributes to reducing carbon emissions, it does not share the advantage of a temporary timeframe. Therefore, measures to mitigate potential impacts on agricultural land and the landscape on a permanent basis will require further exploration.

Hydrogen production plant

- 3.4.20 The adjacent area also saw applications for energy infrastructure, specifically hydrogen plants.
- 3.4.21 A screening opinion was submitted and determined in 2023 under planning application 23/00243/SCR. Classified as an EIA development, under planning application 23/00801/FUL permission was granted in 2023 for the construction and operation of an 8 MW Electrolytic Green Hydrogen Production Plant. This included associated infrastructure such as HGV and Multi Cylinder Pack (MCP) loading areas, vehicle maintenance unit, staff welfare facilities, control room, 11KV customer sub-station, boundary fencing, internal access roads, landscaping, external lighting and additional works.
- 3.4.22 The application is closely tied to the approved solar array farm (22/00707/FUL), as the production of green hydrogen is intended to use renewable energy sources, with an alternative power source being the biomass power plant at the Low Marnham Site.
- 3.4.23 According to the applications Committee Report, the proposal was considered suitable in terms of ecological and historical impact, with visual impact concerns noted as minimal in both the local and wider settings. The development was noted to be expected to blend into an area already characterised by industrial elements, such as the substation and pylons. It was acknowledged that, although situated in the open countryside, the site is part of a broader brownfield area that previously housed the High Marnham Power Station, making it an ideal location for this type of development. Ultimately, the proposal was met with approval as it was expected to contribute to net-zero and broader climate-conscious goals. The proposal enables JGP to be largely self-sufficient at the Low Marnham site and meet most of its heat and energy needs. Energy that exceeds its needs is fed back to National Grid.
- 3.4.24 The area continues to show strong approval for energy-related infrastructure with subsequent applications made: 23/01135/FUL, granted in 2024 for the construction and operation of a prototype facility for the production of hydrogen from ammonia; and application 23/00748/HAZ which was granted in 2025, for hazardous substances consent for the proposed storage of a maximum of 4.9 tonnes of hydrogen.

National Grid Substations

- 3.4.25 National Grid has previously submitted EIA Screening Requests for a substation on the High Marnham site. These include:
- BDC Application Reference 30/11/00003/S: Request for an EIA Screening and Scoping for a new Substation and Access Road on land to the west of the existing High Marnham Substation. The EIA Screening and Scoping Request was submitted in December 2011 with BDC confirming in January 2012 that the proposal was not EIA development.
 - BDC Application Reference 23/01519/SCR: Request for an EIA Screening Opinion for a new 400kV substation was submitted to Bassetlaw in December 2023. BDC confirmed to National Grid on 5 February 2024 that the proposal was not EIA development.
 - BDC Application Reference 25/01241/SCR: Since the above screening opinion was issued in 2024, design development has progressed, and further detailed network analysis undertaken by NGET has identified the need for two separate grid reinforcement projects. The Scheme now falls within the scope of the Project, the purpose of which is to facilitate the uprating of the existing 275kV transmission lines to operate at 400kV, connecting them to, and thereby reinforcing the electricity network. The Project would also require the construction of the Scheme and the construction of the new Chesterfield 400kV substation, off Calow Lane in Derbyshire. A revised EIA Screening Request was submitted to BDC on 31 October 2025.

Conclusion

- 3.4.26 There is a well-established precedent for approval, for energy-related infrastructure at the former High Marnham Power Station site from BDC and if not, the Planning Inspectorate. Originating with the now demolished power plant which left much of the land as a brownfield site, the area has gradually evolved into a location primarily composed of general industrial and energy related infrastructure, positioning itself as a suitable site for further energy related projects.
- 3.4.27 The land associated with this PDAS has been identified in previous planning applications as being of and surrounded by limited visual interest, though it does hold potential for agricultural use. While this does not negate the need to mitigate visual impacts, the site benefits from an established industrial backdrop. Past applications have largely been deemed acceptable based on their contributions to addressing climate concerns, and this proposal similarly aligns with those objectives.
- 3.4.28 It is important to note that the majority of the referenced case studies were assessed under previous iterations of the NPPF, National Policy Statements for Energy, and Bassetlaw's Local Plan. While there is continuity between earlier frameworks and their current iterations, the increasing emphasis on supporting climate-friendly development should be considered when comparing cases.
- 3.4.29 Collectively, much like previous applications, the Scheme represents an energy-related project that capitalises on the site's suitability for such use. Other considerations, including visual impact and agricultural potential, should be appropriately mitigated with the growing need for climate-friendly infrastructure playing a significant role in balancing the planning assessment.

4. The Scheme

4.1 Introduction

4.1.1 This section of the PDAS provides description of the Scheme.

4.1.2 This section of the statement also sets out the design components that have been incorporated within the Scheme in the context of the physical, social and economic environment of the proposed substation. Specific details around the amount of development proposed, the layout, scale and appearance of the proposal are also discussed within this section.

4.2 Scheme Description

4.2.1 This planning application seeks full planning permission for:

“Erection of a 400kV Air Insulated Switchgear (AIS) substation with one 400/275kV Supergrid Transformer (SGT) and one 400/33kV SGT. This will also include 16 bays, gantries, control and amenities building, permanent access roads, diesel generator, parking, drainage, lighting and CCTV, landscaping and biodiversity enhancement, and security fencing”.

4.2.2 The Scheme comprises the following principal elements:

- construction of a new 400kV AIS substation; and
- a new site access which will utilise an existing access point in the north west of the Site, off Fledborough Road, and an existing road in the northern part of the Site. A new access will be constructed from this existing road. From this new access, a new access road will travel southwards.

Proposed AIS Substation

4.2.3 This Scheme involves construction of an AIS substation and associated infrastructure, including one 400/275kV SGT and one 400/33kV SGT. The SGTs are 12m length by 7m width with a height of 10m. The SGTs will be surrounded by a perimeter of reinforced concrete bunds, supported on a base slab and a central plinth for supporting the SGTs. The bunds act as a secondary oil containment measure for the insulation oil in the SGTs.

4.2.4 There will be a noise enclosure around SGT2 to reduce operational noise. Other equipment includes protection and control equipment, switching devices, cooler banks for each SGT, a diesel generator for emergency backup power and a water tank for emergency fire water supply.

4.2.5 Within the substation, the majority of electrical equipment is mounted on steel posts fixed to concrete foundations. The highest parts of the electrical equipment are typically up to 11.5m above ground level.

4.2.6 The overhead line gantries, of which ten are proposed, are taller steel line landing gantry structures within the substation, which support the downleads from the adjacent 400kV/275kV overhead line pylons. The gantries will be approximately 12.5m high. One of the gantries is to facilitate a temporary overhead line connection and will be re-purposed as a customer/generator connection bay following construction.

- 4.2.7 The Scheme involves the construction of 16 bays which will be located in the centre of the Site, which is located to the west of the existing substation. The bays are approximately 17m x 19m. The approximate height is 11.5m.

Permanent buildings

- 4.2.8 There are twenty permanent buildings proposed as part of the Scheme:
- A combined control and amenities building in the south west of the Site. It will be 33.5m length by 15m width with a height of 4.5m. It will be a brick cladding building with a concrete roof.
 - Sixteen portable relay rooms to accommodate electrical protection equipment. These will be located throughout the substation in proximity to the bays in the centre of the Site. These buildings will be 7.5m length by 4m width with a height of 4m.
 - A 33kV switchgear building will be located to the south east of the substation. The building will be 12.9m length by 7m width with a height of 7.9m.
 - A small workshop building and separate storage unit building located in the south west of the Site. Both buildings will measure 6.5m length by 2.5m width with a height of 4.5m.

Other permanent structures

- 4.2.9 A diesel generator within an acoustic enclosure and fitted with a silenced exhaust system will be located in the south east of the Site. Hardstanding for the placement of a backup emergency diesel generator will also be located within the south east of the Site.
- 4.2.10 A fire water tank will be located in the south west of the proposed substation.
- 4.2.11 Permanent security fencing will be located around the substation. The substation will have a 2.4m high palisade security/safety fence with a 4m high electric pulse fence installed to the rear of the palisade to secure the Site and prevent trespass. A double security gate will also be located in the north western part of the Site along the proposed new access route.
- 4.2.12 Provision for the parking of six vehicles, including two electric vehicle charging bays, will be located in the south east of the proposed substation.
- 4.2.13 Welfare facilities including toilets and showers will be located within the combined control and amenities building.

Internal access, circulation and parking

- 4.2.14 The proposed internal road and pedestrian area layout for the substation compound has been designed to allow the safe movement of vehicles and pedestrians and has had regard to relevant health and safety legislation and good industry practice. The site access roads are designed to allow for maintenance access around the substation. The internal access roads will be 6m wide and surfaced with tarmac.
- 4.2.15 Car parking is to be provided to the south east of the proposed substation, with provision for the parking of six vehicles, including two electric vehicle charging bays for visitors and National Grid staff.

Drainage

- 4.2.16 One attenuation pond will be located to the south of the proposed substation. It will have a storage volume of 10,000m³, a basin invert level of 6.9m AOD, a maximum depth of water of 1.5m, and a basin earthwork side slope of 1:3. An outlet basin will be located along the eastern extent of the basin and extend eastwards to join an existing surface water carrier drain. The carrier drain will then continue eastwards to a new outfall (outfall details to be confirmed with the Lead Local Flood Authority).
- 4.2.17 An existing ditch within the southern part of the proposed substation will be closed, subject to the relevant closure processes which are not covered within this PDAS. Surface water will be diverted to the proposed attenuation pond.
- 4.2.18 The Scheme boundary extends to the east beyond the existing substation to accommodate an existing pumping main service at the existing substation which connects to an outfall in an open ditch 700m to the east of the proposed substation. As part of drainage works for the Scheme, the works will include a new large diameter buried pipe to manage/attenuate surface water captured by the cut-off ditch to the south of the new substation. The buried pipe will have a diameter of 450mm.
- 4.2.19 Mitigation measures, in the form of oil interceptors will be put in place to prevent any discharge from the SGT bunds being discharged into the clean surface water drainage system.

4.3 Rights of Way and Open Access Land

- 4.3.1 There are no PRoWs identified within the Site. Three PRoWs and NCR 647 are located within 500m of the Site.
- 4.3.2 Nottinghamshire County Council has identified that there are a number of Definitive Map Modification Order (DMMO) applications which have been submitted for public footpaths that are in proximity to the Scheme with two applications directly interacting with the Scheme.
- 4.3.3 These applications are for footpaths that are not shown on the Definitive Map (the legal record of PRoWs); however, applications have been made indicating that PRoWs may exist. If the evidence submitted is sufficient, these paths would be added to the Definitive Map. There are two DMMO applications located within the Site. However, these routes have not been designated as PRoWs at the time of writing. Notwithstanding this, the Landscape Mitigation Plan (Ref. 30184504-ARC-XX-LAN-DWG-00001) submitted as part of the Environmental Appraisal Report identifies potential diversion routes should the DMMO applications be accepted.
- 4.3.4 The application site also includes land identified as common land. The designated common land extends along Sparrow Lane from Hollowgate Lane and into the existing National Grid substation site. Whilst the common land does interact with the red line boundary, there are no works proposed which would impede or prevent access. As such, no additional consent from the Planning Inspectorate on behalf of the Secretary of State for Environment, Food and Rural Affairs is required.

4.4 Overhead Line Works and Consenting Requirements

- 4.4.1 As set out in Section 1.3, ancillary works are required to tie the proposed substation into the existing transmission network. These works are to comprise the construction of new 400kV overhead line and associated equipment including temporary and permanent pylons.

- 4.4.2 Whilst planning permission will not be sought from BDC for these works (because different consenting regimes apply), they are related to the Scheme and material to the determination of the planning application for the substation.
- 4.4.3 Section 37 of the Electricity Act 1989 establishes that, with certain exemptions, consent must be obtained to install and keep installed overhead electric lines. Section 37 consent is required to be obtained for new above ground overhead lines that is:
- new overhead lines less than 2km in length; and
 - replacing an existing overhead line that which meets certain tests, unless exempted.
- 4.4.4 Section 37 of the Electricity Act 1989, as amended, sets out, with certain exceptions, that consent must be obtained to 'install or keep installed' electric lines above ground. 'Electric lines' are defined in S.64 of the Act.
- 4.4.5 Section 37 of the Electricity Act 1989 does provide an exemption from the requirement to obtain consent for any overhead line that is on land that 'is, or will be', in National Grid's 'occupation or control'. This means that above ground electric lines (busbars, conductors or gantries that are part of the 'electric line') can be installed and kept installed on National Grid land, i.e. within substations, without requiring Section 37 consent, or relying on any electricity exemptions. In addition, the Overhead Lines (Exemption) (England and Wales) Regulations 2009 provide further exemptions for minor works to existing overhead lines requiring Section 37 consent.
- 4.4.6 Whilst outside the scope of this planning application, the following provides a high-level overview of the nature of the temporary and permanent works proposed to modify the existing overhead line configuration to connect the High Marnham Substation to the transmission network:

Existing Overhead Lines to be Removed

- 4ZV – Chesterfield to High Marnham 1 and Chesterfield to High Marnham 2 275kV overhead lines will be removed between towers 4ZV001A to 4ZV003 and 4ZV001B to 4ZV003. The overhead lines to be removed are located to the south of the proposed substation.
- XE – Thurcroft/West Melton to High Marnham 275kV overhead line will be removed between towers XE001 to XE004. The XE overhead line is located to the south of the proposed substation.
- ZDA – West Burton to High Marnham 400kV overhead line is to be removed between towers ZDA252A and ZDA252B. These works are proposed to the north of the proposed substation.
- ZDA/ZDF – Cottam – Staythorpe 400kV overhead line will be removed between towers ZDA248, ZDA248B, ZDA249 to ZDA253 and ZDF002 to ZDF004. These works are proposed to the east of the proposed substation site.
- ZDF/ZDF – Stoke Bardolph – High Marnham, 400kV overhead line will be removed from towers ZDA248F to ZDA248B, ZDA249 to ZDA253 and ZDF002 to ZDF004. These works are proposed to the south of the proposed substation site.

New Proposed Permanent Overhead Lines

- 4ZV – Chesterfield to High Marnham 1 and Chesterfield to High Marnham 2. New 400kV overhead line from 4ZV003 (new) to 4ZV003B.
- XE – Thurstcroft/West Melton to High Marnham. New 275kV overhead line from towers XE004 (new) to XE004A.
- ZDA – West Burton to High Marnham. New 400kV overhead line at ZDA251B only.
- ZDA – Cottam to High Marnham. New 400kV overhead line at ZDA251B only.
- ZDF – Staythorpe to High Marnham. New 400kV overhead line at towers ZDF004 (new) to ZDF004B.
- ZDF – Stoke Bardolph to High Marnham. New 400kV overhead line at towers ZDF004 (new) to ZDF004B.

4.4.7 The proposed works, and associated temporary connections are illustrated on Drawing PDD-203717-LAY-330 High Marnham 400kV Substation - Overall Layout (Planning Version) which has been submitted for information purposes. It is noted that the proposed overhead line works represent a significant reduction and rationalisation of the existing overhead line configuration.

4.5 Construction and Commissioning

- 4.5.1 This section of the PDAS sets out the construction programme and outlines the key assumptions that have been made from the High Marnham EAR with regard to construction approach and working methods.
- 4.5.2 The Scheme will be designed, constructed and operated in accordance with all relevant health and safety legislation. It will also comply with design safety standards including the National Electricity Transmission System Security and Quality Supply Standard (NETS SQSS), which defines the criteria and methodology for coordinating and operating the National Electricity Transmission System. The NETS SQSS informs a suite of National Grid policies and processes, which set out the design standards and thresholds that must be met when designing, constructing and operating assets such as the proposed substations.
- 4.5.3 The construction and commissioning of the Scheme is expected to take circa 54 months in total. The indicative programme identifies pre-commencement works are due to start in February 2026 and will be completed by May 2026. Construction works will span from September 2026 and will be completed by January 2031.
- 4.5.4 The indicative construction and commissioning stage will consist of the following phases:
- pre-commencement works – June 2026 – July 2026;
 - site establishment and enabling works – July 2026 – November 2026;
 - substation works – November 2026 – July 2030; and
 - demobilisation – August 2030 – October 2030.

Outline Construction Environmental Management Plan

- 4.5.5 An Outline Construction Environmental Management Plan (OCEMP) has been submitted as part of this planning application. Following the receipt of planning approval, the OCEMP will then be updated by the Mains Works Contractor to a full Construction Environmental Management Plan (CEMP) which will be in accordance with the OCEMP.
- 4.5.6 The OCEMP will also be applicable for the Section 37 application.
- 4.5.7 The purpose of the OCEMP is to identify potential adverse environmental issues arising from the construction of the works, to specify measurable limits and targets, and to detail the mitigation measures to be undertaken during construction and the management tools and procedures required. The OCEMP therefore provides an operational manual detailing the management, monitoring, auditing and training procedures to be followed during the construction of the works to ensure compliance with relevant legislation. It would also set out the specific roles and responsibilities of the Main works contractors and wider project team personnel. The OCEMP would typically include the following:
- available details regarding the phasing of works;
 - details of the works to be undertaken highlighting any operations likely to result in adverse environmental impacts, with an indication of the specific detailed mitigation measures to be employed;
 - prohibited or restricted operations;
 - a framework for compliance with relevant legislation and guidance;
 - details of plant to be used;
 - construction working hours including any weekend or public holiday works proposed and, if so, their working hours;
 - roles and responsibilities of key staff including training of staff, liaison with stakeholders and management of enquiries and complaints;
 - details of emergency procedures to be implemented on the Site;
 - details of general Site management practices, including working hours, hoarding, access, lighting, Site facilities, energy and water use, waste, materials procurement and storage;
 - details of environmental management and control procedures covering ecology, traffic and access, noise and vibration, dust, contamination, hazardous materials, drainage and pollution control;
 - requirements for auditing, monitoring and record-keeping;
 - mechanisms for third parties to register complaints and the procedures for responding to complaints; and
 - provisions for reporting, public liaison and prior notification, especially where dispensations are required.
- 4.5.8 All proposed mitigation measures relating to the construction phase as identified in Chapters 4-15 of the EAR are also to be included within the OCEMP.

Outline Construction Traffic Management Plan

- 4.5.9 An Outline Construction Traffic Management Plan (OCTMP) has been submitted as part of this planning application. The construction of the Scheme will be carried out in full compliance with the approved CTMP.
- 4.5.10 The OCTMP will also be applicable for the Section 37 application.
- 4.5.11 The purpose of the OCTMP is to outline the measures to be followed to manage construction traffic. The OCTMP would typically include the following:
- the construction programme and anticipated peak two-way traffic movement flows broken down into vehicle types (Heavy Goods Vehicles (HGVs) and cars/Light Goods Vehicles (LGVs));
 - details of proposed routes for HGVs travelling to and from the Site;
 - peak numbers of anticipated construction workers;
 - Abnormal Indivisible Loads (AILs) numbers and the vehicle types/sizes;
 - details of any PRoW realignment/diversions/closures and any alternative routes being proposed and the duration of closure/diversion;
 - confirmation of the substation site access and the site access locations for the overhead line; and
 - site access drawings, including visibility splays and swept path analysis.

Outline Site Waste Management Plan

- 4.5.12 An Outline Site Waste Management Plan (OSWMP) has been submitted as part of this planning application prior to the commencement of the Scheme. Following the receipt of planning approval, the OSWMP will then be updated by the Main Works Contractor to a full Site Waste Management Plan (SWMP) which will be in accordance with the OSWMP.
- 4.5.13 The OSWMP outlines measures to be undertaken during construction to appropriately manage construction waste.

Temporary works

- 4.5.14 A temporary interconnector cable between the New 400kV High Marnham Substation and the existing 400kV substation will be used as part of the initial energisation of the New 400kV High Marnham Substation.
- 4.5.15 The tie-in works to connect the substation to the grid, subject to Section 37 consent, will require the temporary diversions of the 4ZV and ZDF overhead lines to the south of the proposed substation .

Construction compound

- 4.5.16 Class A, Part 4 of The Town and Country Planning (General Permitted Development) (England) Order 2015 states that Permitted Development may be granted for temporary compounds when associated with an approved application so long as the proposed permitted development is consistent with, *“the provision on land of buildings, moveable structures, works, plant or machinery required temporarily in connection with and for the duration of operations being or to be carried out on, in, under or over that land or on adjoining land”*.

- 4.5.17 Pending confirmation of the final location of a temporary compound, National Grid will implement the works under deemed planning permission or, if required, seek a separate planning consent from BDC as the LPA.
- 4.5.18 Standard construction compound lighting and palisade security fences for construction compounds will be used.

Working hours

- 4.5.19 Typical working hours would likely to be 7am to 6pm Monday to Friday, except during system outages, and 8am to 1pm on Saturday. System outages are assumed to be permitted only from the end of March to end of October (standard summer working). During outages, some weekend working may be required.
- 4.5.20 Any works proposed outside the hours specified above are to be agreed with Bassetlaw District Council prior to any of the proposed works being carried out.

Site access and routes

- 4.5.21 Site access will utilise an existing access point in the north west of the Site, off Fledborough Road, and an existing road in the northern part of the Site. A new access will be constructed from this existing road. From this new access, a new access road will travel southwards to the north west corner of the substation where there will be a double security gate.
- 4.5.22 From the Site entrance, the access road will split off in two directions to create a loop around the entirety of the substation. In the south eastern corner of the Site, the access road splits into an additional road which loops around the southern extent of the existing substation before going north to join an existing road to the east of the existing substation.
- 4.5.23 The access route overlaps underground cables in the south eastern corner of the Site.
- 4.5.24 The Site access and routes are shown on the Proposed Site Layout (Ref. PDD-203717-LAY-342).

Existing Substation Removal works

- 4.5.25 Once the temporary connection to the western part of the existing 400kV substation is no longer required, following installation of permanent infrastructure and the transfer of all circuits to the new 400kV substation, the temporary cables and the western part of the existing 400kV substation will be removed as part of this Scheme.
- 4.5.26 All redundant equipment within the western part of the existing 275kV substation will be removed. The perimeter fence is to be retained for security purposes. Gravel or other suitable low maintenance substrate is to be installed across this part of the Site. Any known contamination or potential sources of contamination are to be removed / remediated including assets below ground (such as oil-filled cables).
- 4.5.27 Removal works are to be consented under Town and Country Planning (General Permitted Development) Order 2015 Schedule 2, Part 15 Class B(f).
- 4.5.28 The proposed layout of the Site, including removal and temporary works, is shown in Appendix C of the EAR, High Marnham New 400kV Substation Proposed Site Layout.

4.6 Operational Phase

Access

- 4.6.1 During operation, access to the Site will be via the existing access point off Fledborough Road, to the west of the Site.
- 4.6.2 As noted above, there are two DMMO applications which interact with the application site. The landscape Mitigation Plan submitted with this application includes provision for a permanent diversion to the south and west of the proposed substation.

Operations

- 4.6.3 Throughout the operational phase, the substation will not be regularly manned. Welfare and amenity facilities will be located within the AIS building for use by maintenance staff. When maintenance of the substation is undertaken, the number of staff on site will increase to approximately 10 for the duration of the works.
- 4.6.4 Day-to-day operational noise associated with staff on site will be minimal and contained within normal daytime working hours.
- 4.6.5 Substations are not generally lit or permanently illuminated, other than sensor-activated security lighting for when an alarm is activated. In this scenario, a light will be activated for approximately three minutes. This will occur up to seven times a week throughout operation, with one or two occurrences at night per week. Floodlights, 4-6m in height, will be installed but only used if access is required during the hours of darkness.
- 4.6.6 Security lighting will also be used when an intruder alarm is activated at night; in this scenario, a light will be activated for approximately three minutes whilst the alarm is remotely assessed by National Grid.

4.7 Environmental mitigation and Biodiversity Net Gain (BNG)

- 4.7.1 The landscaping on the Scheme has been designed to provide environmental mitigation and Biodiversity Net Gain (BNG).
- 4.7.2 The landscaping design comprises:
- Proposed species rich hedgerow with tree planting along the western boundary to reduce visibility from residential properties on the western side of the Site boundary;
 - Proposed hedgerow associated with a bank to provide visual screening to residential properties along Hollowgate Lane, as well as park homes at Sparrow Lane Park. Opportunity to add bunding during the detailed design phase.
 - 31m of proposed species rich hedgerow with tree planting associated with a bank to optimise BNG;
 - Proposed species rich hedgerow associated with a ditch using the modified topography;
 - Existing hedgerow re-installed with native hedgerows after completion of drainage works;

- Proposed woodland planting with native species to supplement screening along the southern boundary and to ensure integration with the existing Local Character Area;
- Proposed native hedgerows with shallow roots over the drainage pipeline to the south of the substation;
- Modified grassland is to be planted within the northern areas of the Site; and
- Proposed species rich grassland to be planted within the southern areas of the Site.

5. Design and Access Statement

5.1.1 This section of the PDAS provides an overview of how, taking into account National Grid's statutory duties, the policy framework, engagement with stakeholders and environmental assessment, the design of the Scheme has evolved. It focuses on the following principal elements of the proposal's evolution:

- design objectives
- technology options
- use
- scale and amount
- appearance
- environmental mitigation and enhancement measures
- Access; and
- compliance with the Horlock Rules.

5.2 Design Objectives

5.2.1 Due to the nature of the Scheme and the need to ensure operational stability, security and safety, there is limited flexibility in terms of design, architecture and the selection of materials relative to other types of development. This is expressly recognised in NPS EN-5 (DESNZ, 2024a) which states at paragraphs 2.4.3 to 2.4.4 that:

"...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."

'While the above principles should govern the design of an electricity networks infrastructure application to the fullest possible extent – including in its avoidance and/or mitigation of potential adverse impacts (particularly those detailed in Sections 2.9 below) – the functional performance of the infrastructure in respect of security of supply and public and occupational safety must not thereby be threatened.'

5.2.2 In this regard, the AIS substations and other buildings associated with the Scheme have been designed in accordance with National Grid Technical Specification.

5.2.3 Notwithstanding the limited flexibility associated with the design of substations, the Scheme has had regard to the design principles established in the Development Plan, national planning policy and the Horlock Rules. Opportunities to positively shape the proposal, informed by the site's context and constraints as well as the views of stakeholders, have informed the design process. In this context, the following key design objectives have underpinned, and guided the evolution of, the design of the Scheme:

- To avoid internationally and nationally designated areas of the highest amenity, cultural, heritage or scientific value.
- To deliver, where possible, environmental enhancement including a net gain in biodiversity.
- To conserve, and where possible enhance, local features of historic and landscape importance.
- To minimise the land required for the Scheme.
- To ensure that there is no unacceptable impact on neighbouring amenity.
- To propose lighting appropriate to the application site's context.
- To ensure that the Scheme minimises as far as is practicable greenhouse gas (GHG) emissions and is climate change resilient.
- To locate the new substations in close proximity to the existing 400kV overhead line network to minimise the need for additional, ancillary infrastructure.
- To maintain suitable separation distances between built development and sensitive ecological features (trees/woodlands, ancient woodlands, ditches, hedgerows) where possible.
- To provide a safe and suitable access to the proposed substations.

5.3 Technology Options

5.3.1 There are two technology options available when designing a substation. These are:

- Air Insulated Switchgear (AIS); and
- Gas Insulated Switchgear (GIS).

5.3.2 Both AIS and GIS substations contain the same components as each other; the main difference lies with the means of insulation. An AIS system largely utilises air as an insulator between electrical conductors and earth whilst GIS substations are self-contained systems that largely use a gas with better insulating properties than air as an insulator. AIS substations are the most common type of substation, accounting for more than 70 per cent of substations all over the world.

5.3.3 The following section of the PDAS describes the design of the Scheme in terms of use, layout, scale and amount, appearance, landscaping and ecological enhancement and access.

5.4 Scheme Design

Use

5.4.1 The proposed use of the application site is for the construction and operation of the new 400kV substation. The substation is to upgrade the existing transmission network to maintain system compliance and prevent overloading circuits as they transport the energy that is generated.

- 5.4.2 The Scheme will support the UK's net zero target by adding capacity to accommodate increasing power flows of energy generated mostly from offshore wind, in Scotland and North East England, which is expected to double within the next ten years, south to areas of demand in the Midlands and beyond. By reinforcing the network in the centre of the country, the Scheme would facilitate the connection of more renewable and low-carbon electricity, to allow clean green energy to be carried around the network.

Layout

- 5.4.3 The proposed works in its entirety comprises:
- AIS 400kV substation located within a compound measuring approximately 690m x 200m. This includes protection and control equipment, substation plant and new substation control infrastructure. This will include:
 - 400/275kV SGT;
 - 400/33kV SGT;
 - protection and control equipment;
 - substation plant;
 - substation control infrastructure;
 - 10 overhead line gantries; and
 - 20 permanent buildings, ranging from 4m to 7.5m in height, 6.5m to 33.5m long, and 2.5m to 15m wide.
- 5.4.4 Substation plant for controlling, directing, switching and transforming high voltage electricity. This plant includes:
- AIS switchgear;
 - Air Insulated Busbar (AIB) connecting the AIS switchgear to other plant;
 - Capacitor Voltage Transformers (CVT);
 - CSEs;
 - earth switches;
 - surge arresters;
 - diesel generator for emergency backup power;
 - protection and control equipment;
- 5.4.5 The development of a new substation will enable National Grid to uprate the existing 275kV overhead lines to operate at 400kV between Chesterfield (North East Derbyshire) and High Marnham (in Bassetlaw) and Brinsworth (in Rotherham). This will allow additional power to flow through the grid, transferring green energy from where it is generated to where it is needed.
- 5.4.6 One attenuation pond will be located to the south of the proposed substation. It will have a storage volume of 10,000m³, a basin invert level of 6.900m AOD, a maximum water depth of 1.5m, and a basin earthwork side slope of 1:3. An outlet basin will be located along the eastern extent of the attenuation pond and extend eastwards to join an existing surface water carrier drain. The carrier drain will then continue eastwards

to a new outfall (outfall details to be confirmed with the Lead Local Flood Authority). An existing ditch within the southern part of the proposed substation will be closed, subject to the relevant closure processes. Surface water will be diverted to the proposed attenuation pond. The Scheme boundary extends to the east beyond the existing substation to accommodate an existing pumping main service at the existing substation which connects to an outfall in an open ditch 700m to the east of the proposed substation. As part of drainage works for the Scheme, the works will include a new large diameter buried pipe to manage/attenuate surface water captured by the cut-off ditch to the south of the new substation. The buried pipe will have a diameter of 450mm. The extent of these works will be informed by the Flood Risk Assessment. Oily water from the SGT bunds will be filtered through an oil interceptor prior to being connected into the clean surface water drainage system.

Scale and amount

5.4.7 The total application site area is 36 ha.

5.4.8 There are twenty permanent buildings proposed as part of the Scheme:

- A combined control and amenities building in the south west of the Site. It will be 33.5m length by 15m width with a height of 4.5m. It will be a brick cladding building with a concrete roof.
- Sixteen portable relay rooms to accommodate electrical protection equipment. These will be located throughout the substation in proximity to the bays in the centre of the Site. These buildings will be 7.5m length by 4m width with a height of 4m.
- A 33kV switchgear building will be located to the south east of the substation. The building will be 12.9m length by 7m width with a height of 7.9m.
- A small workshop building and a small storage unit both located in the south west of the Site. Both buildings will be 6.5m length by 2.5m width with a height of 4.5m.

5.4.9 The substation plant and equipment will include:

- One 400/33kV SGT. The SGTs will be 12m length by 7m width with heights of 10m. The SGT will be surrounded by a perimeter of reinforced concrete bunds, supported on a base slab and a central plinth for supporting the SGT. The bunds act as a secondary oil containment measure for the insulation oil in the SGT.
- There will be a noise enclosure around SGT2 to reduce operational noise. Other equipment includes protection and control equipment, switching devices, cooler banks for each SGT, a diesel generator for emergency backup power and a water tank for emergency fire water supply.
- Within the substation, the majority of electrical equipment will be mounted on steel posts fixed to concrete foundations. The highest parts of the electrical equipment will be typically up to 11.5m above ground level.
- The overhead line gantries, of which 10 are proposed, are taller steel line landing gantry structures within the substation, which support the downloads from the adjacent 400kV/275kV overhead line pylons. The gantries will be approximately 12.5m high. One of the overhead line gantries is to facilitate a temporary overhead line connection and will be re-purposed as a customer/generator connection bay following construction.

- The Scheme involves the construction of 16 bays which will be located in the centre of the Site, which is located to the west of the existing substation. The bays will be approximately 17m x 19m. The approximate height is 11.5m.

Appearance

- 5.4.10 The Scheme comprises a 400kV AIS substation forming part of the national electricity transmission network. The substation platform would be a broadly level, engineered surface designed to accommodate the high-voltage equipment required for operation at 400kV. The layout would include a series of galvanised steel lattice gantries, busbars, disconnectors, circuit breakers and support structures arranged in an open-air configuration. These components would typically range in height from around 5m to 11.5m.
- 5.4.11 The preferred design solution for the High Marnham Substation was AIS, as it was considered that despite a larger footprint, it would fit better into the surrounding landscape and would be easier to visually screen compared to GIS technology, as there would be less massing to screen than if a building was used. It has reduced visual effect by virtue of generally lower height equipment.
- 5.4.12 The control and protection building would be a single-storey, steel-framed structure finished with profiled metal cladding or textured composite panels in subdued, recessive colours to help the building blend into the surrounding environment. The roof would have a shallow pitch and be finished in a matching tone. Smaller ancillary buildings, such as welfare or storage units, would be designed to complement the main control building in both form and materials.
- 5.4.13 Given the air-insulated design, the 400kV equipment requires greater electrical clearances than gas-insulated systems, resulting in a spacious, grid-like layout with open visual character. The compound would be enclosed by steel palisade or mesh security fencing up to 2.4m high, typically finished in a neutral colour. External lighting would be limited to essential operational areas and designed to minimise light spill.
- 5.4.14 There is no scope to vary the colour and finish of the electrical equipment needed. Typically, busbars and clamps are manufactured from aluminium (dull silver grey). Insulators are either porcelain (usually reddish brown/grey) or silicone (usually grey) and the manufacturers of equipment vary in their preference. Steel support structures within the compound would be left in a galvanised finish (dull silver grey) to avoid maintenance requirements in close proximity to 'live' equipment.
- 5.4.15 Regarding the materials/finishes used for the fencing, all fencing at the substations will have a standardised galvanised finish. The fencing cannot be painted due to future maintenance issues, see information as detailed above, so there is no scope for variation.
- 5.4.16 The vehicle gates to the substation compound will match the heights and specification of the boundary treatments.
- 5.4.17 To reduce the visual impact of the substation, the design incorporates bunded earthworks, perimeter planting, and localised screen mounding using native tree and shrub species appropriate to the local landscape character. The combination of recessive colours, low building heights, and landscape treatment would help integrate the substation into its surroundings and soften views from nearby receptors.

- 5.4.18 Exterior and interior lighting would be provided at the site to allow for safe movement and the operation (and maintenance) of equipment. Lighting columns would typically be 12.5 m tall. All lighting would be designed in accordance with the appropriate design standards. The position of lighting columns would be subject to detailed design and would be determined by safety and operational requirements. Lighting would be directional and is intended to support safe movement of pedestrians and vehicles around the site (and minimise light spill to the local environment). The lighting would therefore not be on by default, and only whilst there are activities happening at the site as dictated by operational requirements. Additional task lighting may be required when undertaking specific maintenance activities. Details of the lighting lux levels are provided on Drawings PDD-203717-LAY-331 and PDD-203717-LAY-332 (External Lighting Plan Sheet 1 and 2).

Landscaping and enhancement

- 5.4.19 The planning application is accompanied by an illustrative Landscape Mitigation Plan detailing the planting which is proposed to reduce the landscape and visual impacts of the Scheme. The measures proposed include the following:
- Excavation to be undertaken with care to minimise potential impacts upon existing vegetation and maintain existing screening;
 - Incursion into Root Protection Areas (RPAs) and tree loss will be minimised through the siting of main infrastructure components away from RPAs; and planting proposals include:
 - new areas of species-rich grassland with taller perennial wildflower species included in species mix to contribute to visual mitigation and BNG;
 - new hedgerow with intermittent tree planting along the southern and western boundaries of the Scheme to help reduce the impact upon the visual amenity of residential receptors along Hollowgate Lane and PRoWs 111/4/1, 111/8/1, 111/9/1 and 111/7/2; and
 - new woodland planting blocks to help reduce the impact upon receptors to the south.
- 5.4.20 The proposed landscaping mitigation measures will contribute towards the Scheme achieving a +10 per cent Biodiversity Net Gain. The BNG Report submitted with the planning application has calculated the biodiversity value of the habitat that will be lost as a result of the Scheme and shows that the habitat creation and enhancement has achieved mandatory 10% biodiversity net gain. The BNG Report confirms if the habitat creation recommendations are followed, this could deliver an on-Site net gain of 18.70 habitat biodiversity units (+22.37%), 7.26 hedgerow units (+55.49%) and 0.06 watercourse units (+19.87%) meaning the overall Scheme will result in a net gain in biodiversity on-Site.

Access

Construction access

- 5.4.21 Site access during construction will utilise an existing access point in the north west of the Site, off Fledborough Road, and an existing road in the northern part of the Site. A new access will be constructed from this existing road. From this new access,

a new access road will travel southwards to the north west corner of the substation where there will be a double security gate.

- 5.4.22 From the Site entrance, the access road will split off in two directions to create a loop around the entirety of the substation. In the south eastern corner of the Site, the access road splits into an additional road which loops around the southern extent of the existing substation before going north to join an existing road to the east of the existing substation.
- 5.4.23 The access route overlaps underground cables in the south eastern corner of the Site.

Operational access

- 5.4.24 During operation, access to the Site will be via the existing access point off Fledborough Road, to the west of the Site. This access will be used when maintenance is required. It is anticipated that maintenance will be carried out by 10 staff approximately 10 times a year.
- 5.4.25 For the external access roads, they would be constructed using an impermeable surface such as asphalt or concrete respectively. The requirement for substation surfacing is that it should need little to no maintenance (for up to 40 years), be load bearing and protected from spillages (fuel/oil). Given these requirements, it precludes the use of unbound material so there is no scope for variation in the surfacing of the access roads.
- 5.4.26 The Definitive Map Modification Order (DMMO) application route, currently crossing the south west corner of the Site would be permanently diverted to the south and west of the proposed substation.

5.5 Compliance with the Horlock Rules

- 5.5.1 As set out in Section 2.6, the Horlock Rules provide guidelines for the siting and design of new substations. Paragraph 2.9.18 of NPS EN-5 (DESNZ, 2024a) states that the Horlock Rules “*should be embodied in applicants’ proposals for the infrastructure associated with new overhead lines’*.” Accordingly, the Horlock Rules have been an important consideration in the design and siting of the proposed substations. A summary of how the design and siting of the proposed substations has met the Horlock Rules is presented in Table 5.1.

Table 5.1 Accordance with the Horlock Rules

Horlock Rules	How the Scheme is in accordance with the Horlock Rules
Rule 1: In the development of system options including new substations, consideration must be given to environmental issues from the earliest stage to balance the technical benefits and capital cost requirements, against the	Environmental issues were a key factor in the selection process for the proposed substation site. National Grid considered environmental constraints in respect of (inter alia) biodiversity, landscape and visual, cultural heritage, flood risk and air quality. Environmental considerations have also influenced the selection of the preferred access option, technological solution and mitigation and enhancement measures, as detailed in the sections above.

