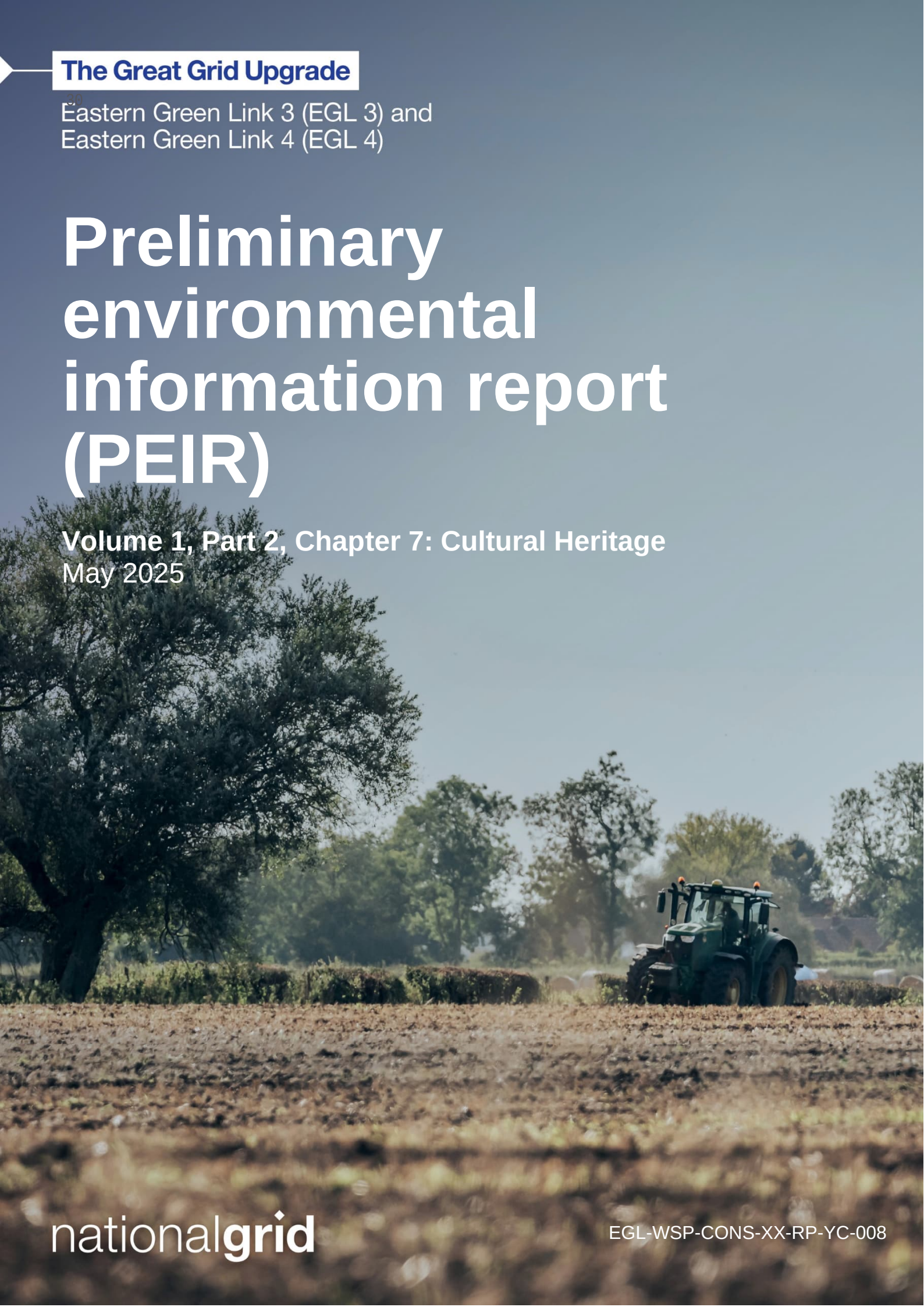
The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and
Eastern Green Link 4 (EGL 4)

Preliminary environmental information report (PEIR)

Volume 1, Part 2, Chapter 7: Cultural Heritage

May 2025



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7. Cultural Heritage

7. Cultural Heritage

7.1. Introduction

7.1.1. This chapter presents the preliminary findings of the Environmental Impact Assessment (EIA) undertaken to date for the Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4) English Onshore Scheme, with respect to cultural heritage, including the above and below-ground archaeological resource, built heritage, the historic landscape, and any other elements which may contribute to the historical and cultural heritage within the study area. The preliminary assessment is based on information obtained to date. It should be read in conjunction with the description of the Projects provided in **Volume 1, Part 1, Chapter 4: Description of the Projects.**

7.1.2. This chapter describes the methodology used, the datasets that have informed the preliminary assessment, baseline conditions, environmental measures, and the preliminary cultural heritage effects that could result from the English Onshore Scheme during the construction and operation (and maintenance) phases. Specifically, it relates to the English onshore elements of EGL 3 and EGL 4 (the English Onshore Scheme) landward of Mean Low Water Springs (MLWS).

7.1.3. This chapter should be read in conjunction with:

- **Volume 1, Part 1, Chapter 4: Description of the Projects** (due to the close association between the Projects' design and impacts to heritage assets);
- **Volume 1, Part 2, Chapter 6: Biodiversity** (due to the potential for effects on historic hedgerows);
- **Volume 1, Part 2, Chapter 8: Landscape and Visual Amenity** (due to the interrelated impacts with cultural heritage and landscape mitigation);
- **Volume 1, Part 2, Chapter 9: Water Environment** and **Chapter 10: Geology and Hydrogeology** (due to the potential for impacts on heritage assets outside the English Onshore Scheme by changes to drainage, and preservation conditions);
- **Volume 1, Part 2, Chapter 12: Traffic and Transport** (due to information on traffic levels past heritage assets); and
- **Volume 1, Part 2, Chapter 14: Noise and Vibration** (due to the interrelated impacts with cultural heritage).

7.1.4. This chapter is supported by the following figures:

- **Volume 3, Part 2, Figure 7-1 Cultural Heritage Study Area and Zones**;
- **Volume 3, Part 2, Figure 7-2 Heritage Assets**; and
- **Volume 3, Part 2, Figure 7-3 LiDAR Interpretation**.

7.1.5. This chapter is supported by the following appendices:

- **Volume 2, Part 1, Appendix 1.2.A: Legislation and Policy Overview;**
- **Volume 2, Part 1, Appendix 1.5.A: Outline Register of Design Measures**;

- **Volume 2, Part 1, Appendix 1.5.B: Outline Code of Conduction Practice;**
- **Volume 2, Part 2, Appendix 2.7.A: Cultural Heritage Scoping Responses;**
- **Volume 2, Part 2, Appendix 2.7.B: Cultural Heritage Baseline;**
- **Volume 2, Part 2, Appendix 2.7.C: Cultural Heritage Gazetteer;** and
- **Volume 2, Part 2, Appendix 2.7.D: Cultural Heritage Non-significant impacts.**

Limitations

7.1.6. The information provided in this Preliminary Environmental Information Report (PEIR) is preliminary, the final assessment of potentially significant effects will be reported in the Environmental Statement (ES). The PEIR has been produced to fulfil National Grid Electricity Transmission plc (NGET)'s consultation duties in accordance with Section 42 of the PA2008 and enable consultees to develop an informed view of the preliminary significant effects of the English Onshore Scheme.

7.1.7. This assessment is based on preliminary desk-based research and site visits to assess potential effects caused by changes to key designated heritage assets. It cannot, therefore, be taken as a definitive statement of the potential presence and significance of archaeological remains within the draft Order Limits. Baseline analysis is ongoing, and further surveys are proposed to refine the assessments made through existing knowledge and to allow informed assessment of the potential effects of the English Onshore Scheme. These include, but are not limited to, desk-based geoarchaeological assessment, geophysical survey and evaluation excavation.

7.1.8. Light detection and ranging (LiDAR) data was obtained from the Department for Environment, Food and Rural Affairs to identify additional heritage assets. Project specific LiDAR has not yet been reviewed but will be reviewed for the ES.

7.1.9. Aerial photographic analysis is ongoing and has not been included within this assessment. However, the results will be incorporated into the ES.

7.1.10. The English Onshore Scheme has been assessed on the principal that environmental measures (refer to **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology** for further details) have been 'embedded' into the design to mitigate potential significant effects. This approach is informed by the iterative design process. Additionally, the English Onshore Scheme would ensure that standard good practice construction measures are adopted, through the implementation of an Outline Code of Construction Practice (CoCP) (**Volume 2, Part 1, Appendix 1.5.B Outline CoCP**). The preliminary appraisal of potential effects therefore assumes that both embedded design mitigation and good practice measures are in place.

