

Outer Dowsing Offshore Wind Preliminary Environmental Information Report

Volume 1, Chapter 20: Onshore Archaeology and Cultural Heritage

Date: June 2023

Outer Dowsing Document No: 6.1.20

Internal Reference: PP1-ODOW-DEV-CS-REP-0025

Rev: V1.0

Company:	Outer Dowsing Offshore Wind	Asset:	Whole Asset			
Project:	Whole Wind Farm	Sub Project/Package:	Whole Asset			
Document Title or Description:	Onshore Archaeology and Cultural Heritage					
Document Number:	6.1.20	3 rd Party Doc No (if applicable):	N/A			
<i>Outer Dowsing Offshore Wind accepts no liability for the accuracy or completeness of the information in this document nor for any loss or damage arising from the use of such information.</i>						
Rev No.	Date	Status / Reason for Issue	Author	Checked by	Reviewed by	Approved by
V1.0	June 2023	Final	SLR	GoBe	Shepherd and Wedderburn	Outer Dowsing Offshore Wind

Table of Contents

20 Onshore Archaeology and Cultural Heritage.....	8
20.1 Introduction.....	8
20.2 Statutory and Policy Context.....	8
20.3 Consultation	18
20.4 Baseline Environment	27
Study Area	27
Data Sources.....	27
Existing Environment - Archaeology.....	28
Existing Environment - Cultural Heritage	51
Future Baseline	60
20.5 Basis of Assessment	60
Scope of the Assessment.....	60
Realistic Worst-Case Scenario	61
Embedded Mitigation	65
20.6 Assessment Methodology	65
Assumptions and Limitations	70
20.7 Impact Assessment	70
Construction	70
Operations and Maintenance.....	94
Decommissioning	99
20.8 Mitigation.....	104
20.9 Cumulative Impact Assessment	104
20.10 Inter-Relationships	105
20.11 Transboundary Effects	105
20.12 Conclusions.....	105
20.13 References.....	118

List of tables

Table 20.1: Legislation and policy context.....	13
Table 20.2: Summary of consultation relating to Archaeology and Cultural Heritage	19

Table 20.3: Maximum design scenario for Onshore Archaeology and Heritage for the Project alone	62
Table 20.4: Embedded mitigation relating to Onshore Archaeology and Cultural Heritage	65
Table 20.5: Impact magnitude definitions	66
Table 20.6: Sensitivity/importance of the environment	66
Table 20.7: Matrix to determine effect significance.....	69
Table 20.8: Permanent direct impacts to buried archaeological remains	72
Table 20.9: LN1 - Temporary indirect effects	79
Table 20.10: LN2 - Temporary indirect effects	79
Table 20.11: WM1 - Temporary indirect effects	80
Table 20.12: WM2 Temporary Indirect Effects.....	81
Table 20.13: WM3 - Temporary Indirect Effects	82
Table 20.14: WN4/5 - Temporary Indirect Effects.....	83
Table 20.15: WM6 Temporary Indirect Effects.....	84
Table 20.16: WM7 - Temporary Indirect Effects	84
Table 20.17: WM8 -Temporary Indirect Effects	85
Table 20.18: WM9 - Temporary Indirect Effects	86
Table 20.19: WM10 - Temporary Indirect Effects	86
Table 20.20: WM11 Temporary Indirect Effects	86
Table 20.21: WM12 - Temporary Indirect Effects	87
Table 20.22: WM13 - Temporary Indirect Effects	88
Table 20.23: WM14 - Temporary Indirect Effects	89
Table 20.24: A1 - Temporary Indirect Effects	90
Table 20.25: A2 - Temporary Indirect Effects	91
Table 20.26: A3 - Temporary Indirect Effects	91
Table 20.27: A4 - Temporary Indirect Effects	92
Table 20.28: A5 - Temporary Indirect Effects	93
Table 20.29: A16 Compound – Temporary indirect effects	93
Table 20.30: LN2-A52 - Permanent Indirect Effects	95
Table 20.31: WM13 - Permanent Indirect Effects	96
Table 20.32: WM14 - Permanent Indirect Effects	97
Table 20.33: LN2 - Temporary Indirect Effects	100
Table 20.34: WM13 - Temporary Indirect Effects	101
Table 20.35: WM14 - Temporary Indirect Effects	102
Table 20.36: Summary of the Residual Impacts for each Effect.....	107

Abbreviations

Acronym	Expanded name
AOP	Areas of Potential
bgl	Below ground level
DCO	Development Consent Order
DBA	Desk Based Assessment
DMRB	Design Manual for Roads and Bridges
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
EMHERF	East Midlands Environment Historic Research Framework
EN-1	National Planning Policy Statement for Energy
EPP	Evidence Plan Process
ES	Environmental Statement
ETG	Expert Technical Group
GT R4 Ltd	The Applicant. The special project vehicle created in partnership between Corio Generation (a wholly owned Green Investment Group portfolio company), Gulf Energy Development and TotalEnergies
HER	Historic Environment Record
HS	Heritage Statement
IPC	Infrastructure Planning Commission
LVIA	Landscape Visual Impact Assessment
NHLE	National Heritage List for England
NPPF	National Planning Policy Framework
NSIP	Nationally Significant Infrastructure Projects
ODOW	Outer Dowsing Offshore Wind
OnSS	Onshore Substation
PAS	Portable Antiquity Scheme
PEIR	Preliminary Environmental Information Report
RPG	Registered Park and Garden
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Study

Terminology

Term	Definition
Baseline	The status of the environment at the time of assessment without the development in place.
Cumulative effects	The combined effect of the Project acting cumulatively with the effects of a number of different projects, on the same single receptor/resource.
Cumulative impacts	Impacts that result from changes caused by other past, present or reasonably foreseeable actions together with the Project.
Project design envelope	A description of the range of possible elements that make up the Project's design options under consideration, as set out in detail in the Project description. This envelope is used to define the Project for Environmental

Term	Definition
	Impact Assessment (EIA) purposes when the exact engineering parameters are not yet known. This is also often referred to as the “Rochdale Envelope” approach.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Department for Energy Security and Net Zero (DESNZ).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of an impact with the sensitivity of a receptor, in accordance with defined significance criteria.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the Environmental Impact Assessment (EIA) Regulations, including the publication of an Environmental Statement (ES).
EIA Directive	European Union 2011/92/EU of 13 December 2011 (as amended in 2014 by Directive 2014/52/EU).
EIA Regulations	Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
Environmental statement (ES)	The suite of documents that detail the processes and results of the Environmental Impact Assessment (EIA).
Evidence Plan	A voluntary process of stakeholder consultation with appropriate Expert Topic Groups (ETGs) that discusses and, where possible, agrees the detailed approach to the Environmental Impact Assessment (EIA) and information to support Habitats Regulations Assessment (HRA) for those relevant topics included in the process, undertaken during the pre-application period.
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial.
Intertidal	Area where the ocean meets the land between high and low tides.
Joint bays	A joint bay provides a secure environment for the assembly of cable joints as well as bonding and earthing leads. A joint bay is installed between each length of cable.
Landfall	The location at the land-sea interface where the offshore export cable will come ashore.
Maximum Design Scenario	The maximum design parameters of the combined Project assets that result in the greatest potential for change in relation to each impact assessed.
Mitigation	Mitigation measures, or commitments, are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the Project design) or secondarily added to reduce impacts in the case of potentially significant effects.
Outer Offshore Wind (ODOW)	The Project.
Onshore Cable Corridor (ECC)	The Onshore Export Cable Corridor (Onshore ECC) is the area within which the export cable running from the landfall to the onshore substation will be situated.

Term	Definition
Onshore substation (OnSS)	The Project's onshore substation, containing electrical equipment to enable connection to the National Grid.
Onshore Infrastructure	The combined name for all onshore infrastructure associated with the Project from landfall to grid connection.
Preliminary Environmental Information Report (PEIR)	The PEIR is written in the style of a draft Environmental Statement (ES) and forms the basis of statutory consultation. Following that consultation, the PEIR documentation will be updated into the Project's ES that will accompany the application for the Development Consent Order (DCO).
PEIR Boundary	The PEIR Boundary is outlined in Figure 3.1 in Volume 1, Chapter 3: Project Description, and comprises the extent of the land and/or seabed for which the PEIR assessments are based upon.
Receptor	A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of receptors include species (or groups) of animals or plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc.
study area	Area(s) within which environmental impact may occur – to be defined on a receptor-by-receptor basis by the relevant technical specialist.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
The Project	Outer Dowsing Offshore Wind including proposed onshore and offshore infrastructure.
Trenchless techniques	Trenchless technology is an underground construction method of installing, repairing, and renewing underground pipes, ducts and cables using techniques which minimize or eliminate the need for excavation. Trenchless technologies involve methods of new pipe installation with minimum surface and environmental disruptions. These techniques may include Horizontal Directional Drilling (HDD), thrust boring, auger boring, and pipe ramming, which allow ducts to be installed under an obstruction without breaking open the ground and digging a trench.

20 Onshore Archaeology and Cultural Heritage

20.1 Introduction

- 20.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents the results to date of the Environmental Impact Assessment (EIA) for the potential impacts of Outer Dowsing Offshore Wind (“the Project”) on Onshore Archaeology and Cultural Heritage. Specifically, this chapter considers the potential impact of the Project from the Landfall, along the Onshore Export Cable Corridor (ECC), and incorporating the Onshore substation (OnSS) during the construction, operation and maintenance, and decommissioning phases.
- 20.1.2 GT R4 Limited (trading as Outer Dowsing Offshore Wind) hereafter referred to as the 'Applicant', is proposing to develop the Project. The Project will be located approximately 54km from the Lincolnshire coastline in the southern North Sea. The Project will include both offshore and onshore infrastructure including an offshore generating station (windfarm), export cables to landfall, and connection to the electricity transmission network (see Volume 1, Chapter 3: Project Description for full details).
- 20.1.3 This chapter summarises the information contained within a PEIR Heritage Statement (HS) and a PEIR Archaeological Desk Based Assessment (DBA). These are provided within Volume 2, Appendix 20.1: Onshore Archaeology and Cultural Heritage Desk-Based Assessment and Volume 2, Appendix 20.2: Onshore Archaeology and Cultural Heritage - Heritage Statement. The preliminary HS and preliminary DBA would be completed prior to application as set out within each document.
- 20.1.4 This chapter will reference pertinent findings within the following at EIA:
- Volume 1, Chapter 28 Landscape and Visual Assessment.