Horlock Rules	How the Scheme is in accordance with the Horlock Rules
consequential environmental effects, in order to avoid as far as possible adverse effects.	Overall, the Scheme is in accordance with Rule 1.
<p>Rule 2</p> <p>The siting of substations, sealing end compounds and line entries should seek to avoid areas of the highest amenity, cultural or scientific value by the overall planning of the system connections.</p>	<p>The Site is not within, nor does it contain, any international or national environmental designations. The environmental assessments submitted with the planning application also confirm that the Scheme will not have any significant adverse effects on internationally or nationally designated sites or assets, including in respect of ecology, landscape and the historic environment.</p> <p>Overall, the Scheme is in accordance with Rule 2.</p>
<p>Rule 3</p> <p>Areas of local amenity value, important existing habitats and landscape features should be protected as far as reasonably practicable.</p>	<p>Marnham Railway Yard candidate Local Wildlife Site (cLWS) is located approximately 50m north of the Site. Fledborough to Harby Dismantled Railway LWS is also located approximately 50m north of the Site. 11 other LWSs are located within 2km. No internationally designated sites are within 10km.</p> <p>The ecological assessment submitted with the planning application highlights that the application site predominantly comprises unmanaged grassland, scrub and woodland. Boundary hedgerows intersect and surround most of the site. A ditch is located within the southern part of the Site.</p> <p>The loss of habitats will be offset and the BNG Report has calculated that the Scheme will deliver in excess of 10 per cent net gain in biodiversity.</p> <p>Overall, the Scheme is in accordance with Rule 3.</p>
<p>Rule 4</p> <p>Siting of substations, extensions and associated proposals should take advantage of the screening provided by landform and existing features and the potential use of site layout and levels.</p>	<p>The design of the Scheme has developed iteratively to ensure that potential impacts are identified and wherever possible avoided or minimised.</p> <p>Existing vegetation along the former railway embankment to the north of the Site provides substantial screening. Excavation will be undertaken with care to minimise potential impacts on existing screening.</p> <p>Additional planting will be implemented to reduce visual impact including new hedgerow with intermittent tree planting to the south and west and new woodland planting blocks to the south.</p> <p>The Landscape and Visual Impact Assessment has concluded that the visual impact for residential and recreational receptors will not be significant.</p> <p>Overall, the Scheme is in accordance with Rule 4.</p>
<p>Rule 5</p> <p>Proposals should keep visual, noise and other environmental effects to a minimum.</p>	<p>There are a number of residential receptors within 500m of the Site boundary, the nearest being 400m to the south in High Marnham. Fledborough House Farm is 500m to the north. Most residential receptors in the area are separated from the Site by agricultural parcels and vegetation.</p>

Horlock Rules	How the Scheme is in accordance with the Horlock Rules
	<p>Careful consideration was afforded to the proximity of sensitive receptors, including residential dwellings in order to minimise impacts on amenity.</p> <p>As noted above in respect of Rules 3 and 4, the Scheme will not result in significant adverse effects on visual amenity.</p> <p>Air quality and noise impacts arising from construction activities associated with the Scheme will be managed through the implementation of a CEMP.</p> <p>The substations will be within a building, minimising potential noise emissions during operation. Additionally, the design includes a noise enclosure which would be used around SGT2 to reduce operational noise outside the site. On this basis, the Noise Impact Assessment submitted with the planning application confirms that noise impacts will not be significant. The operation of the substations will not result in significant emissions to air.</p> <p>Overall, the Scheme is in accordance with Rule 5.</p> <p>The Scheme will result in the loss of agricultural land. The Site comprises a mix of Grade 2, 3a and 3b agricultural land. Approximately half the land across the Site is Grade 2 and 3a BMV land. An Outline Soil Management Plan (OSMP) has been prepared alongside the EAR submitted as part of the planning application.</p> <p>A detailed Soil Management Plan (SMP) will be prepared post planning consent and implemented during construction and operation to protect agricultural land quality and soil resources, ensuring that good practice measures are implemented for soil stripping, stockpiling and reinstatement.</p> <p>Nottinghamshire Minerals Local Plan 2019-2036 indicates that the Site lies on the border of the minerals safeguarding area (MSA) relating to alluvial sand and gravel. The Site is likely not underlain by sand and gravel deposits, therefore it is not considered likely that a significant area of potential minerals would be sterilised.</p> <p>Overall, the Scheme is in accordance with Rule 6.</p>
<p>Rule 6</p> <p>The land use effects of proposals should be considered when planning the siting of substations or extensions.</p>	
<p>Rule 7</p> <p>In the design of new substations or line entries, early consideration should be given to the options available for terminal towers, equipment, buildings and ancillary development appropriate to individual locations.</p>	<p>The requirement for overhead line works has been kept to a minimum. Indeed, this was a key consideration in determining the preferred site for the proposed substations. Whilst the overhead line works do not form part of the planning application for the Scheme, they have been designed alongside the proposals for the new substation and their associated environmental effects have been considered in the environmental assessments submitted with the planning application. As described above and illustrated on drawing PDD-203717-LAY-330, the modifications of the existing wirescape, represents a</p>

Horlock Rules	How the Scheme is in accordance with the Horlock Rules
	<p>significant rationalisation of the existing overhead line network.</p> <p>Overall, the Scheme is in accordance with Rule 7.</p>
<p>Rule 8</p> <p>Space should be used effectively to limit the area required for development, consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation.</p>	<p>The substations are being constructed at the maximum allowable gradient, helping to balance cut and fill and supporting natural drainage flow.</p> <p>As set out in respect of Rule 6, the Scheme will not result in significant effects on other land uses.</p> <p>No PRowWs will need to be diverted or closed during the construction or operation of the Scheme.</p> <p>Overall, the Scheme is in accordance with Rule 8.</p>
<p>Rule 9</p> <p>Design of access roads, perimeter fencing, earth shaping, planting and ancillary development should form an integral part of the site layout and design to fit in with the surroundings.</p>	<p>The Scheme includes retained perimeter fence, utilisation of the existing access point, and planting and ancillary development as appropriate.</p> <p>The design of these Scheme components has been afforded careful consideration so as to minimise adverse environmental impacts.</p> <p>Overall, the Scheme is in accordance with Rule 9.</p>
<p>Rule 10</p> <p>In open landscape especially, high voltage line entries should be kept, as far as possible, visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance.</p>	<p>The Landscape and Visual Impact Assessment submitted as part of this planning application describes the site as situated in a generally flat and open rural landscape, with low hedgerows and containing occasional trees. Views towards the Site from most directions are largely unobstructed given the flat nature of the topography.</p> <p>The landscape appraisal submitted as part of the Landscape and Visual Impact Assessment notes that the Site and its immediate environs are largely defined by the presence of the existing substation, railway embankment and associated electrical transmission infrastructure. The former High Marnham Power Station is cited as a key characteristic of the landscape here. However, the predominantly rural nature of the wider Landscape Character Type (LCT) is such that it is considered to have a medium sensitivity to development of this nature.</p> <p>Taking into consideration the mitigation measures proposed and the presence of the existing substation immediately adjacent, it is considered that the landscape is able to absorb localised changes without the overall character of the surrounding LCT being significantly altered. This appraisal therefore concludes that there is likely to be a minor to negligible adverse level of effect upon this LCT once the Scheme becomes operational.</p>

Horlock Rules	How the Scheme is in accordance with the Horlock Rules
<p>Rule 11</p> <p>The inter-relationship between towers and substation structures and background and foreground features should be studied to reduce the prominence of structures from main viewpoints. Where practicable, the exposure of terminal towers on prominent ridges should be minimised by siting towers against a background of trees rather than open skylines.</p>	<p>The Landscape and Visual Impact Assessment notes that whilst the Scheme will materially alter the landscape use of much of the Site, from rural to industrial, the close proximity of the existing substation and the presence of existing electrical transmission infrastructure reduces residual effects considerably, such that the level of effect is no greater than minor adverse.</p> <p>Overall, the Scheme is in accordance with Rule 10.</p> <p>The application site is not located on a prominent ridge. The ancillary overhead line works associated with the wider Scheme have been kept to a minimum and there will be no net increase in the number of permanent pylons.</p> <p>Overall, the Scheme is in accordance with Rule 11.</p>

6. Planning Policy and Guidance

6.1 Introduction

- 6.1.1 This section of the statement reviews the relevant national and local planning policies and guidance that are material to the determination of this application.

6.2 Overview

- 6.2.1 Section 70(2) of the TCPA 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 set out that planning applications must be determined in accordance with the Development Plan, unless material considerations indicate otherwise.
- 6.2.2 For the purposes of the Acts, the statutory Development Plan for the area consists of:
- Bassetlaw Local Plan 2020-2038 (Adopted 2024)
 - Bassetlaw Local Plan Policies Map
 - Nottinghamshire Minerals Local Plan (Adopted 2021)
 - Nottinghamshire Waste Local Plan (Adopted 2025)
- 6.2.3 The following documents are material considerations in the determination of the application for the Scheme:
- Draft Biodiversity Net Gain Supplementary Planning Document (SPD) (July 2025)
 - Draft Design Code Guide SPD (June 2025)
 - Draft Planning Obligations SPD (July 2025)
 - National Planning Policy Framework (February 2025)
 - National Planning Practice Guidance (PPG) (first published March 2014)
 - Overarching National Policy Statement for Energy (EN-1) (January 2024)
 - National Policy Statement for Electricity Networks Infrastructure (EN-5) (January 2024)
- 6.2.4 In order to be approved for planning permission, the primary test is that the Scheme complies with the Bassetlaw Local Plan (adopted 2024) Nottinghamshire Minerals Local Plan (adopted 2021) and Nottinghamshire Waste Local Plan (adopted 2025), Where there are no up-to-date policies, reference should be made to the NPPF (MHCLG, 2025) .
- 6.2.5 As stated by Paragraph 11 of the NPPF, decision taking means ‘approving development proposals that accord with an up-to-date development plan’. Continuing, the NPPF gives context in that, ‘where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date’, permission will be granted unless the NPPF ‘provides a strong reason for refusing the development proposed’ or the ‘adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole’. Development Plan

Bassetlaw Local Plan 2020-2038

- 6.2.6 The Bassetlaw Local Plan (BLP) was adopted by BDC on 29 May 2024.
- 6.2.7 The BLP sets out BDC's development strategy, planning policies and proposals, including site allocations, to guide land use and planning decisions in the district up to 2038. It forms part of the Development Plan for Bassetlaw, alongside the Bassetlaw Local Plan Policies Map (BLPPM) and Nottinghamshire Minerals and Waste Local Plans, and replaces the Bassetlaw Core Strategy and Development Management Policies DPD (2011).
- 6.2.8 Nottinghamshire County Council holds the Minerals and Waste Local Plans for the district.
- 6.2.9 In the BLPPM, the application site is located outside of defined settlement boundaries. It is therefore located in open countryside. The application site is not subject to any designations within the BLPPM.
- 6.2.10 Within the BLP's Visions and Objectives for where Bassetlaw District will be in 2038, emphasis is placed on lowering locally produced greenhouse gas emissions through a secure, reliable, affordable net zero and low carbon energy mix. The vision sets out that to achieve this, significant new renewable energy infrastructure will be needed to make meaningful contributions across the district, in part through maximising opportunities for net zero energy generation at the former power station sites, whilst the increasing provision of localised renewable and low carbon technologies will better enable residents and businesses to transition to a net zero carbon district by 2050.
- 6.2.11 Strategic Objective 11 of the BLP states that BDC places emphasis on transitioning to a net zero carbon district. The Strategic Objective notes that increasing resilience to climate change will require maximising opportunities to generate and use a vibrant mix of renewable energy, zero carbon and other alternative technologies.
- 6.2.12 The BLP policies of most relevance to the Scheme are summarised in Appendix A.

Nottinghamshire Minerals Local Plan

- 6.2.13 The Nottinghamshire Minerals Local Plan was adopted on 25 March 2021. This replaces saved policies from the previous Minerals Local Plan.
- 6.2.14 The Minerals Local Plan covers the period to 2036 and sets out minerals requirements for the county, site specific allocations to meet identified demand and a range of planning policies against which future minerals development will be assessed.
- 6.2.15 The Minerals Local Plan policies which relate to the Scheme are summarised in Appendix B.

Nottinghamshire Waste Local Plan

- 6.2.16 The new Nottinghamshire Waste Local Plan was adopted in September 2025. It replaces saved policies from the 2002 Waste Local Plan and the 2013 Waste Core Strategy.
- 6.2.17 The new Waste Local Plan provides the future planning strategy for waste management in Nottinghamshire and Nottingham until 2038 and aims to provide sufficient capacity to meet future needs.

- 6.2.18 Those relevant planning policies in the Nottinghamshire Waste Local Plan are summarised in Appendix C.

6.3 Material Considerations

- 6.3.1 The following documents are material considerations in the determination of the application for the Scheme:
- Draft Biodiversity Net Gain Supplementary Planning Document (SPD) (July 2025)
 - Draft Design Code Guide SPD (June 2025)
 - Draft Planning Obligations SPD (July 2025)
 - National Planning Policy Framework (February 2025)
 - National Planning Practice Guidance (PPG) (first published March 2014)
 - Overarching National Policy Statement for Energy (EN-1) (January 2024)
 - National Policy Statement for Electricity Networks Infrastructure (EN-5) (January 2024)
- 6.3.2 Material considerations relevant to the Development Plan are summarised in Appendix D. The remaining national material considerations are outlined below.

National Planning Policy Framework (NPPF)

- 6.3.3 The National Planning Policy Framework (NPPF), first published in 2012 and most recently revised in December 2024 (a further technical amendment was made in February 2025), sets out the government's planning policies for England and how these are expected to be applied. The NPPF is a material consideration in determining planning applications.
- 6.3.4 At the heart of the NPPF is a presumption in favour of sustainable development through plan-making and decision-taking. Paragraph 11 sets out that in terms of decision-taking, that means:
- 'c) approving development proposals that accord with an up-to-date development plan without delay; or*
- d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*
- i) the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
- ii) any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.'*
- 6.3.5 Paragraph 116 of the NPPF 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, following mitigation, would be severe, taking into account all reasonable future scenarios'*.

- 6.3.6 Paragraph 135, as summarised, states that planning policies and decisions should ensure that developments are designed to function well and enhance the overall quality of their area throughout their lifespan. Developments should be visually attractive through high-quality architecture, thoughtful layouts, and effective landscaping. They must respect local character and history, including the surrounding built environment and landscape, while allowing for appropriate innovation and change. A strong sense of place should be established or maintained by carefully arranging streets, spaces, building types, and materials to create distinctive, welcoming environments for living, working, and visiting. Sites should be optimised to support an appropriate mix and amount of development, including green and public spaces, and to enhance local facilities and transport links. Finally, developments should create safe, inclusive, and accessible places that promote health, well-being, and a high standard of amenity for all users, ensuring crime and the fear of crime do not undermine quality of life or community resilience.
- 6.3.7 Paragraph 139 states that development that is poorly designed should be refused, particularly if, after considering relevant local design guidance and supplementary documents such as design codes, it does not align with local design policies or government guidance. In contrast, significant weight should be given to developments that reflect these policies and guidance, as well as to outstanding or innovative designs that promote high sustainability or help elevate design standards in the area, provided they are compatible with the surrounding form and layout.
- 6.3.8 Paragraph 161 gives support to transitioning to net zero by 2050. To achieve this the planning system should help 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.
- 6.3.9 Paragraph 165 states that in order to help increase the use and supply of renewable and low carbon energy and heat, plans should in part consider areas for renewable and low carbon sources and supporting infrastructure. Further, opportunities should be identified for development to draw energy supply from renewable or low carbon sources.
- 6.3.10 Paragraph 168 states (in part) that local planning authorities when determining planning applications for renewable or low carbon energy developments and their associated infrastructure should:
- ‘a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal’s contribution to a net zero future’ 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’.Paragraph 170 of the NPPF states that development should be avoided when in areas at risk of flooding by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.*

- 6.3.11 Paragraph 172 states plans should take into account all sources of flood risk and the current and future impacts of climate change by, inter alia, applying a sequential, risk-based approach to the location of development, so as to avoid, where possible, flood risk to people and property.
- 6.3.12 Paragraph 173 states that *‘A sequential risk-based approach should also be taken to individual applications in areas known to be at risk now or in future from any form of flooding’*.
- 6.3.13 *Paragraph 175 gives further context, stating that ‘The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk)’.*
- 6.3.14 Paragraph 177 provide further detail, stating that *‘Having applied the sequential test, if it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification’*.
- 6.3.15 Paragraph 181 states that *‘When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:*
- a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;*
 - b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
 - c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
 - d) any residual risk can be safely managed; and*
 - e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.’*

6.3.16 Paragraph 187, as summarised, states that planning policies and decisions should enhance the natural and local environment by protecting and improving valued landscapes, sites of biodiversity or geological importance, and soils, in line with their statutory or identified status. They should recognise the intrinsic character and beauty of the countryside, the benefits of natural capital and ecosystem services, and the value of high-quality agricultural land, trees and woodland. The character of undeveloped coastlines should be maintained, with improved public access where suitable. Development should minimise impacts on biodiversity and deliver net gains, including through resilient ecological networks and features supporting priority species. It should also prevent and mitigate risks from pollution, land instability, and

other hazards, aiming to improve local environmental conditions wherever possible. Additionally, the remediation and mitigation of degraded, contaminated, or unstable land should be undertaken when appropriate.

- 6.3.17 Paragraph 197 of the NPPF states that *'Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner'*.
- 6.3.18 Paragraph 198, as summarised, states that planning policies and decisions should ensure that new development is suitable for its location by considering the likely effects, including cumulative impacts, of pollution on health, living conditions, and the natural environment, as well as the sensitivity of the site and surrounding area. This includes minimising and mitigating adverse noise impacts, protecting tranquil areas valued for their peace and recreation, and limiting light pollution to safeguard local amenity, dark landscapes, and nature conservation.
- 6.3.19 Paragraph 207 of the NPPF, requires applicants to describe the significance of any heritage assets (including their setting and archaeological potential) affected by development, providing a level of detail which is proportionate to the assets' importance.
- 6.3.20 Paragraph 212 states that the conservation of designated heritage assets should be prioritised, with greater importance given to more significant assets, regardless of the degree of potential harm. Paragraph 213 states that clear and convincing justification should be provided for development which would lead to any harm to a designated heritage asset's significance.
- 6.3.21 Paragraph 215, states that, *'where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'*.
- 6.3.22 Paragraph 216 continues, noting that, *'the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'*.
- 6.3.23 Paragraph 220 sets out the baseline for consideration of development impacting conservation areas, stating that, *'not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 214 or less than substantial harm under paragraph 215, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole'*.
- 6.3.24 Paragraph 221 states that *'Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies'*.
- 6.3.25 Paragraph 225 states that the *'Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working'*.

Planning Practice Guidance (PPG)

- 6.3.26 Planning Practice Guidance (PPG), first published in 2014, provides guidance on planning policy identified in the NPPF.

Air Quality

- 6.3.27 The PPG for Air Quality (MHCLG, 2019a) was first published on 6 March 2019 and was last updated on 1 November 2019.
- 6.3.28 The PPG notes that all development plans can influence air quality in a number of ways, including what development is proposed and where, and the provision made for sustainable transport. The guidance places value in considering air quality issues at the plan-making stage as this can ensure a strategic approach to air quality and help secure net improvements in overall air quality where possible.
- 6.3.29 PPG notes that assessments need to be proportionate to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions). The scope and content of supporting information is best discussed and agreed between the LPA and applicant before it is commissioned.
- 6.3.30 The PPG states that mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. Further, it is important that LPAs work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and that unacceptable risks are prevented.

Biodiversity Net Gain

- 6.3.31 The PPG for Biodiversity Net Gain was first published on 14 February 2024 and was last updated on 1 May 2024.
- 6.3.32 Under the statutory framework introduced by Schedule 7a of TCPA 1990 (inserted by Schedule 14 of the Environment Act 2021), this objective is for development to deliver at least a 10 per cent% increase in biodiversity value relative to the pre-development biodiversity value of the on-site habitat. This increase can be achieved through on-site biodiversity gains, registered off-site biodiversity gains or statutory biodiversity credits.

Climate Change

- 6.3.33 The PPG for Climate Change (MHCLG, 2019b) was first published on 12 June 2014 and was last updated on 15 March 2019.
- 6.3.34 The guidelines reinforce the Climate Change Act 2008 legally binding target to reduce the UK's greenhouse gas emissions by at least 80 per cent% in 2050 from 1990 levels.
- 6.3.35 The guidelines states that LPAs can assist in mitigating climate change by reducing emissions, to help achieve this they can provide opportunities for renewable and low carbon energy technologies.

Renewable and Low Carbon Energy

- 6.3.36 The PPG for Renewable and Low Carbon Energy (MHCLG, 2023) was first published on 18 June 2015 and was last updated on 14 August 2023.

- 6.3.37 The guidelines reinforce that planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable.

Consents and planning applications for National Energy Infrastructure Projects

- 6.3.38 Consents and planning applications for National Energy Infrastructure Projects This guidance (DESNZ and Department for Business, Energy and Industrial Strategy, 2019) states that if consent under Section 37 of the Electricity Act 1989 is granted, the Secretary of State may also give a direction for planning permission to be deemed to be granted for the development under section 90(2) of TCPA 1990. The applicant seeking consent for the works from the Secretary of State must serve notice of their application on the relevant planning authority.

National Policy Statements and Need

- 6.3.39 Whilst the substation proposals at High Marnham will be determined in accordance with TCPA 1990, it is considered that NPSs for Energy are a material consideration for this proposal. Section 104(3) of the Planning Act 2008 requires that the Secretary of State must decide an application for development consent (Nationally Significant Infrastructure Projects (NSIPs) as defined in the Planning Act 2008) in accordance with any relevant National Policy Statement.
- 6.3.40 In January 2024, the DESNZ designated revised NPSs for Energy. The relevant NPSs are:
- Overarching NPS for Energy (EN-1) (DESNZ, 2024ba); and
 - NPS for Electricity Networks Infrastructure (EN-5) (DESNZ, 2024ab).
- 6.3.41 Paragraph 3.3.65 of NPS EN-1 states that *‘There is an urgent need for new electricity network infrastructure to be brought forward at pace to meet our energy objectives’* and paragraph 3.3.66 notes that *‘The security and reliability of the UK’s current and future energy supply is highly dependent on having an electricity network which will enable new renewable electricity generation, storage, and interconnection infrastructure that our country needs to meet the rapid increase in electricity demand required to transition to net zero while maintaining energy security. The delivery of this important infrastructure also needs to balance cost to consumers, accelerated timelines for delivery and the minimisation of community and environmental impacts.’*

Overarching National Policy Statement for Energy (EN1)

- 6.3.42 Paragraph 1.2.1 NPS EN-1 states that *‘In England, this NPS, in combination with any technology specific NPSs may be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended)’*. The delivery of this project is integral to the delivery of new electricity networks and the urgent need as identified in NPS EN-1 is an important material consideration for this application.
- 6.3.43 Paragraph 3.3.65 of NPS EN-1 states that *‘There is an urgent need for new electricity network infrastructure to be brought forward at pace to meet our energy objectives’* and paragraph 3.3.66 notes that *‘The security and reliability of the UK’s current and future energy supply is highly dependent on having an electricity network which will*

enable new renewable electricity generation, storage, and interconnection infrastructure that our country needs to meet the rapid increase in electricity demand required to transition to net zero while maintaining energy security. The delivery of this important infrastructure also needs to balance cost to consumers, accelerated timelines for delivery and the minimisation of community and environmental impacts.'

- 6.3.44 NPS EN-1 outlines that aside from connecting new sources of electricity generation with new sources of demand there are other drivers for new electricity network infrastructure. Paragraph 3.3.67 states that *'As the electricity system grows in scale, dispersion, variety and complexity, work will be needed to protect against the risk of large-scale supply interruptions in the absence of sufficiently robust electricity networks [...] development of new lines of 132kV (and over 2km) and above will also be necessary to preserve and guarantee the robust and reliable operation of the whole electricity system'*.
- 6.3.45 NPS EN-1 acknowledges that the consenting of onshore reinforcements can take significant time noting at paragraph 3.3.73 that *'completion of these onshore reinforcements has often taken longer than the completion of the offshore wind farms for which they are being built'. As a consequence, delays could present a material barrier to the delivery of the government ambition to deliver up to 50GW of offshore wind by 2030. Furthermore, paragraph 3.3.79 outlines that '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'*.
- 6.3.46 In applying EN-1 and EN-5 to the planning balance, substantial weight should be afforded to the urgent national need for new and reinforced electricity transmission infrastructure identified within those policy statements. EN-1 confirms that the need for additional electricity network capacity is immediate and significant to maintain security of supply and enable the transition to net zero, while EN-5 reiterates that reinforcement and expansion of the transmission system are critical national priorities. The Scheme directly supports these objectives by facilitating the transfer of low-carbon generation and strengthening the resilience of the national grid in northern England. Accordingly, when balancing local planning considerations against potential environmental or amenity effects, the Scheme's contribution to nationally critical energy objectives should attract substantial positive weight, consistent with the national policy framework and the government's overarching energy strategy.
- 6.3.47 NPS EN 1 emphasises the significance of delivering high quality energy infrastructure to uphold its dedication to reaching Net Zero while guaranteeing the UK maintains a secure, dependable, and cost-effective energy provision. NPS EN-1 outlines the government's strategy for executing crucial energy infrastructure projects in England and Wales. It affirms the substantial requirement to introduce new energy infrastructure for supporting economic growth, boosting productivity, enhancing competitiveness, supporting social well-being and decarbonising the energy system to meet the government's net zero targets.

Critical National Priority (CNP) Infrastructure

- 6.3.48 The need for nationally significant low carbon infrastructure is further reinforced by the Government's conclusion that there is a critical national priority (CNP) for its provision (Paragraphs 3.3.62 and 4.2.4 of NPS EN-1).

- 6.3.49 Although the project itself is not defined as an NSIP it is a crucial part in enabling NSIP projects and delivering the overarching Great Grid Upgrade. The policy relating to CNP is therefore a material consideration insofar as the NPS is material and relevant to this TCPA application.
- 6.3.50 Paragraph 3.3.63 of NPS EN-1 states that *‘Subject to any legal requirements, the urgent need for CNP Infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible’*. This helps to reinforce the importance of delivering low carbon infrastructure by recognising that the need for it is so critical that the benefits will generally outweigh any residual adverse impacts in all but the most exceptional circumstances.
- 6.3.51 Paragraph 3.2.70 recognises that the grid is a network and that all parts of that network have an important role in delivering new electricity networks: *‘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.’*
- 6.3.52 As set out in Paragraph 4.2.16 of EN-1, *‘the Secretary of State will take as the starting point for decision-making that such [CNP] infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy, which requires a clear outweighing of harm, exceptionality or very special circumstances.’* This means that the Secretary of State will take as a starting point that CNP Infrastructure will meet the non-exhaustive list of tests (as set out in paragraph 4.2.17).
- 6.3.53 Although the proposed 400kV substation at High Marnham is being consented under the Town and Country Planning Act 1990 rather than as a Development Consent Order under the Planning Act 2008, the definition of CNP is considered to be a material consideration in the determination of this planning application.
- 6.3.54 The Project forms part of National Grid’s wider transmission reinforcement strategy identified through the Electricity System Operator’s HND and subsequent CSNP, which together set out nationally critical reinforcements required to connect new offshore generation and strengthen the onshore 400kV network. The proposed substation provides a vital node in this system, supporting the transfer of renewable generation and system resilience across northern England. Consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route.

National Policy Statement for Electricity Networks Infrastructure (EN5)

- 6.3.55 NPS EN-5 (DESNZ, 2024a) was designated in January 2024. Although the primary purpose of EN-5 is to be applied to decisions for Nationally Significant Infrastructure Projects (NSIPs), it is also a material consideration in the determination of planning applications for energy infrastructure.
- 6.3.56 NPS EN-5 applies to electricity networks in England with a voltage of 132kV or higher which are carried on towers/poles or buried underground, as well as associated infrastructure including substations.

- 6.3.57 Emphasising the crucial role of electricity networks in bolstering the new electricity generation infrastructure necessary for the UK's transition to net zero, NPS EN-5, in paragraph 1.1.5, reaffirms the government's stance on CNP Infrastructure, stating:
- '...government has concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure. This includes: 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. These are viewed by the government as being CNP infrastructure and should be progressed as quickly as possible'*
- 6.3.58 Paragraphs 2.4.3 to 2.4.4 state that:
- '...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.*
- While the above principles should govern the design of an electricity networks infrastructure application to the fullest possible extent – including in its avoidance and/or mitigation of potential adverse impacts (particularly those detailed in Section 2.9 below) – the functional performance of the infrastructure in respect of security of supply and public and occupational safety must not thereby be threatened'.*
- 6.3.59 At paragraphs 2.2.1 to 2.2.2, NPS EN-5 states:
- 'The Secretary of State should bear in mind that the initiating and terminating points – or development zone – of new electricity networks infrastructure is not substantially within the control of the applicant.*
- *Siting is determined by:*
 - *the location of new generating stations or other infrastructure requiring connection to the network, and/or*
 - *system capacity and resilience requirements determined by the Electricity System Operator'.*
- 6.3.60 With specific regard to substations, paragraphs 2.2.8 to 2.2.9 of NPS EN-5 state that:
- '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. 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'.*
- 6.3.61 At paragraph 2.9.18, reference is made to the Horlock Rules, whereby its principles should be embodied in applicants' proposals for the infrastructure associated with new overhead lines.

2025 Consultation on Revisions to Energy National Policy Statements

- 6.3.62 In April 2025, the government launched a consultation on proposed changes to EN-1 and EN-5 that ended on 29 May 2025. The consultation covers updates to all three NPSs for new energy infrastructure:
- Draft Overarching National Policy Statement for Energy (EN-1) (DESNZ, 2025a); and

- Draft National Policy Statement for Electricity Networks Infrastructure (EN-5) (DESNZ, 2025b).
 - Draft National Policy Statement for renewable energy infrastructure (EN-3) (DESNZ, 2025c)
- 6.3.63 Changes consulted upon in the draft 2025 updates to the energy infrastructure NPSs include alignment with Clean Power 2030 targets and endorsement of the Centralised Strategic Network Plan. The 2025 revisions have strengthened the process for delivering major new infrastructure, reinforcing the government's ambition to deliver clean power by 2030.
- 6.3.64 The Clean Power Report explicitly identifies the Chesterfield to High Marnham (and Brinsworth to Chesterfield) project as one of four schemes which will provide significant additional capacity on the network to facilitate flow from north to south. The Brinsworth to Chesterfield project needs to be delivered by 2030 to enable an affordable and secure clean power system.
- 6.3.65 The emerging draft of EN-1 reinforces the approach taken by National Grid in the ES. The draft revised EN-1 and EN-5 reiterate the government's commitment to the Clean Power Action Plan 2030, which aims for at least 95 per cent of the UK's electricity generation to come from clean sources by 2030 and emphasises the urgency and CNP of developing low-carbon infrastructure, thereby supporting the need case established in this PDAS.
- 6.3.66 The draft revised EN-1 and EN-5 maintain the assessment principles and generic impact considerations outlined in the current EN-1 and EN-5, ensuring continuity in evaluating environmental effects. They also introduce enhanced guidance on biodiversity, flood risk, climate resilience and the mitigation hierarchy. The EAR is considered to be in compliance with these emerging draft NPSs.
- 6.3.67 Draft NPS EN-3 is not considered to be of relevance to this planning application submission.

6.4 Other Material Considerations

International climate policy context

- 6.4.1 The government's energy policy is driven by a global need, and international commitments, to move towards net zero emissions, and achieving this through developing new sources of renewable energy and transmitting it from where it is generated to where it is needed.
- 6.4.2 Although there had been previous international agreements, most recent policy derives from the Paris Agreement which was adopted under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) in 2015. This had as an objective, the holding of the increase in global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change.

- 6.4.3 The Conference of Parties (COP26) held in Glasgow in 2021 agreed on accelerated action on climate change this decade and reaffirmed the long-term goal to limit global warming to 1.5°C above pre-industrial levels and resolved to pursue efforts to achieve this, recognising that limiting global warming to 1.5°C *‘requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45 per cent% by 2030 relative to the 2010 level and to net zero around mid-century’*.
- 6.4.4 COP27 held in Sharm el-Sheikh in 2022 again reaffirmed the commitment to limiting global warming to 1.5°C and agreement to provide ‘loss and damage’ funding to vulnerable countries hit hard by climate disasters.
- 6.4.5 COP28 held in Dubai in 2023 closed with an agreement that signals the ‘beginning of the end’ of fossil fuels by outlining a ‘just and equitable transition’, underpinned by deep emissions cuts and financial commitments.
- 6.4.6 At the 2024 United Nations Climate Change Conference (COP29) held in Baku, Azerbaijan, the United Kingdom made significant commitments to address climate change which included:
- Enhanced Emission Reduction Target: The UK announced a new Nationally Determined Contribution (NDC), pledging to reduce greenhouse gas emissions by 81 per cent% by 2035 compared to 1990 levels. This target reflects an increase from the previous goal of a 78 per cent% reduction and aligns with recommendations from climate advisers.
 - Climate Finance Commitment: Developed nations, including the UK, agreed to triple climate finance to developing countries, setting a new target of \$300 billion annually by 2035. This funding aims to assist developing nations in mitigating and adapting to the impacts of climate change.
 - COP29 maintained the process of international climate diplomacy, negotiating key agreements on finance and carbon markets. However, it deferred several other decisions until COP30 in Brazil in November 2025.

National climate and energy legislation and policy context

- 6.4.7 The Climate Change Act 2008 forms the basis for the UK’s approach to tackling and responding to climate change. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are adapted to. The Act also establishes the framework to deliver on these requirements.
- 6.4.8 Through the Climate Change Act 2008, the UK Government set a target to significantly reduce UK greenhouse gas emissions by 2050 and a path to get there. The Act also established the Committee on Climate Change to ensure that emissions targets are evidence-based and independently assessed. In addition, the Act requires the Government to assess the risks and opportunities from climate change for the UK, and to adapt to them. The Committee on Climate Change’s Adaptation Committee advises on these climate change risks and assesses progress towards tackling them.
- 6.4.9 The Climate Change Act 2008 originally committed the UK to reducing its greenhouse gas emissions by 80 per cent% by 2050, compared to 1990 levels. However, in 2019 this was changed to a target to reduce greenhouse gas emissions by 100 per cent% by 2050, compared to 1990 levels; this is commonly known as ‘net zero’.

6.4.10 In recent years there have been a succession of reports, strategies and, policy statements released by the Government aiming to support the realisation of the 2050 net zero target and enable the transition to clean, green and home-grown energy. The Scheme would contribute to fulfilling the aims of these strategies, demonstrating its national importance and need. These include:

- January 2018: A Green Future: Our 25 Year Plan to Improve the Environment (HM Government, 2018) is the Government's long-term strategy, first published in January 2018 and updated in February 2023, the plan sets out ambitious goals across air, water, land biodiversity and waste
- March 2020: Net Zero: Opportunities for the Power Sector (2020) (National Infrastructure Commission, 2020): this paper sets out updated evidence and analysis of the electricity system in the context of the 2050 net zero greenhouse gas emissions target
- November 2020: The Ten Point Plan for a Green Industrial Revolution (HM Government, 2020) is a £12 billion government backed drive aiming to help create up to 250,000 green jobs and accelerate the UK's transition to net zero. Measures included in the plan include advancing offshore wind, promote electric vehicles and boost green transport
- November 2020: National Infrastructure Strategy: Fairer, Faster, Greener (H.M Treasury, 2020): this paper sets out the gGovernment's plan to deliver on its ambition to *'deliver an infrastructure revolution: a radical improvement in the quality of the UK's infrastructure to help level up the country [...] and put the UK on the path to net zero emissions by 2050'*.
- December 2020: Energy White Paper: Powering our Net Zero Future (BEIS, 2020) outlines the gGovernment's plan to support the UK in becoming a net zero greenhouse gas emitting country by 2050.
- October 2021: Net Zero Strategy: Build Back Greener (HM Government, 2021) this strategy sets out policies and proposals for decarbonising all sectors of the UK economy to meet the our net zero target by 2050.
- April 2022: British Energy Security Strategy (HM Government, 2022). This document is built on the Net Zero Strategy and was published in response to the Russian invasion of Ukraine and the 2022 energy price crisis. The Strategy sets out the key actions to accelerate delivery of clean energy, recognising the importance in delivering climate goals whilst simultaneously providing energy security and securing greater energy independence.
- September 2022: The Growth Plan (HM Treasury, 2022) included measures to support the energy market and supply reform and price relief to stabilise bills, strengthen energy security and support sustainable economic growth.
- January 2023: Mission Zero – the Skidmore Review (January 2023) (DESNZ, 2023): this independent review considered how the net zero target could maximise economic growth while also increasing energy security and affordability for consumers and businesses.
- February 2023: Environmental Improvement Plan 2023 (Department for Environment, Food and Rural Affairs (Defra), 2023)(: this plan is the government's first revision of the 25 Year Environment Plan, and it provides a comprehensive

delivery plan for the government's approach to halting and then reversing the decline in nature.

- March 2023: Powering Up Britain (HM Government, 2023a) and Powering Up Britain: Energy Security Plan (HM Government, 2023b). These documents provide an update of the strategy for secure, clean and affordable British energy for the long-term future.
- June 2023: Progress Report to Parliament Climate Change Committee 2023 (Climate Change Committee, 20232): this statutory report provides a comprehensive overview of the UK Government's progress to date in reducing greenhouse gas emissions.
- October 2023: The Energy Act 2023 established the Independent System Operator and Planner, now named National Energy System Operator (NESO) to oversee system planning and integrate net zero objectives into energy operations. NESO is tasked with strategic planning across electricity and gas systems, co-ordinating transmission projects, planning system expansion and embedding net-zero objectives into network development.
- January 2024: DESNZ designated revised National Policy Statements (NPSs) for energy. The two most relevant NPSs are:
 - National Policy Statement for Energy (NPS EN-1 (DESNZ, 2024ba); and National Policy Statement for Electricity Networks Infrastructure (NPS EN-5
- March 2024: Beyond 2030: A national blueprint for a decarbonised electricity system in Great Britain (National Grid ESO, 2024a). This transitional plan is a stepping-stone before NESO develops the fully Centralised Strategic Network Plan which will be published in 2026.
- July 2024: Future Energy Scenarios: ESO Pathways to Net Zero (National Grid ESO, 2024b).
- November 2024: NESO Clean Power 2030: Advice on achieving clean power for Great Britain by 2030 (NESO, 2024b). This identifies Norwich to Tilbury (AENC and ATNC – the NOA code for Norwich to Tilbury) and Sea Link as critical to delivering a network which supports the clean power pathways, but at present have delivery dates after 2030.
- December 2024: Clean Power 2030 Action Plan: A new era of clean electricity (DESNZ, 2025dUK Government, 2025). This report provides the strategic initiative aimed at transitioning to cleaner energy sources and reducing carbon emissions and was issued following NESO's Clean Power 2030: Advice on achieving clean power for Great Britain by 2030 publication.
- June 2025: The UK's Modern Industrial Strategy (Department for Business and Trade) provides a ten-year roadmap to unlock £25.6 billion in British Business Bank Funding. It identifies eight high growth sectors including clean energy. The Strategy also identifies that high electricity prices and grid connection delays are a barrier to electrification in the UK's energy-intensive industries and to the delivery of net zero commitments. The Industrial Strategy references new powers in the Planning and Infrastructure Bill, currently before Parliament, to amend regulatory processes and accelerate connections for strategically important projects. This will include a power to 'designate' government strategic documents, including the Industrial Strategy, to inform allocation of connections, enabling the

gGovernment to reserve future capacity on the grid, reducing waiting times for businesses with major investments in Great Britain.