Preliminary significance conclusions

7.1.11. For ease of reference, a summary of the potentially significant effects from the preliminary cultural heritage assessment is provided in **Table 7-1.** All other effects in relation to cultural heritage have been assessed as not significant. Further details of the methodology behind the assessment, and a detailed narrative of the assessment itself are provided within the sections below. All assets are shown in **Volume 3, Part 2 Figure 7-2 Heritage Assets.**

Table 7-1 – Preliminary summary of significance of effects

Receptor and summary of predicted effects	Heritage value of receptor [1]	Magnitude of impact [2]	Significance [3]	Summary rationale
Remains of a potential Romano-British farmstead (MLI12624) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches	Medium	Medium	Moderate adverse	The indicative zone for underground cable assets would cross the site of the Romano-British farmstead. The impact of the Projects upon the asset is permanent
Four circular mounds interpreted as part of a salterns (WSP_ID_150, WSP_ID_151, WSP_ID_152, WSP_ID_153) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches	Medium	Medium	Moderate adverse	The indicative zone for underground cable assets would impact all of the salterns and would be a permanent impact.
A circular bank interpreted as an undated enclosure (WSP_ID_105) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches.	Medium	Medium	Moderate adverse	The indicative zone for underground cable assets would impact the southern curve of the enclosure and the impact would be permanent.

Receptor and summary of predicted effects	Heritage value of receptor [1]	Magnitude of impact [2]	Significance [3]	Summary rationale
A potential Romano-British settlement (MLI22323) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches	Medium	Medium	Moderate adverse	The indicative zone for underground cable Assets would impact part of the settlement and the impact would be permanent.
Site of RAF Sutton Bridge (MLI20490) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches	Medium	Medium	Moderate adverse	The remains would be impacted by an area proposed for use of stockpiling of material, and by the construction of a haul road.
An artificial earthen bank (MNF18953), possibly a road used as a Pilgrim route, associated with a scatter of medieval and early post-medieval material would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches for Converter Station Option D.	Medium	Medium	Moderate adverse	Converter Station Option D would have a permanent impact on a section of this historic routeway.
Remains of a roddon (MNF22145) with finds dating from, predominantly, the early medieval period would be affected by the	Medium	Medium	Moderate adverse	Converter Station Options A, B and C would have a permanent impact on this early medieval site.

Receptor and summary of predicted effects	Heritage value of receptor [1]	Magnitude of impact [2]	Significance [3]	Summary rationale
site preparation, construction of the haul road, and the excavation of the cable trenches for Converter Station Options A, B and C				
Medieval ridge and furrow (WSP_ID_016), an undated enclosure (WSP_ID_015) and a number of field boundaries (WSP_ID_017, WSP_ID_019, WSP_ID_020) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches for Converter Station Options A, B and C	Medium	Medium	Moderate adverse	The indicative zone for underground cable assets between the converter stations and the substation would impact the asset for Converter Station Option A, B and C.
A scatter of sherds of Roman pottery and post-medieval briquetage on a possible roddon (MNF18977) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches and a trenchless crossing pit	Medium	Medium	Moderate adverse	The indicative zone for underground cable assets would cross the eastern extent of the asset for Converter Station Options B and D and the impact would be permanent.

Receptor and summary of predicted effects	Heritage value of receptor [1]	Magnitude of impact [2]	Significance [3]	Summary rationale
Possible Roman settlement (MNF18975) would be affected by the site preparation, construction of the haul road, and the excavation of the cable trenches and trenchless crossing pits for Converter Station Options A, C and D	Medium	Medium	Moderate adverse	The converter stations would impact the asset for Converter Station Options A, C, and D and the impact would be permanent.
Medieval moated site (MNF2207) impacted by changes in its setting by increased traffic during construction	High	Low	Moderate adverse	Temporary impact within the setting of the asset due to the presence of construction traffic.

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Section 7.9** and is defined as [negligible, low, medium, and high].
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Section 7.9** and is defined as [negligible, low, medium, and high].
3. The significance of the environmental effects is based on the combination of the significance/value of a receptor and the magnitude of impact and is expressed as major (significant), moderate (potentially significant) or minor/negligible (not significant), subject to the evaluation methodology outlined in **Section 7.9**.

7.2. Relevant technical guidance

7.2.1. The legislation and planning policy which has informed the assessment of effects with respect to cultural heritage is provided within **Volume 2, Part 1, Appendix 1.2.A: Regulatory and Planning Context**. Further information on policies relevant to the English Onshore Scheme is provided in **Volume 1, Part 1, Chapter 2: Regulatory and Policy Overview.** Relevant technical guidance, specific to cultural heritage, that has informed this PEIR and will inform the assessment within the ES is summarised below.

Technical guidance

7.2.2. A summary of the technical guidance for cultural heritage is given in **Table 7-2**.

Table 7-2 – Technical guidance relevant to the cultural heritage assessment

Technical guidance document	Context
Planning Practice Guidance: Historic Environment (2019) (Ref 7.1)	This guidance provides advice on the conservation and enhancement of cultural heritage.
Historic England Good Practice Advice in Planning Note 2 (GPA 2): Managing Significance in decision-taking in the Historic Environment (2015) (Ref 7.2)	This document provides guidance and information to assist in implementing cultural heritage policy and ensuring compliance with National Planning Policy Framework (NPPF) fundamentals.
Historic England Good Practice Advice in Planning Note 3 (GPA 3): The Setting of Heritage Assets (2017) (Ref 7.3)	Sets out guidance on managing change within the settings of heritage assets. The document sets out five steps to follow to ensure an appropriate level of assessment is achieved.
Chartered Institute for Archaeology (2021) Principles of Cultural Heritage Impact Assessment in the UK (Ref 7.4)	This document provides guidance for cultural heritage practitioners in regard to the principles of cultural heritage impact assessments. These are: A. understanding cultural heritage assets; and B. evaluating the consequences of change.
Institute of Environmental Management and Assessment (IEMA) (2020) Impact Assessment Guidance (Ref 7.5)	Sets out key principles and direction to ensure that environmental mitigation identified during the pre-application assessment process (including design and EIA) is delivered once consent has been granted.
Historic England Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019) (Ref 7.6)	This Historic England advice note covers the NPPF requirement for applicants for heritage and other consents to describe heritage significance to help local planning authorities to make decisions on the impact of proposals for change to heritage assets.

Technical guidance document	Context
Chartered Institute for Archaeologists (CIfA) Standard and guidance for archaeological desk-based assessment (2020a) (Ref 7.7)	Sets out standards to produce archaeological desk-based assessments.
CIfA Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (2020b) (Ref 7.8)	Sets out standards for the provision of consultancy advice in the historic environment.

7.3. Consultation and engagement

Overview

7.3.1. The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 5.9** of **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**.

Scoping Opinion

7.3.2. **Volume 2, Part 2, Appendix 2.7.A. Cultural Heritage Scoping Responses** outlines the comments made in the Scoping Opinion in relation to cultural heritage and how these have been addressed within this PEIR.

7.3.3. The information provided in the PEIR is preliminary and not all of the Scoping Opinion comments have been addressed at this stage however, all comments will be addressed within the ES.

7.3.4. Since issue of the Scoping Opinion changes to the Projects design has resulted in Fenland District Council and Cambridgeshire County Council falling withing the draft Order Limits. Whilst the preliminary assessment has taken account of the relevant baseline information for these local planning authorities the scope of the assessment remains unchanged.

Technical engagement

7.3.5. Technical engagement with consultees in relation to cultural heritage is ongoing. A summary of the technical engagement undertaken to date is outlined in **Table 7-3**.

Table 7-3 – Technical engagement on the environmental aspect assessment

Consultee	Consideration	How addressed in this PEIR
Lincolnshire County Council	A stakeholder engagement meeting was held on 27 September 2024 "*500m study area is too small...1km for the most part is reasonable... brilliant approach of assessment, makes it less concerning... an*	The study area from the draft Order Limits is 500 m for detailed baseline data. Within the ES, information up to 1 km will be considered in a gazetteer and to further inform the baseline, with an extended study area of 3 km where

Consultee	Consideration	How addressed in this PEIR
	intelligent approach is the best way forward."	impacts caused by changes in setting may occur.
Norfolk County Council	A stakeholder engagement meeting was held on 27 September 2024 *"Geoarchaeological recording on GI* [Ground Investigation] *work is useful...it would be worth undertaking magnetometery in the Fenland Basin."*	Desk-based geoarchaeological assessment of the indicative cable route, Walpole B Substation and converter stations will be undertaken to inform the ES**.** This information is not available to inform the PEIR. This will include recommendations for further work. Geophysical survey of the indicative cable route, Walpole B Substation and converter stations will be undertaken to inform the ES**.**
Historic England	A stakeholder engagement meeting was held on 27 September 2024 *"It is better for geoarchaeologists to inspect the ground investigation cores rather than just the logs".*	Desk-based geoarchaeological assessment of the indicative cable route, Walpole B Substation and converter stations will be undertaken to inform the ES**.** This information is not available to inform the PEIR. This will include recommendations for further work**.**
Historic England	A NGET Grimsby to Walpole Project and EGL 3 and EGL 4 discussion on Moat Field for the application of the asset to be designated as a scheduled monument was held on 03 February 2025. Historic England recommended treating the Moat Field site as a Scheduled Monument for planning purposes, irrespective of the final designation decision. It was emphasised that avoiding access routes along the east and north sides of the moat	The English Onshore Scheme's access route options have been reviewed to minimise heritage impacts. Impacts considered as part of the assessment. At this stage of assessment, the moated site has been assessed as if it was a scheduled monument.