20.2 Statutory and Policy Context

- 20.2.1 The applicable legislative framework is summarized as follows:
- the Ancient Monuments and Archaeological Areas Act 1979; and
 - the Planning (Listed Buildings and Conservation Areas Act) 1990.
- 20.2.2 Scheduled Monuments are protected from physical development effects under the Ancient Monuments and Archaeological Areas Act 1979.
- 20.2.3 Listed Buildings and Conservation Areas are protected under the Planning (Listed Building and Conservation Areas) Act 1990. Relevant to the Project, the legislation states that:
- ‘in considering whether to grant planning permission... for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses’ (Section 66).*
- 20.2.4 In relation to the Project and regards to Conservation Areas, it states that:

'special attention shall be paid to the desirability of preserving or enhancing the character of that area' (Section 72).

20.2.5 The applicable planning policy is summarized as follows.

- National Planning Policy Framework (NPPF) (2021);
- National Planning Policy Statement for Energy (EN-1) (2011);
- National Planning Policy Statement for Energy (EN-1) (draft 2023);
- East Lindsay Local Plan (2018); and
- South East Lincolnshire Development Plan 2011-2036 (2019).

20.2.6 The relevant paragraphs of the NPPF are set out below.

Paragraph 194:

In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record (HER) should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and where necessary, a field evaluation.

Paragraph 199:

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.

Paragraph 200:

Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;

b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

Paragraph 202:

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.

Paragraph 203:

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.

- 20.2.7 EN-1 sets out the Government’s policy for the delivery of Nationally Significant Energy Infrastructure Projects. This chapter will consider the 2011 version of EN-1 but pay due regard to the draft 2023 version also.
- 20.2.8 Section 5.8 of EN-1 (2011) and section 5.9 of EN-1 (2023) relate to the historic environment and broadly reiterate policy within the NPPF. They specify that an applicant should describe the significance of heritage assets affected by development, including the contribution of setting to that significance. It is specified that where remains of archaeological interest may be affected a desk-based assessment should be undertaken to assess archaeological interest and that field evaluation should be undertaken where desk-based assessment is insufficient to understand that interest. The use of visualisations to aid in the assessment of impacts to setting is referenced. The necessity for mitigation measures to record archaeological remains is also set out.
- 20.2.9 Local planning policy is provided in the East Lindsey Local Plan Core Strategy and the Southeast Lincolnshire Development Plan 2011-2036. Relevant sections of these policies are provided.

East Lindsay Local Plan Core Strategy - Strategic Policy 11 – Historic Environment

1. The Council will support proposals that secure the continued protection and enhancement of heritage assets in East Lindsey, contribute to the wider vitality and regeneration of the areas in which they are located and reinforce a strong sense of place.
2. Proposals will be supported where they:
 - Preserve or enhance heritage assets and their setting;
 - Preserve or enhance the special character, appearance and setting of the District’s Conservation Areas. Proposals should take into account the significance of Conservation Areas including spaces, street patterns, views vistas and natural features, and reflect this in their layout, scale, design, detailing, and materials;
 - Have particular regard to the special architectural or historic interest and setting of the District’s Listed Buildings. Proposals will be expected to demonstrate that they are compatible with the significance of a listed building including fabric, form, setting and use;

- Do not harm the site or setting of a Scheduled Monument; any unscheduled nationally important or locally significant 59 Adopted July 2018 archaeological site. Appropriate evaluation, recording or preservation in situ is required and should be undertaken by a suitably qualified party;
- Preserve or enhance the quality and experience of the historic landscapes and woodland of the District and their setting;
- Are compatible with the significance of non-designated heritage assets in East Lindsey;
- Do not have a harmful cumulative impact on heritage assets;
- Promote a sustainable and viable use which is compatible with the fabric, interior, surroundings and setting of the heritage asset; and
- Conserve heritage assets identified as being at risk, ensuring the optimum viable use of an asset is secured where it is consistent with the significance of the heritage asset. This may include redevelopment or enabling development, particularly where a use would benefit the wider.

...

Definition of Heritage Assets Designated heritage assets in East Lindsey are;

Listed buildings (including attached and curtilage structures)

Conservation Areas

Scheduled Monuments

Registered Battlefields Registered parks and gardens.

Non-Designated heritage assets in East Lindsey are;

Buildings of local interest Sites of archaeological interest

Unregistered parks and gardens and other landscape features

Buildings, monument, place, areas or landscapes positively identified as having significance in terms of the historic environment as identified in the Lincolnshire Histo Environment Record or through Neighbourhood Plans and the development management process.

South East Lincolnshire Policy 29: The Historic Environment

Distinctive elements of the Southeast Lincolnshire historic environment will be conserved and, where appropriate, enhanced. Opportunities to identify a heritage asset's contribution to the economy, tourism, education and the local community will be utilised including:

- The historic archaeological and drainage landscape of the Fens;
- The distinctive character of South East Lincolnshire market towns and villages;
- The dominance within the landscape of church towers, spires and historic windmills

To respect the historical legacy, varied character and appearance of South East Lincolnshire's historic environment, development proposals will conserve and enhance the character and appearance of designated and non-designated heritage assets, such as important known archaeology or that found during development, historic buildings, conservation areas, scheduled monuments, street patterns, streetscapes, landscapes, parks (including Registered Parks and Gardens), river frontages, structures and their settings through high-quality sensitive design.

A. Listed Buildings

1. ...
2. ...
3. Proposals that affect the setting of a Listed Building will be supported where they preserve or better reveal the significance of the Listed Building.

B. Conservation Areas

Proposals within, affecting the setting of, or affecting views into or out of, a Conservation Area should preserve (and enhance or reinforce, as appropriate) features that contribute positively to the area's character, appearance and setting. Proposals should:

1. ...
2. ...
3. ...
4. ...
5. Assess, and mitigate against, any negative impact the proposal might have on the townscape, roofscape, skyline and landscape;
6. ...

C. Archaeology and Scheduled Monuments

1. Proposals that affect archaeological remains, whether known or potential, designated or non-designated, should take every reasonable step to protect and, where possible, enhance their significance.
2. Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them.
3. If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site.
4. Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer, undertaken by a suitably qualified person, and approved by the Local Planning Authority.
5. Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the Local Planning Authority.

D. Registered Parks and Gardens

Proposals that cause substantial harm to a Registered Park or Garden, or its setting will not be permitted, unless in an exceptional case, where a clear and convincing justification is made in line with national policy.

...

F. Development Proposals

Where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made to its setting, it should be informed by proportionate historic environment assessments and evaluations (such as heritage impact assessments, desk-based appraisals, field evaluation and historic building reports) that:

1. identify all heritage assets likely to be affected by the proposal;
2. explain the nature and degree of any effect on elements that contribute to their significance and demonstrating how, in order of preference, any harm will be avoided, minimised or mitigated;
3. provide a clear explanation and justification for the proposal in order for the harm to be weighed against public benefits; and
4. demonstrate that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long-term use of the asset.

20.2.10 The relevant legislation and planning policy for offshore renewable energy Nationally Significant Infrastructure Projects (NSIPs) referenced above and specifically in relation to Onshore Archaeology and Heritage, is summarised in Table 20.1 below.

Table 20.1: Legislation and policy context

Legislation/policy	Key provisions	Section where comment addressed
Ancient Monuments and Archaeological Areas Act, 1979	The Act provides protection to Scheduled Monuments from physical disturbance. Permission to disturb a Scheduled Monument can be applied for under Scheduled Monument Consent.	The preliminary DBA identifies the presence/absence of Scheduled Monuments within the PEIR boundary and the general archaeological potential of the area that can be surmised from desk-based resources. The final Desk Based Assessment to be submitted with the Environment Statement (ES) chapter would include reference to additional sources including the results of archaeological evaluation.
Planning (Listed Buildings and Conservation Areas Act), 1990	In respect to Listed Buildings, section 66 of the Act requires that 'special regard' is paid to the desirability of preserving buildings or their settings or any features of special architectural or historic interest which they possess. In respect to Conservation Areas, section 72 of	The preliminary HS identifies the presence/absence of Listed Buildings and Conservation Areas within the PEIR boundary and a search area of up to 5km. It then assesses the potential for adverse effects/harm to Listed Buildings and Conservation Areas through setting change.

Legislation/policy	Key provisions	Section where comment addressed
	<p>the Act requires that special attention is paid to the desirability of preserving or enhancing the character of a Conservation Area.</p>	<p>Where necessary and possible, special regard to the setting of a Listed Building or attention to preserving or enhancing the character of a Conservation Area can be referenced through embedded design mitigation or achieved through suitable conditions to DCO consent. The implementation of embedded mitigation or a route to suitable conditions to achieve these goals will be set out within an updated Heritage Statement to be submitted within the ES Chapter.</p>
<p>National Planning Policy Framework Chapter 16 Conserving and Enhancing the historic environment</p>	<p>Paragraph 194 requires the significance of a heritage asset to be described to the extent required to understand the potential impact of the proposal on that significance. Paragraph 194 also requires that a field evaluation is undertaken where necessary to understand archaeological significance and the potential impact of the proposal on that significance.</p>	<p>The preliminary DBA provides high level statements of significance for potential archaeological remains. These statements of significance would be refined at EIA when the result(s) of archaeological evaluation are available. The PEIR does not include a field evaluation, this will be deferred to the ES stage of the Project.</p> <p>The HS to be submitted with the ES will provide proportionate statements of significance for potentially affected assets. These will be assets from within the filtered dataset provided by the preliminary HS.</p> <p>The information provided within the HS and DBA to be finalised during EIA will provide for an understanding of which assets may experience adverse impact/harm.</p>
	<p>Paragraph 199 requires that in determining an application great weight be afforded to the conservation of a designated heritage asset (and the more important the asset, the greater the weight should be).</p>	<p>Paragraph 199 will be applied by the decision maker.</p>