- 6.4.11 All the above national drivers stress the importance of transforming the energy generation of the UK to renewables so that the country can meet its legal target of net zero greenhouse gas emissions by 2050.
- 6.4.12 More recently Gthe government has had an ambition for Great Britain to be supplied with clean power by 2030. This forms part of a plan to Make Britain a Clean Energy Superpower (Prime Minister’s Office, n.d.). To achieve the Clean Power 2030 goal the National Energy System Operator (NESO) was formally commissioned by the Secretary of State and the DESNZ to provide independent advice on the pathway towards the 2030 ambition. The following reports have subsequently been released:
- Clean Power 2030;
 - Clean Power 2030 Action Plan: A New Era of Clean Electricity; Clean Power 2030.
- 6.4.13 In November 2024 the UK’s National Energy System Operator (NESO) published its independent analysis on how the Department for Energy Security and Net Zero (DESNZ) can achieve its ambitious Clean Power (CP2030) goal.
- 6.4.14 In the Clean Power 2023 report, NESO lay out pathways for how Great Britain can reach a clean power system by 2030. The report identifies that offshore wind will providing over half of Great Britain’s generation, with onshore wind and solar providing another 29 per cent%. New dispatchable low carbon technologies, such as using carbon capture and storage, or hydrogen, add significant value to the system, with even relatively small levels of operational capacity materially reducing the overall challenge for the rest of the programme.
- 6.4.15 Associated with the new energy generation the report identifies the need for a major network expansion, in line with published plans for the transmission network and with further strengthening at distribution level.
- 6.4.16 The Clean Power 2030 Report explicitly identifies the Chesterfield to High Marnham (and Brinsworth to Chesterfield) project in Annex 2 as one of four schemes which will provide significant additional capacity on the network to facilitate flow from north to south. The Chesterfield to High Marnham project needs to be delivered by 2030 to enable an affordable and secure clean power system,
- 6.4.17 The report notes the need to accelerate these transmission projects to ensure that they can help to deliver the new sources of clean power generation by 2030.

Clean Power 2030 Action Plan: A New Era of Clean Electricity

- 6.4.18 Following the publication of the NESO (2024) Clean Power 2030 Report, the government published the Clean Power 2030 Action Plan setting out the government’s view of the pathway to 2030 and settings targets required to achieve clean power by 2030. The Clean Power 2030 Action Plan (DESNZ, 2025d) outlines strategies to accelerate the transition to a cleaner energy system by 2030, focusing on reducing greenhouse gas emissions, increasing renewable energy use, and promoting energy efficiency.
- 6.4.19 The Action Plan identifies that in a typical weather year, the 2030 power system will see clean sources produce at least as much power as Great Britain consumes in total over the whole year, and at least 95 per cent% of Great Britain’s generation;

reducing the carbon intensity of the nation's generation from 171gCO₂e/kWh in 2023 to well below 50gCO₂e/kWh in 2030.

- 6.4.20 To achieve this, the Action Plan outlines the ambition to secure the following generation mix:
- 42-50 GW of offshore wind;
 - 27-29 GW of onshore wind;
 - 45-47 GW of solar power.
- 6.4.21 These will be complemented by flexible capacity, including 23-27GW of battery capacity, 4-6GW of long-duration energy storage.
- 6.4.22 The Action Plan identifies a series of challenges which need to be addressed to secure the 2030 targets and in particular the need for construction of generation and transmission projects to commence by 2026 if they are to be operational by 2030. The Action Plan notes that around twice as much new transmission infrastructure will be needed in the nation's grid by 2030 as has been built in the past decade.

6.5 Summary

- 6.5.1 The review of the policy context for the Scheme presented in this section has established that:
- Section 70(2) of TCPA 1990 and Section 38 (6) of the Planning and Compulsory Purchase Act 2004 confirm that planning applications must be determined in accordance with the Development Plan unless material circumstances indicate otherwise.
 - The development plan for the purposes of the High Marnham Substation includes:
 - Bassetlaw Local Plan (adopted 2024) (BDC, 2024);
 - Nottinghamshire Minerals Local Plan (Adopted 2021) (NCC, 2021)
 - Nottinghamshire Waste Local Plan (Adopted 2025) (NCC, 2025)
 - SPD's summarised in Appendix E.
 - the NPPF establishes a presumption in favour of sustainable development, sets out that significant weight should be placed on the need to support economic growth and productivity and requires that planning decisions should address the locational requirements of different sectors;
 - infrastructure, including energy infrastructure, investment is a key pillar underpinning the Government's wider economic policies and objectives;
 - there is a recognised, urgent need for new electricity transmission and distribution infrastructure in the UK and the need case for new connections should be considered as being demonstrated by NPS EN-1 if it represents an efficient and economical means of connecting a new generating station to the transmission or distribution network;
 - The High Marnham Substation proposal, forms part of the Chesterfield to High Marnham Project which is specifically referenced in NESO's Clean Power 2030 Reports one of four schemes which will provide significant additional capacity on

the network to facilitate flow from north to south. The Chesterfield to High Marnham project needs to be delivered by 2030 to enable an affordable and secure clean power system.

- Although the application will be determined in accordance with TCPA 1990, the NPSs for Energy are a material consideration for this application, which will enable the delivery of NSIPs (which are recognised as having a critical national priority) and the Great Grid Upgrade.
- The determination of this planning application against the development plan and other identified material considerations should be made in the context of the urgent need to deliver this infrastructure upgrade.

7. Planning Assessment

7.1 Introduction

- 7.1.1 Section 70(2) of TCPA 1990 and Section 38 (6) of the Planning and Compulsory Purchase Act 2004 confirm that planning applications should be determined in accordance with the Development Plan unless material circumstances indicate otherwise.
- 7.1.2 This established a presumption in favour of granting permission for developments which are in accordance with the development plan.
- 7.1.3 This principle has been developed and clarified by subsequent appeal history and case law, which has confirmed that a particular proposal does not need to accord with each and every policy in a development plan, the key issue is that it accords with the overall thrust of development plan policies taken as a whole. In order to be approved for planning permission therefore, the primary test is that the Scheme complies with the Bassetlaw Local Plan (2020-2038) and Nottinghamshire Minerals Local Plan (adopted 2021) and Nottinghamshire Waste Local Plan (adopted 2025). Where there are no up-to-date policies then reference should be made to the NPPF (MHCLG, 2025).
- 7.1.4 This section identifies those issues anticipated to be material considerations in the determination of the planning application and assesses them in the context of the policy environment discussed. The main planning issues raised by this application are considered within the remainder of this section under the following headings. Each section contains a summary of review and reports undertaken for each respective topic to assist in navigation and understanding of the wider environmental reports:
- Principle of the Development;
 - Design Overview (Layout, Design and External Appearance);
 - Ecology (including Arboriculture);
 - Landscape and Visual Character;
 - Historic Environment;
 - Traffic and Transport;
 - Air Quality;
 - Noise and Vibration;
 - Land and Ground Conditions;
 - Agriculture and Soils;
 - Minerals safeguarding;
 - Water Resources and Flood Risk;
 - Socioeconomics and Human Health; and
 - Electric and Magnetic Fields.

7.2 Principle of the Scheme

- 7.2.1 National Grid as a statutory undertaker has a statutory responsibility to meet the needs of the modern economy in supplying electricity to the regional DNOs and end users including industrial, business and domestic users.
- 7.2.2 The delivery of the Scheme would enable National Grid to fulfil its statutory obligations to provide a secure, reliable and efficient electricity supply, while also strengthening its capacity to meet both current and future customer demand. This will be achieved through the delivery of essential infrastructure, specifically, the elements included within this planning submission, such as new substations, upgraded transmission lines and the associated reinforcement of other proposed network assets. These improvements are designed not only to enhance the resilience and flexibility of the electricity network, making it better able to withstand fluctuations in demand and supply, but also to facilitate the transition to a low-carbon energy system.
- 7.2.3 By providing the necessary capacity and technical capability to integrate increased volumes of renewable and low-carbon energy sources, the Scheme will directly support the decarbonisation of the electricity sector. This is a fundamental component of the government's broader climate and sustainability agenda, including the statutory commitment to achieve Net Zero Carbon emissions by 2050. Furthermore, at the national policy level, there is unambiguous support for critical infrastructure projects of this kind. Such projects are explicitly recognised as essential for maintaining energy security, supporting economic growth, and enabling the UK's transition to a sustainable and resilient low-carbon energy future.
- 7.2.4 The site is situated in open countryside. Therefore, in addition to the other considerations outlined in Policy ST1 of the BLP, any proposed development will only be supported if it is consistent with other policies in the development plan or within national policy.
- 7.2.5 The Development Plan does not contain explicit policy relating to the development of new substations. However, Policy ST49 of the BLP sets out the overriding policy for renewable energy development. It supports developments that *'generate, share, transmit and/or store zero carbon and/or low carbon renewable energy, subject to the satisfactory resolution of all relevant site-specific and cumulative impacts upon:*
- *location, setting and position in the wider landscape, resulting from its siting and scale;*
 - *natural and heritage assets and their settings;*
 - *air and water quality;*
 - *hydrology and hydrogeology;*
 - *BMV agricultural land;*
 - *existing highway capacity and highway safety;*
 - *noise, light, glare, smell, dust, emissions or flicker;*
 - *aviation and radar; and*
 - *recreation and local amenity'.*

- 7.2.6 The BLP also places a large emphasis on preparing the district for climate change. As such, Policy ST48 of the BLP sets out to ensure that development is better equipped to be more resilient in the wake of the anticipated effects of climate change. For non-residential development, it is expected that for all major developments within the district, development is required to provide five trees per 1,000m² of floorspace, it has been assessed that this would result in 5.5 trees required. To adhere to requirements, 40 trees would be planted on site as part of the Scheme.
- 7.2.7 The site is located adjoining the former High Marnham Power Station site, which has been decommissioned and removed, whilst the land use is currently predominantly arable agricultural land with associated boundary hedgerows which intersect and surround most, but not all of the Site. The wider setting is dominated by industrial use.
- 7.2.8 Policy ST9 provides support for proposals that re-use and redevelop large brownfield sites in the countryside so long as they make effective use of land for economic and/or environmental activities and comply with other relevant policies. Support is subject to meeting criteria including demonstrating a national, regional, or sub-regional economic need, being unable to reasonably locate the development elsewhere in the district and ensuring the proposal provides economic or environmental benefit relative to current use of the site. Proposals must avoid significant adverse impacts on local character, landscape, biodiversity, heritage assets, and residential amenity. Development should also minimise private vehicle travel and address sustainable transport and highway improvements. Any inclusion of non-economic or environmental uses must be clearly linked functionally to the site's primary purpose, be appropriately scaled, and avoid over-concentration that would affect the area's function or appearance. As shown in forthcoming sections it has been demonstrated how the Scheme can address and appropriately mitigate the potential constraints identified by the policy.
- 7.2.9 The site as shown on Plan 4 within the Nottinghamshire Minerals Local Plan (NMLP), indicates that the Site lies on the border of the MSA, relating to alluvial sand and gravel. Policy SP7 of the NMLP states that non-mineral development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity. As indicated in Chapter 9 of the EAR, the Site is likely not underlain by sand and gravel deposits, therefore is not considered likely that a significant area of potential minerals would be sterilised.
- 7.2.10 To summarise, whilst further details will be provided in subsequent sections, it is noted that the Scheme is located within Flood Zone 1, will achieve a minimum of 10 per cent net BNG, and will not result in significant harm to heritage or environmental assets. Furthermore, the Scheme will not have a significant impact on the landscape and will be accompanied by appropriate mitigation measures to ensure that all potential impacts are adequately addressed. Accordingly, the Scheme is considered to be compliant with the requirements of the Development Plan and, therefore, represents an appropriate form of development.
- 7.2.11 At a national policy level, although the proposed 400kV substation at High Marnham is being consented under the TCPA 1990 rather than as a Development Consent Order under the Planning Act 2008, it nonetheless constitutes critical national priority infrastructure in policy terms. National Policy Statements EN-1 and EN-5 identify the need for new and reinforced electricity transmission infrastructure as a critical

national priority to maintain security of supply and deliver the transition to net zero. The Project, in which the High Marnham Substation sits within, is part of National Grid's broader transmission reinforcement strategy. This strategy has been outlined by the Electricity System Operator's HND and subsequent CSNP, which together set out nationally critical reinforcements required to connect new offshore generation and strengthen the onshore 400kV network. The proposed substation provides a vital node in this system, supporting the transfer of renewable generation and system resilience across northern England. Consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route.

- 7.2.12 To reiterate, the Scheme is being brought forward to ensure that there is sufficient capacity to meet demand from National Grid's customers and help reinforce the existing network in the wake of increasing capacity of renewable energy creation. The combination has meant that sections of the existing network have been identified as requiring upgrades to secure the operation of the transmission system, ensuring reliable, economic and long-term supply.
- 7.2.13 The need for the Scheme is substantiated by National Policy Statements, specifically NPS EN-1 and NPS EN-5, which identify substations as critical components of national infrastructure that should be progressed expeditiously. The Scheme incorporates appropriate landscaping and mitigation measures, and its justification is further reinforced by the presence of the existing High Marnham Substation in close proximity, as well as clear national-level policy support.
- 7.2.14 In conclusion, the principle of the Scheme is unequivocally established by multiple supporting national policy documents, including NPS EN-1 and NPS EN-5, and is further supported by the Development Plan and overriding objectives relating to increasing renewable energy infrastructure provisions. The proposal largely adheres to local planning policies and there are significant material considerations in favour of the Scheme.

7.3 Design Overview (Layout, Design and External Appearance)

- 7.3.1 The NPPF, NPS EN-1, and NPS EN-5 collectively advocate for high-quality design in new developments, including energy infrastructure.
- 7.3.2 In alignment with these national policies, Policies ST33, ST39, 46, ST50 of the BLP and the draft Design Code Guide SPD establish specific requirements to ensure that development respects the form, scale, and character of the surrounding landscape.
- 7.3.3 BLP Policy ST33 emphasises that development proposals must demonstrate a clear function, character and identity that reflects a robust understanding of the local context and distinctiveness, in accordance with national and local design guidance such as Sport England's Active Design principles, the Bassetlaw Design Quality SPD, and the Bassetlaw Design Code. Land should be used efficiently, with density appropriate to the local character and housing needs, particularly within rural settlements.
- 7.3.4 Further, the policy states that development should protect and enhance landscape, townscape and heritage assets, respecting the surrounding landform, layout, building orientation, scale, materials, and landscaping. Consideration must be given to promote safe communities by reducing crime and fear of crime through natural

surveillance, active frontages, and appropriate lighting. Designs should be sustainable, incorporating modern construction methods, durable materials, passive solar design, and renewable or low-carbon technologies where practicable. Flood risk and water runoff should be managed with suitable drainage solutions. Schemes should also provide well-integrated, attractive parking and external storage for vehicles, cycles, and waste, in line with Nottinghamshire Parking Standards where feasible.

- 7.3.5 In regard to incorporating trees into design, Policy ST39 of the BLP states that where development may negatively impact trees or hedgerows, applications must include a detailed Tree Survey and Arboricultural Assessment, conducted by a qualified arboriculturist, covering all existing trees and hedgerows on site in accordance with BS 5837:2012 Trees in relation to design, demolition and construction recommendations.
- 7.3.6 Policy 46 of the BLP states that development proposals must also be designed and constructed to avoid and minimise negative impacts on the amenity of existing and future users, both within and nearby the site. This includes protecting the living conditions of residents and occupiers by preventing significant losses of privacy, excessive overshadowing or overbearing effects, as well as controlling levels of activity, noise, light, air quality, odour, vibration, or other pollution, to standards that can be appropriately mitigated. For proposals located adjacent to or near 'bad neighbour' uses such as waste sites, incinerators, chemical production, heavy industry or businesses operating outside normal hours, it must be demonstrated that the ongoing use of neighbouring sites will not be compromised and that the amenity of future occupiers of the new development can still be achieved in line with these requirements. Where a new 'bad neighbour' use or change of use could have a significant adverse effect on residential amenity, suitable mitigation measures must be put in place before the development can be occupied.
- 7.3.7 Policy ST50 requires development to consider flood risk, with all development, where practicable, incorporating SuDS in line with national standards.
- 7.3.8 The Draft Design Code SPD (2025) outlines standards for industrial development, emphasising the use of landscaping to screen unsightly views and help mitigate pollution, including noise. It also highlights the positive role of trees in enhancing design and stresses the need to address potential negative impacts from lighting through appropriate mitigation. Additionally, the code underscores the importance of effective flood management by requiring developments to demonstrate the successful implementation of SuDS.
- 7.3.9 Good design of substations is primarily governed by application of the Horlock rules, alongside an iterative design approach informed by stakeholder engagement, relevant sections of national policy (NPS EN-1 and EN-5) and the embedded environmental design mitigation as part of the environmental appraisal process. Such good design principles are then intertwined with the technical design requirements alongside the regulatory and other constraints such as operational, safety and security requirements for new electricity transmission infrastructure.
- 7.3.10 As such, when assessing the acceptability of the Scheme, it is important to acknowledge that energy projects frequently result in landscape and visual impacts, necessitating a balanced judgement as to whether the scale and significance of these effects are sufficient to outweigh the overall benefits of the project. This approach is expressly recognised in National Policy Statement EN-1 (Paragraph 5.10.35). The design of the Scheme has been undertaken in the context of National

Grid's statutory duty to operate in an economic and efficient manner, and has been informed throughout by the rigorous health and safety processes that govern the design and construction of its infrastructure.

- 7.3.11 Paragraph 4.7.1 of NPS EN-1 outlines that 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'.
- 7.3.12 Paragraph 4.7.5 sets out that '*design principles should be established from the outset of the project to guide the development from conception to operation. Applicants should consider how their design principles can be applied post-consent*'.
- 7.3.13 Acknowledging the limitations on infrastructure design, paragraph 4.7.6 states that '*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, land form 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. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process.*'
- 7.3.14 Section 2.4 of NPS EN-5 reinforces the above policy and sets out the need for applicants to consider the criteria for good design in NPS EN-1 at an early stage when developing projects.
- 7.3.15 Continued, at paragraph 2.4.4, EN-5 goes on to state that 'the functional performance of the infrastructure in respect of security of supply and public and occupational safety must not thereby be threatened'. In this regard, the substations and other buildings associated with the Scheme have been designed in accordance with National Grid Technical Standards.
- 7.3.16 The Scheme has undergone careful consideration of the siting, scale, design, and use of materials, taking into account the site and its context with regard to layout, form, height, massing, scale, size, elevational treatment, materials and orientation. The objective is to ensure that built form is effectively integrated into the local setting while making a positive contribution to the quality of the local environment.
- 7.3.17 The introduction of substantial built form and infrastructure into a previously semi-rural environment, albeit one situated in close proximity to existing electrical infrastructure, is likely to affect visual amenity for local residents and users of public rights of way, highways, and tracks. However, mitigation measures, including the strategic planting of hedgerows, woodland, and trees, alongside the preservation of field boundaries within the Site, will serve to screen views and facilitate the integration of the development into the landscape over time, thereby significantly reducing the magnitude of these effects.
- 7.3.18 Notwithstanding the limited flexibility associated with the design of substations, the Scheme has had regard to the design principles established in the Development Plan and nationally planning policy, as well as the Horlock Rules. In particular:
- The proposed colour and finishes to new structures will use a muted colour palette to reduce contrast, minimise visual impact and aid assimilation with the colours of the wider landscape.

- A lighting regime will be adopted to minimise light spill.
- A planting regime will be implemented in accordance with the illustrative landscape mitigation and enhancement plan to minimise visual impacts.
- Appropriate security measures are included in the design of the Scheme, including fencing and controlled site access, to reduce the opportunity for crime.

7.3.19 Considering the nature of the Scheme and the design measures incorporated therein, the Scheme is evaluated as being in compliance with the policies set forth in the BLP, as well as national planning policies regarding design and layout. Furthermore, the Scheme has been strategically located and designed in part to minimise environmental and amenity impacts to the greatest extent possible, reducing potential impacts on areas of local amenity value, important existing habitats (including LWSs) and landscape features (Horlock Rule 3).

7.4 Ecology (including Arboriculture)

7.4.1 Under the Electricity Act 1989 and Natural Environment and Rural Communities Act 2006, National Grid has a statutory duty to conserve and enhance biodiversity. Schedule 14 of the Environment Act 2021, meanwhile, requires that development subject to planning permission provides a 10 per cent gain in biodiversity.

7.4.2 Both national and local planning policies also place a strong emphasis on the conservation and enhancement of biodiversity. Policy ST38 of the BLP serves as BDC's overarching environmental policy, establishing BDC's commitment to conserving and enhancing Bassetlaw's natural environment. This includes the protection of biodiversity and geodiversity resources and the implementation of measures to enhance these assets at both nationally and locally prioritised sites, habitats, features, and for protected and priority species.

7.4.3 Policy ST38 of the BLP aims to protect and enhance the biodiversity and geodiversity of Bassetlaw, covering international sites, nationally designated areas and local designations. The policy states that, once the principle of development is established, appropriate mitigation measures must be implemented. The preferred approach is to avoid harm to biodiversity and geodiversity assets, if avoidance is not possible, the policy requires ensuring no net loss or, ideally, a net gain of priority habitats and local populations of priority species. As a last resort, compensation must be provided to offset any residual impact on biodiversity. Additionally, the policy mandates that all developments must achieve biodiversity net gain in accordance with national requirements and that the management of enhanced biodiversity will be maintained for a minimum of 30 years. National Policy under Schedule 7a of the TCPA 1990 (inserted by Schedule 14 of the Environment Act 2021) requires a statutory 10 per cent BNG in relation to pre-development biodiversity value on the site.

7.4.4 Policy ST39 of the BLP sets out BDC's commitment to protecting existing trees, woodlands, and hedgerows, while also promoting additional planting to increase canopy cover for biodiversity, amenity and climate change adaptation. This will be achieved by retaining and enhancing trees and woodlands protected by Tree Preservation Orders, those within conservation areas and important hedgerows, as well as considering both individual and group contributions to the landscape. As stated, BDC will resist the loss of ancient woodland and veteran trees unless there are exceptional circumstances and suitable compensation strategies. Major developments are expected to provide new trees or financial contributions to mitigate

climate impacts. Where developments may affect trees or hedgerows, applications must include an accurate Tree Survey and Arboricultural Assessment, details of protective measures during development, an avoidance and mitigation strategy with replacement planting of equal value, and a 10-year management plan for ongoing maintenance.

- 7.4.5 Complementing the requirements for the provision of new trees, Policy ST48 requires climate change resilience and protection of local air quality in development design. Specifically relating to trees, the policy states that major developments must provide five native trees per 1,000 m² of non-residential floorspace or contribute £100 per sapling if on-site planting is not feasible, as reinforced by the Local Plan Infrastructure Delivery Plan (2023).
- 7.4.6 The NPPF, at paragraph 187, requires planning policies and decisions to contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity value and minimising impacts on, and providing net gains for, biodiversity.
- 7.4.7 Paragraph 193 stipulates (inter alia) that:
- development should be refused where significant harm to biodiversity cannot be avoided, mitigated or, as a last resort, compensated for;
 - development which is likely to have an adverse effect on a SSSI should not be permitted except where the benefits clearly outweigh the impacts on site specific features of special scientific interest and the national network of SSSIs;
 - development resulting in the loss or deterioration of irreplaceable habitats should be refused, unless there are exceptional reasons and a suitable compensation strategy exists; and
 - development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
- 7.4.8 At paragraph 5.4.48, NPS EN-1 explains how the Secretary of State should approach the consideration of effects on biodiversity in determining DCO applications, stating that appropriate weight should be attached to designated sites, protected species, habitats and other species of principal importance, and to biodiversity and geological interests within the wider environment. With specific regard to regional and local sites, both NPS EN-1 and NPS EN-5 set out that, in the context of new nationally significant infrastructure, these should not be used in themselves to refuse development consent. A material consideration, as such great weight should be given to these documents in the overall planning balance.
- 7.4.9 With specific regard to arboriculture, national and local planning policies seek to retain, and encourage the planting of new trees. In this regard, paragraph 193(c) of the NPPF stipulates that *‘development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists’*.

- 7.4.10 Consistent with the requirements of the Development Plan, NPPF and NPS EN-1, a Phase 1 Habitat Survey has been undertaken and sits within the Ecology Report. Collated in the EAR, Chapter 4 summarises that biodiversity and ecology assets have been identified and assessed against potential effects arising from the Scheme. The assessment presented in the EAR has informed a suite of measures to mitigate adverse impacts on biodiversity and these are set out in the OCEMP which is also submitted with the planning application.

Statutory designated sites

- 7.4.11 There were no internationally designated sites identified within 10km of the Site including Special Areas of Conservation, Special Protection Areas or Ramsar sites.
- 7.4.12 No nationally or locally designated statutory sites for nature conservation were located within 2km of the Site.

Non-statutory designated sites

- 7.4.13 There are 13 non-statutory designated sites within 2km of the Site. These are shown in Table 4.1 in Chapter 4 of the EAR.
- 7.4.14 The closest designations are Marnham Railway Yard candidate LWS and Fledborough to Harby Dismantled Railway LWS. These designations are 50m north respectively from the substation site. Marnham Railway Yard cLWS comprises a strip of land along the southern side of an old disused railway line. Fledborough to Harby Dismantled Railway is a disused railway line that features diverse vegetation, ranging from open grassland and well-developed scrub to pioneer plants on disturbed and bare soils.
- 7.4.15 Of the 13 non-statutory sites considered, Table 4.2 of the EAR confirms that only the Marnham Railway Yard candidate LWS and the Fledborough to Harby Dismantled Railway LWS have been further scoped for further assessment, with all other non-statutory designations not affected by the Scheme. Without mitigation, the Scheme could impact these LWSs through surface water runoff pollution and dust deposition. As outlined in Table 4.3, to minimise construction impacts, both LWSs will have site boundaries fenced to clearly demarcate the works area and prevent entry, with additional buffers established around sensitive habitats to avoid direct and indirect effects. A CEMP, including Dust and Surface Water Management Plans, will be implemented to manage potential environmental effects. During operation, the site will remain fenced from adjacent habitats to prevent disturbance by site personnel. Sections 4.4 and 4.5 of the EAR detail the impacts and control measures to be employed and with these measures in place, no residual impacts or adverse effects on ecological features are anticipated.

Habitats

- 7.4.16 A Preliminary Ecological Appraisal (PEA) (ref.10056387-AUK-XX-XX-RP-GE-3-1-Preliminary ecological appraisal report) and Phase 1 Habitat Report (Ref. XXX) will accompany submission.
- 7.4.17 The desk study identified six Habitats of Principal Importance (HPI) within 2km of the Site. There is an area to the north of the Site which is recognised as Open Mosaic Habitats on Previously Developed Land HPI in England (HPIE) (MAGIC, 2023). There are six areas of Deciduous Woodland HPIE, two located within the existing High Marnham Substation site to the east of the existing High Marnham Substation,

one adjacent to the Scheme boundary and three located 600m south of the Site. One area of Coastal and Floodplain Grazing Marsh HPIE was identified adjacent to the north east of the Site.

- 7.4.18 A range of habitats were identified within the Site, including dense scrub dominated by hawthorn, blackthorn, and bramble along the eastern edge, poor semi-improved and improved grasslands in the south east with diverse herb species and extensive arable land bordered by hedgerows. Additional habitats include tall ruderal patches, a mixed woodland plantation, various hedgerows, scattered trees and both wet and dry ditches. Hardstanding areas and bare ground are present in the east and south east, associated with infrastructure and access tracks. Several of these habitats, such as improved grassland, arable farmland, hedgerows, and ditches are recognised as Habitats of Conservation Concern in the Nottinghamshire Biodiversity Action Plan.
- 7.4.19 As aforementioned Policy ST38 is Bassetlaw District Council's principal environmental policy, focused on conserving and enhancing biodiversity and geodiversity across international, national, and local sites. It requires developers to avoid harm to these assets where possible, or otherwise ensure no net loss, or preferably, a net gain, of priority habitats and species. If impacts cannot be fully mitigated, compensation measures must be provided as a last resort. As detailed in the BNG section below, whilst the Scheme will require the removal of habitat, a net gain has been achieved to ensure compliance with policy.
- 7.4.20 As detailed in Table 4.2 of the EAR, out of the ten habitats identified on site, four of them, Mixed Woodland Plantation, Hedgerows, Scattered Trees, and Ditches, were scoped in for further assessment. In the absence of mitigation, the Scheme has the potential to impact the mixed woodland plantation, hedgerows, trees and ditches on the Site through permanent removal of 1.1km of hedgerows, and two trees. Table 4.3 of the EAR outlines the proposed construction control and monitoring measures, including those to be specified within the CEMP and the OCEMP. After the successful implementation of the mitigation measures, no residual effects are anticipated during the construction and operational phases of the Scheme.

Species

- 7.4.21 There were 81 records of protected and/or notable plant species returned by the desk study, the closest in the LWS located 110m north of the Site (Marnham Railway Yard candidate LWS and Fledborough to Harby Dismantled Railway LWS).
- 7.4.22 There were no records of protected/notable plant species within the Site.
- 7.4.23 There were no INNS identified as present within the Site. The closest record of New Zealand pygmyweed (*Crassula helmsii*) was located approximately 500m from the Scheme, in the area of the existing High Marnham Substation.
- 7.4.24 The desk study returned no records of protected and/or notable invertebrate species within 2km of the Site.
- 7.4.25 The northeast of the Site within the existing High Marnham Substation, particularly along the former railway yard and dismantled railway, comprises a mosaic of species-rich calcareous grassland, scrub, woodland and early successional plants. This area of the Site also qualifies as Open Mosaic Habitats on Previously Developed Land (JNCC, 2010). Despite the lack of records, open mosaic habitats can support a diverse invertebrate assemblage, including uncommon species.

- 7.4.26 The Site is predominantly managed arable with some areas of scrub, so lacks diverse plant species for foraging or commuting. Nevertheless, it is likely to support a limited assemblage of common and widespread terrestrial invertebrate species. The likelihood that the Site supports a significant assemblage of protected or notable terrestrial invertebrates was assessed as low.
- 7.4.27 The desk study returned several records of two protected and/or notable fish species within 2km of the Site, European eel (*Anguilla anguilla*) and bullhead (*Cottus gobio*). The majority of records were of European eel located along the River Trent and connected drain network.
- 7.4.28 The closest record of European eel to the Site was located within the Old Trent, Marnham, LWS, approximately 100m south east. There were two records of bullhead located within the River Trent, the closest approximately 700m north east. The River Trent has some connectivity to ditches in close proximity to the Site.
- 7.4.29 The Site does not contain any waterbodies that would be considered suitable for European eel or any other protected/notable fish due to the poor water quality, low water levels and sluggish channel current identified during the habitat assessment of the ditch, alongside lack of connectivity to the River Trent.
- 7.4.30 Great crested newt surveys found no evidence of the species within the site or nearby waterbodies, with desk studies and environmental DNA (eDNA) results from 2019 and 2023 consistently negative. Although some site habitats such as scrub, grassland, hedgerows and broken concrete provide limited shelter for common amphibians, they are not suitable for great crested newt breeding. Targeted surveys of nearby ponds revealed poor suitability and no presence of great crested newts. Updated 2025 surveys showed 'Pond 1' had good suitability but still no evidence of the species. Overall, great crested newts are considered likely absent and the site offers limited suitability for common amphibians.
- 7.4.31 Desk studies identified records of grass snake and common lizard to the east and south east of the Scheme boundary, with the nearest common lizard record about 600m away and grass snake records approximately 2km away. The existing High Marnham Substation and adjacent dismantled railway areas offer suitable reptile habitats, such as unmanaged grassland and scrub, but these are separated from the Site by the River Trent and surrounded by intensively managed farmland with limited connectivity. While a single grass snake was observed within the Site in 2023, the area is largely arable and does not support significant reptile populations, with more suitable habitats located to the north.
- 7.4.32 Bird surveys recorded 21 species on and around the Site, including 14 species of conservation concern and two Schedule 1 birds, a barn owl and peregrine falcon. The Site offers key habitats for breeding and foraging, such as arable land, scrub, hedgerows and adjacent woodland, though nesting opportunities are limited. High counts were noted for woodpigeon, linnet, yellowhammer, common whitethroat and wren, mainly using hedgerows and scrub. While some breeding activity was recorded, the overall value of the Site for breeding birds is considered low due to limited habitat quality and intensive land management. Most notable bird records from desk studies were located off-site, within designated conservation areas.
- 7.4.33 In regard to roosting bats, bat surveys and desk studies identified several bat species within 2km of the Site, with the closest record being a common Pipistrelle foraging within the Site boundary. Five trees on site were found to have moderate or high bat roosting potential, but further aerial inspections determined these features were

suitable only for individual bats or small groups, with one tree potentially suitable for a maternity colony. No bats or evidence of roosting were found during the surveys. Overall, no bat roosts were identified within the Site and the value of the roost resource is considered to be of Site-level importance.

- 7.4.34 In regard to commuting and foraging bats, bat activity surveys, including night-time walks and automated monitoring, found generally low bat activity on the Site, with most activity concentrated to the east and along linear features like woodland edges, tree lines, and hedgerows. Common and Soprano Pipistrelle bats accounted for the majority of recorded calls, with occasional passes from noctule, *Nyctalus sp.*, Leisler's, *Myotis sp.*, and brown long-eared bats. The highest activity was observed during the summer, and overall, the recorded bat assemblage is assessed as being of County-level importance according to UK Bat Mitigation Guidelines.
- 7.4.35 Desk studies identified 108 badger records, including several setts and activity signs in and around the Site, particularly near the existing High Marnham Substation and along the River Trent. Within the Site, a sett and signs such as a latrine were recorded, with additional setts adjacent to the substation and the riverbank. Hedgerows, scrub, and woodland in and near the Site provide suitable habitat, confirming badger use for foraging, commuting and sett creation.
- 7.4.36 Desk studies found one otter record 250m south of the Site and 40 water vole records mainly along the River Trent and drain network, with the nearest water vole record about 100m south. Five American mink records were also noted nearby. The Site is connected via drains. Habitat assessments showed that the surveyed ditches offer sub-optimal conditions for water vole and poor conditions for otter. No conclusive signs of either species were found during surveys, so both are presumed absent from the Site.
- 7.4.37 The desk study returned 11 records of hedgehog (*Erinaceus europaeus*) within 2km of the Site. The closest record was 1.15km south of the Site. The scrub and hedgerows on-site provide suitable areas for commuting and foraging for hedgehog. It is likely that hedgehog is present on-site.
- 7.4.38 Desk studies identified 14 records of brown hare (*Lepus europaeus*) within 2km of the Site, with the nearest record 1.4km away. A dead brown hare was found in on-site arable fields, confirming the species is present. Brown hares typically inhabit open farmland, grassland, and woodland edges, favouring areas with a mix of fields, grasses and hedgerows.
- 7.4.39 A summary of the receptors within the Zone of Influence (Zoi) of the Scheme is included within Table 4.2 of the EAR. As detailed, reptiles, common amphibians, breeding and wintering birds, roosting bats, commuting and foraging bats, badgers, European hedgehogs, and brown hares were identified for further assessment. Specific mitigation measures for these species are provided in Table 4.3 of the EAR.
- 7.4.40 Following the successful implementation of these mitigation measures, the Scheme is considered compliant with Policy ST38 of the BLP, which requires the protection of protected and priority species. It has been assessed that no residual effects are anticipated during either the construction or operational phases of the Scheme.

Arboriculture

- 7.4.41 A total of 34 arboricultural features were recorded within the study area. These were recorded as 17 individual trees (T), nine groups of trees (G) and eight hedgerows (H).
- 7.4.42 Each arboricultural feature was assigned to one of four categories, as listed in Table 7.1.

Table 7.1 Tree categories recorded

Tree Category	No. of Individual Trees	No. of Groups of Trees	No. of Hedgerows	No. of Woodland Groups
Category A (trees of high quality)	1	-	-	-
Category B (trees of moderate quality)	10	7	-	-
Category C (trees of low quality)	5	2	8	-
Category U (trees of poor quality unsuitable for retention)	1	-	-	-
Total	17	9	8	-

- 7.4.43 It was confirmed by BDC that no trees surveyed are subject to Tree Preservation Order or Conservation Area restrictions.
- 7.4.44 It was confirmed that there are no designated ancient woodlands or veteran trees in the study area.
- 7.4.45 A total of ten individual trees (T3, T4, T5, T8 T11, T12, T13, T14, T15, T16), two groups of trees (G5 and G7) and eight hedgerows (H1, H2, H3, H4, H5, H6, H7 and H8) are located within, or immediately adjacent to development works and will require full or partial removal to facilitate the proposals.
- 7.4.46 No RPA incursions are anticipated as a result of the Scheme.
- 7.4.47 No facilitation pruning works are anticipated as a result of the Scheme.
- 7.4.48 The proposed removals are limited to moderate and low-quality Category C trees, which have minimal amenity value. These removals represent a low impact on the site's overall visual and arboricultural value, and canopy loss will be appropriately mitigated. A tree replacement strategy forms part of the Landscape Mitigation Plan submitted for outline consent. Upon approval, a detailed tree replacement strategy will be provided as required.
- 7.4.49 In accordance with Policy ST39 of the BLP, arboricultural surveys have confirmed that no ancient woodland or veteran trees will be lost. The surveys are supported by details of protective measures during construction, a mitigation strategy including replacement planting of equivalent value, and a 10-year management plan. As a part of BNG, 40 new trees are proposed as a part of statutory net gain. Accompanied to BNG requirements is need for a 30-year management plan, the requirement for the 10 years is met within this.

- 7.4.50 Complementing the requirements for the provision of five native trees per 1,000 m² of non-residential floorspace or contribute £100 per sapling if on-site planting is not feasible, as reinforced by the Local Plan Infrastructure Delivery Plan (2023). It has been calculated that the total floorspace of the constructed usable buildings, excluding major infrastructure, amounts to a combined area of 1,105 m². This achievement is complemented by the planting of 40 trees, as detailed in the Landscape Mitigation Plan, significantly exceeding the required minimum of 5.5 trees based on the criteria specified in the Planning Obligations SPD.
- 7.4.51 All tree works will be carried out by an Arboricultural Association approved contractor in accordance with BS 3998:2010: Tree Work – Recommendations.
- 7.4.52 Due to the nature of the proposed works, once further detail is known as to the construction process, a site-specific Arboricultural Method Statement (AMS) will be required to protect trees to be retained over the course of the works. This should be specified as a post-planning condition by BDC.
- 7.4.53 Preliminary Tree Protection Measures will be incorporated into the pre-commencement AMS.