Consultee	Consideration	How addressed in this PEIR
	would significantly reduce potential impacts.	

7.3.6. Further consultation with Historic England is planned for Spring 2025 to consider the Moat Field scheduled monument application in more detail.

7.3.7. Technical engagement meetings with Historic England, Lincolnshire County Council and Norfolk County Council are planned throughout 2025, including joint technical engagement meetings with the Grimsby to Walpole Project.

7.3.8. The requirement for other technical engagement meetings will be reviewed prior to production of the ES and meetings will be held if necessary to develop or discuss the assessment.

7.4. Data gathering methodology

Study area

7.4.1. The study area for the assessment of potential significant effects on cultural heritage has been defined through consideration of the components of the English Onshore Scheme, which are principally underground cable and above ground elements comprising a substation and two converter stations. The study area extends 500 m from the draft Order Limits, within which all the components of the English Onshore Scheme would be located. This is deemed to be an appropriate distance from the draft Order Limits to describe the historical and archaeological baseline, and to undertake an assessment of archaeological potential. Within the ES, information up to 1 km will be considered, following consultation with Lincolnshire County Council.

7.4.2. Given the dimensions and characteristics of the operational above ground elements of the English Onshore Scheme, an Extended Study Area extending 3 km from the Walpole Station Area (i.e. the area within which both the Walpole B Substation and converter stations would be sited) has been defined to identify receptors which may be impacted through change to setting. However, the focus is on assets where the setting contributes to their significance. This covers only Zone 3 (see below).

7.4.3. The draft Order Limits traverses two National Character Areas (NCAs); the Lincolnshire Coast and Marshes NCA and The Fens NCA. The NCAs, along with the Lincolnshire Landscape Character Areas, which subdivide the NCAs, broadly define particular landscape types and types of heritage assets and archaeological remains. From these units, the English Onshore Scheme have been subdivided into three distinct zones for the purpose of developing the cultural heritage baseline and the assessment of archaeological potential. These are:

- Zone 1: Lincolnshire Coast and Marshes;
- Zone 2: The Eastern Fens; and
- Zone 3: Townlands and Reclaimed Wash Farmlands.

7.4.4. The study area, Extended Study Area and zones are shown in **Volume 3, Part 2, Figure 7-1 Cultural Heritage Study Area and Zones**.

Desk study

7.4.5. A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 7-4**

Table 7-4 – Data sources used to inform the cultural heritage assessment

Organisation	Data source	Data provided
Historic England	National Heritage List for England (NHLE)	Information on statutorily designated heritage assets.
Lincolnshire County Council	Lincolnshire Historic Environment Record (HER)	Information on non-designated heritage assets.
Norfolk County Council	Norfolk HER	Information on non-designated heritage assets.
Local councils and Historic England	Lincolnshire and Norfolk conservation areas data	Information on conservation areas
Lincolnshire County Council	Lincolnshire Landscape Character Areas	Information on changes in land use and management.
Norfolk County Council	Norfolk Historic Landscape Characterisation	Information on changes in land use.
Historic England	Regional Research Framework East Midlands: Updated Framework 2012	Information on the significant archaeology in the East Midlands.
Historic England	Regional Research Framework East of England: Updated Framework 2021	Information on the significant archaeology in the East of England.
Groundsure	Historic Ordnance Survey (OS) mapping	Information on historical mapping.
Historic England	Historic England's Aerial Archaeology Mapping Explorer; Historic England Archive Service for aerial photograph data	Information on aerial photographs.
Department for Environment, Food and Rural Affairs	Department for Environment, Food and Rural Affairs Survey Data Download	LiDAR 1 m DTM (digital terrain model) data.
Portable Antiquities Scheme	Portable Antiquities Scheme database	Information on archaeological find spots

Survey work

7.4.6. A drive over along the entire route of the English Onshore Scheme was undertaken during January 2025, to visually inspect the area and allow understanding of the relevant landscape character areas. Setting visits to designated assets were included,

particularly in the vicinity of the Walpole B Substation and converter stations at Walpole. Gunby Hall registered park and garden was visited to determine the density of vegetation between the asset and the indicative cable route.

7.5. Overall baseline

7.5.1. The following section provides a summary baseline. Full details are provided in **Volume 2, Part 2, Appendix 2.7.B Cultural Heritage Baseline**. Further details of assets discussed below are contained in **Volume 2, Part 2, Appendix 2.7.C: Cultural Heritage Gazetteer** and shown in **Volume 3, Part 2, Figure 7-2 Heritage Assets** and **Volume 3, Part 2, Figure 7-3 LiDAR Interpretation**. Asset numbers provided throughout this chapter are either numbers from the Historic Environment Record (e.g. MLI125181), from WSP analysis of LiDAR (e.g. WSP_ID_150) or from the National Heritage List for England (e.g. NHLE101917).

Zone 1 Baseline Summary

7.5.2. There are 406 heritage assets in the Zone 1 500 m study area, of which 40 are designated. There are two scheduled monuments which both date to the medieval period, a churchyard cross (NHLE1360006 NHLE1014424, MLI41603, also a Grade II listed building) and a motte (NHLE1019173, MLI43594). There are 37 listed buildings: three that are Grade I, five that are Grade II*, and the remaining 29 are Grade II. There is also a Grade II registered park and garden, Gunby Hall (NHLE1000979, MLI43408).

7.5.3. There are 29 heritage assets that date to the prehistoric, most of which are casual loss finds dating to the Neolithic (4000 BC to 2,200 BC) and Bronze Age (4,000 BC-700 BC). The western extension to the scheduled Butterbump barrow cemetery (NHLE 1003615, MLI43597) is in the study area for Zone 1. This contains a group of seven round barrows that has produced middle Bronze Age pottery and flints, two cremation urns, and a cremation. While there are no sites specifically dated to the Iron Age (800 BC-43 AD), possible late prehistoric settlement activity in the form of linear and curvilinear enclosures has been identified within the grounds of Gunby Hall (MLI115969; ELI12329).

7.5.4. There are 15 Roman (43 AD to 410) heritage assets which largely consist of coins and pottery which suggest domestic activity in the study area between AD 138 and 423. Cropmarks may represent Romano-British settlements, and excavations at Burgh-le-Marsh have revealed farms, field systems, and salt production, highlighting its importance as a trading hub. The Lincolnshire marshes were likely used for grazing and salt extraction.

7.5.5. There are 13 heritage assets that date to the early medieval period (AD 410–1066). This includes evidence for three settlements, two of which, Orby (MLI43701) and Welton Le Marsh (MLI88720), slightly overlap the Indicative Zone for Underground Cable. Notable finds including an early medieval burial with armour were discovered near Bonthorpe.

7.5.6. There are 157 medieval (AD 1066 – 1540) heritage assets in Zone 1. Two of these are scheduled monuments (NHLE1360006, NHLE1014424, MLI41603; NHLE1019173, MLI43594), two are Grade I listed (NHLE1360009, MLI41497; NHLE1063629, MLI42002), one is Grade II* (NHLE1063626, MLI42170), and two are Grade II (NHLE1147238, MLI41496; NHLE1360006, NHLE1014424, MLI41603). Villages like Orby and Huttoft transitioned to arable farming during the medieval period, while salt production was significant. However, many villages were later abandoned as landlords

shifted to pastoral farming. Manors, moated sites, and religious establishments like Hagnaby Abbey (NHLE 1011454/ MLI43593) reflect the social structure and church influence, with sea banks built to prevent flooding.

7.5.7. There are 182 post-medieval (AD 1540–1900) heritage assets in the study area. 32 of these are listed buildings, one is Grade I (MLI43408, NHLE 1063656), four are Grade II*, and the remaining 27 are Grade II. The Grade I Gunby Hall (MLI43408, NHLE 1063656) is situated in the Grade II Gunby Hall Registered Park and Garden (NHLE1000979, MLI43408). The landscape during this period was scattered with dispersed farmsteads and agricultural heritage assets as the drainage of the fens allowed for an increase of arable farming.