Legislation/policy	Key provisions	Section where comment addressed
	<p>Paragraph 200 requires that substantial harm to or loss of designated heritage assets should be supported by clear and convincing justification and be exceptional or wholly exceptional (depending on the importance of the asset).</p>	<p>It is anticipated that Paragraph 200 will not be engaged.</p>
	<p>Paragraph 202 dictates that where a designated heritage asset will experience less than substantial harm then the harm should be weighed against the public benefits of the proposal. This balance should be undertaken with respect to Paragraph 199 which provides the heritage asset with 'great weight'.</p>	<p>Harm to designated heritage assets will be justified by the public benefits of the Project which will be set out within the HS accompanying the ES. These are anticipated to reference the renewable energy credentials of the Project.</p>
	<p>Paragraph 203 references potential impact to non-designated heritage assets and dictates that any harm should be balanced with regard to the significance of the asset and the scale of the harm.</p>	<p>Paragraph 203 will be applied by the decision maker with reference to the effects identified within the ES.</p>
<p>National Statement for Energy – EN-1 (2023 draft)</p>	<p>Paragraph 5.8.8 (2023 draft 5.9.10) states that the applicant should provide a description of the significance of heritage assets affected and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the impact of the proposal on the significance of the heritage assets.</p>	<p>The PEIR DBA provides high level statements of significance for potential archaeological remains. These statements of significance would be refined at EIA when the result(s) of archaeological evaluation are available.</p> <p>The HS to be submitted with the ES will provide proportionate statements of significance for potentially affected assets. These will be assets from within the filtered dataset provided by the PEIR HS.</p>
	<p>Paragraph 5.8.9 (2023 draft - 5.9.11) states that a field evaluation may be necessary to supplement a desk-based assessment when the desk-based research is insufficient to properly assess archaeological interest. This paragraph also</p>	<p>The PEIR does not include a field evaluation, this will be deferred to the EIA stage of the Project with appropriate reporting presented within the ES or as supporting documentation.</p>

Legislation/policy	Key provisions	Section where comment addressed
	<p>references the appropriate use of visualisations to explain how a proposal may affect the setting of an asset.</p> <p>Paragraph 5.8.10 (2023 draft 5.9.12) states that the applicant should ensure that the impact of the proposed development on the significance of heritage assets can be adequately understood from the application and supporting documents.</p>	<p>Visualisations of the OnSS would be provided as necessary as part of the EIA process and presented within the ES chapter or as supporting documentation.</p> <p>The information provided within the PEIR HS and DBA will be finalised during EIA to provide for an understanding of which assets may experience adverse impact/harm.</p>
National Statement for Energy – EN-1 (2011)	<p>Paragraph 5.8.18 (EN-1 2011) states that when considering applications for development affecting the setting of a designated heritage asset, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval. Paragraph 5.8.15 (EN-1-2011) states that any harmful impact on the significance of a designated asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Paragraph 5.9.30 (2023 draft) states that where development 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.</p>	<p>Harm to designated heritage assets will be justified by the public benefits of the Project which will be set out within the HS accompanying the ES. These are anticipated to reference the renewable energy credentials of the Project.</p>

Legislation/policy	Key provisions	Section where comment addressed
National Statement for Energy – EN-1 (2023 draft)	Paragraph 5.9.31 (2023 draft) states 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.	Paragraph 5.9.31 will be applied by the decision maker with reference to the effects identified within the ES.
National Statement for Energy – EN-1 (2023 draft)	Paragraphs 5.8.20-5.8.21 (2023 paragraphs 5.9.17-5.9.18) reference that where the loss of a heritage asset is justified, the developer should be required to record the heritage asset and advance understanding of the significance of the heritage asset to an extent proportionate to the level of the asset’s significance and where appropriate the Infrastructure Planning Commission (IPC) should impose requirements on consent that such work is carried out in a timely manner in accordance with a Written Scheme of Investigation (WSI).	Geophysical survey and further work as set out within the Onshore Archaeological WSI (Document Reference 8.6) will record archaeological remains with further work as a requirement of consent to be detailed by later WSI.
East Lindsey Local Plan Core Strategy – Strategic Policy 11 – Historic Environment	The Council will support proposals that preserve and enhance heritage assets and their setting, have special regard to Listed Buildings and their settings and do not harm the setting of a Scheduled Monument.	The Archaeological DBA and HS (Volume 2, Appendices 20.1 and 20.2) have sought to understand the significance of heritage assets potentially affected by the proposals so that the level of any adverse harm can be understood and mitigated where appropriate. Preservation of archaeological remains can be through ‘record’ and would be achieved through the programme of archaeological fieldwork set out within the Archaeological DBA. Harm to Scheduled Monuments and Listed Buildings through setting change has been identified but this is not significant.

Legislation/policy	Key provisions	Section where comment addressed
South East Lincolnshire Development Plan 2011-2036	Proposals should be accompanied by an assessment of the significance of heritage assets, including any contribution made by their setting. Proposals affecting the setting of a Listed Building should not cause harm. Proposals potentially affecting archaeological remains should include a statement of significance for the remains to be potentially affected which may need to be informed by the results of field evaluation. Mitigation should include avoidance where necessary or preservation by record in accordance with an approved WSI.	The supporting technical appendices set out the significance of assets potentially affected (Volume 2, Appendices 20.1 and 20.2). An outline strategy for an evaluation strategy has been prepared (SLR Consulting 2023). The DCO application will be supported by an outline WSI for mitigation.

20.3 Consultation

- 20.3.1 Consultation is a key part of the Development Consent Order (DCO) application process. Consultation regarding Onshore Archaeology and Cultural Heritage has been conducted through the Evidence Plan Process (EPP) Expert Technical Group (ETG) meetings and the EIA scoping process (ODOW, 2022). An overview of the Project consultation process is presented within Volume 1, Chapter 6: Consultation.
- 20.3.2 A summary of the key issues raised during consultation to date, specific to Onshore Archaeology and Cultural Heritage, is outlined in Table 20.2 below, together with how these issues have been considered in the provision of this PEIR or how these issues will be addressed through EIA.

Table 20.2: Summary of consultation relating to Archaeology and Cultural Heritage

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
<p>9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.1 - Table 8.2.4</p>	<p>Given the stage of the Proposed Development and current absence of information regarding the significance of assets and potential impacts of the Proposed Development, the Inspectorate does not agree to scope this matter out. The ES should include an assessment of indirect (setting) effects arising from the construction of the onshore export cable on designated heritage assets more than 500m from the route, where likely significant effects could occur.</p>	<p>The preliminary HS provided at PEIR has identified a list of designated heritage assets potentially affected by the Project. This has considered designated heritage assets within at least 2km of the ECC. This list will be reviewed at EIA with impact assessment undertaken as necessary. Impacts are addressed within Section 20.7</p>
<p>9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.2 - Table 8.2.4</p>	<p>Given the stage of the Proposed Development and lack of information about the location of the OnSS, the Inspectorate does not agree at this stage it is possible to scope out effects on heritage assets in excess of 2km from the route. Given the potential size, scale and undefined location of this element of the Proposed Development, this matter should be scoped into the assessment where likely significant effects could occur.</p>	<p>The preliminary HS provided at PEIR has identified a list of designated assets potentially affected by the Project. This has considered designated assets of the highest importance within up to 5km from the OnSS. This list will be reviewed at EIA with impact assessment undertaken as necessary. The assessment of potential impacts to non-designated heritage assets in excess of 2km from the ECC is not considered proportionate, with due regard to their lower level of importance. Identified impacts are addressed within Section 20.7</p>
<p>9th September 2022 Scoping Opinion The Planning Inspectorate</p>	<p>Given the distance to the array, the Inspectorate agrees that there is unlikely to be a significant effect on the terrestrial heritage assets not highlighted by</p>	<p>Scoped out.</p>

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
3.14.3 - Table 8.2.4	stakeholders or identified as being potentially sensitive by the heritage consultant and that this matter can be scoped out of the assessment.	
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.4 - Paragraph 8.2.44	The Inspectorate agrees that given the localised onshore nature of the effects from the Proposed Development, significant transboundary heritage effects are unlikely to occur, and this matter can be scoped out of the assessment.	Scoped out.
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.5 - Table 8.2.1	The Applicant's attention is directed to the response of Historic England at Appendix 2 of this Opinion, which identifies the East Midlands Historic Environment Research Framework (EMHERF) as an important resource for both marine and terrestrial archaeology impact assessments.	The East Midlands Historic Environment Research Framework (EMHERF) will be referenced appropriately within any Written Schemes of Investigation prepared in relation to the Project. An outline method for field evaluation has been prepared by within the Onshore Archaeological WSI (Document Reference 8.6).
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.6 - Paragraph 8.2.23	It is not clear from the Scoping Report why a 2km search area around the OnSS has been chosen to establish those heritage assets that could be sensitive to changes in their setting. The ES should explain the choice of all search areas used including the reasons for their selection.	This study area has been increased to 5km within the PEIR with reference to the requirements of the Lincolnshire Archaeological Handbook. The assets selected for further assessment will be subject to further review as part of the EIA. This is addressed within Section 20.7
9th September 2022 Scoping Opinion The Planning Inspectorate	The Inspectorate notes that a ZTV will be prepared as part of the landscape and visual assessment (LVIA) for the onshore works and that it may be used for the Archaeology and Cultural Heritage assessment. The	The ZTV is shown on the drawings illustrating the location of designated heritage assets. The ZTV was referred to during the filtering of assets undertaken as part the PEIR. It is recognised and understood that impacts to setting are not just visual, as it also recognised that a visual change does not necessarily equate to 'harm'. The assessment of effects to setting

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
3.14.7 - Paragraph 8.2.38	Inspectorate recommends the LVIA and heritage consultants liaise closely with regards to the ZTV to ensure heritage assets within the LVIA ZTV are appropriately identified, noting that impacts on setting are not limited to just visual. Should the use of a ZTV be considered ineffective for the cultural heritage assessment (as noted as possible in the Scoping Report), this should be explained and justified in the ES.	which may include the consideration of lighting and noise changes will be considered at EIA in respect to the assets filtered from the list of assets identified at PEIR. This is addressed within Section 20.7
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.8 - Paragraph 8.2.39	The ES should clearly explain what aspect-specific criteria are used to define receptor value/sensitivity and magnitude of change for the archaeology and cultural heritage assessment.	For the purposes of EIA a tabulated matrix will be necessary to present the results of impact assessment. The DMRB matrices will be referenced. However, a technical narrative will sit behind the tables. This narrative will be presented within the technical appendices which will include a full HS and a full DBA referencing the results of fieldwork where necessary. This is addressed within Section 20.7
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.9 - Table 8.2.3	The ES should also consider the potential for effects on other historic land features, such as drainage patterns and ditches alongside historic landscape character, where significant effects are likely to occur. Reference could be made to the Lincolnshire Historic Landscape Characterisation (2011).	The PEIR does not assess potential effects on historic landscape character. The assessment of potential effects on historic landscape character will be undertaken in the ES.