BNG

- 7.4.54 The BNG Report reports that the site has a baseline value of 83.60 Biodiversity Units. The baseline is presented in Table 7.2 below. The baseline hedgerows on-site have been calculated as having a value of 13.09 BU, as shown in Table 7.3. The baseline for watercourses on-site has been calculated as having a value of 0.31 BU, as shown in Table 7.4.

Table 7.2 Baseline area habitats

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Grassland	Modified Grassland	0.48	Low	Poor	High	1.10
Grassland	Modified Grassland	0.77	Low	Good	High	5.31
Grassland	Other neutral	0.01	Medium	Moderate	Low	0.08
Cropland	Cereal Crops	31.13	Low	Condition Assessment N/A	High	71.60
Woodland and Forest	Other Woodland; Mixed	0.22	Medium	Moderate	Low	1.76
Heathland and Shrub	Mixed Scrub	0.08	Medium	Good	Low	0.96
Heathland and Scrub	Bramble Scrub	0.38	Medium	Condition Assessment N/A	Low	1.52

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Heathland and Scrub	Blackthorn Scrub	0.01	Medium	Poor	Low	0.04
Sparsely vegetated land	Tall Forbs	0.07	Low	Good	Low	0.42
Sparsely vegetated land	Tall Forb	0.19	Low	Poor	Low	0.38
Urban	Developed, sealed surface	2.73	Very Low	N/A - Other	Low	0
Individual tree	Rural	0.03	Medium	Good	Low	0.40
Individual	Rural	0.004	Medium	Moderate	Low	0.03
Total		36.11				83.60

Table 7.3 Baseline Hedgerow

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Hedgerow	Native hedgerow - associated with bank or ditch	0.51	Medium	Good	High	7.04
Hedgerow	Native hedgerow with trees - associated with bank or ditch	0.02	High	Good	High	0.41
Hedgerow	Species-rich native hedgerow	0.08	Medium	Good	High	1.10
Hedgerow	Species-rich native hedgerow	0.02	Medium	Moderate	High	0.18
Hedgerow	Native hedgerow	0.48	Low	Good	High	3.31

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Hedgerow	Native hedgerow	0.06	Low	Moderate	High	0.28
Hedgerow	Native hedgerow	0.01	Low	Poor	High	0.02
Hedgerow	Ecologically valuable line of trees	0.08	Low	Moderate	High	0.74
Total		1.26				13.09

Table 7.4 Baseline Watercourse

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Watercourse	Ditch	0.02	Medium	Poor	High	0.07
Watercourse	Ditch	0.06	Medium	Poor	High	0.24
Total		0.08				0.31

- 7.4.55 As shown in Table 7.5, the Scheme will create 15.26ha of developed land or 40.16% of the land within the red line boundary (38ha); sealed surface. The remaining land will comprise of retained habitat and habitat creation, which includes 1.48ha of habitat that will be reinstated to what it was previously. The habitat creation will generate 99.83 BU.
- 7.4.56 As shown in Table 7.6, there will be a total of 0.16km of hedgerow/ecologically valuable line of trees retained. Post development there will be 1.98km of new hedgerow created which equates to 19.06 BU.
- 7.4.57 As shown in Table 7.7, the two ditches within the Site to east of the Site will be retained, with one ditch being enhanced which equates to 0.13 BU.

Table 7.5 Post Development Habitat

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Grassland	Modified Grassland	10.38	Low	Moderate	High	41.41
Grassland	Modified Grassland	0.16	Low	Poor	High	0.36
Grassland	Other neutral	7.05	Medium	Moderate	Low	47.20

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Lakes	Pond (priority habitat)	0.62	High	Poor	High	2.77
Woodland and Forest	Other Woodland; Broadleaved	0.61	Medium	Poor	Low	2.04
Heathland and Shrub	Mixed Scrub	0.47	Medium	Moderate	Low	3.15
Urban	Developed, sealed surface	15.26	V Low	N/A	Low	0
Cropland	Cereal crops	1.18	Low	N/A	High	2.62
Heathland and shrub	Bramble scrub	0.05	Medium	N/A	Low	0.19
Sparsely vegetated land	Tall forbs	0.02	Low	Good	Low	0.10
Total		35.8				99.83

Table 7.6 Post development hedgerow

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Hedgerow	Species rich native hedgerow—associated with ditch or bank	0.91	High	Good	High	9.24
Hedgerow	Species rich native hedgerow—associated with ditch or bank	0.031	V High	Good	High	0.42
Hedgerow	Species rich native hedgerow—associated with ditch or bank	0.41	High	Good	High	5.53

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Hedgerow	Native hedgerow	0.40	Low	Good	High	1.80
Total		1.98				19.06

Table 7.7 Post development watercourse

Broad Habitat	Metric Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline Biodiversity Units
Watercourse	Ditch	0.02	Medium	Moderate	High	0.13
Total		0.02				0.13

- 7.4.58 As detailed in the BNG Report, an assessment based on an ecological survey undertaken in March 2025 has assessed the ecological constraints and provide recommendations for further surveys, assessments and mitigation in respect of the proposed works.
- 7.4.59 If the habitat creation/enhancement recommendations are followed, this could deliver an on-Site net gain of 18.70 habitat biodiversity units (+22.37%), 7.26 hedgerow units (+55.49%) and 0.06 watercourse units (+19.87%) meaning the overall Scheme will result in a net gain in biodiversity on-Site.

Ecology (including Arboriculture) Conclusion

- 7.4.60 National Grid is committed to implementing the identified control measures to avoid, reduce or mitigate any potential impacts that may occur during the construction and operation of the Scheme. The control measures detailed in Table 4.3 of the EAR should ensure that no impacts are sustained upon the aforementioned ecological features during the construction and operational phases of the Scheme.
- 7.4.61 Policy ST38 requires the protection and enhancement of biodiversity and geodiversity, with the objective of securing no net loss, or preferably, a net gain of habitats and species. While the Scheme necessitates the removal of certain habitats, including 1.1 km of hedgerows and two trees, the mitigation measures outlined in the EAR, and to be incorporated into both construction and operational management plans, will ensure that there are no residual effects on habitats and species. In accordance with the Environment Act (2021) and local planning policies regarding biodiversity net gain, the Scheme will deliver in excess of a 10% net gain in biodiversity. Consequently, the Scheme achieves biodiversity net gain and satisfies the requirements of Policy ST38.
- 7.4.62 In line with Policy ST39 of the BLP, arboricultural surveys have confirmed that no ancient woodland or veteran trees will be lost as a result of the Scheme. The surveys are accompanied by details of protective measures to be implemented during construction, a mitigation strategy that includes replacement planting of equivalent

value, and a 10-year management plan. As part of the statutory biodiversity net gain requirements, 40 new trees are proposed. Furthermore, a 30-year management plan will be implemented to meet the long-term maintenance requirements of BNG, with the 10-year management obligation encompassed within this period.

- 7.4.63 The construction control measures will be included in the CEMP and their implementation will be monitored by National Grid.
- 7.4.64 Overall, the Scheme is assessed as being in accordance with the BLP, the NPPF, NPS EN-1 and NPS EN-5. By minimising adverse impacts on biodiversity and delivering an overall net gain, it is also in accordance with National Grid's statutory duties.

7.5 Landscape and Visual Character

- 7.5.1 National Grid has a statutory duty under the Electricity Act 1989 to conserve and enhance the natural beauty of the countryside. Local and national planning policies also seek to conserve and enhance landscape and visual amenity.
- 7.5.2 Although rural economic growth is not the Scheme's primary focus, Policy ST8 discusses rural development that will involve economic growth. As the Scheme will encourage rural economic growth at least during construction, the policy is relevant. Policy ST8 emphasises that development should not negatively affect the character of the area, the surrounding townscape or landscape, the settlement's form and character, or biodiversity and heritage assets. Policy ST9 similarly requires that the scale and nature of proposals do not have significant adverse impacts on the location's character, landscape, biodiversity or heritage assets. Policy ST33 mandates high-quality design standards, with particular attention to integrating strong landscape design for developments adjacent to the countryside. Finally, Policy ST35 offers overarching support for developments that enhance the nature and quality of Bassetlaw's landscapes.
- 7.5.3 Policy ST37 emphasises the need to protect and enhance the landscape character and distinctiveness of green and blue infrastructure. The site is located near the River Trent, identified as a main green corridor. This policy ensures that development does not adversely affect the function, setting, biodiversity, landscape quality, access, or recreational value of these corridors. Major development proposals situated wholly or partly within the minimum buffer zone of a main green corridor (30m from each side of the centre line) or a minor green corridor (15m from each side) must be accompanied by an ecological impact assessment and/or a landscape statement proportionate to the proposal's nature and scale.
- 7.5.4 Policy ST38 requires development to protect and enhance the biodiversity and geodiversity of Bassetlaw by safeguarding, restoring, and providing appropriate buffers around wildlife and geological features at both local and broader landscape scales to create robust ecological networks. Policy ST39 highlights the need to consider the value of trees and hedgerows, not only on their individual merit but also for their contribution to amenity and their role within groupings in the wider landscape setting. In addition, Policy ST40 requires that landscape mitigation measures should also serve to conserve and, where possible, enhance historic assets and landscapes. Policy ST49 of the BLP requires renewable development to be supported by mitigation measures that ensure impacts upon the location, setting and position in the wider landscape, resulting from the development's siting and scale, are mitigated for.

- 7.5.5 The draft Design Code Guide SPD emphasises the importance of screening industrial uses from public view. As outlined in Design Code NLO-10, this can be effectively achieved through the strategic use of landscaping to obscure development from public vantage points. Furthermore, Design Code NLO-6 underscores the significant role of retaining existing vegetation and enhancing landscaping, both to improve biodiversity and to create visually appealing, well-landscaped environments. Additionally, Design Code NLO-5 identifies hedgerows as valuable natural features that can serve as landscape boundaries for developments.
- 7.5.6 At a national level, starting with paragraph 135, the NPPF sets out that planning decisions should ensure that developments are (inter alia) visually attractive, as a result of good architecture, layout and appropriate and effective landscaping, and that they are sympathetic to local character and history. At paragraph 187, the NPPF requires that decisions should protect and enhance valued landscapes.
- 7.5.7 With regard to landscape and visual effects, NPS EN-1 (Paragraphs 5.10.5, 5.10.35 and 5.10.36) recognises that virtually all proposed energy infrastructure will give rise to landscape and visual effects and that the Secretary of State should judge whether these effects outweigh the benefits of the project. NPS EN-1 (Paragraphs 5.10.15 - 5.10.19) advises applicants to carry out a landscape and visual impact assessment of effects associated with the construction and operation of proposals.
- 7.5.8 NPS EN-5 (Paragraph 2.11.2) sets out that the Secretary of State should be satisfied that proposals, so far as is reasonably possible, comply with the Horlock Rules. Several of the Horlock Rules (as set out in Section 2.6 of this PDAS) relate to landscape and visual amenity considerations in the siting of substations.

Landscape appraisal

- 7.5.9 As detailed in Chapter 5 of the EAR, the Scheme, including the existing High Marnham Substation, is located within a predominantly flat and open rural landscape characterised by low hedgerows and occasional trees. The flat topography results in largely unobstructed views towards the Site from most directions.
- 7.5.10 There are no designated landscape related sites within the study area. However, several Grade II listed buildings are present in the south east and southern extents of the study area. Additionally, the River Trent, which traverses the eastern side of the study area, is classified as a green corridor.
- 7.5.11 The study area is situated within National Character Area (NCA) 48: 'Trent and Belvoir Vales' (Natural England, 2013).
- 7.5.12 At the regional level, the East Midlands Regional Landscape Character Assessment identifies the majority of the study area as 'Group 3: River Valley Floodplain – 3a: Floodplain Valleys' Landscape Character Type (LCT), with areas near 'Group 4: Lowland Vales – 4a: Unwooded Vales.'
- 7.5.13 Locally, the Bassetlaw Landscape Character Assessment (2009) defines the landscape character of the administrative area, with most of the study area (excluding the eastern extent) falling within the Mid-Nottinghamshire Farmlands - Policy Zone 12: Normanton-on-Trent.
- 7.5.14 The eastern portion of the study area lies within the Newark and Sherwood District Council administrative boundary. According to the Newark and Sherwood District Council Landscape Character Assessment (Supplementary Planning Document, 2013), this area is classified as 'Trent Washlands – River Meadowlands (B)'. This is

described as a low-lying agricultural region associated with the broad valleys of the Trent and Soar, characterised by productive arable farming, meadowlands, small nucleated villages, market towns and cities, power stations, and quarries.

Construction impacts

- 7.5.15 As detailed in the EAR, given the relatively small scale of the Scheme in relation to the scale of the NCA, it is not anticipated that there will be any effects that are likely to materially alter the character of the wider NCA. Whilst the Site and its immediate environment are largely defined by the presence of the existing substation, railway embankment and associated electrical transmission infrastructure, the former High Marnham Power Station is cited as a key characteristic of the landscape here. The predominantly rural nature of the wider LCT is such that it is considered to be of Medium sensitivity to development of this nature.
- 7.5.16 Effects upon notable characteristics such as pasture and arable fields, boundary vegetation and scrub vegetation will be noticeably affected at the local level, however, this will be largely contained within the Scheme boundary such that effects upon the wider LCT will be reduced considerably.
- 7.5.17 During the construction phase there are likely to be noticeable effects upon the character of the landscape, with the influence of construction phase activity (including noise, dust and a reduction in tranquillity) extending beyond the Site boundary into the wider LCT, resulting in a Minor Adverse level of effect.
- 7.5.18 At the local (Site) scale, the character of the landscape is already heavily influenced by the presence of the former Power Station, the existing substation and highly visible electrical transmission infrastructure, however, the surrounding landscape is largely rural in nature. The sensitivity at the local scale is considered to be low.
- 7.5.19 Construction phase activity is likely to contribute to a considerable increase in the presence of noise and disruption in an otherwise relatively tranquil setting, leading to a temporary Moderate Adverse level of effect.
- 7.5.20 Measures contained in Table 5.2 of the EAR submitted with the planning application, will be implemented to reduce landscape impacts of the Scheme. As listed, production of a CEMP will instil good practice construction working activities.

Operational impacts

- 7.5.21 As described in Section 5.6 of the EAR, the Scheme's infrastructure will introduce elements that are not wholly consistent with the existing landscape character, with the degree of incongruity varying throughout the operational phase. Accordingly, the appraisal as detailed in the EAR has assessed the anticipated landscape effects both at Year 1 of operation and at Year 15, when the proposed mitigation planting is expected to have reached maturity and residual effects are more fully realised.
- 7.5.22 Given its relatively small scale in comparison to the wider NCA, it is not anticipated that the Scheme will result in any effects likely to materially alter the character of the NCA. As aforementioned, at the regional level, the Site and its immediate surroundings are defined by existing infrastructure including the substation, railway embankment and electrical transmission lines, with the former High Marnham Power Station also cited as a key landscape feature. The wider LCT, which is predominantly rural, is assessed as having medium sensitivity to this type of development.

- 7.5.23 While notable local landscape features, including pasture, arable fields, boundary vegetation and scrub will be noticeably affected, impacts on the broader LCT are expected to be limited, especially as mitigation planting matures. Considering both the proposed mitigation measures and the presence of substantial existing infrastructure immediately adjacent to the Site, the landscape is considered capable of absorbing the localised changes without significantly altering its overall character. Consequently, the appraisal concludes that the operational phase of the Scheme is likely to result in only a minor to negligible adverse effect upon the wider LCT.
- 7.5.24 At the local scale, the landscape character is already heavily influenced by existing infrastructure and the former Power Station, although the surrounding area remains largely rural. The sensitivity at this scale is therefore considered low. Upon commencement of operations, construction related noise and activity will cease and part of the Site will transition from agricultural to industrial use. However, given the proximity of the existing infrastructure, the operational phase is anticipated to result in a moderate to minor adverse effect at Year 1, reducing to minor adverse by Year 15, once mitigation planting is established.
- 7.5.25 Whilst the Scheme will materially alter the landscape use of much of the Site from rural to industrial, the close proximity of the existing substation and the presence of existing electrical transmission infrastructure reduces residual effects considerably, such that the level of effect is no greater than Minor Adverse.
- 7.5.26 The measures outlined in Table 5.3 of the EAR specify the control and monitoring protocols for managing landscape and visual impacts during the operational phase of the Scheme. These measures include, but are not limited to, embedded design features and targeted planting strategies to provide visual mitigation.

Visual

- 7.5.27 As noted in Chapter 5 of the EAR, movement, change, and activity on construction sites are more noticeable to people than static features, meaning the evolving nature of the Scheme, visible machinery, and construction compounds will attract significant attention, further amplified by associated noise and lighting. However, these effects will be temporary and short term, lessening with the use of considerate construction practices such as careful placement of compounds, controlled lighting, low material stockpiles and tree protection. Most of these impacts will diminish once construction is completed and the Scheme becomes operational, with further reductions occurring as mitigation planting matures.

Residential receptors

- 7.5.28 As detailed in Chapter 5 of the EAR, there are a number of residential receptors located close to the Scheme, some of which are holiday destinations. Due to their rural setting, all of these receptors are considered highly sensitive to changes in their visual environment. For assessment purposes, receptors likely to experience similar views and magnitudes of effect were grouped together where appropriate.
- 7.5.29 Fledborough House Farm, situated to the north of the Scheme, has its south westerly views towards the Site and existing infrastructure largely screened by established vegetation along the railway embankment. However, taller construction machinery, such as cranes, may still be partially visible. During the construction phase this will result in a moderate to minor adverse effect, which will be temporary. Once operational, the only noticeable changes visible above the trees will be the relocated

pylons, which when considered against the existing baseline would contribute a negligible degree of change to the overall composition of the view. It is therefore considered that there will be a Negligible Adverse level of effect.

- 7.5.30 Properties accessed via Main Street, about 1km north of the Scheme, including Long Row Cottages, The Gables, North Farm, Top Farm, Manor Cottages and The Potteries, may have occasional glimpses of taller construction machinery. These views are mostly obscured by landform and intervening vegetation. The construction phase will lead to a minor adverse effect for these properties, again temporary. Once operational, the only noticeable changes visible above the trees are likely to be the re-located pylons, which when considered against the existing baseline would contribute a negligible degree of change to the overall composition of the view. It is therefore considered that there will be a Negligible Adverse level of effect.
- 7.5.31 To the south and south east, properties north of Hollowgate Lane, such as Hill Farm, Woodlands, Rookery Cottage, Hawthorns and park homes at Sparrow Lane Park, are in closer proximity and have limited existing vegetation screening the Site. Here, construction activities will be highly visible, resulting in a major adverse effect during the construction phase, although the impact will be temporary until mitigation planting matures. Once operation at Year 1, the removal of some existing mitigation planting, coupled with proposed mitigation planting not yet having reached maturity, means that there will be largely unobstructed views of the Scheme, as well as previously obscured views of the existing substation. This will increase the presence of development within the view resulting in a Major to Moderate Adverse level of effect. By Year 15, the proposed mitigation planting will have reached a level of maturity where it can perform its intended screening function, reducing the level of effect to Moderate to Minor Adverse
- 7.5.32 Further south and east, properties including Trent View Cottages, The Bungalow, and visitors to Marnham Meadows Holiday Park will have their views mostly obscured by vegetation, though occasional glimpses of construction activity are still likely. The effect for these receptors will be minor adverse and temporary. Once operational, at Year 1, the removal of some existing mitigation planting, coupled with proposed mitigation planting not yet having reached maturity, means that glimpses of the Scheme, as well as previously obscured views of the existing substation are likely to be possible through existing intervening vegetation, resulting in a Moderate to Minor Adverse level of effect. By Year 15 proposed mitigation planting will have reached a level of maturity where it can perform its intended screening function, reducing the level of effect to Minor Adverse.
- 7.5.33 Properties along the western urban fringe of South Clifton, the northern fringe of Low Marnham, and the north eastern fringe of Normanton on Trent, located between 1 to 1.5km from the Scheme, may experience distant and brief glimpses of construction activity. Due to substantial intervening vegetation, the adverse effect during construction is expected to be no greater than minor and will be temporary.
- 7.5.34 Finally, views from Station Cottages and Station House to the north of the railway embankment will be completely obscured by existing landform and vegetation, meaning these properties will not experience any visual effects from construction activities. Once operational, views will be completely obscured by existing landform and vegetation associated with the railway embankment.

Recreation and Access Receptors

- 7.5.35 Several Local Authority PRowS within the study area are expected to experience views of the Scheme to varying extents, and all are considered to be of medium sensitivity. For the purpose of assessment, these PRowS have been grouped based on the degree of visual impact anticipated.
- 7.5.36 PRowS 111/4/1, 111/8/1, 111/9/1, and 111/7/2 are situated close to the Site and are likely to have direct views of construction activities, which will form a highly noticeable feature and alter the visual character of these routes. During the construction phase, the lack of mitigation planting will result in a major to moderate adverse effect, although this will be temporary. Once operational, at Year 1, the proposed mitigation planting will not yet have reached maturity, therefore there will be views of the Scheme. This will result in a noticeable increase in the presence of electrical transmission infrastructure within the view, leading to a Moderate Adverse level of effect. By Year 15, the proposed mitigation planting will have reached a level of maturity where it can perform its intended screening function, reducing the level of effect to Minor Adverse.
- 7.5.37 PRowS 98/7/1 and 98/12/2 are located slightly further from the Site to the north west and north east. While the Scheme may be visible from these locations, existing vegetated field boundaries will significantly restrict views. The construction phase is expected to result in a moderate to minor adverse effect for these PRowS, and this impact will be temporary. Once operational, views of the Scheme will be largely obscured by the intervening railway embankment, with the only noticeable changes visible above the trees being to the relocated pylons, which would not alter the overall composition of the view, resulting in a Negligible Adverse level of effect.
- 7.5.38 Fledborough Road, with Hollowgate Lane and Polly Taylor's Road to a lesser extent, are also in close proximity to the Site and have limited roadside vegetation to obscure views. Construction activity will be highly noticeable for users of these routes, leading to a moderate adverse effect during the construction phase, although this will not be permanent. Once operational, at Year 1, the proposed mitigation planting will not yet have reached maturity, therefore there will be views of the Scheme. This will result in a noticeable increase in the presence of electrical transmission infrastructure within the view, leading to a Moderate to Minor Adverse level of effect. By Year 15, the proposed mitigation planting will have reached a level of maturity where it can perform its intended screening function, such that the only readily noticeable visible changes will be the relocated pylons, which would not alter the overall composition of the view, reducing the level of effect to Minor to Negligible Adverse.
- 7.5.39 Other PRowS, highways, and access tracks in the area may also have views of the Scheme, but these are likely to be sufficiently screened by existing and future mitigation vegetation, resulting in no greater than a minor adverse effect during the construction phase. Once operational, these views are likely to be sufficiently obscured by existing intervening vegetation and subsequently by proposed mitigation planting, that the level of effect will be no greater than Minor Adverse.
- 7.5.40 Whilst there are a number of additional PRowS, highways and access tracks that are likely to experience views of the Scheme, these views are likely to be sufficiently obscured by existing intervening vegetation and subsequently by proposed mitigation planting, that the level of effect will be no greater than Minor Adverse.

- 7.5.41 To avoid or prevent potential impacts occurring or to reduce their significance upon landscape character and visual amenity receptors during the operation period, the mitigation measures as presented Table 5.3 of the EAR will be implemented.

Landscape and Visual Character Conclusion

- 7.5.42 When determining the acceptability of the Scheme it is important to recognise that energy projects will often give rise to landscape and visual effects and that a judgement is therefore required as to whether the scale and significance of such effects is sufficient to outweigh the benefits of the project. This is expressly recognised in NPS EN-1 (Paragraph 5.10.35).
- 7.5.43 Whilst the Scheme will introduce large-scale built form and infrastructure into a previously semi-rural setting (albeit in close proximity to existing electrical infrastructure) which is likely to affect the visual amenity for nearby residents and users of PRowS, highways and tracks, mitigation through strategic planting of hedgerows, woodland and trees, and maintenance of the Site's field boundaries will help to screen views and integrate the development into the landscape over time, reducing effects considerably.
- 7.5.44 The Scheme demonstrates compliance with all relevant local landscaping policies. In particular, it aligns with Policy ST37 ensuring that local green and blue infrastructure, including the River Trent, will remain largely unaffected by the Scheme following the implementation of mitigation measures. The Scheme also adheres to Policies ST38 and ST39 by enhancing and utilising existing landscape features and vegetation to maximum effect through strategic planting. This approach not only improves screening and delivers BNG but also contributes positively to the wider landscape setting and ensures that the amenity value of the local environment is maintained.
- 7.5.45 Furthermore, these measures collectively satisfy the requirements of Policy ST49 of the BLP, which stipulates that renewable energy developments must be supported by mitigation strategies addressing factors such as location, setting and integration within the wider landscape. Through its careful siting, scale and robust mitigation planting, the Scheme ensures that any potential landscape impacts are effectively managed and minimised.
- 7.5.46 As demonstrated above, the Scheme will not adversely affect the function, setting, access, visual or recreational value of receptors and assets within the district, provided that the mitigable effects are addressed through the implementation of the 15-year mitigation landscaping scheme. The Scheme has given due consideration to the draft Design Code Guide SPD, incorporating strategic screening and enhancements to the vegetated landscape. Residual effects at Year 15 are therefore not expected to exceed Moderate to Minor Adverse levels for any of the identified receptors.
- 7.5.47 The future landscape and visual baseline is anticipated to reflect a more suburban character, likely resulting in lower landscape sensitivity and reduced magnitude of change which will result in a potentially lower overall landscape effect. However, in visual terms, this increase in suburbanisation may introduce additional visual receptors (i.e. an increased number of residents close to the Site), which could result in potentially heightened adverse visual effects overall, however, it is assumed that any proposed development within close proximity to the Scheme would incorporate its own visual mitigation measures.

- 7.5.48 On this basis, the Scheme is assessed as being in accordance Policy ST8, ST9, ST33 and ST35 of the BLP, which set out that development can be considered acceptable if it respects the form, scale and character of the landscape, through careful siting, scale, design and use of materials. The proposed will employ the use of landscaping to ensure that long-term impacts from national to local levels will be limited, owing in part to the existing site being already largely dominated by industrial use despite being broadly within a countryside setting.
- 7.5.49 If it is not deemed that the Scheme has demonstrated local policy applicability, it can be argued that the importance of the development outweighs the harm caused. Given the need for the Scheme (as set out in Section 8) and the fact that there would be no significant landscape and visual effects with the proposed mitigation, the balance is considered to be firmly in favour of the Scheme. The Scheme is therefore assessed as being in accordance with NPS EN-1, NPS EN-5, the NPPF and the relevant policies within the BLP. By minimising adverse impacts on landscape and visual amenity, it is also in accordance with National Grid's statutory duties.

7.6 Historic Environment

- 7.6.1 National Grid has a statutory duty under Schedule 9 paragraph 1 of the Electricity Act 1989 to protect buildings and objects of architectural, historic or archaeological interest.
- 7.6.2 Development Plan policies, including ST40 of the BLP, seek to conserve, enhance and manage Bassetlaw's historic environment, with support being given to those proposals that safeguard the heritage significance and setting of locally and nationally important heritage assets. As detailed within policy, applicants will be required to submit evidence in line with best practice and relevant national guidance, examining the significance of any heritage assets. These sentiments are echoed in Policy ST49 of the BLP.
- 7.6.3 The NPPF (paragraph 207) requires applicants to describe the significance of any heritage assets (including their setting) affected by development, providing a level of detail which is proportionate to the assets' importance.
- 7.6.4 The NPPF policies differentiate between designated heritage assets and nondesignated heritage assets.
- 7.6.5 With regard to designated assets, paragraph 212 requires that 'when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance'. In other words any harm to a designated heritage asset must be given great weight in the planning balance irrespective of the level of that harm.
- 7.6.6 Where harm to a designated asset is deemed to be 'substantial' paragraphs 213 and 214 of the NPPF are engaged. Where there would be 'less than substantial harm' to a designated asset paragraph 215 is engaged, which requires that harm to be weighed against the public benefits of the proposal.
- 7.6.7 In relation to non-designated heritage assets paragraph 216 confirms that any effects should be taken into account in determining the application, continuing that "in weighing applications that directly or indirectly affect non-designated heritage assets,

a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset”.

- 7.6.8 The following summary outlines the historic environmental features relevant to the planning applications, as detailed in Chapter 6 of the EAR.

Designated heritage assets

- 7.6.9 There are no designated heritage assets within the Site itself. However, within a 1km study area, three listed buildings and one Conservation Area (CA1) are present.
- 7.6.10 South Clifton Conservation Area (CA1), located approximately 740m to 1.3km south east of the Site and separated by the River Trent, is a historic village with origins dating back to at least 1300. Its significance is derived from its historical and evidential value, with its rural riverside setting and characteristic red brick architecture contributing to its medium heritage value.
- 7.6.11 Marnham Hall, a Grade II listed manor house situated about 500m south of the Site near the River Trent, dates from the 16th century and was remodelled in the early 18th century. The Hall has notable historical associations, particularly with the Cartwright family, and its significance is enhanced by its well-maintained grounds, which are recorded as a non-designated heritage asset. Marnham Hall is assessed as having medium heritage value.
- 7.6.12 The Church of St George, a Grade II* parish church approximately 905m north east of the Site, traces its origins to the 13th century and features elements from successive periods of reconstruction. Associated with the church are the lychgate and railings, dating from the mid-19th century, located about 930m north east of the Site. The church and these features hold aesthetic, historical, and communal value, with the setting of the church informed by the surrounding rural landscape. Both the church and the associated railings are considered to be of medium heritage value due to their architectural and historic interest and group association.
- 7.6.13 For Marnham Hall, Table 6.1 of the EAR identifies appropriate construction control measures to protect the asset and its setting. The grounds of Marnham Hall are a key component of the Hall's heritage value, and increased noise levels during construction have the potential to temporarily detract from the experience of this and associated assets. However, given the short-term nature of construction activities, the overall impact is not considered significant. Traffic management measures, while not essential, may be beneficial in further mitigating any temporary changes to the asset's setting, and such measures will be implemented as outlined in the CTMP.
- 7.6.14 A similar potential temporary impact has been identified for the medium-value CA1, resulting from increased construction traffic noise. The Conservation Area's significance is informed by its quiet, isolated rural setting, and any increase in noise could temporarily affect how the asset is experienced. As with Marnham Hall, the impact is considered minor due to its temporary nature, and traffic management measures could offer additional mitigation, though they are not deemed essential. As summarised in the Cultural Historic Desk Based Assessment (HDBA) (Ref. EDEU-ARC-ENVS-XXXXXX-RP -ENS -000022), due to the temporary nature of this activity, the scale of harm would be less than substantial harm.
- 7.6.15 No operational phase mitigation measures are required for designated heritage assets, as no significant adverse impacts are anticipated once the Scheme is complete.

Non-designated heritage assets

- 7.6.16 There is a total of 40 non-designated heritage assets recorded by the Historic Environment Record within the 1km study area, of these, one asset is located within the Site (Potential Enclosures at High Marnham Solar Farm).
- 7.6.17 As described in Table 6.1 of the EAR, the asset (Potential Enclosures at High Marnham Solar Farm) lies partially within the Scheme boundary. Therefore, it could potentially experience a direct (physical) impact from construction of the Scheme through the permanent loss of archaeological remains. This could have a negative impact on the asset's significance. As detailed, to mitigate this, archaeological trial trenching is to be undertaken to target and further investigate the potential remains.
- 7.6.18 Dependent on the results of the trial trenching, an Archaeological Mitigation Strategy may need to be implemented via a Written Scheme of Investigation. This will identify risk of remains being impacted by the Scheme and develop a mitigation approach to be implemented ahead of construction works to reduce potential impacts. As detailed in the HDBA, giving weight to several factors including the asset's current low value, partial loss of remains from the Scheme, and the implementation of mitigation comprising measures such as targeted trial trenching, archaeological recording and/or watching brief, the scale of harm to the asset would be moderate though ultimately categorised as less than substantial harm.
- 7.6.19 A number of other non-designated heritage assets are discussed in Chapter 6 of the EAR. As detailed in Table 6.1 of the EAR, non-designated asset 17 may benefit from traffic management measures to reduce potential temporary changes to its setting. Although these measures are not considered essential, such controls will be implemented through the CTMP. For all other non-designated heritage assets, mitigation is not required, as the temporary impacts of construction are not considered significant due to the low value of these buildings. General control measures related to temporary construction activities will be applied as appropriate through the CEMP and CTMP. As summarised in the HDBA, due to the temporary nature of this activity, the scale of harm would be negligible causing less than substantial harm.
- 7.6.20 Table 6.2 of the EAR identifies potential operational impacts on three non-designated heritage assets of low value located along Hollowgate Lane. These impacts consist of possible permanent changes to the assets' setting due to visual intrusion associated with the Scheme's operation. The north-facing façades of these historic houses overlook agricultural land, which contributes to their rural character and significance. While the existing substation already introduces an industrial element to their setting, the Scheme would further encroach on the landscape, resulting in a negative visual impact. Although this change is not considered significant, control measures such as the introduction of screening through planting, can help soften the visual intrusion. Construction control measures will be integrated into the CEMP to mitigate and minimise potential effects on landscape and visual amenity. As summarised in the HDBA, the scale of harm from the potential change in setting would be less than substantial harm, but control measures could benefit these assets by reducing the visual intrusion from the Scheme.
- 7.6.21 The settings of many of the other assets, both designated and non-designated, are limited to their immediate vicinities or within their village environments and as such no impacts are expected during construction or operation.

Historic Environment Conclusion

- 7.6.22 Policy ST40 of the BLP stipulates that the Council will support development proposals which safeguard the heritage significance and setting of both locally and nationally important heritage assets. In accordance with this policy, the Scheme has been carefully designed to avoid, reduce or mitigate potentially significant effects on cultural heritage and archaeology assets. The assessment presented within the Cultural Heritage section of the EAR concludes that with the adoption of mitigation measures during construction, that there would be less than substantial significant effects on the assets described above. No adverse operational effects are anticipated; accordingly, it is considered that the Scheme will result in less than substantial harm to the significance of heritage assets during construction and operation.
- 7.6.23 As demonstrated the Scheme has described the significance of any heritage assets (including their setting) and has provided a level of detail which is proportionate to the assets' importance. With the implementation of the proposed mitigation measures, it is concluded that there would be no significant impact on any heritage assets within the study area during the construction and operation of the Scheme. The Scheme would not result in substantial harm to any designated heritage assets. Accordingly, the policy assessment contained in Paragraph 214 of the NPPF is not engaged.
- 7.6.24 As the Scheme has been assessed as causing less than substantial harm, the Scheme is likely to be weighed against Paragraph 215 and 216 of the NPPF in relation to designated and non designated assets respectively.
- 7.6.25 It is considered that any adverse effect should be considered harm in the context of the NPPF, and therefore only a neutral effect should be considered as indicating no harm to designated heritage assets. The assessment presented within the Cultural Heritage section of the EAR concludes that with the adoption of mitigation measures during construction, that there would be a temporary adverse impact on designated and non-designated heritage assets. No adverse operational effects on designated assets are anticipated.
- 7.6.26 Whilst the potential impacts on non-designated heritage assets have been assessed as temporary, occurring during construction Paragraphs 215 and 216 of the NPPF is engaged. The Planning Practice Guidance (PPG) (Heritage: Paragraph 018) notes that harm can arise from change in setting or temporary development if it affects the way significance is experienced. However, the duration, reversibility, and extent of the impact are key factors.
- 'In assessing any proposal that directly or indirectly affects a designated heritage asset, it is important to understand the particular significance of the asset that may be affected and the extent of any impact on that significance. Temporary works or changes may also cause harm, but the degree of harm and its duration are relevant considerations.'*
- 7.6.27 Accordingly, less than substantial harm on both designated and non-designated assets has been assessed as likely to arise during construction works, these impacts are both temporary and reversible and will not result in the permanent loss of significance. Given the short duration and reversible nature of the impact, the harm should be afforded limited weight in the overall planning balance.
- 7.6.28 Operational impacts have been identified for three non-designated assets of low-value located along Hollowgate Lane. The impacts identified comprise potential

permanent changes to the setting of these assets due to visual intrusion from operation of the Scheme. The rear (north-facing) façades of these historic houses back onto agricultural land, the rural nature of which forms part of their setting which contributes to their overall significance. Although the existing substation is within view of these heritage assets, adding an industrial component to their setting, the Scheme would further encroach on the rural landscape making a negative contribution from a visual perspective. The potential change in setting is not predicted to be significant. Given the low value of these non-designated assets and the assessment that any effect is not predicated to be significant any harm should be afforded limited weight in the overall planning balance.

- 7.6.29 As the Scheme does not result in the loss of any heritage assets, with the majority of impacts being temporary, the overall assessment of harm must be weighed against the documented need for the Scheme, as outlined in Chapter 8. The national imperative to upgrade electrical infrastructure, to support international and national climate initiatives and to provide reliable electricity to the population, outweighs the less than substantial, mitigated harm to heritage assets.
- 7.6.30 As aforementioned, it has been assessed that there will be less than substantial harm to asset CA1. Paragraph 220 establishes the baseline for assessing development impacts on Conservation Areas, noting that not all elements within a Conservation Area necessarily contribute to its overall significance. Any loss of a building or other element should be considered in accordance with Paragraph 215, with appropriate regard to the level of harm, the relative significance of the affected element, and its contribution to the Conservation Area as a whole. In this instance, the anticipated impacts are expected to be less than substantial and temporary and therefore compliant to policy.
- 7.6.31 The baseline and results of survey indicate archaeological potential for finds, deposits and features within the Site, particularly in proximity to the 'Potential Enclosures at High Marnham Solar Farm', where features may be more extensive than the geophysics results show. The potential is for Prehistoric, and a particularly high potential for Romano-British and medieval to post-Medieval activity. Due to the presence of the asset within the Site as well as potential for additional archaeological, in line with Paragraph 207 of the NPPF, further archaeological investigation/evaluation are required.
- 7.6.32 It is understood, as per footnote 75 of the NPPF, that, '*non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets*'. A geophysical survey has been carried for the Scheme but the results were unavailable prior to the writing of the HDBA. As highlighted during consultation with the Historic Environment Officer, it is recommended that the geophysical survey results be supported by trial trenching.
- 7.6.33 -The evidence provided demonstrates that the Scheme has satisfactorily addressed all relevant site specific and cumulative impacts, the Scheme does not require the removal or loss of any assets with the impacts largely being related to the setting, with the assessed impacts levelling a case of 'less than substantial harm', this should be weighed against public benefits in relation to designated assets and for non-designated these should be weighed against the scale of any harm or loss and the significance of the (un-designated) heritage asset. As the anticipated impacts, following mitigation, are assessed to result in less than substantial harm to all identified heritage assets, and given the overall public benefit demonstrated by the

need for the Scheme as set out in Chapter 8, the proposals are considered to be in accordance with both local and national policy.

- 7.6.34 Subject to the results of outstanding archaeological surveys, the Scheme is considered to be in accordance with the heritage policies of the Development Plan, the NPPF, National Policy Statement EN-1 and National Grid's statutory duties under the Electricity Act 1989.