7.5.8. There are ten modern (1901–present) heritage assets in Zone 1 and they largely relate to World War II. The indicative zone for underground cable assets passes through the site of RAF Spilsby (MLI88704) and whilst it was dismantled in 1970, LiDAR analysis has identified a number of features associated with the base (WSP_ID_327, WSP_ID_326, WSP_ID_324, WSP_ID_328 and WSP_ID_325). Evidence of the major drainage works took place in the 1990s are visible in the form of low earthworks (for example WSP_ID_511; WSP_ID_513).

Zone 2 Baseline Summary

7.5.9. There are 234 heritage assets in the Zone 2 500 m study area, 18 of which are designated. The designated assets all date to the post-medieval period and are comprised of one scheduled monument, Sibsey Trader Windmill (NHLE1063535, NHLE1013828, MLI43497), which is also a Grade I listed building, and 16 Grade II listed buildings.

7.5.10. There are eight prehistoric heritage assets in Zone 2, these date from between the Mesolithic and Bronze Age. It is likely that the study area was used only intermittently for hunting activity or activities such as salt working, and that settlement was located elsewhere as the assets are largely casual loss finds.

7.5.11. During the Roman period, the study area was primarily agricultural, with nine heritage assets identified, including settlements and a saltern (MLI42229). Increased activity is evident, with land being reclaimed and extensive woodland clearance allowing for increased agricultural land, with settlements likely on higher ground due to marshy conditions.

7.5.12. There are no early medieval heritage assets in the study area, which is likely due to flooding that occurred in this area towards the end of the Roman period.

7.5.13. The study area contains 42 medieval heritage assets, including a settlement (MLI97841), a chapel (MLI42767), and field systems. Zone 2 was part of Boston's agricultural hinterlands during the medieval period and had dispersed settlements and irregular field systems, with sheep husbandry funding church constructions.

7.5.14. The study area contains 166 post-medieval heritage assets, including six Grade II listed buildings and 131 farms, with Sibsey Trader Windmill (NHLE1063535, NHLE1013828, MLI43497) being the most notable. There were significant infrastructure changes in the post-medieval, including the Firsby to Bolton Railway (MLI124888) and extensive drainage of the fens. The area also features religious buildings from the Fen Churches Act of 1816.

7.5.15. The study area contains nine modern heritage assets, primarily military, including five World War II pillboxes and two Cold War Royal Observer Corps monitoring posts

(MLI85907, MLI125181). The landscape remained arable, with efforts to support agriculture through industrial development and the introduction of the A16 in 1922. Modern housing developments surround historic settlement cores.

Zone 3 Baseline Summary

7.5.16. A total of 510 heritage assets are located within the 500 m study area for Zone 3. Of these, three are scheduled monuments, 42 are listed buildings, and four are Conservation Areas. The scheduled monuments comprise a shrunken medieval village (NHLE 1004933), and two medieval crosses (NHLE 1010678; NHLE 1014429). Of the listed buildings, four are Grade I listed medieval churches (NHLE 1077676; NHLE 1164857; NHLE 1171875; NHLE 1204871). The remainder are Grade II listed which comprise historic farmhouses, memorials, and mile posts. The four Conservation Areas are Fleet, Fleet Hargate, Tydd St Mary and Tydd Gote.

7.5.17. There are 14 heritage assets which date to the prehistoric period. None of these relate to the Palaeolithic or Mesolithic periods, with the first known evidence for human activity in the 500 m study area being a flint scraper believed to be Neolithic in date. There is no known evidence for Bronze Age activity in the 500 m study area, and evidence dating to the Iron Age is currently confined to pottery sherds recovered during archaeological excavations of a medieval motte. Known evidence, taken alongside the former historic character within Zone 3 which was largely riverine and marsh, implies that the area was unlikely to have been permanently settled during prehistory. It is possible, however, that salt production may have been established by the later prehistoric period, given the large numbers of undated saltern mounds throughout the 500 m study area for Zone 3.

7.5.18. There are 38 heritage assets which have been dated to the Roman period within the 500m study area for Zone 3. Of these, one is representative of settlement activity (MLI22323), with further indications identified as cropmarks (MLI20432) and soil marks (MLI12624) which are yet to be investigated further. The remaining evidence for Roman activity within the 500 m study area for Zone 3 is artefactual in the form of small finds recovered through fieldwalking. It is also possible that some of the known, as yet undated, saltern mounds within the 500 m study area for Zone 3 could be representative of salt production in the Roman period.

7.5.19. There are 21 heritage assets dated to the early medieval period within the 500 m study area for Zone 3. Archaeological excavations south of Ingleborough revealed a number of ditches containing domestic waste and early medieval pottery sherds, along with evidence for crops such as barley indicating early medieval settlement and agricultural activity in the vicinity (MNF18943). Most of the known evidence relates to small finds recovered through fieldwalking, but the presence of historic settlements containing early English place-name elements within the 500 m study area for Zone 3 is suggesting of early medieval origins, despite a current lack of corroborative archaeological evidence aside from that recovered south of Ingleborough.

7.5.20. There are 224 heritage assets dating to the medieval period within the 500 m study area. These include the Grade I listed Church of St Mary (NHLE 1204871) in Tydd St Mary, with other designated assets being a Grade II cross in the churchyard of St Mary and further scheduled crosses in All Saints Churchyard (NHLE 1010678) and north of Poultry Farm (NHLE 1014429). The other scheduled monument within the 500 m study area for Zone 3 is the shrunken medieval village remains at Algakirk (NHLE 1004933). A number of existing settlements within the 500 m study area for Zone 3 are known to have been inhabited during the medieval period, and evidence for land exploitation

comes in the form of sea and river defences and salt production in the form of numerous saltern mounds recorded in the HER and through analysis of LiDAR imagery.

7.5.21. There are 445 heritage assets dating to the post-medieval period within the 500 m study area for Zone 3. These are mainly representative of changes to the landscape following the drainage and subsequent enclosure of former marsh. Numerous farmsteads were established alongside the enclosure of new agricultural land, many of which are Grade II listed and located within the 500 m study area for Zone 3. Transport infrastructure also developed during this period, evidenced through the establishment of railways and roads upon which Grade II listed milestones are recorded. Settlements within the 500 m study area which had been occupied since at least the medieval period developed and, in some cases, expanded during the post medieval period. The four Conservation Areas within the 500 m study area for Zone 3 are reflective of this development, with listed and non-listed historic buildings informing the historic character of these settlements.

7.5.22. There are 14 heritage assets associated with the modern period within the 500 m study area for Zone 3. These are primarily defensive-minded sites associated with World War II military infrastructure, including pillboxes, a potential aircraft crash site and former Aircraft Observer Corps posts. Many of these former sites are no longer visible on the ground. Changes to the landscape during the modern period include the gradual removal of post medieval enclosure boundaries throughout the 20th century. Many of these former boundaries have been identified as low earthworks through analysis of LiDAR imagery. Transport infrastructure also continued to develop through the modern period, with the establishment of a now-disused tramway and the modern Fosdyke Bridge.

Future baseline

7.5.23. Large parts of the study area comprise arable land and some degradation of extant earthworks and shallowly buried archaeological deposits may be expected to occur over the lifetime of the English Onshore Schemes, although the condition of any remains is unlikely to be significantly altered before the start of the construction period. This could include the partial or total loss of known or potential buried archaeological resources within the draft Order Limits or known above-ground assets within the study area as a consequence of land being disturbed or developed.

7.5.24. Effects caused by changes within the setting of designated assets may occur in the future from new development.

7.6. Environmental measures

7.6.1. As set out in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**, the environmental measures are characterised as design measures or control and management measures. A range of environmental measures would be implemented as part of the English Onshore Scheme and will be secured in the DCO as relevant.

7.6.2. **Table 7-5** outlines how these design and control measures will influence the cultural heritage assessment. In addition to the measures listed in **Table 7-5**, standard mitigation measures, comprising management activities and techniques, would be implemented during the construction of the Projects to limit effects through adherence to good site practices and achieving legal compliance. These are listed in **Volume 2, Part 1, Appendix 1.5.B: Outline CoCP** and are not repeated below.

7.6.3. Measures listed in **Table 7-5** have been assigned references, for example (H01). These align with the references provided in **Table 3.1 of Volume 2, Part 1, Appendix 1.5.B: Outline CoCP** in Volume 2 for ease of cross-reference.