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
<p>9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.10 - Paragraph 8.2.31</p>	<p>The assessment should address the significance of both designated and non-designated heritage assets, using sufficiently robust evidence and taking into account advice from relevant consultation bodies.</p>	<p>In response to the Lincolnshire County Council Historic Environment Officer, non-designated assets and designated heritage assets have been considered within the PEIR. The assets identified within the PEIR as being potentially sensitive will be taken forwards for consideration at EIA. These primarily include assets of a built heritage nature, designated and non-designated. However, other remains may also be sensitive to change, particularly if they have earthworks and are tangible features where understanding is clearly evidenced by visible landscape features. In respect to non-designated assets, consideration of the latter has highlighted certain categories of non-designated asset which may be affected by setting change under the circumstances of the proposals. These include earthworks which could be affected by potential partial breach/loss of footprint. These relate to medieval earthworks – sea walls and areas of ridge and furrow etc. This is addressed within Section 20.7</p>
<p>9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.11 -Paragraph 8.2.35</p>	<p>The baseline data should include a review of available Portable Antiquities Scheme data.</p>	<p>In response to the Lincolnshire County Council Historic Environment Officer the Portable Antiquities Scheme has been consulted with the results included within the PEIR.</p>
<p>9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.12 - Paragraphs 8.2.40 to 8.2.41</p>	<p>The Inspectorate notes that limited information is provided in the Scoping Report on the approach to mitigation, beyond proposed embedded measures. The Applicant should seek to agree an appropriate mitigation strategy that addresses significant effects with the</p>	<p>A broad outline WSI has been prepared to set out evaluation methods which will commence during EIA (SLR 2023). The results of fieldwork undertaken in reference to this document would inform an Outline WSI for mitigation work. Until the work set out within the outline WSI for evaluation has been completed an outline WSI for mitigation works cannot be finalised. It is proposed that the Outline Written Scheme for mitigation works may be submitted post submission within the determination period if evaluation works are not completed prior to</p>

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
	relevant consultation bodies, as part of the EPP.	submission. This will benefit from the results of fieldwork undertaken within the determination period and provide an outline for conditioned fieldwork.
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.13 - n/a	The onshore elements of the Proposed Development have potential to change the pattern of drainage within and adjacent to the boundary of works. Effects of changes to drainage on designated and non-designated heritage assets should be included in the assessment, where significant effects are likely to occur.	Acknowledgement of potential change to the water environment to be achieved through reference to the hydrology assessments undertaken at EIA.
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.14 - n/a	Gunby Hall Registered Park and Garden - This RPG is located adjacent to the western boundary of the AoS for the Proposed Development. Setting effects on this receptor should be addressed in the assessment where significant effects are likely to occur. There should be appropriate cross reference between the LVIA and the Archaeology and Cultural Heritage assessments to ensure there is complete consideration of potential effects on this receptor.	The asset is located 4.7km west of the ECC and is addressed within Volume 2, Appendix 20.2: Onshore Archaeology and Cultural Heritage - Heritage Statement.
9th September 2022 Scoping Opinion The Planning Inspectorate 3.14.15 n/a	The ES should assess impacts to peat deposits in this aspect chapter, in addition to the consideration of peat acknowledged for the Marine Archaeology aspect chapter, where significant effects are likely to occur. The approach to assessment and any	A deposit model prepared to support the PEIR has included a review of the Historic England Peat Database. Mitigation will be discussed as part of the EIA process.

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
	proposed mitigation should be discussed with the relevant consultation bodies.	
9th September 2022 Scoping Opinion The Planning Inspectorate and ODOW Expert Technical Group sessions 3.14.16 - n/a	The Applicant's attention is directed to the response of Lincolnshire County Council contained in Appendix 2 to this Opinion in respect of the approach to the design and detail for the archaeological impact assessment. Baseline data sources - Full Air Photo assessment across the impact zone of all available oblique and vertical photos including the Historic England archive and the Cambridge University Collection of Air Photos and those held by Lincolnshire County Council	The necessity for air photo assessment is deferred until EIA with the results of the PEIR potentially reducing its scope. The results of the PEIR, specifically the results of the archaeological deposit modelling indicate that assessment of aerial photography south of segment WM5 would be unnecessary. This is due to this area being tidal or underwater from the end of the Mesolithic period through to the post medieval period with any survival of remains within this area (that associated with salterns and moated sites) having been effectively highlighted through the survival of earthworks through Light Detection and Ranging (LiDAR) assessment. Segments WM1 - WM5 and A1 – A5 may be subject to this technique based on necessity.
9th September 2022 Scoping Opinion The Planning Inspectorate and ODOW Expert Technical Group sessions 3.14.16 - n/a	The Applicant's attention is directed to the response of Lincolnshire County Council contained in Appendix 2 to this Opinion in respect of the approach to the design and detail for the archaeological impact assessment. Baseline data sources - Full historic map regression of impact zone to include all available maps	Since the provision of the Scoping Opinion, an approach to limit the full map regression was discussed with the Lincolnshire Historic Environment Officer. This referenced a full map regression for a selected parish to be confirmed. However, a review of parish boundaries undertaken to date has indicated this may be of limited value. An alternative broad review of first edition Ordnance Survey Mapping is now suggested for PEIR (see Volume 2, Appendix 20.2: Onshore Archaeology and Cultural Heritage - Heritage Statement).
9th September 2022 Scoping Opinion The Planning Inspectorate and	The Applicant's attention is directed to the response of Lincolnshire County Council contained in Appendix 2 to this Opinion in respect of the approach to the design and	A LiDAR assessment has been undertaken for the PEIR footprint (see Volume 2 Appendix 20.1, Annex 24).

Date and Consultation Phase/type	Consultation and key issues raised	Sections where comment addressed
ODOW Expert Technical Group sessions 3.14.16 - n/a	detail for the archaeological impact assessment. Baseline data sources - Full LiDAR assessment across the impact zone	
9th September 2022 Scoping Opinion The Planning Inspectorate and ODOW Expert Technical Group sessions	The Applicant’s attention is directed to the response of Lincolnshire County Council contained in Appendix 2 to this Opinion in respect of the approach to the design and detail for the archaeological impact assessment. Fieldwork - Geophysical survey across the impact zone Archaeological trial trenching across known/predicted archaeology and blank areas to inform mitigation strategy which should be agreed by the time the ES is submitted with the DCO application.	<p>A broad outline WSI has been prepared to set out evaluation methods which will commence during EIA (SLR 2023).</p> <p>Subsequent to discussions within the ETG, deposit modelling has been undertaken and referenced within the PEIR (see Volume 2 Appendix 20.1, Annex 23). This will be updated with field observations undertaken during site investigations as the Project progresses but as initially informed a broad outline strategy for geophysical survey and trial trenching.</p> <p>Geophysical Survey – a proposed geophysical survey will commence during EIA. This has been referenced in a broad method statement for evaluation (see SLR 2023). This will not survey the whole PEIR footprint. It will be targeted based on the results of the deposit model and LiDAR assessment.</p> <p>Trial Trenching – necessity and scope deferred until EIA but a broad strategy has been referenced within an outline WSI (Document Reference: 8.6). Anticipated to target areas of high risk at the pre-submission/predetermination stage with other trial trenching and intrusive work delayed as a condition to consent.</p> <p>With regard to a mitigation strategy to be submitted with the DCO application, the results of fieldwork undertaken in reference to the broad outline strategy for evaluation works (SLR 2023) will inform an Outline WSI for mitigation work. Until the work set out within the outline WSI for evaluation and detailed above has been completed, an outline WSI for mitigation works cannot be finalised. It is proposed that the Outline</p>

Date Consultation Phase/type	and Consultation and key issues raised	Sections where comment addressed
		<p>Written Scheme for mitigation works may be submitted post submission within the determination period if evaluation works are not completed prior to submission. This will benefit from the results of fieldwork undertaken within the determination period and provide an outline for conditioned fieldwork.</p>

- 20.3.3 As identified in Volume 1, Chapter 4: Site Selection and Alternatives and Volume 1, Chapter 3: Project Description, the Project design envelope has been refined and will be refined further prior to DCO submission. This process is reliant on stakeholder consultation feedback.
- 20.3.4 Design amendments to cable routing, OnSS location and massing may be relevant to Archaeology and Cultural Heritage.

20.4 Baseline Environment

Study Area

- 20.4.1 The PEIR references a 'PEIR boundary'. This comprises the extent of the land for which the PEIR assessments are based upon. It reflects an approximately 300m wide corridor around a centre line with a total combined length of approximately 91km in reference to the potential footprint of the Onshore ECC and three potential locations for the ONSS.
- 20.4.2 The study areas are set out in Volume 2, Appendix 20.1: Archaeological Desk Based Assessment and Volume 2, Appendix 20.2: Heritage Statement.
- 20.4.3 The study area for the Archaeological DBA comprised a buffer of up to 2km from the PEIR boundary. This parameter was established through consultation with the Lincolnshire Historic Environment Officer through their scoping response. This study area is anticipated to provide a robust baseline in respect to the known archaeological potential of the footprint of the PEIR boundary where ground disturbance may occur. It is acknowledged that this will be consolidated by forthcoming fieldwork undertaken prior to submission of the EIA.
- 20.4.4 The study area for the HS comprised a buffer of up to 5km from the PEIR boundary. This was established through consultation with the Lincolnshire Historic Environment Officer through their scoping response and includes an inner 2km buffer for assets of lower significance; the 2-5km buffer being utilised for Scheduled Monuments and Grade I and II* Listed Buildings as well as RPGs and Conservation Areas.
- 20.4.5 The study areas are shown on Figure 20.1.1.1-20.1.1.7 in Volume 2, Appendix 20.1: Archaeological Desk-Based Assessment, and Figure 20.1.2.1-20.1.2.18 in in Volume 2, Appendix 20.2: Heritage Statement.