7.7 Traffic and Transport

- 7.7.1 The NPPF, NPS EN-1 and BLP policies promote sustainable transport modes and seek to avoid adverse impacts on the highways network.
- 7.7.2 Policy ST1 establishes the spatial strategy for the district, promoting development in sustainable locations close to transport hubs and encouraging higher density in these areas. However, given the nature and potentially disruptive characteristics of the Scheme, this policy is not considered to be directly applicable.
- 7.7.3 Policy ST49 stipulates that renewable energy generation developments must not have an adverse impact on existing highway capacity or highway safety. Complementing this, Policy ST52 encourages and supports measures that enhance the management of both the strategic and local highway networks, including demand management, traffic management, and calming initiatives, particularly where these are necessitated by site allocations identified in the BLP. Developments with significant transport implications are required to submit a Transport Assessment or Transport Statement, and, where applicable, a Travel Plan as part of their planning application.
- 7.7.4 Furthermore, proposals that would compromise the efficient and safe operation of the local or strategic highway network, or jeopardise future improvements to transport infrastructure as identified in Policy ST56 or the Local Transport Plan, will not be supported. As stated in Policy ST56, BDC will consider use of a review mechanism in a S106 agreement to secure planning obligations.
- 7.7.5 Policy ST53 requires that development contributes to a sustainable, safe, and active transport network, supporting proposals that offer a range of public transport and active travel options. Access arrangements should be well-designed, safe, and convenient for all users, with particular priority given to pedestrians, cyclists, and other vulnerable groups. Such access must not compromise the free flow of traffic, exacerbate congestion, or increase safety risks for any road users.
- 7.7.6 The NPPF (paragraph 115) stipulates that (inter alia) applications for development should ensure that: sustainable transport modes are prioritised; safe and suitable access to the Site can be achieved for all users; and any significant impacts from the development on the transport network or on highway safety can be cost effectively mitigated to an acceptable degree. At paragraph 116, the NPPF goes on to state that development should only be 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. For developments that will generate significant amounts of movements, Paragraph 117 requires that applications are supported by a vision-led transport statement or transport assessment. NPS EN-1 is broadly consistent with the policy contained in the NPPF.
- 7.7.7 The following summarises the traffic and transport features of relevance to the planning applications as summarised in Chapter 11 of the EAR.

Baseline

- 7.7.8 The extent of highway network considered is informed by the proposed construction route identified for material and equipment delivery to the Site and by roads which will be used by construction staff traffic. The construction route consists of Main Street and the A57 connecting to the A1 which forms part of the strategic road network. It also forms part of the Heavy Load Route of the National Trunk Road Network. The proposed construction route is shown in Appendix E of the EAR.

Traffic

- 7.7.9 As shown by Table 11.1 in the EAR, the baseline traffic flows show an average weekday 12hr (07:00-19:00hrs). HGV flows on the roads that form the construction route are between 44 HGVs (on Main Street in the vicinity of the Site access) and 563 HGVs (on the A57). Average weekday 12hr (07:00-19:00hrs) total vehicle flows are between 951 (on Main Street in the vicinity of the Site access) and 7,608 vehicles (on the A57).
- 7.7.10 It is anticipated that there will be a maximum total of 232 movements per road assessed. This equates to 100 HGVs (two-way movements) and 132 cars / LGVs (two-way movements).
- 7.7.11 Based on the indicative Construction Traffic Estimates (document ref: PDD-203717-TAB-001 Rev P02), construction will commence in September 2026 and end in December 2030. Peak construction traffic is anticipated to occur in 2027.

Sensitive receptors

- 7.7.12 As shown by Table 11.2 of the EAR, three key receptors have been identified within 150m of the construction route, all of which are located along the A57 section of the route. These are East Markham Primary School, Darlton Playground and St Giles' Church, the latter of which is considered a low sensitivity receptor with the other two being high.

Collision data

- 7.7.13 The latest three-year personal injury collision data (2021-2023) were obtained from Crashmap.co.uk for the roads forming the construction route and for the Site access junction.
- 7.7.14 A total of ten collisions were recorded along the construction route between 2021 and 2023. 80 per cent were of 'slight' severity, and the remaining 20 per cent were classified as 'serious'. No fatal collision was recorded along the construction route.
- 7.7.15 A total of two 'serious' collisions were recorded along the construction route, one on the A57 to the east of the junction with Woodcoates Road, and one on Main Street to the south of the junction with Hollowgate Lane. The latter involved a motor cyclist casualty.
- 7.7.16 No collisions involving pedestrians or cyclists were recorded along the assessed route.
- 7.7.17 No collision clusters were identified along the construction route.

Cycling, walking and equestrian provision

- 7.7.18 Key elements of the existing walking and cycling infrastructure along the proposed construction route are as follows:
- 7.7.19 Along the A57 between Markham Moor Interchange and the junction with High Street there are footways predominantly on the eastbound side of the carriageway, although there are sections where this alternates between the eastbound and westbound side. Additionally, there is a shared use pathway on the A57 to the west of the junction with Askham Road for approximately 70m.
- 7.7.20 There is a footway present along Main Street on the northbound side of the carriageway through Ragnall. Additionally, there is a short footway between the junction with Hollowgate Lane and Long Row Cottages.
- 7.7.21 There are no PROW within the Scheme Boundary, however, the following PROW connect to the proposed construction route along Main Street:
- Ragnall FP2 (Footpath)
 - Ragnall BW3 (Bridleway)
 - Fledborough FP7 (Footpath)
 - Marnham BOAT8 (Byway Open to All Traffic)
- 7.7.22 A review of the PROWs undertaken concluded that the construction of the Scheme is not anticipated to result in temporary and/or permanent access disruption and diversions. .
- 7.7.23 National Cycle Route 647 runs along Main Street for overlapping with the proposed construction route for approximately 500m. This National Cycle Route is a 12.7km route which follows the former Lancashire, Derbyshire, and East Coast railway line

Public transport

- 7.7.24 Public transport in the vicinity of the Site is limited with no bus services along the assessed section of Main Street. However, along the A57 there is a bus stop approximately 60m to the east of the junction with Woodcoates Road providing a bus service for Tuxford Academy.
- 7.7.25 The closest railway station is Saxilby Station, located to the north east of the Site, and is a driving distance of 15.2km from the proposed Site access. The station is on the Sheffield-Lincoln line and the Doncaster-Lincoln Line and is operated by Northern Trains and East Midlands Railway. The former provides a service between Lincoln and Leeds via Retford and Sheffield; the latter provides a service between Doncaster and Peterborough via Lincoln and Sleaford.

Construction and operation

- 7.7.26 The control measures listed in Table 11.5 of the EAR will be applied during the construction phase of the Scheme. National Grid is committed to implementing the identified control measures to reduce or avoid any potential impacts that may occur during the construction of the Scheme. The control measures will be included in the CEMP and their implementation will be monitored by National Grid.

- 7.7.27 Appropriate control, enhancement and monitoring measures have been applied to the following potential receptors and/or impacts:
- site access and security;
 - pedestrian severance, amenity, fear and intimidation – personnel and visitors access and safety;
 - HGV environmental effects including road users, accidents and safety, residents, and air/noise quality;
 - seamless flow of movement, together with safety and security on-site;
 - parking and loading;
 - road safety;
 - ensuring the construction routes are adequate for AIL deliveries;
 - road condition – ensuring that the surface of the highway altered for the Scheme remains in good repair and is safe for the public traffic using the highway;
 - accidents and safety;
 - ensuring vehicles comply to minimise impact on road users and the public; and
 - sustainable travel – managing and improving the way employees travel to, from, and during work.
- 7.7.28 Potential construction impacts have been assessed through the completion of a Transport Appraisal.
- 7.7.29 The peak daily construction activity is anticipated to occur in 2027. To evaluate the worst-case scenario in terms of traffic volume during the construction phase, both construction HGV movements and construction staff cars/LGVs have been considered.
- 7.7.30 Table 11.6 of the EAR presents the predicted increases in HGV and overall traffic on the road links identified as proposed construction routes. The analysis indicates that the projected increase in construction HGV traffic on Main Street, relative to 2027 baseline flows, exceeds the 30 per cent threshold recommended by the Institute of Sustainability and Environmental Professionals (ISEP) (formerly IEMA) guidance. Consequently, an appraisal of potential residual effects on existing and future road users, as well as other potential receptors, is provided in the subsequent section.

Residual effects

- 7.7.31 The A57, designated as a Heavy Load Route within the National Trunk Road Network already experiences high HGV traffic and is thus not considered sensitive.
- 7.7.32 Main Street, which provides access to the Site and runs through predominantly rural areas with limited residential receptors, is also assessed as not sensitive. While the projected increase in HGV traffic is large, it must be seen in the context of the future traffic baseline on Main Street which is very low. During the peak construction activity, it is anticipated that there will be a maximum of 50 HGVs accessing the Site, equating to 100 two-way HGV movements to the Site via Main Street per day. This equates to four or five two-way HGV movements per hour.

- 7.7.33 As the construction phase is temporary and control measures will be implemented through the Construction Traffic Management Plan (CTMP), any potential effects on the A57 and Main Street are expected to be short-term, negligible and not significant.
- 7.7.34 During normal operation of the Scheme, it is understood that the only traffic generated would be associated with infrequent (assumption of 10 vehicles per year) repair and routine maintenance and inspection activities and a small number of operational staff. Operational traffic numbers will also be dependent on any operational issues with the Site. Movements are not anticipated to have a material effect on the transport network and receptors, and therefore, no further assessment will be required.

Traffic and Transport Conclusion

- 7.7.35 The Development Plan stipulates that proposals for renewable energy generation developments must not result in any adverse impacts on existing highway capacity or highway safety (Policy ST49). In support of this, it is encouraged and supported that measures aimed at enhancing the management of both strategic and local highway networks, including initiatives related to demand management, traffic management, and traffic calming (Policy ST52). Access arrangements should be well-designed, safe, and convenient, such access must not compromise the free flow of traffic, exacerbate congestion, or increase safety risks for any road users (Policy ST53).
- 7.7.36 At paragraph 116 of the NPPF, it is stated that development should only be refused on highways grounds if there would be an unacceptable impact on highway safety or if the residual cumulative impacts on the road network would be severe.
- 7.7.37 The Scheme is not expected to result in any unacceptable or significant adverse impacts on highways, traffic, or road safety. While baseline traffic flows on Main Street may temporarily exceed the 30 per cent threshold recommended in ISEP / IEMA guidance during the construction phase, these effects are assessed as short-term and temporary, therefore it can be considered that the impact will be negligible and not significant.
- 7.7.38 The construction route, which includes Main Street, the A57 and the A1, will not have an unacceptable impact on local amenity or the character of the area, owing to the temporary nature of construction traffic and the mitigation measures embedded in the Scheme and detailed within the CEMP. Once operational, vehicle movements associated with the development will be very low and are not anticipated to materially affect the transport network or local receptors.
- 7.7.39 Appropriate control and mitigation measures, including those related to safety, orientation, fear and intimidation and a Staff Travel Plan as outlined in Table 115 of the EAR, will be implemented to ensure compliance with national and local policies. The Scheme will also maintain the permeability of the built environment, requiring the closure of any PRowS, supporting sustainable and safe travel through convenient routes that allow continued access to the countryside.
- 7.7.40 The Scheme is, therefore, in accordance with the Development Plan, the NPPF and NPS EN-1.

7.8 Air Quality

- 7.8.1 As required by the Environment Act 1995 (amended 2021), BDC has undertaken a review and assessment of air quality within its areas of jurisdiction, as part of Local Air Quality Management duties. This process has indicated that within BDC's authority there are no declared Air Quality Management Areas.
- 7.8.2 Policy ST42 of the BLP aims to support healthy, active lifestyles by requiring development to maintain, or where possible, improve air quality in the district. Policy ST48 mandates that developments be designed for climate change resilience and avoid unacceptable adverse impacts on local air quality. It also requires major developments to provide five trees per 1,000 sqm of non-residential floorspace or make an equivalent financial contribution if on-site provision is not feasible. Policy ST39 reinforces this requirement for tree planting or financial contributions from major developments. Additionally, Policy ST49 permits renewable energy development only if site-specific and cumulative air quality impacts are satisfactorily addressed.
- 7.8.3 The NPPF (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. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement [...] Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan"*. Paragraph 5.2.7 of NPS EN-1, meanwhile, requires that, where a project is likely to have adverse effects on air quality, the applicant should undertake an assessment of the impacts of the project on air quality as part of an ES.
- 7.8.4 As detailed in Chapter 7 of the EAR, a review of air quality monitoring data in the vicinity of the Scheme shows there are no relevant monitors near the Site that would provide representative pollutant concentrations, as the Site is situated in a rural location. The closest monitors within the BDC network are in the populated areas of Dunham and Tuxford, 3.6 km and 5.9 km from the Site respectively, which suggests pollutant levels are not sufficiently high to require ongoing local monitoring under BDC's Local Air Quality Management duties.
- 7.8.5 Data from 2019 to 2023 (see Table 7.1, Chapter 7 of the EAR) indicate no exceedances of the Air Quality Strategy annual mean objective for NO₂ (40µg/m³) at sites within 10km of the Scheme, with the highest measured concentration in 2023 being 24.2µg/m³ at an urban centre in Tuxford, which is expected to have higher levels than the rural Scheme area. Air quality data for 2020 and 2021 are considered atypical due to reduced traffic flows during COVID-19 lockdowns and are not representative of normal conditions. The BDC network does not monitor PM₁₀ or PM_{2.5} concentrations. Baseline and future levels for these pollutants will instead be informed by Defra's modelled background concentration maps.
- 7.8.6 As shown by Table 7.2 of the EAR, NO₂ pollutants are shown to have background pollutant concentrations of 6.9µg/m³, PM₁₀ concentrations were recorded as 15.4µg/m³ and PM_{2.5} were recorded as 8.3µg/m³.

Construction and operation impacts and mitigation

- 7.8.7 Chapter 7 of the EAR evaluates the potential dust impacts of the Scheme during construction on local air quality. Dust generated from activities such as demolition, earthworks and vehicle movements, including mud tracked onto public roads, may cause nuisance to residents and impact sensitive ecological sites. One statutory ecological site, Spalford Warren SSSI, is located 2.8km to the south east.
- 7.8.8 A construction Dust Risk Assessment was undertaken in accordance with the Institute of Air Quality Management (IAQM) 2024 guidance, due to the presence of sensitive human receptors within 250m of the Site boundary. The assessment considered factors such as construction activities, receptor locations and existing dust levels to determine the unmitigated dust risk for construction, earthworks and trackout. The assessment conservatively assumed that dust emissions could occur anywhere within the Site and its purpose was to define the level of unmitigated dust risk to inform the selection of appropriate control and management measures to prevent residual effects.
- 7.8.9 As detailed in Table 7.4, the unmitigated risks from construction dust include a medium risk of dust soiling to receptors within 50m of construction vehicle routes due to trackout activities, while the risk to human health from these activities is low. For earthworks and construction activities, both dust soiling and human health risks are assessed as low.
- 7.8.10 There will be no demolition activities as part of this application, therefore the risks associated with demolition activities have been screened out.
- 7.8.11 The control measures listed in Table 7.3 of the EAR will be implemented and monitored by National Grid during the construction phase, as part of the CEMP. These measures address potential dust emissions from excavation, general construction activities, and HGV movements, with a focus on protecting sensitive residential and human receptors.
- 7.8.12 As detailed in Table 7.3 of the EAR, construction control, enhancement and monitoring measures include various different management strategies and plans. As such, a Dust Management Plan will be prepared by the contractor to address the low unmitigated dust risk associated with the Scheme. The plan will include measures such as recording and logging all dust and air quality complaints and exceptional incidents, with records made available to the local authority upon request. The site will be prepared and maintained by erecting barriers, enclosing operations, keeping equipment damped down, preventing site runoff, and promptly removing dust-generating materials.
- 7.8.13 Additionally, mitigation is applicable to all vehicles and machinery, particularly Non-Road Mobile Machinery, which is required to comply with best practice standards, including no idling and adherence to speed limits, while minimising the use of diesel generators. Operational procedures will require the use of dust suppression with cutting and grinding equipment, enclosed chutes, minimised drop heights and an adequate water supply on site.
- 7.8.14 Waste management will focus on recycling and reusing materials while prohibiting bonfires or burning of waste. Construction-specific measures include avoiding scabbling and ensuring sand and aggregates are stored in bunded and damped areas.

- 7.8.15 For trackout, the Dust Management Plan will implement water-equipped road sweepers, avoid dry sweeping, ensure that vehicles are covered, maintain inspection records, install and regularly damp down hard-surfaced haul routes, incorporate wheel washing systems, apply dust suppressants at high-traffic locations, and position site access gates at least 10m from sensitive receptors.
- 7.8.16 These measures will be monitored and adapted as necessary to ensure effective dust control throughout the construction phase.
- 7.8.17 In regard to construction traffic, flows for the Scheme were assessed against IAQM (2017) and Design Manual for Roads and Bridges LA 105 Air quality (National Highways, 2024) thresholds for impacts on human and ecological receptors. Since there are no Air Quality Management Areas in the area, the less stringent IAQM criteria were applied. Forecasted changes in LGV and HGV flows during construction are well below the IAQM screening thresholds, with the largest increases (82 LGV Annual Average Daily Traffic, and 43 HGV Annual Average Daily Traffic in 2027) far below the limits. Similarly, the traffic flow changes do not exceed LA 105 criteria (National Highways, 2024) for ecological sites. As a result, further assessment of construction traffic effects on both human and ecological receptors was not required.
- 7.8.18 During normal operation, the Scheme will generate only minimal traffic, limited to occasional repair, maintenance, and inspection activities involving an estimated 10 vehicles per year, which is well below the screening threshold. As a result, no operational control measures are required.
- 7.8.19 With respect to the planting requirements outlined in Policy ST48, the Landscape Mitigation Plan demonstrates that the requirement of five trees per 1,000m² for major developments has been met, as evidenced by the provision of 40 trees.

Air Quality Conclusion

- 7.8.20 Policy ST42 of the BLP aims to support healthy, active lifestyles by requiring development to maintain, or where possible, improve air quality in the district. Policy ST48 mandates that developments be designed for climate change resilience and avoid unacceptable adverse impacts on local air quality. It also requires major developments to provide five trees per 1,000 sqm of non-residential floorspace or make an equivalent financial contribution if on-site provision is not feasible. Policy ST39 reinforces this requirement for tree planting or financial contributions from major developments. Additionally, Policy ST49 permits renewable energy development only if site-specific and cumulative air quality impacts are satisfactorily addressed.
- 7.8.21 The Scheme will not result in any unacceptable impacts on the district's air quality, as suitable measures are in place to address construction-related effects. The Scheme also meets tree planting requirements for non-residential development. Therefore, the Scheme is compliant with the BLP, as well as the NPPF and NPS EN-1.

7.9 Noise and Vibration

- 7.9.1 Policy 46 of the BLP details that development proposals must be designed to avoid and minimise impacts on the amenity of existing and future users, both individually and cumulatively. This includes ensuring no significant adverse effects on living conditions, such as privacy, overshadowing, or overbearing impacts and that any noise, light, air quality, odour, vibration, or other pollution is appropriately mitigated.

For proposals near existing ‘bad neighbour’ uses (e.g. heavy industry) it must be demonstrated that these uses are not compromised and that the amenity of new occupants is maintained. Where new or changing ‘bad neighbour’ uses could significantly affect residential amenity, suitable mitigation must be in place before occupation.

- 7.9.2 Policy ST49 reinforces these principles by requiring renewable energy developments to ensure noise levels are satisfactorily controlled.
- 7.9.3 The Noise Policy Statement for England (NPSE) sets out the long-term vision of Government noise policy which is to promote good health and a good quality of life through the management of noise. The thresholds for assessing health effects and quality of life are important, particularly when considering and comparing different scenarios as well as establishing the need for, and extent of, noise mitigation. The NPSE introduces the concept of the NOAEL (No Observed Adverse Effect Level), LOAEL (Lowest Observed Adverse Effect Level), and SOAEL (Significant Observed Adverse Effect Level). The PPG also introduces the concept of the UAEL (Unacceptable Adverse Effect Level).
- 7.9.4 Paragraph 187 of the NPPF states that, ‘planning decisions should contribute to and enhance the natural and local environment *by [...] preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of [...] noise pollution*’. Paragraph 198 stipulates that planning decisions should ensure that proposals are appropriate for their location, mitigating and reducing to a minimum potential adverse impacts resulting from noise and preventing noise giving rise to significant adverse impacts on health and quality of life.’
- 7.9.5 NPS EN-1 (paragraphs 5.12.6 to 5.12.7) states that, where noise impacts are likely to arise from a project, the applicant should prepare a noise assessment that is proportionate to the likely noise impact. At paragraphs 5.12.13 to 5.12.15, NPS EN-1 requires that the Secretary of State assesses whether development provides appropriate mitigation measures as well as demonstrating good design including through selection of the quietest cost-effective plant available and the containment of noise within buildings wherever possible.
- 7.9.6 Paragraph 5.12.17 of NPS EN-1 states that development should not be granted consent unless the Secretary of State is satisfied that the proposals:
- avoid significant adverse impacts on health and quality of life from noise;
 - mitigate and minimise other adverse impacts on health and quality of life from noise; and
 - where possible, contribute to improvements to health and quality of life through the effective management and control of noise.
- 7.9.7 NPS EN-5, meanwhile, sets out that the Secretary of State should ensure that relevant assessment methodologies have been used in the evidence presented, and that the appropriate mitigation options have been considered and adopted. It states that, where the applicant can demonstrate that appropriate mitigation measures will be put in place, the residual noise impacts are unlikely to be significant.
- 7.9.8 As aforementioned, the Horlock Rules also apply noise regulations alongside their recommendations for designing and positioning substations, alongside CSE

compounds and line entries. Horlock Rule 5 states that proposals should keep visual, noise and other environmental effects to a minimum.

- 7.9.9 A Noise Impact Assessment Report (Ref. EEN/565/NOTE2024) accompanies this submission. Its findings have been summarised in Chapter 10 of the EAR.
- 7.9.10 The acoustic environment at the Site, as described in Chapter 10 of the EAR, is primarily influenced by local traffic noise, including HGVs along Fledborough Road and along the substation access road to neighbouring property. Distant transformer/humming sound from the existing National Grid High Marnham Substation was also noted.
- 7.9.11 As detailed in Chapter 10 of the EAR, the most sensitive residential receptors potentially affected by the Scheme are those located closest to the Site. These include Sparrow Lane Park (a park home estate to the south east), Hill Farm (to the south), Station House (to the north west), and Fledborough House Farm (also to the north west). While there are additional residential properties in the wider area, particularly to the south in High Marnham, the receptors listed above are considered the most exposed due to their proximity to the Scheme.
- 7.9.12 The primary sources of noise in high voltage substations are items of 'reactive plant' such as SGTs and quad boosters, which produce the characteristic tonal 'hum.' Other equipment, like circuit breakers, disconnectors/isolators, and transformers, generate noise only occasionally during maintenance, outages, or emergencies, typically as short, impulsive sounds (a 'thud' or 'click'). Additionally, insulators and Gas Insulated Busbars may occasionally produce a 'crackling' or 'fizzing' noise from corona discharge, however, this is infrequent and not considered a major noise source.
- 7.9.13 Based on the acoustic modelling undertaken, with the addition of an acoustic enclosure for SGT2 in the design of the Scheme, the noise impacts are anticipated to be negligible to all receptors. Therefore, acoustic mitigation is considered suitable to mitigate potential noise impacts from the Scheme. Noise and Vibration Conclusion
- 7.9.14 The National Grid Electricity Transmission Environmental Engineering Team conducted a Noise Impact Assessment for the Scheme. The assessment focused primarily on the two proposed SGTs, with other substation elements excluded. Noise surveys, both unattended and attended, were carried out at locations representative of the NSRs and included continuous weather monitoring. Acoustic modelling, both with and without mitigation, was performed in line with BS 4142:2014+A1:2019 to predict operational noise levels at these receptors.
- 7.9.15 Policy 46 of the BLP requires that developments avoid and minimise adverse impacts on the amenity of existing and future users, including effects on privacy, overshadowing, and pollution (noise, light, air quality, odour, vibration). Suitable mitigation must be in place for any potential 'bad neighbour' uses before occupation, with Policy ST49 further requiring effective noise control for renewable energy developments.
- 7.9.16 Acoustic modelling confirms that, with acoustic enclosures for SGT2, noise levels at all NSRs will be well below background levels. Acoustic enclosures for SGT2 will therefore be implemented to ensure compliance with local and national policy.
- 7.9.17 The noise and vibration impacts of the Scheme will therefore be minor and not significant. It is therefore in accordance with the BLP, the NPSE, NPPF, NPS EN-1 and NPS EN-5.

7.10 Land and Ground Conditions

- 7.10.1 Policy 47 of the BLP requires that any development on contaminated or unstable land must be supported by thorough contamination and/or land instability risk assessments. These assessments must identify the extent and risks of contamination or instability, ensure the implementation of appropriate mitigation measures, and demonstrate that development will not pose unacceptable risks to human health, water resources, or the wider environment. The policy also requires that the site is made safe for its intended use and neighbouring areas, free from risks associated with contaminants or instability. Additionally, Policy ST49 of the BLP mandates that zero or low carbon renewable energy projects must specifically address hydrology and hydrogeology considerations within their proposals.
- 7.10.2 Policy SP1 from the NWP requires all new development to be designed, built and operated to minimise waste generation, maximise the use of recycled materials, and support effective waste collection, separation, sorting, recycling and recovery throughout the development's operation.
- 7.10.3 The NPPF and NPS EN-1 seek to ensure that proposals incorporate measures to mitigate the contamination of land and that, where necessary, appropriate remediation is undertaken. At paragraph 5.11.3, NPS EN-1 recognises that, whilst the re-use of previously developed land can make a major contribution to sustainable development, this is not always possible for many forms of energy infrastructure.
- 7.10.4 NPS EN-1 notes that an energy infrastructure project will have direct effects on the existing use of a site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development. At paragraph 5.11.8, NPS EN-1 requires that an applicant's ES should identify existing and proposed land uses near development proposals; and 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. It sets out that applicants should also assess any effects of precluding a new development or use proposed in the development plan.
- 7.10.5 The following section provides a summary of Chapter 9, Land and Ground Conditions, as presented in the EAR.
- 7.10.6 The study area for the Land Quality and Ground Conditions appraisal, as illustrated in Appendix E of the EAR consists of the land within the Site, plus a 250m buffer in all directions.
- 7.10.7 A walkover conducted on 25 April 2024 noted that the irregularly shaped Site is of mixed use, with its eastern portion occupied by a National Grid substation secured by palisade fencing, and its western half comprising agricultural fields traversed by pylons and overhead lines from the substation.
- 7.10.8 The Site is generally flat, with an elevation of approximately 18m AOD at its centre, confirmed both by mapping tools and on-site observation. Surrounding land within the study area also shows mixed use, including land associated with the former High Marnham Power Station to the east and north east, and further agricultural fields with overhead lines to the south west and north. Immediately north of the substation is a hardstanding area containing lorry containers, several intermediate bulk containers and tanks with unknown contents. North of the western part of the Site are abandoned railway tracks or sidings oriented west to east, situated close to a carpark about 100m to the north east, with a cycleway and PRow running parallel approximately 10m further north.

Geology

- 7.10.9 No mapped records of made ground exist within the Scheme boundary (Groundsure, 2024). According to British Geological Survey (BGS) mapping (1966), the Site is not underlain by any superficial deposits, with the nearest such deposits, typically poorly sorted sands and gravels of the Holme Pierrepont Sand and Gravel Member, and possible bands of peat, located about 100m north east of the Site within the study area (see Appendix E of the EAR).
- 7.10.10 The bedrock beneath the Site consists of mudstone from the Mercia Mudstone Group, with linear bands of dolomitic siltstone (also of the Mercia Mudstone Group) present in the north and west of the study area and entering the Scheme boundary to the west. These rocks contain evaporite minerals such as halite and gypsum, which can pose challenges for construction due to dissolution and may also lead to chemical attack on concrete from sulphate and sulphuric acid solutions.
- 7.10.11 There are no historic BGS boreholes on the Site itself, but one borehole is available within the study area at the former High Marnham Power Station, approximately 245m north east of the Site.
- 7.10.12 Historical ground investigation data for the Site are primarily summarised in the Jacobs (2024) Geotechnical Investigation Report. The report showed that historical data across the site showed that at the closest points approximately 240m to 360m east of the Site, variable made ground was encountered generally down to 1.4m below ground level (bgl), with a maximum depth of 2.2m bgl. This made ground consisted of granular brown-grey silty sandy gravel with subangular brick, limestone, and chert, as well as cohesive brown to dark brown and locally grey clay. No superficial deposits were identified, and bedrock of the Mercia Mudstone Group was encountered at depths from 0.15m to 2.10m bgl, extending to at least 3.80m bgl. The mudstone was described as extremely weak to weak, reddish brown, de-structured and weathered, with some areas presenting as green-grey, distinctly weathered siltstone.

Hydrogeology

- 7.10.13 The desk study (Arcadis, 2025) and Defra MAGIC mapping (Defra, 2025) indicate that the mudstone bedrock underlying the Site is classified as a Secondary B aquifer, characterised by predominantly low permeability but capable of storing or yielding limited groundwater due to local features such as fissures and weathering. On-site dolomitic siltstone deposits are designated as secondary undifferentiated aquifers.
- 7.10.14 In the study area, the Pierrepont Sand and Gravel Member to the north east is classified as a Secondary A aquifer, which is permeable and can support local water supplies and contribute to river base flow. The bedrock geology has high groundwater vulnerability, but the Site is not located within a SPZ, and there are no records of groundwater abstraction within the study area (Groundsure, 2024). Groundwater monitoring from five boreholes during the 2012 ground investigation found groundwater levels generally between 7.00 and 6.00m AOD, with occasional readings as high as 4.50m AOD and as low as 10.00m AOD, indicating the potential presence of perched water tables.

Hydrology

- 7.10.15 There are no surface water sources recorded onsite or within the study area according to the Groundsure report (2024). No surface water abstractions were indicated within the study area.

Unexploded ordnance (UXO)

- 7.10.16 The UXO risk maps (Zetica, 2024) indicate the Site is located within an area of low risk, “*indicated as having less than 15 bombs per 1000 acres or less*”. The Preliminary Desk Study Assessment (Zetica, 2024) obtained for the Site concluded that ‘*a detailed desk study, whilst always prudent, is not considered essential in this instance*’.

Radon

- 7.10.17 The Site is located within an area where <1 per cent of properties are estimated to be above the radon action level (UKHSA, 2024). Therefore, radon protection measures are not considered necessary for the Scheme, according to guidance in BRE 211 (Building Research Establishment, 2023).

Mining, quarries and minerals

- 7.10.18 The Groundsure report (2024) confirms that there are no recorded surface or underground mineral workings within the study area, except for a surface ground working record for a pond within the Scheme boundary and two records of cuttings north east of the Site. The Coal Authority (2024) indicates the Site is not within a coal mining reporting area. According to the Nottinghamshire Minerals Local Plan 2019-2036, the Site is situated on the edge of an MSA for alluvial sand and gravel, but mapping (Appendix E of the EAR) suggests the Site itself is not underlain by sand and gravel deposits. Consequently, it is considered unlikely that development at the Site would result in the sterilisation of significant mineral resources.

Contamination

- 7.10.19 As part of the 2012 ground investigation, eight natural soil samples from within the Site were chemically analysed and found to have no exceedances compared to industrial/commercial assessment criteria, though no asbestos screening of made or reworked ground was conducted (Geotechnical Engineering Ltd, 2012). Soil leachate testing of 11 samples revealed four exceedances for aluminium above the Drinking Water Standard (DWS) limit of 200 µg/l (Jacobs, 2024). Six groundwater samples from four wells were compared against DWS and Environmental Quality Standards, resulting in minor exceedances for ammoniacal nitrogen, boron, and nickel, and a more significant exceedance for sulphate, with all samples showing concentrations between 730 and 2,600mg/l, well above the DWS limit of 250mg/l. No visual or olfactory contamination was identified in historical investigations, apart from anthropogenic materials such as brick. Ground gas monitoring, conducted in five boreholes over multiple rounds, indicated very low hazard potential with a CS1 rating in all locations (Jacobs, 2024).

Future baseline

- 7.10.20 The existing baseline conditions with respect to ground conditions and hydrogeology are unlikely to change significantly within the time prior to the construction. Based on

the available information, gross and widespread contamination is not anticipated, however, this is subject to completion of site-specific ground investigation works to confirm if remediation is needed. Significant changes to ground conditions are not anticipated.

Construction impacts and mitigation

- 7.10.21 During the construction of the Scheme, workers may be exposed to potentially contaminated soil and shallow groundwater through activities such as excavation, topsoil stripping and earthworks, with exposure routes including accidental ingestion, inhalation of dust and dermal contact. Nearby residents may also be at risk from dust generated during these activities, though widespread contamination is not expected and is likely limited to the north.
- 7.10.22 Construction workers are considered to be of very high sensitivity, while nearby commercial and residential neighbours are of medium sensitivity. With the implementation of robust mitigation measures, including an appropriate CEMP and Health and Safety protocols, the magnitude of impact is considered negligible, resulting in an overall slight adverse to neutral effect.
- 7.10.23 Accidental localised spillages of oils, chemicals, cement, or fuels may occur, potentially contaminating the ground and water environment, but these risks are also deemed negligible with proper controls in place.
- 7.10.24 The geology within the Site has negligible value, and superficial deposits in the study area hold medium value due to proximity to a mineral safeguarding area; however, the overall impact on geological and groundwater receptors is assessed as neutral and not significant, provided mitigation and design measures are followed.
- 7.10.25 Preventative measures for surface water protection should still be implemented, even though no receptors are present within 250m. A geotechnical focused ground investigation is also recommended as a form of mitigation to further inform development and ensure appropriate mitigation against risks such as ground failure, with buildings, structures, and services expected to experience negligible impacts if design measures are adopted.
- 7.10.26 Construction control and monitoring measures have been illustrated in Table 9.4 of the EAR.
- 7.10.27 As detailed, primary mitigation for land and ground conditions will be incorporated into the design stage, ensuring compliance with national and local planning policies. Historical ground investigations have been reviewed for contamination risk assessment, informing materials management and waste strategies. If necessary, an options appraisal and remediation strategy will be prepared and agreed with regulators, although current risk ratings suggest this is unlikely.
- 7.10.28 Preparation of a piling or foundations risk assessment for the Site in accordance with the latest UK guidance (CL:AIRE, 2025). This is to provide a summary of the available environmental information, identify and discuss the potential land quality issues which may impact upon the piling design, and provide appropriate recommendations and mitigation methods to minimise impacts associated with piling (if considered necessary).
- 7.10.29 Gas protection measures will be considered if updated monitoring indicates a need, although previous data suggest these are not required. The construction phase will be governed by a CEMP, including protocols such as a watching brief for

contamination during earthworks, baseline and repeat land quality surveys, designated and bunded areas for chemical and fuel storage, and an Emergency/Spill Response Plan with trained personnel and equipment. Excavated soils will be managed to minimise dust and water runoff, and protocols will ensure reuse, remediation, or appropriate disposal of contaminated materials, guided by a Site Waste Management Plan (SWMP) and Materials Management Plan (MMP) in accordance with CL:AIRE guidelines.

- 7.10.30 Workers will be informed of contamination risks and provided with suitable personal protective equipment and hygiene protocols. Hazardous chemicals used during construction will be subject to risk assessments and detailed in the CEMP, ensuring that all potential pathways to sensitive receptors are controlled and environmental risks are minimised throughout the Scheme's lifecycle.

Operational impacts and mitigation

- 7.10.31 During the operational phase of the Scheme, the use of SuDS for managing surface water may result in infiltration into underlying groundwater, with a minor risk of mobilising contaminants and reducing water quality. The groundwater beneath the Site is considered to have low value (bedrock) and medium value (offsite superficial geology), but with design and mitigation measures in place, such as land contamination investigations and remedial works if needed, the overall impact is assessed as neutral and not significant.
- 7.10.32 Site users, including maintenance workers and visitors, may be at risk from ground gases accumulating in buildings, particularly in confined spaces, posing hazards such as asphyxiation or explosion. Although site-specific ground gas data are not available, known sources in the study area mean further monitoring and assessment will be conducted to inform any necessary protection measures.
- 7.10.33 The geology within the Site is mapped as negligible value, and while superficial deposits exist in the study area near a mineral safeguarding zone, the Scheme's footprint is unlikely to result in significant mineral resource loss. Permanent structures may face minor ground stability risks from shrink-swell clays, collapsible deposits, and landslides, but these are rated as very low risk. With appropriate design and mitigation measures, all operational impacts, including those to buildings and services, are assessed as having a negligible magnitude, resulting in an overall neutral and not significant effect.
- 7.10.34 Operational impacts will be managed through targeted mitigation measures. For geology, geotechnical ground investigation and appropriate design will be undertaken to address any potential ground stability concerns. For hydrogeology, including Secondary A aquifers (offsite) and Secondary B aquifers (onsite), as well as new buildings, infrastructure, and human health (future site users and workers), detailed land contamination investigations will be conducted, with remedial measures implemented where necessary.
- 7.10.35 In relation to surface water, these land quality measures will be supplemented by the adoption of an appropriate drainage strategy to prevent contamination and ensure effective water management during Scheme operation.

Land and Ground Conditions Conclusion

- 7.10.36 As described above, the Scheme has demonstrated compliance with the relevant BLP policies. Specifically, Policy 47 of the BLP requires that proposals provide

evidence of contamination and/or land instability risk assessments, identifying the extent and nature of any contamination or instability, ensuring the implementation of appropriate mitigation measures, and demonstrating that the development will not pose unacceptable risks to human health, water resources, or the wider environment. Policy ST49 of the BLP requires that renewable energy projects address hydrology and hydrogeology.

- 7.10.37 Based on current information, baseline conditions relating to ground conditions and hydrogeology are not expected to change significantly prior to construction. Widespread or significant contamination is not anticipated, however, this will be confirmed through the completion of site-specific ground investigation works to determine whether remediation is necessary.
- 7.10.38 During construction, robust mitigation, including a CEMP, health and safety protocols, and dust controls, will ensure contamination impacts are negligible to slight adverse. Risks from accidental spills and dust generation will be mitigated by proper controls, and surface water protection measures will be implemented, even though no receptors are nearby. Geology and groundwater impacts are assessed as neutral and not significant with these measures in place. Further geotechnical investigations and a piling risk assessment will inform design and minimise risks. Contaminated soils will be managed in line with SWMP and MMP protocols, and workers will receive appropriate PPE and training. Gas protection will be considered if new data indicate a need. Overall, with comprehensive controls and monitoring, construction impacts on land quality, groundwater, and human health are considered negligible and fully compliant with planning policy.
- 7.10.39 Once operational, further studies will be carried out during operation to identify and address any safety or contamination risks. Groundwater and geology impacts are not considered significant, due to proposed design and mitigation measures, including land contamination investigations, remedial works, and geotechnical assessments. For both aquifers and human health, detailed investigations and remedial actions will be implemented as needed. Surface water protection will be ensured through a suitable drainage strategy and ongoing land quality measures. With appropriate mitigation measures, the Scheme is in line with policy.
- 7.10.40
- 7.10.41 Regarding waste, here appropriate, suitable mitigation measures have been identified for both the construction and operational phases of the Scheme, including the preparation and implementation of a SWMP and a MMP, in accordance with the Nottinghamshire Waste Plan (Policy SP1), to ensure that the development is designed, built and operated to minimise waste generation, maximise the use of recycled materials, and support effective waste collection, separation, sorting, recycling and recovery throughout the development's operation.
- 7.10.42 Collectively, the Scheme has demonstrated compliance with the Development Plan, the NPPF and NPS ENS-1.