7.6.4. In addition, design measures identified through the EIA process have been applied to avoid or reduce potential significant effects. Design measures included that are relevant to historic environment receptors are included in **Table 7-5** below under Design and Operation and are also included in **Volume 2, Part 1, Appendix 1.5.A: Outline Register of Design Measures.**

Table 7-5 – Summary of the environmental measures

Receptor	Potential changes and effects	Embedded measures	ID reference
Construction			
Archaeological heritage assets	Disturbance or removal of assets could result in a direct effect resulting from loss of archaeological interest.	Limiting stripping for construction compounds, haul roads, and other associated works in areas where archaeology is recorded to avoid disturbance. Plant access to work sites would use existing access routes as far as possible to minimise disturbance and preclude compaction of archaeological remains. Trackways would be used for access where possible and appropriate to preclude disturbance or compaction of archaeological deposits. Locations of known archaeological interest/value, or areas where archaeological work is planned, would be signposted/fenced off to avoid unintentional damage. A programme of archaeological works, which will be secured through a requirement in the DCO, would be undertaken in areas of impact to ensure buried archaeological remains are preserved by record, proportionate to their importance. The exact methodology at each site would be discussed with the relevant consultees, but may include archaeological excavation or areas of strip, map and record.	H01
Designated heritage assets	Change to setting arising from visibility of the English	Access works would use existing routes where possible, and new routes would be reinstated on	H02

Receptor	Potential changes and effects	Embedded measures	ID reference
	Onshore Scheme can give rise to an indirect effect arising through loss of or harm to historic and architectural interests	completion, reducing perceptual change to the historic landscape.	
Historic landscape character	Change in historic landscape character arising from visibility of the English Onshore Scheme could give rise to direct potential significant effects through harm to historic interests of assets.	Access would, as far as possible, use existing tracks, minimising the extent to which new routes across the landscape would appear. Temporary accesses would be removed and reinstated following the completion of the construction/dismantling works. Any sections of hedgerow which are removed along the indicative cable route would be reinstated.	H03
Hedgerows	Lengths of hedgerows would be removed to facilitate the development proposals, with the potential to cause direct potentially adverse effects on these heritage assets and historic landscape character more widely.	The Contractor would retain vegetation where practicable and in accordance with the LEMP. Where sections of hedgerow are removed, and are ecologically worth preserving, they would be removed in sections, retaining intact root balls where possible and maintained accordingly to prolong longevity and viability (for example through watering). This would speed up the restoration process. Where vegetation is lost and trees cannot be replaced in situ due to the restrictions associated with land rights required for operational safety, suitable native planting approved by NGET would be used as a replacement, in accordance with the outline vegetation reinstatement plans included within the LEMP. Where possible, replacement tree planting would be undertaken at the closest suitable location to area of loss.	MT02
Design and Operation			
Designated heritage assets	Effects to the significance of the heritage asset	Designs have kept potentially significant effects to a minimum.	H01

Receptor	Potential changes and effects	Embedded measures	ID reference
	through change to its setting.	Selection of indicative cable route and detailed consideration of the English Onshore Schemes placement has been undertaken to avoid, as far as possible, direct impacts on designated heritage assets and to minimise change to setting. Planting (once established) to visually screen elements of the English Onshore Scheme, for example the Walpole converter stations, to reduce potential adverse effects on the setting of heritage assets.	
Archaeological heritage assets	Disturbance or removal of assets could result in a direct effect resulting from loss of archaeological interest.	Selection of the indicative cable route has been undertaken to avoid, as far as possible, identified areas of greater archaeological potential. Limiting land take within the draft Order Limits to only that required to construct, operate and maintain the English Onshore Scheme – to minimise disturbance to buried archaeology.	H02
Historic landscape character	Change in historic landscape character arising from visibility of the English Onshore Scheme could give rise to direct potentially significant effects through harm to historic interests of assets.	Selection of indicative cable route and detailed consideration of the placement of the English Onshore Scheme has been undertaken to avoid, as far as possible, and to minimise change to sensitive historic landscape features.	H03

7.7. Scope of the assessment

Spatial scope and study area

7.7.1. The spatial scope of the assessment of cultural heritage covers the area of the English Onshore Scheme contained within the draft Order Limits, together with the study areas described in **Section 7.4**.

7.7.2. The study area extends 500 m from the draft Order Limits, within which all the components of the English Onshore Scheme would be located. This is deemed to be an appropriate distance from the draft Order Limits to describe the historical and

archaeological baseline, and to undertake an assessment of archaeological potential. An Extended Study Area was defined to a maximum distance of 3 km from the above ground components, including the Walpole B Substation and converter stations, as this is the maximum distance at which the Walpole Station Area would have the potential to form a sufficiently prominent part of a view to give rise to potentially significant adverse effects in the landscape context of the study area.

7.7.3. Non-visual perceptual change in setting (e.g. changed sound/noise environments) is anticipated to be restricted to very close proximity of the English Onshore Scheme, and as a result would not have a bearing on the maximum extent of the Extended Study Area.

7.7.4. Effects have been considered during the construction, operation and decommissioning periods.

Temporal scope

7.7.5. The temporal scope of the assessment of cultural heritage is consistent with the period over which the English Onshore Scheme would be constructed and operated. Subject to gaining development consent in 2028, it is anticipated that access and construction of the Projects would commence in 2028, starting with enabling works, including site clearance activities, the installation of construction compounds and access roads. It is expected the main construction works would continue through to 2033 (approximately 6 years).

7.7.6. The English Onshore Scheme is expected to have a life span of more than 40 years. If decommissioning is required at this point in time, then activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works, albeit with a lesser duration of two years. Acknowledging the complexities of completing a detailed assessment for decommissioning works up to 40 years in the future, it is considered that the significance of effects relating to the decommissioning phase would be no greater than those from the construction phase and decommissioning effects are not discussed in detail in this chapter; however, **Table 4.21** in **Volume 1, Part 1, Chapter 4: Description of the Projects** provides a high level summary assessment of the likely significant effects associated with decommissioning. Furthermore, should decommissioning take place it is expected that an assessment in accordance with the legislation and guidance at the time of decommissioning would be undertaken.

Identification of receptors

7.7.7. The principal cultural heritage receptors that have been identified as being potentially subject to significant effects are summarised in **Table 7-6** and are shown in **Volume 3, Part 2, Figure 7-2 Heritage Assets**.

Table 7-6 – Cultural heritage receptors subject to potential significant effects

Receptor	Reason for consideration
Designated heritage assets and non-designated historic buildings	Potentially significant effects arising from the construction of the English Onshore Scheme could include change to setting (and consequently change to the character of conservation areas) resulting from visibility of

Receptor	Reason for consideration
	the Walpole B Substation and converter stations. Noise and other perceptual change arising from the construction or operation of the English Onshore Scheme could result in perceptual change of the setting of heritage assets.
Buried archaeological remains	Potentially significant direct effects arising from the construction of the English Onshore Scheme could include the disturbance or removal of archaeological remains by intrusive groundworks and the disturbance or dewatering of deposits of palaeoecological or geoarchaeological interest.
Historic Landscape Character	Change may arise to historic landscape character in areas of construction of new infrastructure as a result of the loss or modification of landscape features, the introduction of new features, or a change to the perception of the use or appearance of parts of the landscape.

Potential effects considered within this assessment

7.7.8. The effects on cultural heritage receptors which have the potential to be significant and have been taken forward for detailed assessment are summarised in **Table 7-7**.

Table 7-7 – Cultural heritage receptors scoped in for further assessment

Phase	Impact	Receptor	Likely significant effects
Construction	Subsurface impacts from land preparation (earthworks, excavation)	Designated and non-designated heritage assets	Potential effects from permanent loss of archaeological remains
Construction	Physical impacts to elements of the historic landscape, such as hedgerows, causes by land preparation (earthworks, excavation)	Historic Landscape Character	Potential effects from loss of historic landscape elements
Construction	Direct physical impacts on heritage assets and archaeological remains outwith the footprint of	Designated and non-designated heritage assets	Potential effects from permanent loss of archaeological remains

Phase	Impact	Receptor	Likely significant effects
	the English Onshore Schemes permanent infrastructure caused by changes in drainage levels.		
Operation	Visual impacts of all above-ground infrastructure on the setting of heritage assets	Designated and non-designated heritage assets	Potential for effects through change to setting caused during operation.
Operation	Visual impacts on historic landscape character by all above-ground infrastructure	Historic Landscape Character	Potential for effects from perceptual change to historic landscape.

7.7.9. The receptors/effects detailed in **Table 7-8** have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant.

Table 7-8 – Summary of effects scoped out of the cultural heritage assessment

	Receptors/potential effects	Justification
Construction	The temporary effects on designated and non-designated heritage assets; historic landscape character during construction arising through change to setting	Temporary effects arising through change to setting during the construction phase are not deemed to be significant.
Operation	Designated and non-designated heritage assets during land preparation	Archaeological remains within the draft Order Limits would have been removed, following appropriate mitigation, during the construction phase.
Maintenance	Designated and non-designated heritage assets; historic landscape character during repairs	Archaeological remains within the draft Order Limits would have been removed, following appropriate mitigation, during the construction phase.
Decommissioning	Designated and non-designated heritage assets; historic landscape character	Archaeological remains within the draft Order Limits would have been removed, following

	Receptors/potential effects	Justification
	during demolition and excavation	appropriate mitigation, during the construction phase.