Data Sources

- 20.4.6 The following sources were consulted, as necessary, during the preparation of the Archaeological DBA, HS and an outline WSI for archaeological evaluation (SLR 2023):
- the National Heritage List for England (NHLE), for all records relating to designated heritage assets;
 - the Lincolnshire Historic Environment Record (HER);
 - the Portable Antiquity Scheme (PAS);
 - the Environment Agency's library of open access LiDAR data (DSM, DTM and point cloud);
 - a geoarchaeological deposit modelling prepared by AOC Archaeology; and

- the East Midlands Historic Environment Research Framework (EMHERF).

20.4.7 The following data sources will be included as necessary within an updated Archaeological DBA at EIA:

- A targeted map regression;
- potential original aerial photographic review;
- historic England’s Aerial Archaeology Mapping Explorer, for mapped archaeological earthworks and other features identified by the aerial investigation unit;
- geophysical survey; and
- archaeological trial trenching.

Existing Environment - Archaeology

20.4.8 The PEIR Archaeological DBA (Volume 2, Appendix 20.1) sets out an archaeological background to understand the archaeological sensitivity of the PEIR footprint. This has been prepared to understand the archaeological potential of the PEIR footprint and has utilised resources including the Lincolnshire HER and the PAS. The PEIR Archaeological DBA also references a LiDAR assessment and a geoarchaeological deposit model (see Volume 2, Appendix 20.1 and Annex 20.2). The summary potential of the PEIR footprint as indicated by the baseline is summarised below. For full details the reader is referred to Volume 2, Appendix 20.1: Onshore Archaeology and Cultural Heritage Desk-Based Assessment.

20.4.9 Subsequent revisions to an understanding of archaeological potential, which may be provided by forthcoming programmes of fieldwork and further desk-based assessment where necessary, would be included within the ES to be submitted with the DCO application. A draft method statement or outline WSI for an ongoing and forthcoming programme or work has been prepared (Document Reference 8.6).

Lincolnshire Node

LN1.Landfall to A52 – Mumby

20.4.10 **Prehistoric (permanent) – medium potential** - the higher and better draining ground in the west near Mumby on till and glaciofluvial deposits is likely where permanent or persistent potential lies (AOP D & E). The small area of peat at landfall (AOP B) may hold potential for the preservation of organic remains associated with trackways, jetties and fish traps which may have extended across or been present within this area at this time.

20.4.11 **Prehistoric (transient) – medium to high potential** - the flint assemblage indicates some activity which would have been possible from the localised elevated areas/islands of better draining geology across the otherwise flooded or marshy zone from the Neolithic period onwards. The areas of glaciofluvial and till deposits hold a particular potential (AOP D & E). Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).

- 20.4.12 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain within the tidal mudflats, but these would be at significant depth in this area apart from in the tidal zone at landfall where remains are exposed at low tide. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 and in reference to mapping by Green (Green 2022 Figure 32). An area of peat (AOP B) at landfall may also hold prehistoric potential. Other areas of peat cannot be discounted.
- 20.4.13 **Roman – low to medium potential** - Roman settlement may be possible particularly in the western part of the segment. Salterns may also be present. An enclosure recorded by LiDAR alongside relict watercourses may reference this type of activity (LiDAR feature 5) but by the end of this period inundation was likely across much of the footprint except in the west where elevation rises to 5m AOD. An area of peat at landfall may also hold Roman potential.
- 20.4.14 **Anglo-Saxon – negligible to low potential** - apart from the western end of the segment where elevation rises to 5m AOD activity is unlikely. Otherwise, the area was likely inundated.
- 20.4.15 **Medieval – medium to high potential** – the area includes the medieval sea wall at its eastern end and the footprint of the medieval settlement of Mumby at its western end (HER references MLI88781/2 82080). The land in between and within the footprint of the remainder of the PEIR boundary is likely to contain features relating to the agricultural use of the land. Moated sites cannot be discounted. LiDAR confirms ridge and furrow in the west of the segment at Mumby.
- 20.4.16 **Post-Medieval – high potential** – the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records two former farmsteads and a cottage (HER references MLI18796, MLI18799 & MLI18844). LiDAR anomalies adjacent to the cottage may relate to post medieval activity.

LN2. A52 – Mumby to Lincolnshire Node

- 20.4.17 **Prehistoric (permanent) – medium to high potential** - the higher ground and better draining geologies of glaciofluvial and till deposits in the southern part of the area may be where the permanent or persistent potential lies (AOP D & E). However, the area of peat within the footprint of the OnSS recorded at c.1m below ground level (bgl) to the immediate north of the PEIR boundary may hold potential for the preservation of organic remains associated with trackways, jetties and fish traps which may have extended across or been present within this area at this time (AOP B).
- 20.4.18 **Prehistoric (transient) – medium to high potential** - the areas flint assemblage indicates some activity anticipated due to the areas of high ground from which the lower parts of the segment could have been exploited through hunter-gatherer activity. The areas of glaciofluvial and till deposits hold a particular potential (AOP D & E). Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).

- 20.4.19 **Prehistoric (palaeoenvironmental) – medium to high** - remains of the submerged Mesolithic Forest are possible. If waterlogged deposits remain within the tidal mudflats these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2. Peat deposits within the footprint of the OnSS could also hold organic remains of prehistoric potential (AOP B). Other areas of peat cannot be discounted.
- 20.4.20 **Roman – low to medium potential** - Roman activity may be possible particularly in the eastern part of the segment near to Mumby. Activity elsewhere may have been agricultural across well-draining geology. The peat deposits within the footprint of the OnSS could hold potential for Roman organic remains.
- 20.4.21 **Anglo-Saxon – low to medium potential** - settlements at Mumby and Cumberworth may indicate the presence of the segment within a settled landscape. Potential is likely to be restricted to agricultural remains of the period.
- 20.4.22 **Medieval – medium potential** - whilst no assets are recorded within the footprint of the segment, the land across the footprint of the PEIR footprint was likely within or partially within the agricultural hinterland associated with the villages in closest vicinity, namely Mumby, Asserby and Huttoft. LiDAR records ridge and furrow earthworks at the eastern end of the segment (features 3) and other earthworks within the PEIR boundary which are at odds with the modern field systems, and which may therefore be of medieval origin.
- 20.4.23 **Post-Medieval – high potential** – the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. A demolished farm and barn are recorded within the PEIR boundary (HER references MLI118834, MLI116611). The LiDAR assessment records a possible animal pen (LiDAR feature 2) and earthworks associated with post medieval agricultural activity including farmsteads (features 4, 4a and 4b).

Weston Marsh, via south of the A52

WM1. Landfall to A52 – Hogsthorpe

- 20.4.24 **Prehistoric (permanent) – medium potential** - the higher ground in the southern part of the area and at Quakers Hill may be where the permanent or persistent potential nearby deposits of till (AOP D & E). Later Iron Age salterns are possible within AOP A2. The area of peat at landfall or that present at the southern end of the segment at Hogsthorpe may hold potential for the preservation of organic remains associated with trackways, jetties and fish traps which may have extended across or been present within this area at this time (AOP B).
- 20.4.25 **Prehistoric (transient) – medium to high potential** - the flint assemblage indicates some activity which would have been possible from localised elevated areas/islands such as Quaker Hill. Transient/exploitative activity may have extended across the lower areas (tidal mudflats) which could have been flooded or marshy from the Neolithic onwards. The small areas of till deposits hold a particular potential (AOP E). Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).

- 20.4.26 **Prehistoric (palaeoenvironmental) – medium to high potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain but these would be at significant depth apart from at landfall where remains are exposed at low tide. Palaeochannels are recorded in the northern and central segments and could hold deposits of prehistoric or geoarchaeological potential. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to mapping by Green (Green 2022 Figure 19). An area of peat at landfall may also hold prehistoric potential as well as another area of peat at Hogsthorpe (AOP B). Other areas of peat cannot be discounted.
- 20.4.27 **Roman – low to medium potential** –marginal conditions are likely during this period with evidence primarily limited to a saltern 500m west of the southern end of the segment which may indicate that this segment was under tidal conditions at best. During this period (most likely during the latter part) inundation was likely except in an extremely localised areas perhaps around Quakers Hill where elevation rises to c.7m AOD and to the southeast of Chestnut Farm where ground may rise to c.5mAOD and where a small finds assemblage is recorded which may attest to some limited agricultural activity on high ground. An area of peat at landfall may also hold potential for Roman organic remains as well as another area of peat at Hogsthorpe.
- 20.4.28 **Anglo-Saxon – negligible potential** - apart from the extremely localised elevated areas at Quakers Hill and to the southeast of Chestnut Farm the area was likely marshy or inundated with activity located to the west on dryer ground.
- 20.4.29 **Medieval – medium to high potential** – the area includes the medieval sea wall at its eastern end (HER references MLI88781/2). The land within the PEIR boundary is likely to contain features relating to the agricultural use of the land. This includes known sites comprising an earthwork enclosure (MLI88775) and a field boundary (MLI88770). Similar features across an agriculturally exploited landscape and potential moated sites cannot be discounted. The LiDAR assessment has recorded a possible moated site and fishponds adjacent to HER reference MLI88770 (LiDAR feature 13).
- 20.4.30 **Post-Medieval – high potential** – the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a former farmstead (HER reference MLI18807 and a cottage (MLI18799). The LiDAR assessment records earthworks associated with the farmstead and field boundaries in general across the segment.

WM2. A52 Hogsthorpe to Marsh Lane

- 20.4.31 **Prehistoric (permanent) – low to medium- potential** this area was likely inundated such that permanent and persistent activity is unlikely. However, Iron Age salterns are possible in the vicinity of Hogsthorpe and also at the southern end of the segment (AOP A2). The areas of peat at the northern and southern extremities of the segment may hold potential for the preservation of organic remains associated with trackways, jetties and fishtraps which may have extended across or been present within this area at this time (AOP B). A small area of till may hold some isolated potential for persistent activity (AOP E).