7.11 Agriculture and Soils

- 7.11.1 Policy ST49 of the BLP requires development that includes zero or low carbon renewable energy projects, to address the cumulative impacts upon effects on high-quality agricultural land.

- 7.11.2 The NPPF stipulates that planning policies and decisions should promote the effective use of land and recognise the benefits of the BMV agricultural land. Annex 2 of the NPPF defines BMV agricultural land as that which is in Grades 1, 2 and 3a of the ALC. The NPPF establishes that, 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.
- 7.11.3 Similarly, NPS EN-1 sets out that applicants should seek to minimise impacts on BMV land and preferably use land in areas of poorer quality, except where this would be inconsistent with other sustainability considerations. However, at paragraph 5.11.3, NPS EN-1 recognises that, whilst the re-use of previously developed land can make a major contribution to sustainable development, this is not always possible for many forms of energy infrastructure.
- 7.11.4 As summarised in Chapter 12 of the EAR, the following section will present an overview of the baseline conditions for agriculture and soils, as well as the environmental appraisal of potential impacts on agriculture and soils arising from the construction and operation of the Scheme. Where potential environmental impacts are identified, appropriate control measures are prescribed to mitigate or avoid these impacts.
- 7.11.5 The Site's topography and relief have been reviewed against the available Ordnance Survey maps which indicate that the northern extent of the Site is relatively level, with the lowest elevation recorded at 6m AOD. The central area of the Site, encompassing the existing High Marnham Substation, is situated at approximately 12m AOD and slopes upgradient towards the south west, reaching the highest elevation of 24m AOD at the southwesternmost boundary. The Site exhibits an overall west-to-east topographical gradient, rising towards the central portion at approximately 18m AOD before descending eastwards towards the River Trent, where the elevation reduces to 7m AOD. Aerial imagery demonstrates that land use across the Site is predominantly arable agriculture, with part of the existing High Marnham Substation also present. These observations were confirmed during the site visit.
- 7.11.6 Consultation of the government's long-term flood risk service indicates that the Site is subject to variable flood risk from surface water and small watercourses, ranging from low to high, with elevated risk areas where watercourses are present and annual flooding probabilities between 0.1 per cent and over 3.3 per cent. The eastern and northern parts of the Site are assessed as having moderate to high flood risk from rivers and the sea (1 per cent to over 3.3 per cent annual probability), while the remainder of the Site is considered to have a low flood risk, with less than 0.1 per cent annual probability of flooding from these sources.
- 7.11.7 As noted in paragraphs 7.10.10 - 7.10.12 above, the BGS Geology Viewer (BGS, 2025) indicates that the majority of the Site is underlain by Mercia Mudstone Group bedrock, a sedimentary mudstone formed during the Triassic period. Linear bands of dolomitic siltstone, also part of the Mercia Mudstone Group, are mapped in the south west and north west boundaries of the Site. In the north east, the Holme Pierrepont Sand and Gravel Member is present, representing a Quaternary-age superficial sedimentary deposit. Additionally, alluvium consisting of clay, silt, sand, and gravel is mapped along the eastern boundary and in parts of the northern, western, and south western limbs of the Site.

Provisional ALC

- 7.11.8 Provisional ALC mapping shows the Site to all be mapped as Grade 3. Provisional mapping, at a scale of 1:250,000, does not distinguish between Grades 3a and 3b but provides an indication of the likely land classification.
- 7.11.9 Detailed ALC mapping was undertaken within the Scheme boundary for the High Marnham Solar Farm Project by Kernon Countryside Consultants Ltd in April 2022 (Appendix D of the ALC report). The land was mapped as a mixture of ALC Grades 2, 3a and 3b, with overall approximately half being of BMV quality (Grade 2 and 3a), predominantly in the west of the Scheme boundary.

Previous soil survey data

- 7.11.10 Available national soil survey information indicates that the soils across the Site are predominantly characterised by the Whimple 3 Association, which comprises reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.
- 7.11.11 The furthest areas of the western and northern limbs of the Site are characterised by the Compton Association, whereas the east of the Site is characterised predominantly by the Blackwood Association, with the Fladbury 2 Association present on the eastern boundary.
- 7.11.12 The national soil survey information is presented in Appendix A of the ALC report (Ref. EDEU-ARC-ENVS-XXXXXX-RP -ENS -000017).
- 7.11.13 Agricultural Land Classification As detailed in Chapter 12 of the EAR, the ALC surveys identified two major soil types across the surveyed area: loam over clay (generally acidic sandy, medium, or heavy clay loams over clay) and deep clay.
- 7.11.14 It was assessed that the Site comprises a mixture of ALC Grades 2, 3a and 3b:
- ALC Grade 2 (BMV land) accounts for 4.9 (13.5%);
 - ALC Grade 3a (BMV land) accounts for 13.0 (36.1%);
 - ALC Grade 3b (non-BMV land) accounts for 15.0 (41.6%); and
 - Urban (non-agricultural) accounts for 3.2 (8.8%).
- 7.11.15 Therefore, 17.9ha (approximately 50%) of the Site comprises BMV land (very good and good quality agricultural land). The remaining 18.2ha (approximately 50%) consists of Grade 3b non-BMV land (moderate quality agricultural land) and non-agricultural urban land, as the Site includes part of the existing High Marnham substation.
- 7.11.16 As shown on the Agricultural Land Classification Plan (Ref. KCC3211/02) in the Kernon Report (Appendix D of the ALC report), the Site is sat within land showing Grade 2, Grade 3a and Grade 3b.

Impacts / Mitigation

- 7.11.17 Construction of the Scheme will affect 17.9ha of BMV agricultural land (Grades 2 and 3a). Where the loss of BMV agricultural land is permanent, it would be considered an adverse impact. However, proposed landscaping details that a large proportion of the Site will be managed as modified grassland. If these areas are reinstated to their pre-

construction condition and retained with the potential for future agricultural use, such as grazing, the overall impact on agricultural land would be reduced.

- 7.11.18 To further address risks, an Outline Soil Management Plan (OSMP) has been prepared and is submitted with this EAR as part of the planning application. Following the grant of planning consent, a detailed Soil Management Plan (SMP) will be developed and implemented during construction and operation to ensure reinstatement of land required temporarily to a condition suitable to support the required end use, ensuring that retained soils continue to function and provide soil ecosystem services.
- 7.11.19 The control measures outlined in Table 12.2 of the EAR will be applied during the construction and operational phases of the Scheme. Control measures relevant to construction activities will be incorporated into the CEMP, with their implementation subject to monitoring by National Grid.

Agriculture and Soils Conclusion

- 7.11.20 Policy ST49 of the BLP requires that the development of zero or low carbon renewable energy projects must address the potential effects on high-quality agricultural land.
- 7.11.21 The majority of land across the surveyed area, is not BMV land as defined by the NPPF (Grade 3b and below), accounting for 50.4% of surveyed land. The remaining, 49.6% is assessed as Grades 2 and 3a. Grade 2 qualifies as very good quality agricultural land and Grade 3a land is good quality agricultural land. The Site is on agricultural land assessed as Grade 2, Grade 3a and 3b.
- 7.11.22 While impacts on such land may arise as a result of the Scheme, appropriate mitigation measures have been identified and incorporated where relevant. National Grid is committed to implementing these measures to minimise or prevent any potential adverse impacts associated with the Scheme.
- 7.11.23 The NPPF requires planning policies and decisions to promote effective land use and recognise the benefits of BMV agricultural land, defined in Annex 2 as Grades 1, 2, and 3a of the ALC. Although both the NPPF and NPS EN-1 encourage the use of lower quality land, NPS EN-1 recognises that the re-use of previously developed land is not always practical for energy infrastructure projects. Careful site selection has been undertaken for the Scheme, and a detailed SMP will accompany the submission to ensure the appropriate protection of agricultural land quality and soil resources.
- 7.11.24 The Scheme has therefore demonstrated suitable mitigation measures to address the potential effects on higher quality agricultural land.

7.12 Minerals

- 7.12.1 Policy SP7 of the Nottinghamshire Minerals Local Plan requires that proposals for non-minerals development within minerals safeguarding areas to demonstrate that mineral resources will not be needlessly sterilised and that the Scheme will not impede future mineral extraction in the vicinity. If this cannot be demonstrated and there is a clear and demonstrable need for the non-minerals development, prior extraction of minerals will be sought where practicable.

- 7.12.2 Furthermore, where non-minerals development would result in unacceptable impacts on the development, operation, or restoration of a permitted minerals site, mineral allocation, or associated minerals infrastructure, the applicant must provide suitable mitigation prior to the completion of the development.
- 7.12.3 Paragraph 225 of the NPPF states that LPAs should not normally permit other development proposals in a MSA if it might constrain potential future use for mineral working.
- 7.12.4 Plan 4 of the Nottinghamshire Minerals Local Plan 2019–2036 (Nottinghamshire County Council, 2019) identifies the Site as being located on the boundary of a MSA associated with alluvial sand and gravel deposits. However, as detailed in Chapter 9 of the EAR, the Site is unlikely to be underlain by sand and gravel deposits and, therefore, it is not anticipated that the development would result in the sterilisation of a significant area of potential mineral resources.

Minerals Conclusion

- 7.12.5 As it has been assessed that the Scheme would not result in the sterilisation of a significant area of potential mineral resources, the Scheme is compliant with relevant policies of the BLP, the NMLP and the NPPF.

7.13 Water Resources and Flood Risk

- 7.13.1 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (the WFD Regulations) require all waterbodies to achieve both good chemical status and good ecological status for each river basin district.
- 7.13.2 The Development Plan places significant emphasis on ensuring that development does not increase flood risk or compromise water quality within the district. The following summarises the key policies relating to flood risk management and water quality protection:
- Policy ST37 of the BLP requires that green and blue infrastructure be continually enhanced, extended, and managed through the application of climate change mitigation and adaptation measures in new development. This includes the effective management of flood risk and watercourses.
 - Policy ST48 requires development to be climate conscious, being as adaptable to potential effects as possible. As a part of this the policy highlights adapting surface materials and drainage design to reduce the risk of flooding to land, property and people as a result of more extreme rainfall in accordance with Policy ST50.
 - Policy ST49 stipulates that renewable energy developments must demonstrate satisfactory water quality outcomes and will only be supported where any potential impacts on water quality are appropriately addressed and mitigated.
 - Policy ST50 sets out the overarching LPA approach to flood risk and drainage detailing that development proposals must assess and, where necessary, mitigate both on-site and off-site flood risk impacts, proportional to the scale and nature of the development. Continued, the policy requires, where appropriate for applications to include a FRA ensuring safe access, no increased flood risk elsewhere, and, where possible, reduced overall flood risk. In Flood Zones 2 and 3, proposals must pass the Sequential and, if required, Exceptions Tests and

protect land needed for flood management. SuDS should be used to national standards, with robust maintenance, no surface water discharge to sewers and maximised environmental and amenity benefits. In areas at risk from surface water flooding, developments should reduce runoff and direct water to sustainable outfalls.

- Policy ST51, in alignment with WFD objectives, requires protection and, where feasible, enhancement of surface and groundwater quality and quantity. Development near watercourses will be supported if it improves river environments and water quality. All development must ensure adequate water supply and sewage infrastructure, apply the drainage hierarchy, separate foul and surface water, include pollution controls, design for climate resilience, and where possible, use infiltration-based SuDS and water recycling to reduce mains water demand.

7.13.3 Paragraph 175 the NPPF explains that ‘the sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk)’.

7.13.4 Paragraph 187 of the NPPF states that planning decisions should contribute to and enhance the natural and local environment by (inter alia) ‘*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*’.

7.13.5 The NPPF, at paragraphs 170-182, provides the basis for the consideration of flood risk in determining planning applications and requires that proposals seek to avoid inappropriate development in areas of flood risk and ensure that development does not increase flood risk elsewhere.

7.13.6 Paragraph 181 states that development “*should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:*

- *within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;*
- *the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
- *it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
- *any residual risk can be safely managed; and*
- *safe access and escape routes are included where appropriate, as part of an agreed emergency plan’.*

7.13.7 NPPF policy on flood risk is reflected in NPS EN-1 and NPS EN-5.

- 7.13.8 The following section provides an overview of Chapter 8 of the EAR, Water Resources and Flood Risk. It summarises the baseline conditions for water resources and flood risk and presents the environmental appraisal of potential impacts associated with the construction and operation of the Scheme. Where potential environmental impacts are identified, appropriate control measures are prescribed to mitigate or avoid these impacts.

Waterbodies

- 7.13.9 Within the Site boundary, the High Marnham Drain is situated along the eastern edge and discharges into the River Trent, which flows north to south approximately 180m east of the Site. An additional unnamed drain within the boundary responds to rainfall events. The nearest watercourse is an unnamed stream located around 220m north of the Site, which drains into Fledborough Beck, a tributary of the River Trent (a Main River designated by the Environment Agency). The Old Trent, another ordinary watercourse, lies approximately 300m south east, while the next closest watercourse is about 360m west of the Site. There is a single pond located roughly 495m south of the Site, with no other waterbodies present on the Site or within the study area.
- 7.13.10 The Site's topography decreases in elevation from approximately 18m to 8m AOD, with a topographical low point at the centre of the eastern section.

Water quality

- 7.13.11 The study area drains to one WFD surface waterbody catchment, namely the Trent from Carlton-on-Trent to Laughton Drain (Environment Agency, 2023). Table 81 and 82 of the EAR details the current status and lists the Reasons for Not Achieving Good (RNAG) overall status for this waterbody.
- 7.13.12 As detailed in Table 8.1, the Trent from Carlton-on-Trent to Laughton Drain is a surface waterbody with overall status of moderate. Its RNAG status is described as being from transport drainage, sewage discharge (continuous), natural conditions (other, poor soil management and others unknown but pending investigation). The Lower Trent Erewash - Secondary Combined Water Body is a groundwater body that, with good overall status, has its RNAG described as being pollution from an abandoned mine.

Flood risk

- 7.13.13 The Site is predominantly located within Flood Zone 1, indicating a low probability of flooding from rivers and the sea (less than 0.1 per cent annual chance), however, the eastern part of the Site partially extends into Flood Zones 2 and 3, where the annual flood risk exceeds 1 per cent.
- 7.13.14 The broader study area includes the floodplain of the River Trent to the north, east, and south of the Site. Surface water flood risk across the Site is generally very low, though the eastern boundary contains a Flood Zone 3, and Flood Zone 2 notably along the northern boundary.
- 7.13.15 The FRA (Ref. B2441B05-JAC-HM-XX-RP-C-02316) provides additional details regarding flood risks from groundwater, reservoirs and canals, concluding that overall flood risk from these sources is negligible to low. The FRA also outlines mitigation measures to manage surface water flood risk.

Construction and operation impacts and mitigation

- 7.13.16 As stated in Chapter 8 of the EAR, the Scheme presents potential impacts. One of these is the potential impact pathways to the pond located 495m south of the Site, as well as to the Old Trent watercourse and Fledborough Beck. As noted in the EAR, the pathways are considered to be sufficiently weak that these receptors are unlikely to be affected by the Scheme.
- 7.13.17 Further impacts are presented in the potential that could come from surface water runoff from the Scheme. Increased surface water runoff could potentially degrade the water quality of local watercourses, particularly via the High Marnham Drain, which connects to the River Trent. This risk will be managed through appropriate measures to ensure that silty or polluted water is not discharged without suitable treatment. Emergency spill response plans will be in place prior to construction to prevent pollution incidents from harming the water environment.
- 7.13.18 Hydromorphological impacts to local watercourses from increased siltation are also raised as potential impacts. These will be mitigated by avoiding soil storage near watercourses and controlling sources of silted runoff. The risk of increased surface water flooding during construction, due to changes in land permeability, will be mitigated through provision of suitable drainage in construction compounds and reinstatement of the land drainage regime post-works. Water use during construction will be minimised through efficiency measures, and no consumptive groundwater use or change to groundwater recharge is proposed. Overall, with the implementation of control, enhancement and monitoring measures, the Scheme is considered to have a low to negligible impact on water environment receptors during construction.
- 7.13.19 Once operational, the increase in impermeable land cover during the operational phase of the Scheme may affect the land drainage regime and surface water flood risk. These potential impacts will be mitigated through the implementation of appropriate drainage systems. As summarised by the EAR, the FRA notes that any raising of the Site could cause surface water displacement, but the Drainage Impact Assessment confirms that embedded design measures will prevent increased offsite flood risk. While the drainage system has been designed to meet National Grid standards, there is a residual risk that exceptionally large rainfall events could lead to surface water flooding within the Site boundary, though no vulnerable receptors are expected to be affected due to the Site's topography. No other significant operational impacts on water environment receptors are anticipated. Overall, with the embedded design measures, the Scheme is considered to have a low impact on water environment receptors during operation.
- 7.13.20 Nevertheless, the control measures outlined in Table 8.3 of the EAR will be implemented during the construction phase of the Scheme. The control measures will be incorporated into the CEMP, with their implementation subject to ongoing monitoring by National Grid. The measures listed in Table 8.4 of the EAR will be implemented during the operational phase of the Scheme and the appraisal has been undertaken assuming these measures are in place.

Water Resources and Flood Risk Conclusion

- 7.13.21 Policy ST37 of the BLP requires the effective management of flood risk and watercourses. Although development in Flood Zones 2 and 3 must pass the Sequential and, if necessary, Exceptions Tests, the Scheme is assessed as being primarily within Flood Zone 1 with limited areas of Flood Zone 2 and 3 to the east. As

the built development is within Flood Zone 1, it is considered that there is no requirement to apply the Sequential Test.

- 7.13.22 The policy requires that development is accompanied by SuDS designed to national standards, ensuring no surface water discharge to sewers and maximising environmental and amenity benefits. Policies ST48 and ST50 further mandate the adaptation of surface materials and drainage design to reduce flood risk to land, property, and people, supported by the submission of a FRA. The Scheme's SuDS have been designed to accommodate future climate change, effectively managing surface water flood risk throughout the lifetime of the development. The proposed drainage system comprises a network of shallow filter drains to collect runoff from hardstanding areas, while the remainder of the Site will feature a free-draining gravel surface, facilitating drainage and providing attenuation of surface water runoff. The accompanying Drainage Impact Assessment confirms that the proposed measures will not increase off-site flood risk.
- 7.13.23 In accordance with Policy ST51, development adjacent to watercourses is supported where it enhances river environments and improves water quality. Control, enhancement, and monitoring measures, as outlined in Tables 8.3 and 8.4 of the EAR, will be implemented. Upon completion of the proposed SuDS, operational surface water runoff will be treated prior to discharge, thereby safeguarding the water quality of environmental receptors, including the nearby River Trent. The Site is not located within a groundwater source protection zone.
- 7.13.24 Taking into account the control, enhancement and monitoring measures outlined in Table 8.3 and Table 8.4 of the EAR, the Scheme is assessed as having no residual impacts on water environment receptors including its quality during both construction and operation. The Main Works Contractor will be responsible for reviewing and updating the OCEMP prior to the commencement of construction activities.
- 7.13.25 The Scheme has been designed to be resilient to climate change and safe from flooding throughout its operational lifetime. Furthermore, the Scheme will not result in any adverse effects on flood risk for land situated outside its boundary. Accordingly, the Scheme is considered to be in full compliance with relevant policies of the BLP, the NPPF and the relevant National Policy Statements, including NPS EN-1 and NPS EN-5.

7.14 Socioeconomics and Human Health

- 7.14.1 BDC is committed to supporting local businesses, enhancing the local economy and promoting development that delivers social, environmental, and economic benefits to the district.
- 7.14.2 BDC has supplied policy that provides guidance on growth of the economy in rural areas and outside established employment sites, stating in Policy ST8 of the BLP that development will be supported where there is a clear business need or operational requirement. Proposals must not have a negative impact on the character of the location, the surrounding townscape or landscape, local biodiversity, or heritage assets. Safe access for vehicles must be provided, taking into account sustainable and public transport options, and there should be no unacceptable impact on the safe operation of the highway network. Additionally, the development must not adversely affect the residential amenity of nearby properties, in line with Policy 46. Proposals that support the diversification of the rural economy will also be supported, subject to these requirements.

- 7.14.3 As aforementioned Policy ST42 of the BLP promotes development that will help the district become healthier and more active. As a part of these ambitions, BDC believes this will be achieved by development that ensures continued and enhanced pedestrian and cycle routes; maintains the current air quality in the district, where possible improving it; and ensures the risks from pollution and other hazards from climate change are mitigated appropriately.
- 7.14.4 Policy 46 of the BLP reaffirms the importance of protecting amenity by requiring that development should not significantly harm the living conditions of existing or future residents through loss of privacy, excessive overshadowing, or overbearing impacts. Furthermore, developments must not generate unacceptable levels of activity, noise, light, air pollution, odour, vibration, or other pollutants that cannot be appropriately mitigated. For proposals located in proximity to existing 'bad neighbour' uses, such as heavy industry or businesses operating outside of normal hours, it must be demonstrated that the ongoing operation of these neighbouring uses will not be compromised, and that the amenity of future occupiers of the new development will be safeguarded in accordance with policy standards. Additionally, where a new 'bad neighbour' use or a change of use is likely to have a significant adverse impact on residential amenity, suitable mitigation measures must be secured and implemented prior to the occupation of the development.
- 7.14.5 As outlined in previous sections, Policy ST49 provides explicit guidance on renewable energy development. The policy offers general support for such proposals, provided that a range of considerations are satisfactorily addressed. These include the potential for adverse impacts on local communities, residential amenity and quality of life, as well as on water resources, the district's environmental and historic assets and any cumulative effects arising from these factors.
- 7.14.6 As outlined by Policy ST53, development will be supported where it contributes to safe, sustainable and active transport. In part, development should provide well-designed, safe and convenient access for all users, prioritising pedestrians and cyclists. Access arrangements must not compromise the free flow of traffic or other transport modes, nor should they increase congestion or risk to the safety of any road users, including vulnerable groups; and they should encourage forms of active travel through connection to, and extension of, existing pedestrian, cycle and equestrian routes, where practicable.
- 7.14.7 The NPPF seeks to promote healthy and safe communities and states that planning decisions should 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. At paragraph 5.13.19, NPS EN-1 requires that the Secretary of State (in respect of DCO applications) should have regard to the potential socioeconomic impacts of new energy infrastructure.
- 7.14.8 As summarised in Chapter 13 of the EAR, there are no community facilities, businesses, recreation, or tourism assets within the Scheme boundary.
- 7.14.9 Sparrow Lane Park, a park home estate, is approximately 190m south east of the Site.
- 7.14.10 Sparrow Lane Countryside and Rights of Way (CRoW) open access land is about 90m east, though this CRoW is a linear hedgerow not expected to be used for recreation.

- 7.14.11 There are no PRoWs within the Site, but three PRoWs and NCR 647 are within 500m. Two DMMO applications are within the Site, but as these have not been designated as PRoWs, they are not considered further in the assessment.
- 7.14.12 According to Chapter 13 of the EAR, most health indicators in Bassetlaw District are similar to the England average, including life expectancy, mortality rates, and adult obesity. However, the district performs worse than average in smoking rates among pregnant women, childhood obesity, and child poverty. Bassetlaw has a lower rate of emergency admissions for chronic obstructive pulmonary disease than the regional average, but a slightly higher proportion of residents with long-term illnesses or disabilities.
- 7.14.13 The EAR summarises the following construction and operational impacts for the following receptors:
- Socioeconomic:
 - Given the nature of the Scheme, its capital cost and workforce (peaking at around 160 workers) are relatively small compared to other large-scale energy projects. Most construction spending is expected to go to specialist contractors from outside the local area, so the residual impacts on the local economy and employment are likely to be temporary and negligible beneficial.
 - Due to the nature of the Scheme, the proposed substation will be operated remotely and will not require any operators to be permanently on-site. Therefore, no effect is anticipated on local economy and local employment during operation.
 - Community facilities:
 - There are no community facilities within the Scheme boundary or within 500m of the Scheme boundary. Therefore, no impact on community facilities is anticipated during construction or operation.
 - Business, recreational and tourism assets:
 - Sparrow Lane Park is the only business and tourism asset within 500m of the Scheme boundary, located about 190m south east of the Site. As construction access will use an existing entrance on the western side, access to Sparrow Lane Park is not expected to be affected, and no direct impact on businesses or tourism premises is anticipated during construction. While there may be indirect perceived impacts due to changes in the surrounding environment, any financial effects related to property blight fall outside the scope of the EAR. Sparrow Lane CRoW land is not expected to be used for recreation, so no impact on recreational assets is anticipated. There are no PRoWs within the Site, and nearby PRoWs and NCR 647 are sufficiently distant that no disruption to access is expected during construction or operation.
 - No access to disruption is anticipated during operation due to the nature of the Scheme. Therefore, no impact on businesses and tourism premises is anticipated during operation. There may be perceived indirect impacts on visitor accommodation businesses due to changes in the surrounding environment from the Scheme. However, any financial effects from such impacts are outside the scope of the EAR and should be addressed separately with affected property owners.

- 7.14.14 There are potential construction and operational impacts on human health from changes in wider health determinants. These comprise:
- Employment and income:
 - The Scheme may offer limited local employment opportunities and minor economic benefits from construction workers' spending, potentially supporting community wellbeing, but overall impacts are expected to be temporary and negligible beneficial.
 - Physical activity:
 - PROWs will remain accessible during construction, though users may experience temporary minor to major visual impacts. With clear public communication, these effects are expected to be temporary, resulting in a low adverse residual impact on health related to physical activity.
 - The Scheme is not expected to disrupt access to any walking, cycling, or horse-riding routes. While there may be adverse impacts on visual amenity for PROW users, proposed planting and screening measures will reduce these effects over time. As a result, a permanent low adverse residual impact on human health related to physical activity is anticipated.
 - Air quality:
 - Construction activities may cause low to medium dust impacts which could affect those with respiratory or cardiovascular conditions. With mitigation, air quality impacts will be within statutory limits, resulting in temporary negligible adverse health effects.
 - Water quality and flood risk:
 - Potential water pollution and flood risks are assessed as low to negligible after mitigation, so any impacts on human health are expected to be temporary and negligible adverse.
 - Land quality:
 - With construction mitigation measures in place for contaminated dust and spillages, impacts on health from land contamination are expected to be temporary and negligible adverse.
 - With operational mitigation measures such as ground investigation, monitoring, and gas protection in place, the Scheme is expected to result in a permanent negligible adverse impact on human health from exposure to contaminated ground or ground gas, remaining within statutory standards.
 - Noise:
 - Construction and traffic noise may affect mental wellbeing, but with mitigation, noise levels will comply with standards and result in temporary negligible adverse health impacts.
 - The Noise Impact Assessment (Ref.:EEN/565/NOTE2024) identified a significant adverse impact from the SGT2, but with the use of an acoustic enclosure, noise levels are expected to be reduced to negligible and below background levels. Therefore, a permanent negligible adverse impact on human health from noise is anticipated.

- Transport, access, and connections:
 - An increase in construction traffic is expected to have a negligible impact on access, with mitigation ensuring any effects on health are temporary and negligible adverse.
- Radiation and mental health:
 - Although the Scheme is in a rural area with some nearby residences, it may cause anxiety about EMF exposure among local residents. However, as the Scheme will fully comply with established EMF guidelines and health and safety standards, any impact on human health from radiation or related mental health concerns is expected to be permanently negligible.

7.14.15 The control measures outlined in Table 13.1 and 13.2 of the EAR will be implemented during the construction and operation phase respectively, with National Grid ensuring their inclusion in the CEMP and monitoring their effectiveness to reduce or avoid potential impacts.

Socioeconomics and Human Health Conclusion

7.14.16 As outlined in the preceding sections of this PDAS, the Scheme is not expected to have significant adverse effects on health and wellbeing, general access, the local economy, local roads, neighbouring amenities or businesses. The proposal has taken into account factors such as ground stability, contamination, flooding, noise and other environmental considerations to ensure that with appropriate mitigation measures in place. The development would not significantly impede the broader environment and economy.

7.14.17 Overall, the proposal can be regarded as net beneficial to both the local and wider economy and environment, particularly considering the development's necessity as outlined in Section 8. Consequently, it can be argued that the proposal successfully demonstrates compliance with Policy ST8, ST42, 46, ST49, ST53 of the BLP, the NPPF and NPS EN-1 with any impacts being reduced to negligible adverse after mitigation.

7.15 Electromagnetic Fields

7.15.1 EMFs arise from the generation, transmission, distribution and use of electricity and can have adverse effects on human health, including impacts on the nervous system. Direct effects on human health are primarily a result of the induction of currents around power lines and electric cables, particularly where the public may be exposed for a considerable time. Indirect effects can occur as a result of the build-up of electric charges on the surface of the body producing a microshock. For electricity substations, the EMFs close to sites tend to be dictated by the overhead lines and cables entering the installation, not the equipment within the Site.

7.15.2 The International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines set 'reference levels' of electric field strength (for electric fields) and magnetic flux density (for magnetic fields). The reference levels are such that compliance with them will ensure that 'basic restrictions', in terms of the induced current density in affected tissues of the body, are not reached or exceeded. Section 2.11.10 of NPS EN-5 does not repeat the ICNIRP guidelines but requires the Secretary of State to be satisfied that proposals are in accordance with them.

- 7.15.3 National Grid has a very clear policy on EMFs, as set out in its Public Position Statement, which states “...*In all our operations, as a minimum we comply with EMF regulations, guidelines or practices in force in the countries and different jurisdictions in which we operate*”. An assessment of the EMF effects of the Scheme has been completed and is submitted with the planning application.
- 7.15.4 The EMF Assessment concludes that the proposed substations will be fully compliant with the government’s policy on EMFs, with all fields produced being below the relevant exposure limits. On this basis, there will be no significant EMF effects resulting from the Scheme. The overhead lines will be the predominant source of EMFs arising from the Scheme. The EMF Assessment confirms that EMFs from these overhead lines will also comply with the relevant exposure limits.

Electromagnetic Fields Conclusion

- 7.15.5 There will be no significant EMF effects associated with the Scheme and fields will be below exposure limits. On this basis, the Scheme is in accordance with NPS EN-5. EMFs arising from the overhead line works associated with the Scheme will also comply with the relevant exposure limits.

8. Planning Balance and Conclusion

8.1 Introduction

- 8.1.1 Section 70(2) of TCPA 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 establish that the planning application for the Scheme must be determined in accordance with the Development Plan, unless material considerations indicate otherwise.
- 8.1.2 This section of the PDAS presents the overall planning balance. Drawing on the planning assessment presented in Section 7, and in accordance with the legislative requirements above, national planning policy reiterates the essential need for the Scheme, before summarising the benefits and adverse impacts and concluding on the overall planning balance.

Need for the Scheme

- 8.1.3 Although the proposed 400kV substation at High Marnham is being consented under the Town and Country Planning Act 1990 rather than as a Development Consent Order under the Planning Act 2008, it nonetheless constitutes critical national priority infrastructure in policy terms.
- 8.1.4 National Policy Statements EN-1 and EN-5 identify the need for new and reinforced electricity transmission infrastructure as a critical national priority to maintain security of supply and deliver the transition to net zero. The Project, in which the Scheme sits within, is part of National Grid's broader transmission reinforcement strategy. This strategy has been outlined by the Electricity System Operator's HND and subsequent CSNP, which together set out the required nationally critical reinforcements needed to connect new offshore generation and strengthen the onshore 400kV network. The proposed substation provides a vital node to enable the operation of the Project, supporting the transfer of renewable generation and system resilience across northern England. Consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route. Rising electricity demand is expected as power generation for residences, business operations and transport undergoes transformation. The UK government has committed to reach net zero emissions by 2050. This means achieving a balance between the greenhouse gases put into the atmosphere and those taken out. Decarbonising the energy system is vital to achieve net zero; the fossil fuels that once powered the economy would be replaced with sources of low-carbon electricity.
- 8.1.5 There is an increased growth forecast in offshore wind capacity in Scotland and the North East of England, as well as increasing power flows to and from European power grids. This would put pressure on the existing network, such that reinforcement of the transmission network has been identified as necessary to secure the operation of the transmission system and ensure reliable, economic and long-term supply.

- 8.1.6 To achieve this, National Grid needs to upgrade the high voltage power network in England to connect these new sources of offshore energy to the energy network. The Great Grid Upgrade plans are part of the biggest overhaul of the energy network in a generation, and would see significant investment and improvement in the nation's energy infrastructure as the UK continues its transition towards net zero and more sources of low carbon power are developed.
- 8.1.7 The Great Grid Upgrade would connect clean energy produced here in the UK, increasing the self-sufficiency of energy supplies.
- 8.1.8 The Great Grid Upgrade comprises 17 major infrastructure projects that would both scale up the grid and update existing networks. It would enable National Grid to carry more clean, secure energy from where it is generated.
- 8.1.9 The proposal for a new 400kV substation at High Marnham (the Scheme) falls within the scope of the Project the purpose of which is to reinforce the electricity network by uprating the existing 275kV transmission lines to operate at 400kV. The Scheme would allow the uprating to connect to the wider electricity network, reinforcing the grid.
- 8.1.10 The related but independent project, the Brinsworth to Chesterfield project, will reinforce the grid between Brinsworth and Chesterfield, including the construction of a new substation at both Long Lane (the Brinsworth Site), in Rotherham and Chesterfield (the Chesterfield Site) in North East Derbyshire.
- 8.1.11 The Clean Power Report 2030 (NESO) explicitly identifies the Chesterfield to High Marnham (and Brinsworth to Chesterfield) project as one of four schemes which, if not delivered by 2030, would have a significant impact on the ability of the country to deliver clean power. Consequently, substantial weight should be afforded to the national need and strategic importance of the development, consistent with the approach in EN-1 and EN-5, irrespective of the consenting route.

Benefits of the Scheme

- 8.1.12 There is a compelling need for the Scheme. In summary, the Scheme will:
- reinforce the electricity network by connecting the to be uprated existing 275kV transmission lines to allow operation at 400kV, transporting clean energy from the North of England to homes and businesses in the Midlands and beyond and play an important role in building a more secure and resilient future energy system.
 - ensure that National Grid meets its statutory duties to develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity;
 - deliver substantial and important economic and social benefits associated with the construction of the substations and, during operation, electricity supplies to homes and businesses including data centres; and
 - ensure that adverse impacts on the environment and local communities are minimised, and secure enhancements. In accordance with national and local planning policies and associated guidance, the Scheme includes a range of enhancement measures that would generate positive ecological effects and deliver a net gain in biodiversity.

Adverse impacts of the Scheme

- 8.1.13 This planning submission demonstrates that there is a demonstrable unmet need for the type of development proposed and that the development would be in a sustainable location.
- 8.1.14 The other potential environmental impacts of the Scheme have been comprehensively assessed in the suite of environmental assessments submitted with the planning application. Wherever practicable, likely adverse effects have been avoided or minimised through measures embedded into the design of the Scheme and, taking into account the findings of the assessments, consultation with stakeholders and national and local policy requirements, additional mitigation.
- 8.1.15 The assessments, which are summarised in this PDAS demonstrate that the Scheme will not result in any significant adverse environmental effects. The Scheme has the potential to result in localised moderate adverse effects on landscape character during the construction phase but these effects will be temporary and will reduce once proposed mitigation planting has matured. There will be a residual minor to negligible adverse impact on landscape and visual amenity.
- 8.1.16 With mitigation, all other adverse effects associated with the Scheme, including in respect of the traffic and transport, air quality, noise and vibration, land quality and use, minerals, water quality, flood risk, climate change and electromagnetic fields, will be minor or negligible and are not considered to be unacceptable.
- 8.1.17 With regard to the Historic Environment, less than substantial harm on both designated and non-designated assets has been assessed as likely to arise during construction works, these impacts are both temporary and reversible and will not result in the permanent loss of significance. Given the short duration and reversible nature of the impact, the harm should be afforded limited weight in the overall planning balance.
- 8.1.18 Operational impacts have been identified for three non-designated assets of low-value located along Hollowgate Lane. The impacts identified comprise potential permanent changes to the setting of these assets due to visual intrusion from operation of the Scheme. The rear (north-facing) façades of these historic houses back onto agricultural land, the rural nature of which forms part of their setting which contributes to their overall significance. Although the existing substation is within view of these heritage assets, adding an industrial component to their setting, the Scheme would further encroach on the rural landscape making a negative contribution from a visual perspective. The potential change in setting is not predicted to be significant. Given the low value of these non-designated assets and the assessment that any effect is not predicated to be significant any harm should be afforded limited weight in the overall planning balance.

Cumulative impacts

- 8.1.19 The EAR reports the results of the appraisal of the intra-project and inter-project cumulative impacts associated with the construction and operation of the Scheme. There are two types of cumulative impacts, both of which are considered within this EAR:
- Intra-project cumulative impacts: the combination of individual impacts from the Scheme on a particular receptor; and

- Inter-project cumulative impacts: the combination of impacts from several developments, in this case, and the Scheme together with other reasonably foreseeable developments, which individually might have negligible or slight impacts, but when considered together could create a moderate or major cumulative impact.

- 8.1.20 As identified in Table 14.1 of the EAR, there are no receptor groups that have been assessed as having intra-project cumulative impacts, whilst the Table notes that there are impacts for individual groups, assessed ranging from minor or negligible to moderate or above, no receptor group experiences more than one type of residual impact. As such, no intra-project impacts are anticipated as part of the Scheme.
- 8.1.21 As set out in Table 14.2, a short list of committed developments have also been assessed for inter-project related impacts (see for number reference). In addition to the above inter-project committed developments, there is an additional Great Grid Upgrade project to consider, the Brinsworth to Chesterfield Project, which largely comprises the construction of a new 400kV substation at land off Long Lane, east of Brinsworth. Due to the distance between the Scheme and the Brinsworth to Chesterfield Project, the intervening topography and the nature of the Scheme, no inter-project impacts are anticipated.
- 8.1.22 As listed in Table 15.1, the following inter-project cumulative impacts are anticipated during construction:
- Landscape and Visual (committed development 2, 3 5, 6, and 10);
 - Cultural Heritage (committed development 5);
 - Socioeconomics and Human Health (committed development 5); and
 - Agricultural Land and Soils (committed development 5, 6, 7, 8, and 12).
- 8.1.23 Inter-project related construction impacts will be managed by a CEMP and associated management plans, including a CTMP.
- 8.1.24 As listed in Table 15.2, the following inter-project cumulative impacts are anticipated during operation:
- Landscape and Visual (committed development 3 and 5).
 - Inter-project related operational impacts will be managed by embedded design measures including landscape and biodiversity planting. Mitigation would also include the retention and protection of existing screening vegetation.

The Overall Planning Balance

- 8.1.25 As identified in national policy and the government's energy strategy, there is an urgent and critical need to bring forward low carbon infrastructure to meet targets for decarbonisation and net zero. The Scheme will contribute to the delivery of these policy aims, by improving the existing electricity transmission network.
- 8.1.26 The Scheme would not result in any permanent significant adverse environmental effects. Where there are residual impacts mitigation measures have sought to reduce these as far as practicable and to an acceptable level.
- 8.1.27 Overall, the need for, and benefits of, the Scheme clearly outweigh the adverse impacts of the Scheme. The planning balance is firmly in favour of the Scheme and in accordance with the presumption in favour of sustainable development advanced in the NPPF, it is respectfully submitted that planning permission be granted.