7.8. Key parameters for assessment

Realistic worst-case design scenario

7.8.1. The assessment has followed the Rochdale Envelope approach as outlined in **Volume 1, Part 1, Chapter 4: Description of the Projects** and **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology** of the PEIR**.** The assessment of effects has been based on the description of the Projects and parameters outlined in **Volume 1, Part 1, Chapter 4: Description of the Projects**. However, where there is uncertainty regarding a particular design parameter, the realistic worst-case design parameters are provided below with regards to cultural heritage, along with the reasons why these parameters are considered worst-case. The preliminary assessment for cultural heritage has been undertaken on this basis. Effects of greater adverse significance are not likely to arise should any other development scenario, based on details within the Rochdale Envelope (e.g., different infrastructure layout within the draft Order Limits), to that assessed here be taken forward in the final design scheme.

7.8.2. In relation to cultural heritage the following assumptions are made regarding the Projects design parameters in order to ensure a realistic worst-case assessment has been undertaken.

- With regards to converter station height, it is assumed that the maximum building height is 30 m and the assessment has been done on this basis. The converter station height may be reduced.
- It is assumed that there is potential for the disturbance of archaeological remains anywhere within the draft Order Limits; however, not all areas would be impacted e.g. areas of horizontal directional drilling, which would be below the depths of archaeological remains, except in the locations of the starter pits.
- The construction compounds could be located anywhere within the field in which they are currently sited, as shown in **Volume 3, Part 1, Figure 4-5 English Onshore Scheme Permanent Components.**
- Proposed planting to mitigate visual effects of the Walpole B Substation would be in place during the operation of the English Onshore Scheme, although it is noted that this would take time to mature.
- Construction traffic movements along West Drove North, which is adjacent to the moated site considered for designation, would be increased but would not be permanent.

7.8.3. As set out in **Volume 1, Part 1, Chapter 4: Description of the Projects**, and specifically in **Section 4.4**, at this stage in the design process, four options have been identified with regards to the proposed siting of the Walpole converter stations. All four options (Options A-D) have been included within the baseline study. Where an option or options affects the findings of the historic environment assessment reference to the specific option(s) is made in **Section 7.10** or **Volume 2, Part 1, Appendix 2.7.D Cultural Heritage Non-significant impacts**.

Consideration of construction scenarios

7.8.4. As detailed in **Volume 1, Part 1, Chapter 4: Description of the Projects**, the timing of construction activities set out within this PEIR is indicative. It has been identified that elements of the Projects could be constructed sequentially or concurrently. Providing that the required archaeological mitigation detailed in **Table 7-5** is undertaken in one phase as part of the enabling works, there is no significant difference in effects should elements of the Projects be constructed concurrently or sequentially (as detailed in **Volume 1, Part 1, Chapter 4: Description of the Projects**) with regards to potential impacts upon cultural heritage.

7.9. Assessment methodology

Overview

7.9.1. The generic project-wide approach to the assessment methodology is set out in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**, and specifically in **Sections 5.4** to **5.6**. However, whilst this has informed the approach that has been used in this cultural heritage assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this cultural heritage assessment. Details are provided below.

Heritage Value

7.9.2. The heritage significance of a heritage asset is the product of the value it holds for this and future generations resulting from its historic, archaeological, architectural or artistic interests.

- Historical interest - through association with past events or past people; or where a heritage asset is illustrative of a particular asset type, theme or period.
- Archaeological interest - through the potential to hold evidence about the past that can be retrieved through specialist investigation.
- Architectural/Artistic interest - through value derived from contemporary appreciation of a heritage asset's aesthetics.

7.9.3. NPS EN-1 notes that setting contributes to a heritage asset's significance but does not provide an explicit definition of setting. Setting is defined in the NPPF and GPA3 as:

"*The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate an asset, or may be neutral*."

7.9.4. For the purposes of the cultural heritage and archaeology assessment, the heritage significance or value of an asset will be assigned to one of four classes, with reference to the heritage interests described above and professional judgement informed by policy and guidance (**Table 7-2, Table 7-3** and **Table 7-4**). In particular, NPS EN-1 distinguishes between the heritage significance of designated and non-designated assets. To align with other workstreams in this assessment, significance is referred to as a receptor's 'heritage value' in **Table 7-9**.

Table 7-9 – Assessment of Heritage Value

Value	Heritage asset description
High	Scheduled monuments Grade I listed buildings Grade II* listed buildings Grade II listed buildings with exceptional qualities in fabric, historical association, and/or association/group value with heritage assets of high significance Protected wrecks Registered battlefield Conservation areas containing very important (Grade I / II*) listed buildings Grade I and II* registered parks and gardens Protected heritage landscapes (e.g. ancient woodland or historic hedgerows, heritage Sites of Special Scientific Interest) Burial grounds Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of national importance.
Medium	Grade II listed buildings which can be shown to have qualities in their fabric or historical association of regional importance only Conservation areas containing primarily Grade II listed or locally listed buildings Grade II registered parks and gardens Locally listed buildings Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of regional importance.
Low	Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of local importance.
Negligible	Item with no significant heritage value or interest
Uncertain	Heritage assets that have a clear potential, but for which current knowledge is insufficient to allow significance to be determined.

Magnitude of impact

7.9.5. The assessment of the magnitude of impact (i.e. change) is the identification of the degree of the impact of the English Onshore Scheme on the heritage assets. There is no standard scale of comparison against which the severity of potential effects on heritage assets may be judged, because of the great variety of resources and assets, but it is based on the deviation from baseline conditions. The assignment of a magnitude of impact is a matter of professional judgement and is summarised in **Table 7-10**.

7.9.6. The magnitude of impact can be influenced by several factors:

- the permanence of the impact (temporary, permanent, or reversible);

- physical changes caused by the impact (positive or adverse); and
- the extent of the asset or its setting that would be affected and contribution of that part to its heritage significance.

Table 7-10 – Assessment of magnitude of impact

Impact	Description
High	Change to most or all key archaeological materials or key elements of an historic building, such that the resource is totally altered. Comprehensive changes to setting.
Medium	Changes to many key archaeological materials or key historic building elements, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.
Low	Changes to key archaeological materials or key historic building elements, such that the asset is slightly altered. Slight changes to setting.
Negligible	Very minor changes to archaeological materials or historic building elements, or setting.
No Change	No change.

Significance of effect

7.9.7. The classification of the significance of an impact is judged by the relationship of the magnitude of change to the assessed heritage significance of an asset (**Table 7-11)**.

7.9.8. It is generally accepted that major and moderate impacts are considered to be significant, while minor and negligible impacts are considered to be not significant. However, professional judgement will be applied, and this may be amended as appropriate.

7.9.9. All assessments will be presented as narrative descriptions that set out the significance of a heritage asset, including, where appropriate, the contribution of its setting to significance, anticipated magnitude of change to significance, and a resulting significance for effect.

Table 7-11 – Assessment of significance of effect

	Magnitude of Impact			
Heritage Significance	**High**	**Medium**	**Low**	**Negligible**

	Magnitude of Impact			
High	Major (significant)	Major (significant)	Moderate (potentially significant)	Minor (not significant)
Medium	Major (significant)	Moderate (potentially significant)	Minor (not significant)	Minor (not significant)
Low	Moderate (potentially significant)	Minor (not significant)	Minor (not significant)	Negligible (not significant)
Negligible	Minor (not significant)	Minor (not significant)	Negligible (not significant)	Negligible (not significant)

Assessment of Harm and Substantial Harm

7.9.10. Harm and substantial harm are distinguished in NPS EN-1. For this assessment, adverse change of negligible to medium magnitude to a designated asset or a non-designated asset of equivalent heritage significance would normally be considered as less than substantial harm, while a high magnitude of adverse change would normally be considered substantial harm. This follows the case of *Hall vs City of Bradford* 2019 (Ref 7.9) that determined that even a negligible magnitude of change to a designated heritage asset would constitute harm. The fact that the harm may be limited or negligible will contribute to the weight to be afforded to it as part of the planning balance as recognised in Paragraph 5.9.36 in NPS EN-1.

7.9.11. Professional judgement will be applied to the case of each individual asset and comments on the magnitude of any harm arising will be noted in the narrative of each assessment.

Preliminary assessment of cumulative effects

7.9.12. At the current stage of the Projects (PEIR stage), design information for the Projects is insufficient to allow for a robust cumulative assessment to be undertaken. Furthermore, given the current position in relation to baseline data collection, with much of the environmental surveys still to be undertaken during 2025, the baseline identified at this PEIR stage cannot be taken as a complete picture of the potential presence and significance of sensitive receptors. Therefore, a cumulative assessment has not been undertaken at this stage; however, **Volume 1, Part 4, Chapter 28 Cumulative Effects,** presents the long and short lists of 'other developments' which will be considered at the ES stage, and the methodology which allowed for the identification of these other developments, to allow consultation bodies to form a view and provide comment on the other developments included. The long-list will be reviewed and if necessary, updated, in the lead up to the ES, as the Projects design further evolves and in response to any comments raised at statutory consultation.