- 20.4.32 **Prehistoric (transient) – medium potential** - evidence of transient activity is possible, although perhaps restricted to the northern part of the PEIR boundary near to Hogsthorpe but also the area of till (AOP E). Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).
- 20.4.33 **Prehistoric (palaeoenvironmental) – medium to high potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the earlier phase of the tidal mudflats, but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general. Potential for the preservation of organic remains of prehistoric date within areas of peat recorded at Hogsthorpe and at the southern end of the ECC (AOP B). Other areas of peat cannot be discounted.
- 20.4.34 **Roman – low to medium potential** – there is evidence for the potential presence of salterns at the southern end of the segment and also some evidence for possible dry land in the southern and central segments which may have been subject to agricultural use prior to inundation at the end of the period (AOP A2). Some LiDAR anomalies may represent enclosures of this date in the southern and central segment, but this is uncertain (features 20 and 21). Areas of peat at Hogsthorpe and at the southern end of the ECC may hold potential for Roman organic remains (AOP B).
- 20.4.35 **Anglo-Saxon – negligible potential** – the area was likely under marsh or marginal conditions with activity focused on dryer land to the west.
- 20.4.36 **Medieval – high potential** – dry land was facilitated by a sea wall during this period and the PEIR boundary crosses the footprint of a deserted medieval village where evidence of domestic occupation may be preserved within buried remains and where the LiDAR assessment references the potential for earthworks extending beyond the footprint of the HER entry for the village (MLI99148) (LiDAR feature 18). Other areas of medieval enclosures are recorded which could reference further activity of at least an agricultural nature (MLI98639, MLI98638 & MLI98636). Dry conditions are likely replicated across the footprint of this segment with evidence for settlement and agriculture.
- 20.4.37 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records two demolished farmsteads and a post medieval enclosure within the PEIR boundary (HER references MLI118870, MLI118881 & MLI98637). The LiDAR assessment indicates the presence of additional demolished farmsteads (features 16 and 17).

WM3. Marsh Lane to A158 Skegness Road

- 20.4.38 **Prehistoric (permanent) – low to medium potential** - this area was likely inundated or tidal for the majority of the period such that permanent and persistent activity is unlikely apart from the fringes of the segment in proximity to higher ground at Burgh Le Marsh which may have hung onto a transition period between wet and dry until the Bronze Age period. Iron Age salterns are possible in AOP A2 as referenced by a HER entry within the Site (HER MLI41950). A LiDAR anomaly of a mound in the south of the segment may be of Iron Age date but this is uncertain as the feature may be natural or later. The areas of peat extending across the northern part of the segment and its southern extremity may hold potential for the preservation of organic remains associated with trackways, jetties and fish traps which may have extended across or been present within this area at this time (AOP B).
- 20.4.39 **Prehistoric (transient) – low** - evidence of transient activity through a flint assemblage is possible. Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).
- 20.4.40 **Prehistoric (palaeoenvironmental) – medium to high potential**- remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain within the tidal mudflats but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to mapping by Green (Green 2022 Figure 19). Potential for organic remains within two areas of peat is noted including a significant deposit across the northern part of the segment (AOP B). Other areas of peat cannot be discounted.
- 20.4.41 **Roman – low to medium potential** – as the coastline moved east the PEIR boundary was likely drier at this time, but there is little evidence for activity, with activity potentially focused at Burgh-Le Marsh and Skegness some distance to the west and southeast respectively. The PEIR boundary may have been poorly drained and marshy. Potential is referenced as medium in relation to a large deposit of peat across the northern segment of the ECC which may hold organic remains of this date (AOP B).
- 20.4.42 **Anglo-Saxon – negligible to low potential** - the area was likely under marsh or marginal conditions with activity focused on dryer land to the west albeit a pottery scatter to the east of the northern part of the segment means that some dry areas cannot be ruled out – although this could be related to later manuring activity.
- 20.4.43 **Medieval – high potential** – the PEIR boundary crosses the footprint of possible medieval settlement attested to by earthworks visible on historic aerial photographs (HER reference MLI88895) however LiDAR assessment may infer a later date. No earthworks were observed during a walkover. Other settlement of medieval date is recorded in close proximity to the PEIR boundary (MLI41501). Other remains associated with agricultural exploitation of the landscape are likely such as buried remains of ridge and furrow and enclosure ditches although the area is recorded within an empty zone in respect to established larger settlement, potentially indicating relatively wet conditions still. A LiDAR anomaly of a mound in the south of the segment may be of medieval date but this is uncertain as the feature may be natural. Moated sites are possible within the segment.

20.4.44 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a demolished farmstead (HER reference MLI119833) and a post medieval earthwork enclosure within the PEIR boundary (MLI87795). The LiDAR review infers other possible farmsteads and confirms a network of agricultural enclosure.

WM4. A158 Skegness Road to Low Road

20.4.45 **Prehistoric (permanent) – low potential** – the area was likely inundated or under tidal/marshy conditions by the early Neolithic period such that permanent and persistent activity is unlikely until the end of the period when sea levels dropped. Iron Age salterns are possible. The area of peat at the northern extremity of the segment may hold potential for the preservation of organic remains associated with trackways, jetties and fish traps which may have extended across or been present within this area at this time (AOP B).

20.4.46 **Prehistoric (transient) – low to medium potential** - a potential for early flint assemblages and ephemeral activity from the late Mesolithic period and early Neolithic period cannot be ruled out. Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).

20.4.47 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats, but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to mapping by Green (Green 2022 Figure 19). A very small area of peat is recorded in the northern extremity of the area. This may hold some potential for organic remains of this date (AOP B). Other areas of peat cannot be discounted.

20.4.48 **Roman – low to medium potential** – potential is likely to be restricted to salterns with settlement and agricultural activity likely focused towards higher ground in the vicinity of Burgh le Marsh and Skegness. A very small area of peat is recorded in the northern extremity of the area. This may hold some potential for organic remains of this date (AOP B).

20.4.49 **Anglo-Saxon – negligible potential** - the area was likely under marsh or marginal conditions with activity focused on dryer land to the west.

20.4.50 **Medieval – high potential** – the area was still likely to have been relatively wet during this period with established settlement located to the fringes of the study area to the east and west. However, the PEIR boundary crosses the footprint of a number of areas of medieval ridge and furrow (MLI98096, 98097). These correspond with LiDAR anomalies indicative of a historic field system with may have medieval origins. Evidence is anticipated to be related to ridge and furrow and field systems. Moated sites are possible within the segment.

20.4.51 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely.

WM5 – Low Road - to Steeping River

- 20.4.52 **Prehistoric (permanent) – nil to medium potential** – apart from an area of freely draining glaciofluvial deposits in the southern part of this area where some semi-permanent/persistent activity may have been possible, the area was likely inundated or under tidal/marshy conditions by the early Neolithic period such that permanent and persistent activity is unlikely until the end of the period when sea levels dropped. Iron Age salterns are possible within the segment.
- 20.4.53 **Prehistoric (transient) – low to medium potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period and later Neolithic exploitation of an intertidal area before inundation by the end of the Neolithic period cannot be ruled out particularly in the vicinity of the glaciofluvial deposits (AOP D). Possible short-lived cut features on wetland edge beneath the second phase of tidal mudflats but likely eroded and not *in situ* (AOP A2).
- 20.4.54 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats, but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to mapping by Green (Green 2022 Figure 19). Areas of peat cannot be discounted.
- 20.4.55 **Roman – low to medium potential** –is likely to be restricted to salterns with settlement and agricultural activity likely focused towards higher ground in the vicinity of Burgh le Marsh and Skegness. A very small area of peat is recorded in the southern extremity of the area. This may hold some potential for organic remains of this date (AOP B).
- 20.4.56 **Anglo-Saxon – negligible potential** - the area was likely under marsh or marginal conditions with activity focused on dryer land to the west.
- 20.4.57 **Medieval – nil to high potential** –the A52 in the northern part of the segment may represent the alignment of a medieval sea wall such that the majority of the segment located to the south of this may have negligible to nil potential for activity apart from salterns. To the north of the A52 the PEIR boundary crosses the footprint of an area of medieval ridge and furrow (MLI98166). Evidence is anticipated to be related to a medieval sea wall and ridge and furrow and field systems in the north of the segment only.
- 20.4.58 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a demolished farmstead within the PEIR boundary (HER reference MLI120254). An extant farmstead is also recorded as extending into the PEIR boundary (MLI120256). The LiDAR records additional farmsteads within an earlier area of possible medieval activity.

WM6 - Steeping River to Ivy House Farm/Marsh Yard

- 20.4.59 **Prehistoric (permanent) – nil to medium potential** – apart from an area of freely draining glaciofluvial deposits in the northern part of this area where some semi-permanent/persistent activity may have been possible (AOP D), this area was likely inundated or under tidal/marshy conditions by the end of the Mesolithic period such that permanent and persistent activity is unlikely until the end of the period when sea levels dropped.
- 20.4.60 **Prehistoric (transient) – low to medium potential** - a potential for early flint assemblages and ephemeral activity from the late Mesolithic period and later Neolithic exploitation of an intertidal area before inundation by the end of the Neolithic period cannot be ruled out particularly in the vicinity of the glaciofluvial deposits. Possible at the base of AOP A1, at some depth.
- 20.4.61 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath AOP A1 at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat is recorded within the segment, but this cannot be discounted.
- 20.4.62 **Roman – negligible potential** – the area is likely to have been underwater or tidal during this period with any salt making activity more likely to the west of the study area.
- 20.4.63 **Anglo-Saxon – nil potential** – the area was likely inundated during this period.
- 20.4.64 **Medieval – medium potential** – the area was likely inundated during this period or potentially on the seawall such that remains of the seawall could be possible as shown by the LiDAR assessment, but no earthworks were recorded on the site visit. The presence on the sea wall or its immediate vicinity may reference a potential for salt marsh and salterns are known to extend in the immediate vicinity of the proposed compound. An anomalous area is a possible medieval hall (MLI41733), established potentially on the edge of high tide. This is outside of the PEIR footprint, but an associated field system is possibly recorded by the LiDAR assessment within the segment. Remains of settlements are considered unlikely.
- 20.4.65 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a demolished farmstead within the PEIR boundary (HER reference MLI124336) This is confirmed by LiDAR (LiDAR feature 30) which also records an historic enclosure associated with an offsite farmstead as extending within the PEIR (LiDAR feature 29/MLI124326). LiDAR assessment confirms an agricultural landscape with numerous field boundaries orientated to the modern pattern.

WM7 - Ivy House Farm/Marsh Yard to Staples Farm

- 20.4.66 **Prehistoric (permanent) – nil to medium potential** - this area was likely inundated or under tidal conditions by the end of the Mesolithic period such that permanent and persistent activity post-dating the Mesolithic is unlikely. However, the area of peat across the area may hold potential for the preservation of organic remains associated with early trackways, jetties and fish traps which may have extended across or been present within this area at this time (AOP B).