References

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Appendix A. Planning Policy: Bassetlaw Local Plan

Appendix A

Planning Policy: Bassetlaw Local Plan

Policy	Requirement
ST1: Bassetlaw's Spatial Strategy	<p>A. The spatial strategy for Bassetlaw will be delivered over the plan period 2020-2038 through:</p> <ol style="list-style-type: none"> 1. managed sustainable development and growth, appropriate to the size of each settlement or location to meet the evidenced need for new homes and jobs, to regenerate the District's town centres, and to support necessary improvements to infrastructure, services and facilities by: <ol style="list-style-type: none"> a) promoting the efficient and effective use of land and the re-use of previously developed land in sustainable locations, unless there are overriding amenity, biodiversity or heritage matters that preclude such use; and by seeking to minimise the use of the most versatile Grade 1-3 agricultural land, where practicable; Bassetlaw Local Plan 2020-2038 38 b) emphasising the need to develop in sustainable locations in close proximity to transport hubs and key public transport nodes, and by encouraging higher density development in those locations; c) ensuring that sufficient physical, social and green/blue infrastructure is delivered to meet identified needs in a timely manner. 2. enabling the provision of housing land for a minimum of 9,720 dwellings (540 dwellings per annum), through completed sites, sites with planning permission, new site allocations in this Local Plan, and from site allocations in made neighbourhood plans in accordance with the settlement hierarchy below: <ol style="list-style-type: none"> a) at the Main Towns: <ol style="list-style-type: none"> i. approximately 2,322 dwellings in Worksop Outer Area; ii. approximately 238 dwellings in the Worksop Central DPD; iii. approximately 2,331 dwellings in Retford; iv. approximately 2,203 in Harworth & Bircotes; b) by supporting the delivery of approximately 1,412 dwellings in the Large Rural Settlements; c) by supporting the delivery of approximately 1,715 dwellings in the eligible Small Rural Settlements; <p>1.Main Town: Worksop, Retford and Harworth & Bircotes</p>

Policy	Requirement
	<p>2. Large Rural Settlement: Blyth, Carlton in Lindrick and Costhorpe, Langold/Hodsock, Misterton and Tuxford</p> <p>3. Small Rural Settlement: Barnby Moor, Beckingham, Clarborough, Clayworth, Cuckney, Dunham on Trent, East Drayton, East Markham, Elkesley, Everton, Gamston, Gringley on the Hill, Hayton, Laneham, Lound, Mattersey, Misson, Nether Langwith, Normanton on Trent, North Leverton, North and South Wheatley, Rampton, Ranby, Ranskill, Rhodesia, Scrooby, Shireoaks, South Leverton, Sturton le Steeple, Styrrup, Sutton cum Lound, Treswell, Walkeringham, West Stockwith</p> <p>4. Countryside: All areas not identified above</p> <p>3. enabling windfall sites, which are expected to be a reliable source of housing supply during the plan period contributing approximately 912 homes;</p> <p>4. considering land outside of development boundaries and/or outside the built up area(s) of settlements identified in the settlement hierarchy as part of the wider countryside, where development will only be supported where consistent with other policies in the development plan or national policy;</p> <p>5. providing for 49 permanent pitches for Gypsy and Travellers by 2037-2038 of which 27 pitches will be provided by 2028-2029 to meet identified local needs;</p> <p>6. contributing to the provision of approximately 193ha of developable land in the E(g), B2 and B8 Class at the General and Larger Unit Employment Sites, and to meet the needs for B8 sub-regional/regional large scale logistics use only on approximately 118ha of land at the Apleyhead Strategic Employment Site;</p> <p>7. safeguarding, regenerating and enhancing the role of the District's town centres at Worksop, Retford and Harworth & Bircotes, including a small scale extension to Harworth & Bircotes town centre to secure their longevity as vibrant centres that provide for appropriate housing, business, retail, leisure and community facilities to serve each settlement, and its catchment effectively.</p>
ST9: Large Rural Brownfield Sites	<p>1. Proposals for the re-use and re-development of large brownfield sites in the countryside that make effective and efficient use of land for economic and/or environmental activity, and which are consistent with other relevant policies in this Plan will be supported subject to meeting the following criteria:</p> <p>a) The proposal makes provision for an evidenced national, regional or sub-regional economic need;</p>

Policy	Requirement
	<p>b) The development cannot be reasonably provided elsewhere in the District and does not undermine the aims and objectives of other policies in the Plan;</p> <p>c) The nature of the proposed development will capitalise on the locational attributes of the site to achieve demonstrable economic and/or environmental benefits compared with the current use and condition of the site;</p> <p>d) The scale and nature of the proposal will have no significant adverse impact upon the character of the location, the surrounding landscape, biodiversity or heritage assets;</p> <p>e) The proposal would not lead to significant harm to the amenity of local residents;</p> <p>f) The need to travel by private vehicle has been minimised, and the need for appropriate sustainable transport measures and any highway improvements have been identified;</p> <p>2. Any non-economic and environmental uses within a large brownfield site will only be supported where it can be demonstrated that it is consistent with Part 1 above and:</p> <p>a) There is a clear functional relationship with the primary economic and/or environmental purpose of the site; and</p> <p>b) It is of a scale that is appropriate to that relationship; and</p> <p>c) When considered individually or cumulatively with other existing or consented development on site it would not result in an over-concentration that might affect the function and appearance of the area.</p> <p>3. All proposals should be supported by a comprehensive masterplan framework for the site consistent with other relevant policies in this Plan. Where a proposal materially departs from an existing masterplan, clear justification will need to be provided for the approach</p>
ST33: Design Quality	<p>1. All development must be of a high quality design that:</p> <p>a) has a clear function, character and identity based upon a robust understanding of local context, constraints and distinctiveness, while reflecting the principles of relevant national and local design guidance, including Sport England's Active Design principles 3, the Bassetlaw Design Quality SPD and the Bassetlaw Design Code;</p> <p>b) uses land efficiently and ensures density reflects local character:</p>

Policy	Requirement
	<p>i. within the Main Towns of Worksop, Retford and Harworth & Bircotes the density on sites in and adjoining town centres and transport hubs should be maximised, whilst densities elsewhere within the development boundary should be a minimum of 30 dwellings per hectare (net) unless it would result in an adverse effect on the character of the area, including the setting of a heritage asset and/or the integrity of a natural asset;</p> <p>ii. within the Large Rural Settlements and Small Rural Settlements densities should reflect the character of the settlement and local housing needs, unless otherwise promoted through a neighbourhood plan;</p> <p>iii. HS1: Peaks Hill Farm and HS13: Ordsall South will be expected to deliver a range of housing densities across each site informed by the site's masterplan framework, design code and density plan;</p> <p>c) where appropriate, positively preserves, enhances and integrates landscape and townscape features, and natural and heritage assets;</p> <p>d) respects the local context and complements the landform, layout, building orientation, scale, height, massing, type, materials, details and landscaping of the surrounding areas;</p> <p>e) maximises opportunities to create mixed-use developments which support the function and vitality of the area in which they are located;</p> <p>f) for housing, provides a high standard of accommodation, and does not differentiate between the design quality of market and affordable housing;</p> <p>g) integrates well with surrounding streets and open spaces, provides a clear and legible hierarchy of streets, routes and spaces that prioritises safe, easy and direct pedestrian, cycle and public transport movement, while ensuring the safe, convenient movement of all highway users;</p> <p>h) ensures that all the community, including those with disabilities, can easily and safely access buildings and spaces and move around;</p> <p>i) creates safe communities and reduces the likelihood of crime and the fear of crime through maximising natural surveillance and where appropriate use of active ground floor frontages and lighting;</p> <p>j) incorporates and/or links to a well-defined green/blue infrastructure network of well managed and maintained public and open spaces;</p>

Policy	Requirement
	<p>k) secures a high quality public realm that is attractive and aesthetically pleasing, that clearly distinguishes between public and private spaces;</p> <p>l) enhances the value of the District's Nature Recovery Network such as through the use of street trees;</p> <p>m) incorporates high quality landscape design and maximises opportunities for greening, particularly where a development site adjoins the countryside;</p> <p>n) is sustainable in design and construction, and utilises modern construction methods and durable materials, where practicable;</p> <p>o) minimises energy consumption by maximising opportunities for passive solar energy and integrating renewable and low carbon technologies where practicable in accordance with Policy ST49;</p> <p>p) mitigates flood risk and water run-off utilising the drainage hierarchy in accordance with Policy ST50, and integrates water management appropriate to place;</p> <p>q) ensures an appropriate level of well-integrated, convenient and visually attractive areas for motor vehicle and cycle parking informed by the most up-to-date Nottinghamshire Parking Standards⁴ unless it can be demonstrated that it is not viable or feasible to do so; and provides for external storage including waste disposal;</p> <p>2. Where neighbouring or functionally linked sites come forward together, applicants will be expected to work together to ensure that proposals are, or can be, properly integrated.</p>
ST35: Landscape Character	<p>Proposals that contribute to the nature and quality of Bassetlaw's landscapes will be supported where it can be demonstrated that:</p> <p>it protects and where possible enhances the distinctive qualities of the relevant landscape character policy zone, as identified in the Bassetlaw Landscape Character Assessment 2009 by conserving, restoring, reinforcing or creating relevant landscape forms and features; and</p> <p>in the case of the Local Plan site allocations, also promotes the development opportunities identified within the Site Allocations: Landscape Study 2019 and the Landscape Assessment Addendums 2020, 2021 and 2022.</p> <p>Proposals in an edge of settlement location will be expected to create a positive interface between the urban and rural environments. This should be demonstrated through compliance with Part 1 of this Policy, and by giving appropriate consideration to layout, density, scale, massing and form of development in accordance with Policy ST33.</p>

Policy	Requirement
ST37: Green and Blue Infrastructure	<p>1. The connectivity, quality, multifunctionality, biodiversity and amenity value of the green and blue infrastructure network will be enhanced, extended and managed through:</p> <ul style="list-style-type: none"> a) protecting and enhancing the landscape character and the distinctiveness of Green Gaps, Registered Parks and Gardens and ornamental parklands, registered Common Lands and Village Greens, and Local Green Spaces; b) protecting, enhancing and restoring watercourses, ponds, lakes and water dependent habitats where appropriate; c) providing for biodiversity net gain, including reconnecting vulnerable and priority habitats (see policy ST38); d) protecting and enhancing ancient and mature woodland and hedgerows, and providing for tree planting to secure recreational benefits and/or to aid climate change mitigation; e) making appropriate provision for new green/blue infrastructure in new development including open space, allotments, playing fields and outdoor sports facilities, and natural and semi natural greenspace and bluespace; and/or incorporating and where practicable facilitating the improvement of existing provision through the design of development; f) applying climate change mitigation and adaptation measures through new development, including flood risk and watercourse management; g) linking walking and cycling routes, bridleways and public rights of way to and through development, where appropriate; <p>2. The function, setting, and biodiversity, landscape, access and recreational value of the following main and minor green corridors, as identified on the Policies Map will be protected and enhanced:</p> <ul style="list-style-type: none"> a) Main green corridors i. Chesterfield Canal ii. River Idle iii. River Ryton iv. River Trent b) Minor green corridors i. Trent Valley Way ii. Cuckoo Way iii. National Cycle Route 6 iv. River Maun v. Robin Hood Way vi. River Meden vii. River Poulter c) Major development proposals that lie wholly or partly within the minimum buffer zone of a main green corridor (30m measured from each side of the centre point), or a minor green corridor (15m measured from each side of the centre point) should be supported by an Ecological Impact Assessment and/or landscape statement proportionate to the nature and scale of the

Policy	Requirement
	<p>proposal. This should confirm the extent of the buffer zone in that location and demonstrate how the design and layout of the scheme will positively respond to its green/blue infrastructure location and minimise the environmental effects upon the green corridor.</p> <p>3. All new green and blue infrastructure should be accompanied by appropriate management and maintenance arrangements.</p>
ST38: Biodiversity and Geodiversity	<p>1.The Council will seek to protect and enhance the biodiversity and geodiversity of Bassetlaw, including:</p> <p>International Sites</p> <p>a) a proposal that may impact on a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and/or the Sherwood Forest ppSPA will only be supported where it can be demonstrated that there will be no adverse effects on their integrity, unless there are no alternative solutions and it is justified by an 'imperative reasons of overriding public interest' assessment under the Habitats Regulations;</p> <p>b) any scheme within the 5km buffer zone of the Sherwood Forest ppSPA will require a project level 'shadow level' Habitats Regulations Assessment to ensure any significant adverse effects on the Sherwood Forest ppSPA are identified and appropriately mitigated;</p> <p>National Designations</p> <p>c) a proposal (either individually or in combination with other developments) that may either directly or indirectly adversely impact a Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or ancient woodland and their buffer zones will be refused, other than in wholly exceptional circumstances where it can be demonstrated that the benefits of the development in the location proposed clearly outweigh any harm to the special interest features of the asset. In such circumstances measures should be identified through an Ecological Impact Assessment to mitigate the adverse effects resulting from the development.</p> <p>d) proposals of 50 dwellings or more (which includes piecemeal planning applications for less than 50 dwellings within a wider site) that fall within the '10km Impact Risk Zone' of the Clumber Park SSSI will be required to demonstrate that appropriate consideration has been given to the development's impact upon the integrity of that SSSI, including recreational impact. Where relevant, appropriate mitigation measures will be sought, which may include an appropriate design and layout on a development site to protect the integrity</p>

Policy	Requirement
	<p>of the SSSI, and/or a financial contribution to help mitigate identified impacts at the Clumber Park SSSI.</p> <p>Local Designations and Locally Important Ecological Features</p> <p>e) proposals having a direct or indirect adverse effect on a Local Nature Reserve, Local Wildlife Site or Local Geological Site and their buffer zones or other biodiversity/geodiversity asset, will only be supported where there are no reasonable alternatives; and the case for development clearly outweighs the need to safeguard the ecological, recreational and/or educational value of the site.</p> <p>2. In all cases, where the principle of development is considered appropriate the mitigation hierarchy must be applied so that:</p> <p>a) firstly harm is avoided wherever possible; then</p> <p>b) appropriate mitigation is provided to ensure no net loss or a net gain of priority habitat and local populations of priority species;</p> <p>c) as a last resort, compensation is delivered to offset any residual damage to biodiversity;</p> <p>d) they protect, restore, enhance and provide appropriate buffers around wildlife and geological features at a local and wider landscape-scale to deliver robust ecological networks, to help deliver priorities in the draft Nottinghamshire Biodiversity Opportunity Model for Bassetlaw and Idle Valley 201816 or any successor;</p> <p>e) they establish additional ecological links to the Nature Recovery Network.</p> <p>Biodiversity Net Gain</p> <p>3. In line with national legislation, all new development should make provision for net biodiversity gain on site, or where it can be demonstrated after following the mitigation hierarchy that this is not practicable, off site provision will be considered.</p> <p>4. Management for a minimum of 30 years in accordance with a maintenance scheme will be sought to manage the biodiversity assets in the long term.</p>
ST39: Trees, woodlands and hedgerows	<p>1.The Council will protect existing trees, woodland and hedgerows and secure additional planting that increases canopy cover in the interests of biodiversity, amenity and climate change adaptation by:</p> <p>a) retaining, protecting and improving woodland and trees subject to Tree Preservation Orders, trees within conservation areas, and ‘important’ hedgerows as defined by The Hedgerows Regulations 1997;</p>

Policy	Requirement
	<ul style="list-style-type: none"> b) making Tree Preservation Orders; c) giving consideration to trees and hedgerows both on individual merit as well as their contribution to amenity and interaction as part of a group within the broader landscape setting; d) resisting the loss or deterioration of ancient woodland and ancient or veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists; e) seeking from major development, provision for new trees or an equivalent financial contribution to help mitigate the impacts of climate change in accordance with Policy ST48. <p>2. Where development would adversely affect trees or hedgerows the application must be accompanied by:</p> <ul style="list-style-type: none"> a) an accurate tree survey and arboriculture assessment, undertaken by an experienced arboriculturist, of all existing trees and hedgerows on site in accordance with BS5837 (Trees in relation to design, demolition and construction – Recommendations) 201223; b) details of protective measures to be put in place during the development to ensure the health and safety of each specimen and hedgerow to be retained; c) an avoidance and mitigation strategy to include replacement planting for specimens of at least equal amenity and ecological value of a local provenance; and d) a detailed management plan providing details of maintenance arrangements for 10 years
ST40: The Historic Environment	<p>1. The historic environment will be conserved and enhanced, sensitively managed, enjoyed and celebrated for its contribution to sustainable communities. Proposals will be supported where they:</p> <ul style="list-style-type: none"> a) give great weight to the conservation and re-use of designated heritage assets and their settings, including for appropriate temporary use, based on their significance in accordance with national policy; b) make a positive contribution to the character and local distinctiveness of the historic environment, including through the use of innovative design; c) positively conserve or enhance a historic designed landscape; d) maintain, conserve, sustain or return to beneficial use designated or non-designated assets;

Policy	Requirement
	<p>e) capitalise in an appropriate and sensitive manner the regeneration, tourism and energy efficiency potential of heritage assets;</p> <p>f) positively secure the conservation and re-use of 'at risk' heritage assets;</p> <p>g) improve access and enjoyment of the historic environment where appropriate, particularly where they retain, create or facilitate public access to heritage assets to increase understanding of their significance.</p> <p>2. Applicants will be required to submit evidence in line with best practice and relevant national guidance, examining the significance of any heritage assets affected through a Heritage Statement, including any contribution made by their setting. The level of detail should be proportionate to the asset's significance, and the results submitted to the Nottinghamshire Historic Environment Record. In some circumstances, further survey, analysis and/or recording will be made a condition of consent.</p>
<p>POLICY 41: Designated and Non-Designated Heritage Assets</p>	<p>Designated Heritage Assets</p> <p>1. Proposals for development, including change of use, that involve a designated heritage asset, or the setting of a designated heritage asset will be expected to:</p> <p>a) conserve, enhance or better reveal those elements which contribute to the heritage significance and/or its setting;</p> <p>b) respect any features of special architectural or historic interest, including where relevant the historic curtilage or context, its value within a group and/or its setting, such as the importance of a street frontage, traditional roofscape, or traditional shopfronts;</p> <p>c) be sympathetic in terms of its siting, size, scale, height, alignment, proportions, design and form, building technique(s), materials and detailing, boundary treatments and surfacing, or are of a high quality contemporary or innovative nature which complements the local vernacular, in order to retain the special interest that justifies its designation;</p> <p>d) ensure significant views away from, through, towards and associated with the heritage asset(s) are conserved or enhanced;</p> <p>e) in the case of a Conservation Area, to have regard to the established urban grain and ensure that spaces between and around buildings, such as paddocks, greens, gardens and other gaps, are preserved where they contribute to the Conservation Area's character and appearance.</p>

Policy	Requirement
	<p>2. Proposals that will lead to substantial harm or total loss of significance will be refused unless the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, and it can be demonstrated that:</p> <ul style="list-style-type: none"> a) the nature of the heritage asset prevents all reasonable uses of the site; b) no viable use of the heritage asset can be found in the medium term through appropriate marketing that will enable its conservation; c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; d) the harm or loss is outweighed by the benefit of bringing the site back into use. <p>3. Proposals that would result in less than substantial harm to the significance of a designated heritage asset will only be supported where it can be demonstrated that the public benefits will outweigh any harm identified.</p> <p>Non-Designated Heritage Assets</p> <p>4. Proposals for development, including change of use, that involve a non-designated heritage asset, or the setting of a non-designated heritage asset will be expected to:</p> <ul style="list-style-type: none"> a) have regard to the significance of the asset and its relationship with its setting; b) be sympathetic to the local vernacular in terms of siting, size, scale, height, alignment, design and form; proportions, materials; <p>5. Proposals that will lead to harm to or loss of significance of a non-designated heritage asset will only be supported where it can be demonstrated that:</p> <ul style="list-style-type: none"> a) the asset's architectural or historic significance is proven to be minimal; or b) through an up-to-date structural report produced by a suitably qualified person, the asset is not capable of viable repair; or c) through appropriate marketing, the asset has no viable use; or d) the public benefits of the scheme outweigh the loss of significance. <p>Archaeological sites</p> <p>6. Where evidence suggests that significant archaeological remains exist on site, proposals should be supported by an appropriate archaeological evaluation that provides an assessment of the significance of the remains and considers how the</p>

Policy	Requirement
	<p>remains would be affected by the proposed development.</p> <p>7. Where the 'in situ' preservation of archaeological remains is not possible or desirable, suitable provision shall be made by the developer for the excavation, recording, analysis, storage, relocation of assets and archiving, in accordance with a Written Scheme of Investigation that has been approved by the Local Planning Authority.</p>
ST42: Promoting Healthy, Active Lifestyles	<p>1. The Council, with its partners will create an environment which supports healthy, active, inclusive and safe communities. Healthy, active and safe lifestyles will be enabled by:</p> <ul style="list-style-type: none"> a) working in partnership with the health authorities to maintain, and where practicable, improve access to the full range of health services for residents, including through the co-location of health facilities with other community facilities, open space and sports facilities, through multi-purpose buildings and sites; b) facilitating access to a range of high quality, well maintained and accessible open space and play areas, woodland, blue infrastructure, leisure and cultural facilities; c) improving the quantity, quality and accessibility to playing pitches and sports facilities; d) supporting initiatives which improve access to locally grown food at for example, allotments or community gardens; e) creating high-quality, inclusive environments that incorporate active design principles and where practicable, increase opportunities for movement through a network of well-connected sustainable travel routes, public rights of way and towpaths to everyday shops and services; f) supporting energy efficient design of development, where practicable; g) ensuring that the current air quality in the District is maintained and, where possible improved; h) minimising and mitigating against potential harm from risks such as pollution and other environmental hazards and climate change; i) facilitating the provision of optimal digital infrastructure in accordance with Policy ST55 to allow reliable connection to a range of online services; <p>2. All proposals of 50 or more dwellings will be required to submit a Rapid Health Impact Assessment Matrix as part of the planning application. The Council will recognise high performing schemes through Healthy</p>

Policy	Requirement
46: Protecting Amenity	<p>Bassetlaw – a health accreditation scheme for well-designed healthy development proposals.</p> <ol style="list-style-type: none"> Proposals for development should be designed and constructed to avoid and minimise impacts on the amenity of existing and future users, individually and cumulatively, within the development and close to it. As such, proposals will be expected to: <ol style="list-style-type: none"> not have a significant adverse effect on the living conditions of existing and new residents and future occupiers of the proposed development through loss of privacy, excessive overshadowing or overbearing impact; and not generate a level of activity, noise, light, air quality, odour, vibration or other pollution which cannot be mitigated to an appropriate standard. Proposals for development adjacent to, or in the locality of, existing 'bad neighbour' uses such as waste sites, incinerators, chemical production, heavy industry and businesses with out of normal hour (9-5) operations, will need to demonstrate that: <ol style="list-style-type: none"> the ongoing use of the neighbouring site is not compromised; and the amenity of future occupiers of the new development can be achieved in accordance with Part 1 of this policy with the ongoing normal use of the neighbouring site; Where the development of a new bad neighbour business or change of use could have a significant adverse effect on residential amenity, appropriate mitigation will be required before the development can be occupied.
47: Contaminated and Unstable Land	<ol style="list-style-type: none"> Where development is considered to be on contaminated land and/or unstable land, through an appropriate contamination assessment and/or land instability risk assessment, proposals should: <ol style="list-style-type: none"> ensure that all works, including investigation of the nature of any contamination or land instability, and removal of materials can be undertaken without causing unacceptable risk to health, waterways, other watercourses and sources of groundwater, or to the environment; identify the nature and extent of existing unstable land and/or contaminated land and the level of risk that contaminants/instability could pose in relation to the proposed development and its users, and adjoining land; ensure appropriate mitigation measures are identified and implemented which are suitable for the

Policy	Requirement
	<p>proposed use and that the occupiers and neighbouring uses are not exposed to an unacceptable level of risk;</p> <p>d) demonstrate that the developed site, will be suitable for the proposed use without risk from contaminants/instability to people, buildings, services or the environment including the apparatus of statutory undertakers</p>
<p>ST48: Reducing Carbon Emissions, Climate Change Mitigation and Adaptation</p>	<p>1. All proposals, including the change of use of existing buildings and spaces, should be designed to improve resilience to the anticipated effects of climate change taking into account the design principles in the Bassetlaw Design Quality SPD and the Bassetlaw Design Code. Proposals should incorporate, where appropriate, the following measures that address issues of climate change mitigation and adaptation through:</p> <ul style="list-style-type: none"> a) ensuring no unacceptable adverse impact on local air quality; b) designing layouts so that the orientation of buildings and spaces maximise opportunities for solar gain; c) providing space for habitats and species to move through the landscape and for the operation of natural processes to occur; d) where possible, minimising the use of natural resources over the development's lifetime, such as minerals and consumable products, by reuse or recycling of materials in construction, and by making the best use of existing buildings and infrastructure; e) adapting surface materials and drainage design to reduce the risk of flooding to land, property and people as a result of more extreme rainfall in accordance with Policy ST50; f) using integrated water management systems to manage runoff and provide a nonportable water supply; g) providing green/blue infrastructure, and where possible, retaining existing trees and woodlands to reduce the 'urban heating effect' during warmer summers; and h) using urban greening methods within the design of new buildings. <p>2. All new non residential development of 1000sqm floorspace or more will be required to meet the BREEAM very good-excellent standards or equivalent.</p> <p>3. All new residential development in the District should promote water efficiency by meeting the tighter Building Regulations optional requirement of 110 litres/person/day.</p>

Policy	Requirement
	<p>4. All major development will be required to make provision for 5 trees per dwelling or per 1,000 sqm of non residential floorspace on site, or if on site provision is not practicable then an equivalent financial contribution will be sought to enable provision of new native trees and/or the protection and enhancement of ancient and veteran woodland within the District.</p>
ST49: Renewable Energy Generation	<p>1. Development that generates, shares, transmits and/or stores zero carbon and/or low carbon renewable energy including community energy schemes will be supported subject to the satisfactory resolution of all relevant site specific and cumulative impacts upon:</p> <ul style="list-style-type: none"> a) location, setting and position in the wider landscape, resulting from its siting and scale; b) natural and heritage assets and their settings; c) air and water quality; d) hydrology and hydrogeology; e) the best and most versatile agricultural land; f) existing highway capacity and highway safety; g) noise, light, glare, smell, dust, emissions or flicker; h) aviation and radar; i) recreation and local amenity. <p>Proposals must take into account operational and approved developments, as well as any proposed intensification to operational or approved proposals.</p> <p>2. Proposals involving one or more wind turbines will be supported where:</p> <ul style="list-style-type: none"> a) the site is located within an area defined as being suitable for wind energy in a made neighbourhood plan or development plan document; and b) following consultation, it can be satisfactorily demonstrated that all potential adverse planning impacts identified by affected local communities have been fully addressed, including cumulative impacts identified in Part 1 above. <p>3. All renewable energy development will be expected to provide details of the expected power generation based upon expected yield or local self-consumption to enable effective monitoring of the district's contribution to the national zero carbon targets.</p> <p>4. A decommissioning programme applied by a Condition to any planning permission granted will be required to demonstrate that the site can be returned to an acceptable state, three years after cessation of operations.</p>
ST50: Flood Risk and Drainage	<p>1. Proposals are required to consider and, where necessary, mitigate the impacts of the proposed</p>

Policy	Requirement
	<p>development on flood risk, on-site and off-site, commensurate with the scale and impact of the development. Proposals, including change of use applications, must be accompanied by a Flood Risk Assessment (where appropriate), which demonstrates that the development, including the access and egress, will be safe for its lifetime, without increasing or exacerbating flood risk elsewhere and where possible will reduce flood risk overall.</p> <p>2. Where relevant, proposals must demonstrate that they pass the Sequential Test and if necessary the Exceptions Test in Flood Zones 2 and 3 and ensure that where land is required to manage flood risk, it is safeguarded from development.</p> <p>River Ryton Flood Management Impact Zone</p> <p>3. All development within the River Ryton Flood Management Impact Zone, as identified on the Policies Map, will need to demonstrate through a Design and Access Statement that they will not prejudice the delivery of a future flood management scheme for the River Ryton catchment through prior agreement with the Environment Agency.</p> <p>Surface Water Flood Risk</p> <p>4. All development where practicable should incorporate sustainable drainage systems (SuDS) in line with national standards. These should:</p> <ul style="list-style-type: none"> a) be informed by the Lead Local Flood Authority, sewerage company and relevant drainage board; b) have maintenance arrangements in place to ensure an acceptable standard of operation and management for the development's lifetime; c) prevent surface water discharge into the sewerage system; d) maximise environmental gain through: enhancing the green/blue infrastructure network, including urban greening measures, contributing to biodiversity net gain where possible, and, securing amenity benefits along with flood storage volumes; e) seek to reduce runoff rates in areas at risk from surface water flooding, and that any surface water is directed to sustainable outfalls.
ST51: Protecting Water Quality and Management	<p>1. In line with the objectives of the Water Framework Directive¹⁶, the quantity and quality of surface and groundwater bodies will be protected and where possible enhanced. Development adjacent to, over or in, a main river or ordinary watercourse will be supported where proposals consider opportunities to</p>

Policy	Requirement
	<p>improve the river environment and water quality where possible by:</p> <ul style="list-style-type: none"> a) actively contributing to enhancing the status of the waterbody through positive actions or ongoing projects; b) naturalising watercourse channels; c) improving the biodiversity and ecological connectivity of watercourses; d) safeguarding and enlarging river buffers with appropriate habitat in accordance with Policy ST37; and e) mitigating diffuse agricultural and urban pollution. <p>2. Proposals within a Source Protection Zone will need to demonstrate that the Sherwood Sandstone Principal Aquifer and its groundwater resources and groundwater quality will be protected throughout the construction and operational phase of development, by demonstrating the satisfactory resolution of all relevant identified impacts.</p> <p>3. All proposals must ensure that appropriate infrastructure for water supply, sewerage and sewage treatment, is available or can be made available at the right time to meet the needs of the development. Proposals should:</p> <ul style="list-style-type: none"> a) utilise the following drainage hierarchy: i. into the ground (infiltration); ii. to a surface water body; iii. to a surface water sewer, highway drain, or another drainage system; iv. to a combined sewer. b) ensure that foul and surface water flows are separated with foul water being disposed to a public sewer or to a private self-treatment plant and that the design of the waste disposal system will be safe over the lifetime of the development. c) ensure that development that discharges water into a watercourse incorporates appropriate water pollution control measures; d) ensure that drainage design take into account an appropriate climate change allowance as agreed with the relevant authority(s); e) ensure that infiltration based SuDS incorporate appropriate water pollution control measures; f) consider use of water recycling, rainwater and storm water harvesting, wherever feasible, to reduce demand on mains water supply.
ST52: Transport Infrastructure	1. The Council will work with Nottinghamshire County Council and other transport infrastructure partners to:

Policy	Requirement
	<p>a) support and facilitate the delivery of measures identified in the Local Transport Plan and the Bus Service Improvement Plan for the district;</p> <p>b) deliver the transport infrastructure which improves movement within and to Bassetlaw, including measures that help support delivery of the site allocations identified by this Local Plan as identified by the Bassetlaw Infrastructure Delivery Plan 20232;</p> <p>c) ensure that the impacts of new development on the strategic and local road network, including the A57 and A1, are adequately identified through a vision statement and Improvement Plan, and are appropriately and proportionately mitigated through partnership working with the Local Highways Authority, relevant neighbouring planning and highways authorities, and National Highways;</p> <p>d) support, in association with major development, the delivery of new or improved roads, such as a distributor road and sustainable transport improvements, linked where appropriate;</p> <p>e) support and facilitate measures that improve the management of the strategic and local highways network including through demand management, traffic management and calming initiatives required as a result of site allocations identified by this Local Plan;</p> <p>f) support and where appropriate, enable sustainable transport measures that improve access to/from proposed major development around Worksop, Retford and Harworth & Bircotes;</p> <p>g) support plans for enhanced active travel connectivity within Worksop Central, Retford town centre and Harworth & Bircotes town centre and to surrounding areas;</p> <p>h) promote through major development the delivery of a more comprehensive network of multi user transport nodes;</p> <p>2. Proposals for new development which have significant transport implications that either arise from the development proposed or cumulatively with other development proposals will need to submit a Transport Assessment or a Transport Statement, and where relevant a Travel Plan alongside an application. These documents will need to take into account Nottinghamshire County Council guidance and national Planning Practice, and where appropriate, the scope should be agreed with National Highways.</p> <p>3. Appropriate provision for works and/or contributions may be required towards 1a-1h of this policy to provide an adequate level of accessibility by all modes of</p>

Policy	Requirement
	<p>transport and to mitigate the impacts of development upon the transport network. Consideration should be given to the cumulative impact of relevant development both in Bassetlaw and within neighbouring authorities, and how this links to planned infrastructure improvements. This should take into account the Infrastructure Delivery Plan 20232 and Local Plan Transport Assessments, which, where relevant, will inform the scoping of the Transport Assessment and Travel Plan.</p> <p>4. Where relevant, evidence obtained from a site-specific Transport Assessment or Transport Statement will inform the number and phasing of homes to be permitted on proposed development sites and will be established (and potentially conditioned) through the planning application process, in consultation with the highway authority.</p> <p>5. Proposals that prejudice the efficient and safe operation of the local and strategic highway network or future improvements to transport infrastructure identified through mechanisms within Policy ST56 and/or the Local Transport Plan, will not be supported.</p>
ST53: Promoting Sustainable Transport and Active Travel	<p>1. Development that contributes towards a sustainable, safe, active transport network and offers a range of public transport and active travel choices will be supported. Development should, where appropriate:</p> <ul style="list-style-type: none"> a) assist in the improvement of transport infrastructure to help all communities in Bassetlaw have opportunities to travel without a car for everyday journeys; b) provide well-designed, safe and convenient access for all, giving priority to the needs of pedestrians, cyclists and other users in a way which would not: i. compromise the free flow of traffic on the public highway, pedestrians, public transport and cycling or any other transport mode; or ii. exacerbate traffic congestion on the existing highway network or increase the risk of accidents or endanger the safety of road users including pedestrians, cyclists and other vulnerable road users; c) minimise additional travel demand by car through sustainable travel measures identified in a Travel Plan and associated Action Plan(s), where the securing of a Travel Plan Coordinator may be necessary to facilitate the payment of monitoring fees and to pay for the delivery of additional sustainable travel measures/initiatives if modal share targets are not achieved;

Policy	Requirement
	<p>d) encourage forms of active travel through connection to, and extension of, existing pedestrian, cycle and equestrian routes, where practicable;</p> <p>e) respond to the transport needs for specific groups in the community, such as older people and those with disabilities; and</p> <p>f) encourage the use of flexible transport services that combine public and community transport services, ensuring that locally based approaches are delivered to meet the needs of communities.</p>
ST56: Provision and Delivery of Infrastructure	<p>1. The Council will work with neighbouring Local Authorities and infrastructure partners to ensure that the spatial strategy is supported by the timely, and where appropriate phased, provision of necessary physical, social and green/blue infrastructure and where appropriate its maintenance.</p> <p>2. Proposals that form all or part of a site allocation should, where appropriate, be accompanied by a masterplan for the site, proportionate to the scale and nature of the allocation. The masterplan will be expected to:</p> <p>a) set out how development will contribute to the delivery of the objectives of the Local Plan and the site allocation;</p> <p>b) where relevant, demonstrate that the proposal will not prejudice the future development of other parts of the site and adjoining land, or otherwise compromise the delivery of the site allocation and outcomes sought for the area;</p> <p>c) contain a delivery strategy, and where relevant, a phasing plan, that identifies how the development will be implemented and managed over its lifetime, and should address any relevant matters to be resolved; such as, land assembly and preparation, infrastructure requirements and likely need for planning obligations, where appropriate.</p> <p>d) identify where relevant the number/floorspace and phasing of homes and/or employment development to be permitted and the infrastructure delivery linked with the level and type of development proposed. Proposals should ensure that: i. infrastructure needs and delivery timescales have the support of the relevant infrastructure partner(s), informed by relevant assessments and other relevant policies in this Plan; ii. the infrastructure required to support each phase should address the specific site constraints, potential impacts of each phase and harness the site opportunities, evidenced by the site's delivery strategy</p>

Policy	Requirement
	<p>to deliver the relevant infrastructure set out in the Infrastructure Delivery Plan 2023.</p> <p>3. Developers must consider the infrastructure requirements needed to support and serve the proposed development. For residential development of 10 dwellings or more, or a site of 0.5ha or more, and/or non residential schemes of 1000sqm or more, where additional infrastructure capacity is deemed to be necessary, mitigation must be agreed with the relevant infrastructure partner(s). Such measures may include, though not exclusively:</p> <ul style="list-style-type: none"> a) on site provision of new infrastructure (which may include building works and/or the provision of land); b) off-site capacity and/or safety improvement works of infrastructure; c) financial contributions towards new or expanded infrastructure; <p>4. Infrastructure will be sought by means of planning conditions attached to a planning permission, and/or planning obligations and/or through the Bassetlaw Community Infrastructure Levy charge, Section 38 and/or 278 agreements or other mechanisms.</p> <p>5. Where necessary, developers may be required to make a proportionate contribution on a retrospective basis towards such infrastructure as may have been forward funded from other sources where the provision of that infrastructure is necessary to facilitate and/or mitigate the impacts of their development (including the cumulative impacts of planned development).</p> <p>6. Where on-going maintenance and management of infrastructure is required, a management plan will be required to ensure the quality of the provision remains in the long term. This will be agreed through a S106 agreement or any other suitable mechanism;</p> <p>7. In exceptional circumstances, where the developer contends the planning obligations sought, including that for affordable housing, would make a proposal unviable the Council will require an open book viability assessment in support of the proposal.</p> <p>8. The Council will consider use of a review mechanism in a S106 agreement to secure planning obligations in the following circumstances:</p> <ul style="list-style-type: none"> a) for an approved scheme with a non-policy compliant offer; b) for phased, larger scale developments; c) for developments that have abnormal costs.

Appendix B. Planning Policy: Nottinghamshire Minerals Local Plan

Appendix B

Planning Policy: Nottinghamshire Minerals Local Plan

Policy	Requirement
SP7: Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure	<p>Minerals Safeguarding Areas</p> <p>1. Locally and nationally important mineral resources, permitted reserves, allocated sites and associated minerals infrastructure will be safeguarded from needless sterilisation by non-minerals development through the designation of minerals safeguarding areas as identified on the Policies Map.</p> <p>2. Non-minerals development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.</p> <p>3. Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-minerals development, prior extraction will be sought where practicable.</p> <p>Minerals Consultation Areas</p> <p>4. District and Borough Councils within Nottinghamshire will consult the County Council as Minerals Planning Authority on proposals for non-minerals development within the designated Mineral Consultation Area, as shown on the Policies Map.</p> <p>5. The Minerals Planning Authority will resist inappropriate non-minerals development within the Minerals Consultation Areas.</p> <p>6. Where non-minerals development would cause an unacceptable impact on the development, operation or restoration of a permitted minerals site, mineral allocation, or associated minerals infrastructure, suitable mitigation should be provided by the applicant prior to the completion of the development.</p> <p>[The Scheme is shown in Nottinghamshire Minerals Local Plan (Adopted March 2021) Policies Map, as a Minerals Safeguarding Consultation Area for Sand and Gravel]</p>

Appendix C. Planning Policy: Nottinghamshire Waste Local Plan

Appendix C

Planning Policy: Nottinghamshire Waste Local Plan

Policy	Requirement
SP1: Waste prevention and re-use	All new development should be designed, constructed, and operated to minimise the creation of waste, maximise the use of recycled materials, and assist with the collection, separation, sorting, recycling and recovery of waste arising from the development during its use.