7.9.13. Combined effects (sometimes called intra-project effects) result principally from different types of impacts from one development acting in combination on a specific receptor. In this chapter, the following combined effects have been assessed:

- Combined effects on heritage assets arising from noise, views, dust and traffic impacts during construction.

7.9.14. There may also be potential for combined effects to occur with other topics, such as hydrology or geology; however, at this stage of the English Onshore Scheme, data is insufficient to allow for an assessment to be undertaken. These will be considered in the ES.

7.10. Preliminary assessment of cultural heritage effects

7.10.1. Potentially significant effects on heritage assets are presented below. All impacts which are not considered to be significant are presented in **Volume 2, Part 1, Appendix 2.7.D Cultural Heritage Non-significant impacts**. The impacts have been assessed with the environmental measures detailed in **Table 7-5** taken into account.

7.10.2. Impacts presented in this section are permanent construction phase effects, arising from the physical impact upon archaeological remains. The exception is the medieval moated site discussed in **Paragraphs 7.10.18** to **7.10.20.** This is split into potential effects during construction and operation, for effects caused by changes within the setting of the asset.

7.10.3. As detailed in **Section 7.5** above, full detail of assets can be found in **Volume 2, Part 2, Appendix 2.7.C: Cultural Heritage Gazetteer** and shown on **Volume 3, Part 2, Figure 7-2 Heritage Assets** and **Volume 3, Part 2, Figure 7-3 LiDAR Interpretation**. Asset numbers provided throughout this chapter are either numbers from the Historic Environment Record (e.g. MLI125181), from WSP analysis of LiDAR (e.g. WSP_ID_150) or from the National Heritage List for England (e.g. NHLE101917).

Zone 1

7.10.4. There are no significant impacts anticipated in Zone 1.

Zone 2

7.10.5. There are no significant impacts anticipated in Zone 2.

Zone 3

7.10.6. All of the impacts presented below for Zone 3 are considered to be **Significant**.

7.10.7. The HER data notes the remains of a potential Romano-British farmstead (MLI12624) evident as cropmarks parcel. No associated earthwork remains were identified as part of the LiDAR data assessment. Investigations in the 1960s within the area of the cropmarks found remains of Romano-British pottery, mortar, and a ditch with several fills, suggesting that the ditch silted up over a long period of time. Some of the remains were found to have been heavily impacted by historic agricultural activity. The remains have archaeological interest for the potential to inform understanding of Romano-British agriculture and settlement patterns in the landscape. The remains would be of medium value. The indicative zone for underground cable assets would cross the site of the Romano-British farmstead. The magnitude of impact of the English Onshore Scheme upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and the excavation of the cable trenches. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.8. LiDAR data analysis indicates four circular mounds interpreted as part of a salterns (WSP_ID_150, WSP_ID_151, WSP_ID_152, WSP_ID_153). The saltern location is to the south of the possible medieval sea wall defences line (MLI89892) which likely marked the boundary between the salt marsh and land used for agricultural activity. This industrial activity would have been undertaken prior to the draining of the fenlands and may predate the sea wall. The remains have archaeological interest for evidence of saltmaking activity within the fen landscape that would have been part of the local industry. They are considered to be of medium heritage value. The Indicative Zone for Underground Cable Assets would impact all of the mounds. The magnitude of impact of the upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and the excavation of the cable trenches. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.9. LiDAR data analysis indicates a circular bank interpreted as an undated enclosure (WSP_ID_105). The asset was not evident on historic mapping potentially indicating that the asset pre-dates the advent of detailed mapping in the late post-medieval period. The remains have archaeological and historic interest for the information they contain about historic field patterns, settlement, and land use. They are considered to be of medium heritage value. The Indicative Zone for Underground Cable Assets would impact the southern curve of the enclosure. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and the excavation of the cable trenches. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.10. The HER data notes the remains of a potential Romano-British settlement (MLI22323), thought to extend to the southwest of the assumed centre point. No associated earthwork remains were identified as part of the LiDAR data assessment. Investigations in the 1960s found three patches of dark soil and early 2nd to late 4th century pottery in the field. Excavation revealed eight hut floors, although later reports suggest that there are 12 hut sites, within the area of the settlement. Aerial photographs show loose ditched enclosures and droves extending over a considerable area to the southwest but these remains have not been confirmed through archaeological investigation. Agricultural activity may have obscured the remains and the full extent of the surviving remains is not clear. The remains have archaeological interest for potential to inform understanding of Romano-British agriculture and settlement patterns, as well as about activity within this period. The remains would be of medium value. The indicative zone for underground cable assets and the indicative zone for construction compounds would be placed within the area southwest of the centre point for the Romano-British settlement but the English Onshore Scheme is not expected to impact the entirety of the remains. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, the excavation of the cable trenches, and compression from the construction site works within the indicative zone for construction compounds. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.11. The Lincolnshire HER notes the former site of RAF Sutton Bridge (MLI20490) across the area proposed for stockpiling adjacent to the A17, southeast of Sutton Bridge, and extending to the southwest along the River Nene near Gunthorpe Farm. Sutton Bridge Airfield was opened in 1926 as a training station and was used during the Second

World War as a base for three fighter squadrons of Spitfires and Hurricanes before becoming inactive in 1946. The landing strip was reportedly composed of grass with a steel mesh net, rather than tarmac. The airfield was a prime target for German attack and subject to numerous Luftwaffe bombing raids. The airfield remains have archaeological and historical interest for the potential to inform on the understanding of interwar air force training infrastructure, organisation of space within the early airfields, and responses to Luftwaffe bombing raids. The remains would be of medium heritage value. It is proposed to use these parcels for stockpiling. The asset would also be crossed by the construction of a haul road between Centenary Way and Gunthorpe Road. The magnitude of impact of the English Onshore Scheme upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, the construction of the haul road, and compression and vibration from the construction site works. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.12. The Norfolk HER notes an artificial earthen bank (MNF18953) identified with a scatter of early post-medieval pottery, brick, shell and bone during fieldwalking. Subsequent metal detecting retrieved a number of metal objects including a Byzantine silver coin, an oval medieval seal matrix, a late medieval coin weight, a 16th century hooked fastener and several medieval pilgrim badges, including one depicting St Blaise. It is considered possible that the bank was part of a road network through the fenlands. No controlled archaeological investigations have been undertaken on the bank and the bank's purpose has not been confirmed. The remains have archaeological and historical interest for roadside and travel infrastructure that may have been utilised as part of the pilgrimage infrastructure. They are considered to be of medium heritage value. The indicative zone for underground cable assets from the converter station would cross the earthen bank in the Indicative zone of the converter station for Option D. For converter station Option D, the magnitude of impact of the English Onshore Scheme upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul roads, and excavation of the cable trenches. On an asset of medium value, this results in a significance of effect of moderate adverse. For converter station Options A, B, and C, there would be no impact.

7.10.13. The Norfolk HER notes the remains of a roddon (MNF22145) with finds dating from, predominantly, the early medieval period, with possible residual finds of medieval pottery. Investigations of the roddon found evidence of butchery, occupation and agriculture dating to the middle of the early medieval period. The extent of the occupied area and the survival of remains *in situ* is not known. Any surviving remains would have archaeological interest for evidence of settlement and agricultural activity within the fen landscape from the early medieval period. They are considered to be of medium heritage value. The indicative zone for underground cable assets would cross the roddon in the Indicative Zone of the converter station for Options A, B, and C. For converter station Options A, B, and C, the magnitude of impact of the English Onshore Scheme upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul roads, and excavation of the cable trenches, a trenchless crossing pit and drainage basin. On an asset of medium value, this results in a significance of effect of moderate adverse. For converter station Option D, there would be no impact.

7.10.14. LiDAR data analysis indicates a series of linear bank and ditch features interpreted as medieval ridge and furrow (WSP_ID_016). An undated square linear ditch feature with an entrance to the east, interpreted as an undated enclosure, is located adjacent to the eastern end of the ridge and furrow (WSP_ID_015). A number of field boundaries were

also recorded (WSP_ID_017, WSP_ID_019, WSP_ID_020). The remains have archaeological interest for the information they contain about medieval field patterns, land use and agricultural practices. They are considered to be of medium heritage value as a group. The Indicative Zone for Underground Cable Assets between the converter station and the Walpole B Substation would impact the asset in the Indicative Zone of the converter station for Option A. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and excavation of the cable trenches and drainage basins. On an asset of medium value, this results in a significance of effect of moderate adverse. The Indicative Zone for Underground Cable Assets between the converter stations and the substation would impact the asset in the Indicative Zone of the converter station for Option B. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and excavation of the cable trenches, trenchless crossing pits, and drainage basins. On an asset of medium value, this results in a significance of effect of moderate adverse. The Indicative Zone for Underground Cable Assets between the converter station and the substation would impact the asset in the Indicative Zone of the converter station for Option C. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul road, and excavation of the cable trenches. On an asset of medium value, this results in a significance of effect of moderate adverse. There is no impact from converter station Option D.