- 20.4.67 **Prehistoric (transient) – low potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period and later Neolithic exploitation of an intertidal area before inundation by the end of the Neolithic period cannot be ruled out. Possible at the base of AOP A1, at some depth.
- 20.4.68 **Prehistoric (palaeoenvironmental) – low to high potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain within the tidal mudflats. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. Peat across the southern half of the area may hold environmental data relating to the Mesolithic/Neolithic period (AOP B). Other areas of peat cannot be discounted.
- 20.4.69 **Roman – negligible potential** – the area is likely to have been underwater or tidal during this period with any salt making activity more likely to the west of the study area.
- 20.4.70 **Anglo-Saxon – nil – potential** the area was inundated during this period.
- 20.4.71 **Medieval –medium– potential** the area was likely inundated during this period or potentially on the seawall such that remains of seawall could be possible as shown by the LiDAR assessment. The presence on the sea wall or its immediate vicinity may reference a potential for salt marsh. An anomaly referenced by the LiDAR assessment may relate to salt making activity near to a relict watercourse or it could be natural (LiDAR feature 32).
- 20.4.72 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. No building footprints are recorded within the PEIR boundary by the HER, but LiDAR indicates the presence of two buildings in the southern part of the segment (LiDAR feature 31).

WM8 - Staples Farm to Crowhall Lane

- 20.4.73 **Prehistoric (permanent) – nil potential** - this area was likely inundated or under tidal/marshy conditions by the end of the Mesolithic period such that permanent and persistent activity of prehistoric date is unlikely.
- 20.4.74 **Prehistoric (transient) – low potential** -for early flint assemblages from the exploitation of an intertidal area before inundation cannot be ruled out. Base of AOP A1 at depth.
- 20.4.75 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat deposits known but areas of peat cannot be discounted
- 20.4.76 **Roman – negligible potential** – the area is likely to have been underwater or tidal during this period with any salt making activity more likely to the west of the study area.
- 20.4.77 **Anglo-Saxon – nil potential** – the area was inundated during this period.

- 20.4.78 **Medieval –medium to high potential** – the LiDAR assessment indicates that the PEIR footprint was on the landward side of the seabank with a small segment of the bank present in the northern part of the segment. This was verified through site survey. The presence of salterns in the vicinity of the sea wall and within the segment footprint cannot be discounted –salterns are recorded within the PEIR boundary by the HER (MLI13174/5)/ (LiDAR feature 33). Considered marginal for settlement.
- 20.4.79 **Post-Medieval – high potential** – remains of post medieval salterns may be present relating to activity prior to drainage, including one known site (MLI13175). Subsequent to drainage, the land within the footprint of the PEIR was intensively farmed such that drains and remains associated with former farmsteads are likely. No building footprints are recorded within the PEIR boundary by the HER but LiDAR assessment infers the presence of a number of former farmsteads (features 35, 36, 37 & 38).

WM9 - Crowhall Lane to Church End Lane

- 20.4.80 **Prehistoric (permanent) – nil potential** - this area was likely inundated by the sea during the Neolithic period such that permanent and persistent activity is unlikely.
- 20.4.81 **Prehistoric (transient) – low potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period and later Neolithic exploitation of an intertidal area before inundation by the end of the Neolithic period cannot be ruled out. Base of AOP A1 at some depth.
- 20.4.82 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat deposits known but peat deposits cannot be discounted.
- 20.4.83 **Roman – nil -medium potential** – the area is likely to have been underwater or tidal during this period but the proximity of the segment to the possible coastline may mean that salt making activity cannot be entirely ruled out within the mudflat zone (AOP A1).
- 20.4.84 **Anglo-Saxon – nil potential** – the area was likely inundated during this period or within marshland unsuitable for habitation.
- 20.4.85 **Medieval –medium potential** - the PEIR footprint is located within a landscape present between a medieval road and a medieval sea bank. However, considered marginal for settlement. A LiDAR anomaly (LiDAR feature 42) may relate to possible moated site or saltern.
- 20.4.86 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records two demolished farmsteads within the PEIR boundary (HER references MLI124278 & MLI24279). The LiDAR assessment attests to additional farmsteads or associated buildings. Also recorded within the footprint of the PEIR is the former footprint of Freiston Park, a small parkland landscape thought to have been associated with the vicarage at Freiston (MLI92433).

WM10 - Church End Lane to The Haven

- 20.4.87 **Prehistoric (permanent) – nil potential** - this area was likely tidal by the Neolithic period such that permanent and persistent activity is unlikely.
- 20.4.88 **Prehistoric (transient) –medium to high potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period and later Neolithic exploitation of higher ground within an otherwise intertidal area before inundation by the end of the Neolithic period cannot be ruled out. Base of AOP A1 at some depth.
- 20.4.89 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other features, such as feature 46, recorded by LiDAR are likely to be later. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat deposits known but deposits cannot be discounted.
- 20.4.90 **Roman –nil to medium potential** – there is evidence to indicate that the coastline may have been east of part of the PEIR footprint during this period. The footprint of the PEIR may have been dry and under arable use at this time. However, the coastline may have been further to the west for some or most of this period, see Annex 23A Figure 6. Salterns may be possible within the mudflat zone (AOP A1).
- 20.4.91 **Anglo-Saxon – negligible to low potential** – rising sea levels would have resulted in some inundation with settlement activity focused to the west of the study area.
- 20.4.92 **Medieval –medium potential** – the PEIR footprint is located within a landscape present between a medieval road and a medieval seabank. Settlement in the west was consolidated with habitable conditions in part to the east evidenced by a single medieval hall. The footprint of the PEIR was likely more marginal for settlement. Moated sites possible?
- 20.4.93 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records three demolished farmsteads within the PEIR boundary (MLI124176, MLI142228, MLI124246). The LiDAR assessment verified the former presence of historic farm buildings alongside an associated field system which is evidenced by fragmented remains alongside the surviving modern pattern.

WM11 - The Haven to Marsh Road

- 20.4.94 **Prehistoric (permanent) – nil potential** - this area was likely tidal by the late Mesolithic period such that permanent and persistent activity is unlikely.
- 20.4.95 **Prehistoric (transient) – low potential** - for flint assemblages from the exploitation of an intertidal area before inundation cannot be ruled out.
- 20.4.96 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat deposits known but deposits cannot be discounted.

- 20.4.97 **Roman – nil -medium potential** – the area is likely to have been underwater or tidal during this period but the proximity of parts of the segment to the possible coastline may mean that salt making activity cannot be entirely ruled out within the mudflat zone (AOP A1).
- 20.4.98 **Anglo-Saxon – negligible potential** - rising sea levels would likely have caused further inundation with finds of this date being late and possibly of a medieval transit phase.
- 20.4.99 **Medieval – high potential** – a sea wall verified by site observations crosses the northern part of the PEIR boundary (ML197710). This is of medieval date and may have brought parts of the PEIR footprint into marginal use. For example, a moated site extends within the PEIR footprint (NHLE 1018584) and a small finds assemblage may indicate some localised agricultural activity adjacent. Also adjacent to the moated site the LiDAR assessment indicates the presence of an earthwork likely associated with the scheduled site extending further east into the footprint of the PEIR boundary. Other moated sites cannot be discounted but settlement foci and more extensive agriculture field systems anticipated away to the west outside the PEIR footprint. Salterns are possible and the LiDAR indicates a possible saltern at the extreme northern end of the segment and also potentially in the central part of the segment east and northeast of the scheduled moated site.
- 20.4.100 **Post-Medieval – high potential** - subsequent to drainage, the land within the footprint of the PEIR was intensively farmed such that drains and remains associated with former farmsteads are likely. These are attested to be the LiDAR assessment with an associated field system evidenced by fragmented earthwork remains alongside the surviving modern pattern.

WM12 - Marsh Road to Fosdyke Bridge

- 20.4.101 **Prehistoric (permanent) – nil to medium potential** – apart from an area of freely draining glaciofluvial deposits in the southern part of this area where some semi-permanent activity may have been possible (AOP D), this area was likely inundated or under tidal conditions by the end of the Mesolithic period such that other permanent and persistent activity is unlikely until the end of the period when sea levels dropped. A LiDAR anomaly may relate to activity of this period on the glaciofluvial deposits, but this is uncertain with a natural origin or later date possible (LiDAR feature 57).
- 20.4.102 **Prehistoric (transient) – low to medium potential** - for flint assemblages from the exploitation of an intertidal area before inundation cannot be ruled out. Base of AOP A1 at some depth. Possibly a greater potential in the area of freely draining glaciofluvial geology in the southern part of the segment (AOP D).
- 20.4.103 **Prehistoric (palaeoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. No peat deposits known but deposits cannot be discounted. The LiDAR records a number of relict channels or palaeochannels and a large circular feature of palaeo potential.
- 20.4.104 **Roman – nil - medium potential** – the area is likely to have been underwater or tidal during this period but the proximity of parts of the segment particularly in the north to the possible coastline may mean that salt making activity cannot be entirely ruled out (AOP A1).