Appendix D. Planning Policy: Material Considerations (SPD)

Appendix D

Planning Policy: Material Considerations (SPD)

D.1 Draft Biodiversity Net Gain SPD (July 2025)

- D.1.1 BDC is currently consulting the community and interested parties on the draft Biodiversity Net Gain SPD.
- D.1.2 The purpose of this SPD is to build upon and provide guidance on policies in the adopted BLP, providing more advice to developers, site promoters and communities about how BDC expects BNG to be secured and delivered in the district. On adoption, the SPD will be a material consideration for deciding relevant planning applications.

D.2 Draft Design Code SPD (June 2025)

- D.2.1 BDC is currently consulting the community and interested parties on the final stage of the new Bassetlaw Design Code.
- D.2.2 The Design Code will help set design quality standards for new buildings and spaces and will be an important tool for everyone delivering new development across Bassetlaw.
- D.2.3 The scope of the design codes is limited, as the guide does not cover all areas within the district. For example, town centres have their own detailed design codes, and certain development types, such as shop fronts or house extensions, are not addressed in detail in this general district guide. These specific topics are addressed in separate SPD documents.
- D.2.4 Specific codes give context to how the LPA would like design to be approached across the district. In regard to built form, Design Code NLO-10 provides guidance for industrial and commercial uses. The draft SPD states that such development should be screened from public view as much as possible, with signage and arrival wayfinding to be used to ensure such locations are not hidden and do not diminish their functionality and important employment role. The overall objective is to use landscape to mitigate unsightly views, whilst limiting or mitigating noise pollution.
- D.2.5 Further guidance is provided in Design Code NLO-6, which requires new development to not result in the loss or damage of trees and hedges that have significant arboricultural, ecological, and amenity value. The draft SPD notes that existing trees and hedges are to be retained wherever possible, incorporating them into the new layout and landscape design, for example hedges used for rear boundaries or trees as focal points of open spaces. If removal of trees is unavoidable, mitigation must involve replanting native trees/hedges of equal or greater value on-site or nearby.
- D.2.6 Design Code NLO-9 requires new development to consider the design of lighting schemes on settlement edges to minimise light pollution on local amenity and dark landscapes.

- D.2.7 Further, Design Code NLO-20 requires that applicants must show whether landscape led SuDS can be used to achieve greenfield runoff rates. These systems may include features such as wetlands, rain gardens, permeable surfaces, attenuation basins, infiltration ponds, swales, or bioretention areas, and should be incorporated into street and open space networks with vegetation to enhance functionality and appearance. Additionally, plot-level flood mitigation measures, including soft landscaping, rainwater harvesting, ponds, permeable surfaces, and green roofs, should be considered.
- D.2.8 The Design Code SPD will provide more information about the design policies in the Bassetlaw Local Plan, and once adopted, will be a material consideration for deciding relevant planning applications.

D.3 Draft Planning Obligations SPD (July 2025)

- D.3.1 BDC is currently consulting the community and interested parties on the new Planning Obligations SPD.
- D.3.2 The Planning Obligations SPD will provide detailed guidance to developers, housebuilders and the community on BDC's approach to securing developer contributions from new development, ensuring that the BLP policies are as effective as possible in delivering infrastructure required as a consequence of new development.
- D.3.3 This draft SPD applies to all relevant major development proposals as defined by The Town and Country Planning (Development Management Procedure) (England) Order 2015. It is in two parts:
- The first sets out the overall approach to securing planning obligations. It explains how the SPD complies with national and local policy, clarifies the relationship between planning obligations, S278 agreements and the Bassetlaw Community Infrastructure Levy, explains what is expected of applicants at planning application stage and deals with procedural matters relating to the drafting and enforcement of Section 106 Agreements.
 - The second explains how the most commonly sought planning obligations will be secured, including the policy basis and procedures, types of development to which the obligation may apply, thresholds over which the obligation may be sought, type of obligation, methodology of calculation, timing and process of collection.
- D.3.4 BDC expects that, wherever possible, trees will be planted on-site as part of the landscaping scheme, preferably in public spaces or as street trees along the public highway to maximise their long-term retention. Trees planted to meet biodiversity net gain requirements may contribute to the tree planting provision, provided they are not located in private gardens or other private spaces, since only trees in public areas will count towards the obligation.
- D.3.5 According to the Local Plan Infrastructure Delivery Plan 2023, the requirement is five native tree saplings per dwelling or per 1,000m² of non-residential floorspace, at £100 per sapling, which covers both planting and maintenance, following the Woodland Trust's average cost guidance.

Appendix E. Proposed Draft Planning Conditions

Appendix E

Proposed Draft Planning Conditions

- E.1.1 Condition 1: Commencement of Development. The development hereby permitted shall be begun before the expiration of three years from the date of this permission.
- E.1.2 Condition 2: Approved Drawings. The development shall be carried out in accordance with the approved plans listed below:
- E.1.3 Condition 3: Construction and Environmental Management Plan. Prior to the commencement of development, a full Construction Environmental Management Plan (CEMP) must be submitted to, and approved in writing by, the local planning authority. The CEMP shall include:
- a) details of measures to minimise noise, dirt, dust, (and other air borne particles) to include an Air Quality Dust Management Plan (AQDMP), and vibration during construction;
 - b) details of measures to prevent pollution, including to watercourses;
 - c) details of measures relating to the handling of contaminated land;
 - d) details of measures to manage construction impacts on heritage and landscape;
 - e) a waste management plan;
 - f) proposed working hours, including any night-time working hours; and
 - g) details relating to site access.
- E.1.4 The CEMP shall be completed in accordance with British Standard BS 42020:2013 Biodiversity Code of Practice for Planning and Development, and include:
- a) details of what biodiversity features could be impacted and what development activities could be potentially damaging;
 - b) a rolling timetable of when and where specific measures to avoid/reduce impacts are to be carried out, including any seasonal or legal implications (e.g. the bird nesting season) and who is responsible;
 - c) details of method statements for specific biodiversity issues (e.g. for specific destructive activities such as vegetation clearance, hedgerow removal, tree felling, soil stripping and building demolition);
 - d) details of all practical measures (e.g. fencing, protective barriers and warning signs) and sensitive working practices to avoid impacts;
 - e) details of inspections to ensure wildlife does not become trapped in excavations or machinery;
 - f) details of other responsible persons and lines of communication on-site in relation to the implementation of the CEMP;
 - g) details of contingency measures in the event of an accident or other potentially damaging incident (e.g. pollution incidents, how to deal with previously unrecorded protected species found during construction and restoration, unexpected bad weather and repair of damaged features, etc.);

- h) details of procedures to avoid pollution incidents (e.g. from fuel spills and site runoff based on an understanding of the wildlife interest at risk);
- i) regular review of the implementation of the CEMP throughout the construction/restoration phase to monitor effectiveness of mitigation measures and compliance with legal, planning and/or contractual requirements;
- j) details of biosecurity protocols/method statements to prevent spread of non-native species; and
- k) temporary management of existing wildlife features during construction/implementation. The construction of the development shall be carried out in accordance with the approved CEMP.

8.1.28 Condition 4: Construction Traffic Management Plan: Prior to the commencement of development, a full Construction Traffic Management Plan (CTMP) must be submitted to, and approved in writing by, the local planning authority. The CTMP shall include details of:

- a) the routes and vehicle entrance routes to be used by contractors' vehicles moving to and from the Site (and the appropriate signage thereof);
- b) HGV delivery times;
- c) construction vehicle specification requirements, including number of anticipated vehicle movements;
- d) measures to manage debris and damage to the highway network including the submission of a road condition survey;
- e) construction staff travel; and

8.1.29 Condition 5: Landscape and Ecological Management Plan. No development shall take place (including demolition, ground works and vegetation clearance) until a Landscape and Ecological Management Plan (LEMP) has been submitted to, and approved in writing by, the local planning authority. The LEMP shall include the following:

- a) description and evaluation of features to be managed (including species and features such as bat boxes, bird boxes and log piles);
- b) ecological trends and constraints on site that might influence management;
- c) aims and objectives of management which will (without limitation) include the provision of biodiversity net gain within the site, as shown within the Biodiversity Net Gain Plan;
- d) appropriate management options for achieving aims and objectives;
- e) prescriptions for management actions;
- f) a work schedule (including an annual work plan capable of being rolled forward over a five-year period);
- h) details of the body or organisation responsible for implementation of the plan; and
- i) ongoing monitoring and remedial measures. The LEMP shall also include details of the legal and funding mechanism(s) by which the long-term implementation of the plan will be secured by the applicant with the management body(ies) responsible for its delivery. The plan shall be for no less than 30 years. The plan shall also set out

(where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved Scheme. The approved plan shall be implemented in accordance with the approved details.

8.1.30 Condition 6: Arboricultural Method Statement. No development shall commence until an updated Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for the Site have been submitted to and approved in writing by the local planning authority. The AMS shall be updated to include:

a) Methods of any construction related activities within root protection areas (RPA as defined in BS 5837:2012) of the retained trees.

b) Where relevant, a full specification for the construction of any roads and footways including details of the no-dig specification and extent of the areas to be constructed using a no-dig specification. Details shall include relevant sections through them.

c) A specification for protective fencing to safeguard retained trees during clearance and construction phases.

d) Methodology and specification for any facilitation pruning, including root pruning in accordance with BS 3998:2010.

e) Schedule of arboricultural monitoring and supervision (which includes visits by the Arboricultural consultant during installation of protective measures and structures within the RPAs of retained trees). The development shall be implemented in accordance with the approved details.

8.1.31 Condition 7: Archaeology. No development shall take place, unless agreed by the local planning authority, until the applicant, or their agent or successors in title, have undertaken archaeological evaluation to be undertaken in accordance with a written scheme of investigation which has been submitted to and approved in writing by the local planning authority. This may lead to preservation *in situ* or further mitigation.

8.1.32 Condition 8: Soil Management Plan. Prior to the commencement of development, a Soil Resource Plan shall be submitted to, and approved in writing by, the local planning authority. Thereafter, the development shall be implemented in accordance with the approved plan.

8.1.33 Condition 9: Surface Water Drainage: Prior to the commencement of development on the substations site, a surface water drainage scheme, based on the Surface Water Drainage strategy (Reference PDD-203717-REP-317), must be submitted to, and approved in writing by, the local planning authority. The Scheme shall also include:

a) existing and proposed discharge rates and volumes;

b) ground investigations including infiltration in accordance with BRE365. Subject to infiltration being inviable, the applicant shall demonstrate that an alternative means of surface water disposal is practicable subject to the drainage hierarchy as outlined in paragraph 056 of the Planning Practice Guidance;

c) full construction details of all SuDS and drainage components;

d) detailed drainage layout with pipe numbers, gradients, and pipe sizes complete, together with storage volumes of all SuDS components;

e) calculations to demonstrate that the proposed drainage system can contain up to the 1 in 30 year storm event without flooding. Any on-site flooding between the 1 in 30 year and the 1 in 100 year plus climate change storm event should be safely contained on site;

f) details of proposed overland flood flow routes in the event of system exceedance or failure, with demonstration that such flows can be appropriately managed on site without increasing flood risk to occupants, or to adjacent or downstream sites. The Scheme shall be implemented in accordance with the approved details before the development is completed.

8.1.34 Condition 10: Maintenance of Surface Water Drainage. Prior to the first use of the development, a whole-life maintenance plan for the surface water drainage for the site shall be submitted to, and approved in writing by, the local planning authority. The plan shall set out how and when to maintain the full drainage system during and following construction, with details of who is to be responsible for carrying out the maintenance. The plan shall subsequently be implemented in accordance with the approved details.

8.1.35 Condition 11: Lighting. Prior to the first use of the development hereby approved, a Lighting Design Strategy for Biodiversity shall be submitted to, and approved in writing by, the local planning authority. The strategy shall:

a) identify those areas/features on site that are particularly sensitive for bats and other nocturnal wildlife and that are likely to cause disturbance in or around their breeding sites and resting places or along important routes used to access key areas of their territory, for example, for foraging;

b) show how and where external lighting will be installed (through the provision of appropriate lighting contour plans and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent the above species using their territory or having access to their breeding sites and resting places;

c) include details of maximum luminance and lights to be erected, location, height, type and direction of light sources and intensity of illumination;

d) include details of the lights to be switched off/and or dimmed at night including times. All external lighting shall be installed in accordance with the specifications and locations set out in the approved strategy, and these shall be maintained thereafter in accordance with the strategy. No external lighting other than that approved shall be installed.

E.1.5 Condition 12: Landscaping. Prior to the first use of the development, details of soft landscaping works and an implementation and management programme shall be submitted to and approved in writing. The details shall include:

planting plans, including details of schedules of plants, noting species, planting sizes and proposed numbers/densities; and

written specifications (including soil depths, cultivation and other operations associated with plant and grass establishment).

E.1.6 All soft landscaping shall be carried out in accordance with the approved details, implementation programme and British Standard BS 4428:1989 Code of Practice for General Landscape Operations and implemented prior to first use of the development, and therefore retained and maintained in accordance with the approved management programme.

- E.1.7 Condition 13: Landscape Maintenance. Any planting which within a period of five years from planting fails to become established, becomes seriously damaged or diseased, dies or for any reason is removed shall be replaced in the next planting season by a tree or shrub of a species, size and maturity to be approved in writing by the local planning authority.
- E.1.8 Condition 14: Contamination. In the event that contamination that was not previously identified is found at any time during the construction of the approved development, it must be reported in writing immediately to the local planning authority. An investigation and risk assessment must be undertaken, and where remediation is necessary, a remediation scheme must be prepared, which is subject to the approval in writing of the local planning authority. Following completion of measures identified in the approved remediation scheme, a verification report must be prepared, which is subject to the approval in writing of the local planning authority.

Appendix F.

Abbreviations

Appendix F

Abbreviations

Abbreviation	Full Reference
AC	Alternating Current
AIA	Arboricultural Impact Assessment
AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear
AMS	Arboricultural Method Statement
AOD	Above Ordnance Datum
AQDMP	Air Quality Dust Management Plan
BH	boreholes
BMV	Best and most versatile
BNG	Biodiversity Net Gain
BPM	Best Practicable Means
CCTV	Closed-circuit television
CIL	Community Infrastructure Levy
cLWS	candidate Local Wildlife Site
CNP	Critical national priority
COP	Conference of Parties
CRoW Act	Countryside and Rights of Way Act 2000
CSE	Cable Sealing End
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Site
DAS	Design and Access Statement
DC	Direct Current
DCLG	Department for Communities and Local Government
DESNZ	Department for Energy Security and Net Zero
DMMO	Definitive Map Modification Order
DNO	Distribution Network Operator
EAR	Environmental Appraisal Report

Abbreviation	Full Reference
EIA	Environmental Impact Assessment
EMF	Electric and Magnetic Field
EN-1	Overarching National Policy Statement for Energy (EN-1)
EN-5	National Policy Statement for Electricity Networks Infrastructure (EN-5)
ESO	Electricity System Operator
FRA	Flood Risk Assessment
GIB	Gas Insulated Busbar
GIS	Gas Insulated Switchgear
HGV	Heavy Goods Vehicle
HPI	Habitats of Principal Importance
ICNIRP	International Commission on Non-Ionizing Radiation Protection
km	kilometre
kV	kilovolt
LEMP	Landscape and Ecological Management Plan
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LPA	Local planning authority
LVAC	Low Voltage Alternating Current
LWS	Local Wildlife Site
MHCLG	Ministry of Housing, Communities and Local Government
NCA	National Character Area
NDC	Nationally Determined Contribution
NESO	National Energy System Operator
NETS SQSS	National Electricity Transmission System Security and Quality of Supply Standard
NMU	Non-Motorised User
NO ₂	Nitrogen dioxide
NOAEL	No Observed Adverse Effect Level
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance

Abbreviation	Full Reference
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NSIP	Nationally Significant Infrastructure Project
OCEMP	Outline Construction Environmental Management Plan
OCTMP	Outline Construction Traffic Management Plan
OS	Ordnance Survey
OSWMP	Outline Site Waste Management Plan
PDAS	Planning, Design and Access Statement
PRoW	Public Right of Way
RNAG	Reasons for Not Achieving Good
SMP	Soil Management Plan
SOAEL	Significant Observed Adverse Effect Level
SPD	Supplementary Planning Document
SRP	Soil Resources Plan
SRS	Soil Resource Survey
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
SWMP	Site Waste Management Plan
UAEL	Unacceptable Adverse Effect Level
UNFCCC	United Nations Framework Convention on Climate Change
UXO	Unexploded Ordnance
TCPA 1990	Town and Country Planning Act 1990
TP	trial pits
TPP	Tree Protection Plan
WFD	Water Framework Directive

Appendix G.

Glossary

Appendix G

Glossary

Term	Description
Abnormal Indivisible Loads	A large load which cannot ‘without undue expense or risk of damage’ be divided into two or more smaller loads for the purposes of being transported by road, and which exceeds limits set out in terms of weight (>44 tonnes), length (>18.65m), and width (>2.9m).
Additional mitigation measures	Comprises measures over and above embedded and standard mitigation measures to reduce environmental effects. This would include, but not be limited to, mitigation required for protected species.
Alignment	The proposed overhead line route.
Ancient woodland	Land that has been continually wooded since at least 1600 in England. Regarded as ‘irreplaceable habitat’ in national planning policy and guidance. Ancient woodland greater than 2ha is recorded on the Natural England Ancient Woodland Inventory.
Angle/tension pylon	Pylon where a horizontal insulator string attaches the conductors. Tension or ‘angle’ pylons are used at points where the overhead line alignment changes direction.
Archaeological remains	The material remains of human activity from the earliest periods of human evolution to the present. These may be buried traces of human activities, sites visible above ground, or moveable artefacts.
Archaeological Mitigation Strategy and Outline Written Scheme of Investigation	Sets out the scope, guiding principles and methods for the planning and implementation of additional archaeological mitigation works associated with the construction of the Scheme.
Bellmouth	A flared vehicular access point connecting a construction site to the public highway, designed to accommodate turning movements by large vehicles.
Best practicable means	A term used under the Control of Pollution Act 1974 and Environmental Protection Act 1990 to refer to measures which are reasonably practicable, having regard to local conditions and circumstances, to the current state of technical knowledge and to financial implications, concerning the mitigation of noise and other potential nuisance.
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they

Term	Description
	are part: this includes diversity within species, between species and of ecosystems.
Biodiversity Net Gain	An approach for developments to ensure habitats for wildlife are left in a measurably better state than they were before the development.
Biosecurity	Measures aimed at preventing the spread of harmful organisms (e.g. viruses and bacteria) to crops and livestock in order to reduce the risk of transmission of infectious diseases.
Busbar	The common connection point of two or more transmission circuits.
Circuit	A set of wires along which current flows and returns. It is necessary to have a complete circuit for current to flow. The National Grid standard for overhead lines operating at 400kV is for pylons to carry two circuits, each consisting of three phases, i.e. a double circuit configuration.
Cable	An insulated conductor designed for underground installation.
Cable Sealing End	Structures used to transfer transmission circuits between underground cables and overhead lines.
Cable Sealing End compound	Electrical infrastructure used as the transition point between overhead lines and underground cables. A compound on the ground acts as the principal transition point.
Cable Sealing End platform	Electrical infrastructure used as the transition point between overhead lines and underground cables. A platform on the pylon acts as the principal transition point.
Catenary wire	A catenary wire is a tensioned wire rope suspended between two anchor points.
Code of Construction Practice	A code of construction practice sets out the standards and procedures to which a developer (and its contractors) must adhere in order to manage the potential effects of construction works.
Commitments	Measures that a developer commits to delivering as part of a project, with the purpose of limiting, mitigating or compensating potential effects of the Scheme.
Conductor	The overhead wire that carries electricity from one place to another, for example the line between two pylons.

Term	Description
Conservation Area	An area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance as defined in s69(1)(a) in the Planning (Listed Building and Conservation Areas) Act 1990.
Construction Traffic Management Plan	Plan detailing the procedures, requirements and standards necessary for managing the traffic effects during construction of the Scheme so that safe, adequate and convenient facilities for local movements by all transport modes are maintained throughout the construction process.
Contaminated Land	Land where a substance or contaminant in or under the land has the potential to cause significant harm or the significant possibility of significant harm to human health, property or protected species, or significant pollution or the significant possibility of significant pollution to controlled waters.
Corona discharge	An electrical discharge caused by the ionisation of fluid such as air surrounding a conductor carrying a high voltage. It represents a local region where the air (or other fluid) has undergone electrical breakdown and become conductive. A corona occurs at locations where the strength of the electric field (potential gradient) around a conductor exceeds the dielectric strength of the air.
County Wildlife Site	Non-designated areas of land important for their wildlife and nature conservation value.
Culvert	A channel or pipe that carries water below the level of the ground.
Dewatering	The removal of groundwater (e.g. by pumping) to keep a below-ground works area dry.
Distribution Network Operator	Companies that own and operate the power lines and infrastructure that connect the National Grid network to individual properties.
Easement	A legal right in perpetuity granting National Grid the right to install, use, maintain, replace, renew and remove its equipment.
Electric and Magnetic Fields	All equipment that generates, distributes or uses electricity produces Electric and Magnetic Fields (EMF), and EMFs also occur naturally. Electric fields are created by differences in voltage: the higher the voltage, the stronger the resultant field. Magnetic fields are created when electric current flows: the greater the current, the stronger the magnetic field.

Term	Description
Embedded design measures	Mitigation measures are those that are intrinsic to and built into the design of the Scheme.
Environmental Areas	Locations identified for environmental embedded measures, mitigation and/or Biodiversity Net Gain/ environmental enhancement.
Environmental Appraisal Report (EAR)	<p>The Environmental Appraisal Report has been prepared by Arcadis Consulting (UK) Ltd on behalf of the Applicant, National Grid, which is proposing to develop a new 400kV AIS substation ('the Scheme') on land near High Marnham ('the Site').</p> <p>The EAR is to provide BDC with a summary of the environmental information contained in the environmental reports submitted with the planning application for the Scheme.</p>
Environmental topic	A subject area covered within the EIA, for example landscape and visual or biodiversity.
Flood Risk Assessment	A Flood Risk Assessment is an assessment of the risk of flooding, particularly in relation to residential, commercial and industrial land use. In England and Wales, the Environment Agency requires a Flood Risk Assessment to be submitted alongside planning applications in areas that are known to be at risk of flooding.
Full line tension gantries	Types of gantries which allow conductors to connect into a substation or compound directly from a pylon, without requiring a bulky terminal pylon. This allows a larger span between the final pylon and the gantry.
Gantry	An overhead bridge-like structure supporting electrical equipment. A transition point from overhead line equipment to equipment in a compound.
Greenhouse gases	The term 'greenhouse gases' refers to a number of chemicals in the earth's atmosphere such as carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O).
Groundwater	Water that is in the ground. This is usually referring to water in the saturated zone below the water table.
Haul road	A route used by construction traffic within the Order Limits to access a working area from a site access point.
Heavy Goods Vehicles	Goods vehicles weighing more than 3,500kg.
High voltage	275,000 volts and over. National Grid's transmission lines generally operate at 275,000 and 400,000 volts. Lower voltage lines, such as 132,000 volts and 33,000 volts, are generally owned by local distribution companies.

Term	Description
High voltage alternating current	The transmission and distribution of electrical energy using alternating current (AC) at high voltage levels.
Insulator	Used to attach the conductors to the pylons, preventing electrical discharge to the steelwork.
Kilovolt	1,000 volts
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Lattice pylon	Pylon type widely used on the national electricity transmission networks. Both standard lattice pylons (approximately 50m in height) and low height lattice pylons (approximately 40m in height) are proposed on the Scheme.
Light Goods Vehicles	Goods vehicle weighing 3,500kg or less.
Listed building	A measure of a building's special architectural and historic interest. There are three categories of listed buildings, Grades I, II* and II, depending on the level of interest.
Local Nature Reserve	Sites dedicated by the local planning authority under Section 21 of the National Parks and Access to the Countryside Act 1949 for nature conservation which have wildlife or geological features that are of special interest locally.
Local planning authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
Lux	Measurement of the amount of light produced.
Main Works Contractor(s)	Contractor(s) appointed by National Grid to construct the Scheme
Mitigation	The action of reducing the severity and magnitude of change (impact). Measures to avoid, reduce, remedy or compensate for significant adverse effects.
National Electricity Transmission System Security and Quality of Supply Standard	The NETS SQSS sets out a coordinated set of criteria and methodologies that the Transmission Licensees shall use in the planning and operation of the National Electricity Transmission System.
Overhead line	Conductor (wire) carrying electric current, strung from pylon to pylon.
Overhead line craftperson	Person who constructs the overhead line infrastructure.

Term	Description
Overhead line refurbishment	Repair and renewal of conductors, pylon painting, earthwire, fittings and insulators and, where necessary, remedial works to the pylon and foundations.
Permanent access	Access required to infrastructure during the operational phase of the Scheme, for operational and maintenance purposes.
Piling	Engineering process of installing elongated structural elements, known as piles, into the subsoil. This technique is employed to transfer structural loads to deeper, more competent strata, thereby providing stable foundations for construction projects. Essentially, it addresses situations where surface soils lack sufficient bearing capacity to support intended structures.
Public Right of Way (PRoW)	A footpath, bridleway or byway accessible to all members of the public.
Pulling site	A site where the winching equipment that is used to pull through the new conductors is located.
Pylon	Structures that support the overhead line (conductors).
Site access points	A location connecting a construction site to the public highway.
Standard mitigation measures	Management activities and techniques, which would be implemented throughout construction of the Scheme to limit effects through adherence to good site practices.
Statutory Undertakers	Persons with regulatory powers and duties, such as gas, electricity, water and transport providers or transmitters.
Subsoil	Weathered soil layer extending between the natural topsoil and the unweathered basal layer (geological parent material, either solid or drift) below.
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
Suspension pylon	Pylon where conductors are suspended by a vertical insulator string. Suspension pylons support the conductors on straight stretches of overhead line.
Temporary overhead line diversions and pylons	Temporary diversions of existing overhead line may be required to ensure electricity flows are maintained at all times during construction of the Scheme to limit the disruption to the electricity network. These typically comprise a short section of overhead line with temporary structures or pylons which electricity flows are diverted along.

Term	Description
Tensioning site	A site from which the new conductor is fed out during construction. This also includes a tensioning winch to keep the conductor off the ground.
Terminal pylon	Pylons erected at the end of the overhead line to terminate the line at substations or where overhead lines are connected to underground cables. Because of the uneven load on one side of the pylons, much deeper and heavier foundations are required on the unloaded side.
Transmission line	A National Grid overhead line and underground cable which transmits electricity between National Grid's substations. Power is transmitted at high voltages (275kV or above) between power stations where it is generated and the local electricity supply networks of the regional Distribution Network Operators where it is transformed to lower voltages (132kV or below) for supply via distribution lines to local communities.
Trenchless crossing	A crossing installation method that has limited above-ground disturbance and which is used to avoid a sensitive feature such as an environmental feature.
Triple Araucaria conductors	Triple Araucaria conductor design is the least electrically stressed conductor system that National Grid uses. It is the best design for reducing the effects of line crackle (corona discharge).
Topsoil	Material which developed originally at the top of the soil profile and is characteristically darker in colour and has a higher organic matter content than subsoil material.
Temporary construction compounds	Temporary compounds installed during the construction phase of the Scheme. Each compound may contain storage areas including laydown areas, soils storage and areas for equipment and fuel, drainage, generators, car parking and offices and welfare areas (Portakabins).
Underground cable	An insulated conductor carrying electric current designed for underground installation. Underground cables link together two CSE compounds.
Visibility splay	Areas of tree/vegetation removal, typically where access points are, to enable a driver to see down the road and know when the road is clear.
Voltage	The electrical potential difference between two points.
Water Framework Directive	The Water Framework Directive (2000/60/EC) commits European Union member states to achieve good qualitative and quantitative status of all water bodies. It is transposed into law in England and Wales via The Water

Term	Description
	Environment (Water Framework Directive) (England and Wales) 2017 Regulations, which were retained via the European Union (Withdrawal) Act 2018.

Appendix H. Planning History

Appendix H

Planning History

Reference	Proposal	Decision	Decision Date
30/83/0000	Erect Sports Pavillion	X	X
30/86/00004	Change off Use to Clay Pigeon Shooting	X	X
30/87/00003	Erect Additional Offices	X	X
30/87/00004	Erect Telecommunications Building	X	X
30/90/00001	Erect Building for General Farm Storage	Grant	14/05/1990
30/92/00008	Establish New 400kv Double Busbar Substation and Associated Overhead Line Diversions	Grant	13/07/1992
30/92/00005	Change Of Use of Agricultural Land to Static Holiday Caravan Park and Change of Use of Existing Static Park to Touring Caravans and Alter Access	Refuse	30/07/1992
30/93/00004	Establishment of two equipment accommodation modules to be used for telecommunications purposes	Grant	09/07/1993
30/93/00005/A	Erect sign set back into brick surround	Grant	18/10/1993
30/96/00004	Change of use of building to dry, process and package cenospheres	Grant	27/03/1997
30/97/00002	Establish New 400kv Double Bushbar Substation and Associated Overhead Line Diversions (Renewal of P.A. 1/30/92/8)	Grant	20/08/1997
30/98/00001	Installation of dry dust by-products system including 2 x 600-ton silos	Grant	27/04/1999
30/00/00004	Extend existing 400KV Substation	Grant	18/07/2000
30/01/00004	Erect Telecommunications Amplifier Hut	Grant	19/07/2001
30/04/00009	Erect 12 Single Garages	Grant	03/12/2004
30/07/00005	Construct A 2.5m Wide Permissive Cycle Route On Former Railway Line	No Ob Approved by County Council	23/08/2007
30/11/00004/S	Screen Opinion - Proposed Demolition Of Five Cooling Towers	Not EIA Development	19/12/2011
30/11/00003/S	Screening Opinion - Proposed New Substation And Access Road	Not EIA Development	04/01/2012

Reference	Proposal	Decision	Decision Date
30/12/00004	Prior Notification Of Proposed Demolition Of Five Cooling Towers	Not Require Application	27/02/2012
30/11/00005	Proposed Biomass Combined Heat and Power Plant, auxiliary boilers, silos, new offices, revised trailer/car parking and other associated works	Refuse	12/04/2013
13/00933/FUL	Erect Bunded Tank Farm and Silos, Security and Acoustic Fencing	Grant	04/12/2013
14/00612/VOC	Variation Of Condition Two Of P/A 13/00933/FUL To Substitute The Approved Plans To Allow an Increase To The Development From 15 Tanks to 30 Tanks And Amendment to Acoustic Fencing	Grant	15/05/2014
15/01136/FUL	Laying of Underground 33KV _a Electricity Link Between Premises of JG Pears, Low Marnham, and National Grid Switchyard, High Marnham	Grant	25/11/2015
15/01699/VOC	Variation of Condition 2 of Planning Application 30/11/0005 (appeal ref APP/A3010/A/13/2201459) Condition Number(s): Condition 2 - Approved Plans Amendments required to reflect detailed technical design of Combined Heat and Power plant and regulatory change Delete 2008-1546-25D, 26A, 27A, 28A (approved under 30/11/0005) and 31D (approved as a non-material Amendment) Substitute with 2008-1546-25E, 26B, 27D, 28D and 31E	Grant	03/03/2016
16/00903/FUL	Install a Section of Underground 33KV _a Electricity Cable as Part of the Electricity Link between the Premises of JG Pears and the National Grid Switchyard, High Marnham (Alternative to Scheme approved under Planning Application 15/01136/FUL)	Grant	04/08/2016
17/00057/FUL	Proposed Electricity Transformer and Associated Works at the Switchyard to enable Connection of the New Electricity Link to the JG Pears Site, Low Marnham	Grant	15/03/2017
18/00504/AGR	Proposed Agricultural Building For Grain Storage	Grant	18/05/2018

Reference	Proposal	Decision	Decision Date
19/00818/FUL	Erect Storage Building (Class B8) with Associated Weigh Bridge	Grant	05/12/2019
21/00358/HSE	Proposed Single Storey Rear Extension, First Floor Extension (to create a 2 storey dwelling) and Detached Garage	Grant	07/05/2021
21/01147/FUL	Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	16/12/2021
21/01801/NMA	Non Material Amendment to Adjust the Position of Buildings To P.A. 19/00818/FUL Erect Storage Building (Class B8) with Associated Weigh Bridge	Refuse	22/12/2021
22/00438/FUL	Convert Existing Farm Buildings into One Dwelling	Withdrawn	06/06/2022
22/00984/COND	Discharge of Condition 16 on P/A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Partially Granted	24/08/2022
22/01135/COND	Discharge of Condition 5B of P.A. 19/00818/FUL - Erect Storage Building (Class B8) with Associated Weigh Bridge	Grant	03/11/2022
22/00707/FUL	<i>The Construction and Operation of a Solar Photovoltaic(PV) Farm with other Associated Infrastructure Including Sub Stations, Security Cameras, Fencing, Storage Containers, Access Tracks and Landscaping</i>	Grant	05/01/2023
22/01619/COND	Discharge of Condition 16 and 18 on P/A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	13/02/2023
22/01413/SCR	Screening Opinion Full Planning Application for an 8 MW Green Hydrogen Production Plant, Storage and Distribution Facility at Land at the Former High Marnham Power Station, Newark	Withdrawn	01/03/2023
22/01400/SCR	Screening Opinion Full Planning Application for a Battery Storage Facility with Associated Infrastructure at Land at the Former High Marnham Power Station, Fledborough Road, High Marnham	Withdrawn	01/03/2023

Reference	Proposal	Decision	Decision Date
22/01071/FUL	The Erection of Unit A - A Finished Product Despatch Warehouse Building (B8 Use) and Packaging Plant (B2 Use) Including Odour Abatement Plant and Solar PV and Unit B - Raw Animal By-Product (ABP) Intermediate Storage Building (B8 Use) Incorporating Mechanical Processing Plant for Crushing, Freezing and Reloading (B2 Use) Including Odour Abatement Plant and Solar PV on Land Comprising Part of the Former High Marnham Power Station at High Marnham	Grant	26/05/2023
23/00734/COND	Discharge of Condition (Part) 5(c) of P.A. 19/00818/FUL - Erect Storage Building (Class B8) with Associated Weigh Bridge	Grant	24/06/2023
23/00749/COND	Discharge of Condition 10 on P/A 22/00707/FUL - The Construction and Operation of a Solar Photovoltaic(PV) Farm with other Associated Infrastructure Including Sub Stations, Security Cameras, Fencing, Storage Containers, Access Tracks and Landscaping	Grant	25/07/2023
23/00243/SCR	Screening Opinion - An 8 MW Green Hydrogen Production Plant, Storage and Distribution Facility and Green Ammonia Cracker Demonstration Unit on Land Comprising Part of the Former High Marnham Power Station	EIA Required	20/07/2023
23/00749/COND	Discharge of Condition 10 on P/A 22/00707/FUL - The Construction and Operation of a Solar Photovoltaic (PV) Farm with other Associated Infrastructure Including Sub Stations, Security Cameras, Fencing, Storage Containers, Access Tracks and Landscaping	Grant	25/07/2023
23/00985/HSE	Single Storey Rear Extension and Replace Conservatory to side with Single Storey Extension	Grant	10/10/2023
23/00801/FUL	Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare	Grant	26/10/2023

Reference	Proposal	Decision	Decision Date
	Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works		
23/00713/FUL	Erect One Detached Bungalow and a Detached Garage	Grant	10/11/2023
22/01483/FUL	Convert Existing Farm Buildings into One Dwelling (Resubmission of 22/00438/FUL)	Refuse	07/12/2023
23/01370/COND	Discharge of Conditions 4, 5, 14 and 15 on P/A 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant	Grant	12/01/2024
23/01405/COND	Discharge of Condition 18 on P/A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	16/01/2024
23/01519/SCR	Screening Opinion Proposed for a New 400 KV Substation	Not EIA Development	05/02/2024
23/01135/FUL	Full Planning Application for the Construction and Operation of A Prototype Facility for the Production of Hydrogen from Ammonia, and Associated HGV Loading and Unloading Areas, Staff Welfare Building, Boundary Fencing, Internal Access Roads, External Lighting and Works (EIA Development)	Grant	08/02/2024
24/00049/COND	Discharge of Conditions 16, 18 and 20 on P/A 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works	Part discharge	09/02/2024
24/00324/COND	Discharge of Conditions 8 and 19 of P.A. 23/00801/FUL - Proposed Construction and Operation of An 8 MW	Grant	07/05/2024

Reference	Proposal	Decision	Decision Date
	Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works		
24/00436/NMA	Non Material Amendment to 21/01147/FUL to Change to the Timing Requirement of Condition 8 in the Closure of Existing Field Access.	Grant	21/05/2024
24/00100/COND	Discharge of Conditions 6 (Traffic Management) and 22 (Landscaping) of P.A. 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	24/05/2024
24/00123/COND	Discharge of Condition 19 of PA 21/01147/FUL Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	24/05/2024
24/00266/COND	Discharge of Condition 23 on P/A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	03/06/2024
24/00660/COND	Discharge Condition 11 on 23/00801/FUL- Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary Fencing, Internal Access Roads, Landscaping, External Lighting and Works.	Grant	02/08/2024
24/00445/COND	Discharge Condition 22 on P.A 23/00801/FUL - Proposed Construction and Operation of An 8 MW Electrolytic Green Hydrogen Production Plant, with Associated Infrastructure Including HGV and Multi Cylinder Pack (MCP) Loading Areas, Vehicle Maintenance Unit, Staff Welfare Facilities and Control Room, 11KV Customer Sub-Station, Boundary	Grant	04/09/2024

Reference	Proposal	Decision	Decision Date
	Fencing, Internal Access Roads, Landscaping, External Lighting and Works.		
24/01027/COND	Discharge Condition 6 and 14 on P.A 21/01147/FUL - Installation of a Solar Farm and Battery Storage Facility with Associated Infrastructure	Grant	03/10/2024
24/00717/SCR	Screening Opinion - Proposed Battery Energy Storage Systems (BESS) Substation and Associated Infrastructure and Works	Not EIA Development	13/11/2024
23/00748/HAZ	Application for Hazardous Substances Consent for the proposed storage of a maximum of 4.9 tonnes of Hydrogen	Grant	17/02/2025
24/01138/FUL	Battery Energy Storage System, Substation, Associated Infrastructure and Works	Grant	27/06/2025
25/00387/SCR	<i>Request for an Environmental Impact Assessment (EIA) Screening Opinion for High Marnham BESS: A Battery Energy Storage System (BESS) with a Storage Capacity of up to 400 Megawatts (MW)</i>	<i>Awaiting</i>	-
25/00639/FUL	<i>The Construction, Operation and Decommissioning of a Battery and Energy Storage System (BESS) and Associated Infrastructure</i>	<i>Awaiting</i>	-

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