7.10.15. The Norfolk HER notes that a scatter of sherds of Roman pottery and post-medieval briquetage on a possible roddon (MNF18977) was identified during fieldwalking. The extent of the roddon and the survival of remains in situ is not known. Any surviving remains would have archaeological interest for evidence of settlement, resource exploitation, or agricultural activity within the fen landscape from the Roman period. They are considered to be of up to medium heritage value. The indicative zone for underground cable assets and drainage would impact the eastern extent of the asset in the Indicative Zone of the converter station for Options A and C. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of haul roads, and excavation of a trenchless crossing pit and drainage basins. On an asset of medium value, this results in a significance of effect of moderate adverse. The indicative zone for underground cable assets would cross the eastern extent of the asset in the Indicative Zone of the converter station for Options B and D. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of haul roads, and excavation of a trenchless crossing pit. On an asset of medium value, this results in a significance of effect of moderate adverse.

7.10.16. It was also reported at the time of the survey that a Second World War bomber had crashed in the field according to the landowner. No remains of the bomber were observed and no further information is currently available. Any military aircraft crash remains would have archaeological and historical interest for Second World War aircraft technology and use in the defence of Britain against the Luftwaffe. Any such remains would be of high heritage value. However, as this is an unconfirmed record, no impact assessment can be provided at this stage. However, potential effects on any surviving remains would likely to be significant.

7.10.17. The Norfolk HER notes a scatter of Roman, early Saxon, late Saxon and medieval pottery along with pieces of animal bone, briquetage and slag remains (MNF18975)

were identified during fieldwalking. Some of the Roman finds were associated with an unidentified subsurface feature thought to be contemporaneous. The extent of the feature and the survival of associated remains is not known. A later geophysical survey identified possible pits and previous field ditches, which were interpreted as possible Roman settlement. Any surviving remains would have archaeological interest for evidence of settlement, resource exploitation, or agricultural activity within the fen landscape from the Roman period. They are considered to be of up to medium heritage value. The indicative zone for underground cable assets from the converter stations would impact the asset in the Indicative Zone of the converter station for Options A, C, and D. The magnitude of impact of the Projects upon the asset is medium and would be permanent as the asset would be affected by the preliminary site preparation, construction of the haul roads, and excavation of the cable trenches, a trenchless crossing pit, and drainage basins. On an asset of medium value, this results in a significance of effect of moderate adverse. For converter station Option B, there would be no impact.

Medieval Moated site (MNF2207)

7.10.18. The Norfolk HER notes the remains of a medieval moated enclosure (MNF2207) which is thought to have surrounded the mid-15th century Rochford manor house. It is currently being considered for designation as a scheduled monument. The moated site was subject to evaluation in 2011 and 2012 which found that the moat was wider than previously recorded and recovered evidence of a structure in the form of two handmade medieval bricks, floor tiles, medieval pottery sherds, 17th century glass, and the remains of demolished ceramic building material. The remains were observed during LiDAR analysis of the parcel (WSP_ID_005, WSP_ID_006). The Rochford family had control of the lands around the enclosure extending to at least the site of the medieval chapel (MNF14903), alternatively called St Edmund's Chapel or St Catherine's Chapel, 350 m to the northeast of the moat. It is considered likely that the moated site, the chapel, and the intervening land formed the core of the medieval settlement. A road, the modern West Drove North, bisects the medieval core and is likely to have been established in the medieval period as one of the main roads within the area. The moated site is set within low lying agricultural land visually cut with hedgerows and small dispersed farms. West Drove North is visually screened on both sides and the moat is only visible from certain points along the road where the mature vegetation is patchy. Any visual connections between the moat and the site of the former chapel has been eroded with establishment of the tall vegetation located on either side of West Drove North. Its current setting is on a local scale, and largely limited to the field in which is located. Its current setting is made up of agricultural land, farm buildings to the south, other recorded assets of medieval date including a moated site near Faulkner House (MNF19728) and the chapel (MNF14903), and modern pylons to the west. The moated site is visually and spatially set apart from the rest of the medieval core by the road and the surrounding hedgerows. It is also screened from land to the west by mature hedgerows. It is therefore considered that while the setting of the asset makes a contribution to the asset's value, this is only to a small extent. The remains are primarily of archaeological and historical interest for the evidence of the mid-15th century manor house and associated horticulture and agriculture, as well as for enhancing understanding of the distribution of wealth and status in the countryside. The remains would be considered to be of high heritage value as an asset being considered for designation.

Construction phase (All options)

7.10.19. The Walpole B Substation, which would serve both EGL 3 and EGL 4 and the Grimsby to Walpole Project, would be located in the field immediately to the west of the moated site and the construction would impact on the setting of the moated manor site during construction. To facilitate access during the construction phase, it is currently proposed to use West Drove North which would temporarily increase traffic levels on the road. Mitigation in the form of vegetative planting to screen the substation from the moated site is proposed and would also screen the construction of the English Onshore Scheme Preferred Corridors between the Walpole converter stations and the Walpole B Substation. There would be an increase in dust, noise, and vibration as a result of the construction near the moated site, although visual intrusion from the traffic would be limited due to existing vegetation screening the road. It is considered that this would temporarily have an impact on how the asset is experienced but it would not impact how the asset is understood within its environment. Therefore, the magnitude of impact of the English Onshore Scheme during the construction phase upon the asset is considered to be low and would be temporary as the asset would be affected by the introduction of noise, vibration and dust during the traffic movements along West Drove North, preliminary site preparation, construction of the substation, and excavation of the cable trenches. On an asset of high value, this results in a significance of effect of moderate adverse.

Operation phase (All options)

7.10.20. Although the Walpole B Substation is located to the west of the moated site, the vegetative screening proposed would shield the asset from the Walpole B Substation. The planting of further vegetation along the existing field boundaries would enclose the moated site, further distancing it from its original open landscape. Therefore, the magnitude of impact of the English Onshore Scheme during the operation phase upon the asset would be negligible, as the asset would be affected primarily by the presence of the substation on the landscape. It would still be possible to understand the asset in its landscape context. On an asset of high value, this results in a significance of effect of minor adverse (not significant).

7.11. Further work to be undertaken

7.11.1. The information provided in this PEIR is preliminary; the final assessment of potential significant effects will be reported in the ES. This section describes the further work to be undertaken to support the cultural heritage assessment presented in the ES.

Baseline

7.11.2. Further assessment of the English Onshore Scheme is required. This would involve in the first instance additional desk-based research, including a project-specific aerial investigation mapping survey, review of additional project-specific LiDAR data, analysis of historic mapping, and further documentary research, including but not limited to salterns, use of roddons, medieval landscapes, locally listed buildings/non-designated built heritage assets, 18th century drainage and possible air craft crash sites. A full desk-based assessment will be produced as part of the ES.

7.11.3. A geophysical magnetometry survey will be undertaken in the first instance to determine the presence and extent of any archaeological features.

7.11.4. A geoarchaeological desk-based assessment will be undertaken, which will include appropriate recommendations for further work.

7.11.5. These surveys will be followed by a programme of archaeological evaluation by trial trenching to be developed in consultation with the LPAs and, where relevant, Historic England, to further determine the presence and survival of potential archaeological remains, alongside any required geoarchaeological evaluation fieldwork.

7.11.6. Targeted site visits will be undertaken for key assets, including those where further assessment of impacts caused by changes within the setting of heritage assets is required.

Assessment

7.11.7. The assessments undertaken for the PEIR will be reviewed following stakeholder consultation feedback and further design refinement. The following assessments will then either be updated or undertaken where they have not been undertaken for this PEIR:

- Updated assessment of cultural heritage effects.
- Review of impacts caused by dewatering or changes in drainage that could affect the preservation of archaeological sites located outside of the indicative zone for underground cable assets.
- Assessment of effects of currently uncertain or unknown design elements, such as agricultural land drainage, the River Nene Temporary Quay and any required cranes, and works to upgrade small sections of road away from the indicative cable route, required to facilitate access.

Further environmental measures

7.11.8. Further consultation with relevant statutory consultees will be undertaken to define the scope and extents of the environmental measures required and detailed in **Section 7.6** above. If, following stakeholder consultation feedback, further design refinement and further assessment, it is identified that additional environmental measures are required, these will be detailed as part of the ES.

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