- 20.4.105 **Anglo-Saxon – negligible potential** – rising sea levels would likely have caused further or continued inundation.
- 20.4.106 **Medieval – medium to high potential** – a possible medieval sea defence is shown by LiDAR extending through the southern part of the segment (LiDAR feature 58) with a possible earlier medieval defence to the eastern fringes of the PEIR. A sea wall was verified on site at Hundred Acre Farm and through the south of the segment. A rectangular anomaly of uncertain function (possibly natural) located on glaciofluvial gravels to the north of the sea wall and a possible mound may relate to medieval activity (features 57 & 60). Otherwise, the area is anticipated to have been marginal. Moated sites and salterns possible within the segment.
- 20.4.107 **Post-Medieval – high potential** - the land within the footprint of the PEIR was drained and intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records three demolished farmsteads within the PEIR boundary (MLI123123, MLI123126 and MLI123127). One of these (LiDAR feature 55) (MLI123126) is highlighted by the LiDAR to have associated earthwork remains. The earthwork remains of another farmstead located just outside the PEIR boundary is referenced by earthworks within the PEIR boundary (LiDAR feature 52) (MLI123121).
- WM13 - Fosdyke Bridge to Weston Marsh Substation North*
- 20.4.108 **Prehistoric (permanent) – nil to medium potential** - this area was tidal by the late Mesolithic period such that permanent and persistent activity associated with the Neolithic period onwards is unlikely. However, a potential for the preservation of organic remains associated with Mesolithic trackways, jetties and fish traps within an area of peat cannot be ruled out.
- 20.4.109 **Prehistoric (transient) – low potential** - for flint assemblages from the exploitation of an intertidal area before inundation cannot be ruled out. Base of AOP A1 at some depth.
- 20.4.110 **Prehistoric (palaeoenvironmental) – low to high potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. An area of peat deposits across the central part of the segment may hold deposits of prehistoric environmental potential (AOP B). Other deposits of peat cannot be discounted.
- 20.4.111 **Roman – nil to medium potential** – this area was likely tidal if not inundated during this period, albeit a potential for salterns at the eastern end of the segment cannot be ruled out. The LiDAR assessment references mounds which could relate to salt making activity of this date (LiDAR feature 63) (AOP A1).
- 20.4.112 **Anglo-Saxon – negligible potential** - rising sea levels would likely have caused further or continued inundation.
- 20.4.113 **Medieval – medium potential** – the LiDAR assessment records a potential medieval sea wall in the eastern part of the segment which was verified by site observations. LiDAR also records possible mounds which could reference medieval salt working although this is uncertain (LiDAR feature 63). Settlement unlikely.

20.4.114 **Post-Medieval – high potential** - the land within the footprint of the PEIR was drained and intensively farmed during this period such that drains and remains associated with former farmsteads are likely and referenced by the LiDAR assessment.

WM14 - Fosdyke to Weston Marsh Substation South

20.4.115 **Prehistoric (permanent) – nil to medium potential** - apart from an area of freely draining glaciofluvial deposits in the northern part of this area where some semi-permanent or persistent activity may have been possible (AOP D), this area was likely inundated or under tidal conditions by the end of the Mesolithic period such that other permanent and persistent activity is unlikely until the end of the period when sea levels dropped. A LiDAR anomaly may relate to activity of this period on the glaciofluvial deposits, but this is uncertain with a natural origin or later date possible (LiDAR feature 63). A potential for the preservation of organic remains associated with Mesolithic trackways, jetties and fish traps exists within an area of peat which may have extended into the central part of the segment.

20.4.116 **Prehistoric (transient) – low to medium potential** - a potential for flint assemblages from the exploitation of an intertidal area before inundation cannot be ruled out particularly on the glaciofluvial deposits, present at the base of AOP A1, at some depth.

20.4.117 **Prehistoric (palaeoenvironmental) – low to high potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A1 in general. An area of peat may extend into the northern part of the segment (AOP B). Other deposits of peat cannot be discounted.

20.4.118 **Roman – nil to medium potential** – this area was likely still inundated during this period. The only possible exception is the extreme southern part of the segment which could have been dry and the northern part of the segment which could have been located within an area utilised potentially for salterns (LiDAR feature 63) (AOP A1).

20.4.119 **Anglo-Saxon – negligible potential** - rising sea levels would likely have caused further or continued inundation.

20.4.120 **Medieval – medium potential** – LiDAR anomalies reference a potential for a sea wall of potential medieval origin and an area of possible salterns (LiDAR feature 69). The sea wall could, however, be later and the salterns earlier. Otherwise, the area is anticipated to have been marginal.

20.4.121 **Post-Medieval – high potential** - the land within the footprint of the PEIR was drained and intensively farmed during this period such that drains and remains associated with former farmsteads and field boundaries are likely with evidence recorded by the LiDAR assessment. A tramline of unknown purpose extended across the PEIR boundary also (MLI22401).

Weston Marsh, via north of the A52

A1 – Low Road to Steeping River

20.4.122 **Prehistoric (permanent) – nil to medium potential** – the area was likely tidal conditions by the early Neolithic period such that permanent and persistent activity is unlikely until the Iron Age when salt making sites may be possible.

- 20.4.123 **Prehistoric (transient) – low to medium potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period, early Neolithic exploitation of wetland zone cannot be ruled out.
- 20.4.124 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats, but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general. The LiDAR survey records a number of possible paleochannels across the segment. An area of peat deposits across the central part of the segment may hold deposits of prehistoric environmental potential (AOP B). Other deposits of peat cannot be discounted.
- 20.4.125 **Roman – low to medium potential** – settlement and agricultural activity is possible.
- 20.4.126 **Anglo-Saxon – negligible to low potential** - the area was likely under salt marsh or tidal conditions with activity focused on dryer land to the west.
- 20.4.127 **Medieval – high potential** –Evidence is anticipated to be related to possible settlement ridge and furrow and field systems. The HER records ridge and furrow extending within the Site boundary (MLI125705) and the LiDAR surveys provides additional evidence for the agricultural exploitation of the segment, including further areas of ridge and furrow.
- 20.4.128 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a demolished farmstead within the PEIR boundary (HER reference MLI120254). The LiDAR records additional farmsteads and evidence for marl pitting.

A2 – Steeping River to Fodder Dike Bank/Fen Bank

- 20.4.129 **Prehistoric (permanent) – nil to medium potential** –according to mapping by Green, the segment was within a large saltmarsh creek by the Neolithic/Bronze Age period. Whilst some ‘shore’ side activity of a permanent nature cannot be ruled out it is anticipated that this area would have been marginal, and that any persistent activity is unlikely until the Iron Age when salt making sites may be possible.
- 20.4.130 **Prehistoric (transient) – low to medium potential** - a potential for early flint assemblages and ephemeral activity from the late Mesolithic period, Neolithic and Bronze Age exploitation of wetland zone cannot be ruled out.
- 20.4.131 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to Greens mapping of creeks (Green 2022 Figure 82) and LiDAR anomalies. Whilst no peat is recorded, there is a potential for peat deposits.
- 20.4.132 **Roman – low to medium potential** – settlement and agricultural activity is possible due to the location of the segment within dry land in the hinterland of two known settlements at Burgh le Marsh and Skegness.

- 20.4.133 **Anglo-Saxon – negligible to low potential** - the area was likely under salt marsh or tidal conditions with activity focused on dryer land to the west.
- 20.4.134 **Medieval – high potential** – evidence is anticipated to be related to possible settlement ridge and furrow and field systems. The LiDAR records an area of ridge and furrow (LiDAR feature 80). The HER also records settlement remains extending within the Site boundary (MLI190648) (verified by the LiDAR which shows linear anomalies of potential boundaries) and a possible drove road (MLI90647).
- 20.4.135 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records a demolished farmstead within the PEIR boundary (HER reference MLI120352). A scheduled duck decoy located to the immediate west of the segment may have associated remains within the segment (NHLE 1019098).

A3 – Fodder Dike Bank/Fen Bank to Broadgate

- 20.4.136 **Prehistoric (permanent) – nil to medium potential** – according to mapping by Green, the segment was within an area of saltmarsh by the Neolithic/Bronze Age period. Whilst some wetland activity of a semi-permanent nature cannot be ruled out it is anticipated that this area would have been marginal, and that any persistent activity is unlikely until the Iron Age when salt making sites may be possible.
- 20.4.137 **Prehistoric (transient) – low to medium potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period, Neolithic and Bronze Age exploitation of wetland zone cannot be ruled out.
- 20.4.138 **Prehistoric (palaeoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to Greens mapping of creeks (Green 2022 Figures 82 and 83) and LiDAR anomalies. An area of peat deposits across the central part of the segment may hold deposits of prehistoric environmental potential (AOP B). There is a potential for other peat deposits within the segment.
- 20.4.139 **Roman – low to medium potential** – settlement and agricultural activity is possible but salterns more probable.
- 20.4.140 **Anglo-Saxon – low potential** - mapping of post Roman creeks may infer that this area was not as inundated as adjacent areas during this period, however evidence is still limited and focused to the fringes of the study area in the east.

20.4.141 **Medieval – high potential** – evidence is anticipated to be related to possible settlement and ridge and furrow and field systems. This includes an area of ridge and furrow in the southern part of the segment recorded by LiDAR (LiDAR feature 82) although site observations are that this is eroded. The HER also records settlement remains extending within the Site boundary, but these particular remains are likely closer to Friskney (MLI1125410). Activity peripheral to moated sites and settlement may be possible, with two moated sites abutting the PEIR footprint. This includes a scheduled monument with reference to a possible paved causeway extending from the monument to Friskney and which could therefore cross a proposed access road. Other moated sites cannot be discounted. A possible mill site is also recorded (MLI41778) although this could be post medieval.

20.4.142 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely.

A4 – Broadgate to Ings Drove

20.4.143 **Prehistoric (permanent) – nil to medium potential** – the segment was likely within an area of saltmarsh by the Neolithic/Bronze Age period, but an area of drier ground may have been present as indicated by an area of glaciofluvial deposits within the deposit model (AOP D). Some wetland activity of a semi-permanent nature cannot be ruled out particularly at this part of the segment, but it is anticipated that this area would have been predominantly marginal, and that any persistent activity is generally unlikely until the Iron Age when salt making sites may be possible.

20.4.144 **Prehistoric (transient) – low to medium potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period, Neolithic and Bronze Age exploitation of wetland zone cannot be ruled out.

20.4.145 **Prehistoric (paleoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general and in reference to Greens mapping of creeks (Green 2022 Figure 83). Whilst no peat deposits are recorded, there is a potential for peat deposits.

20.4.146 **Roman – low to medium potential** – settlement activity is possible but salterns more probable.

20.4.147 **Anglo-Saxon –low potential** - mapping of post Roman creeks may infer that this area was not as inundated as adjacent areas during this period, however evidence is still limited and focused to the fringes of the study area in the east.

20.4.148 **Medieval – high potential** – evidence is anticipated to be related to possible settlement and ridge and furrow and field systems. Moated sites and salterns may also be possible.

20.4.149 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records two demolished farmsteads within the footprint of the segment (MLI124524 & MLI124527).

A5 – Ings Drove to Church End Lane

- 20.4.150 **Prehistoric (permanent) – nil to low potential** –the segment was likely predominantly within the footprint of the prehistoric River Witham (Green 2022 Figure 83). Whilst some wetland activity of a semi-permanent nature cannot be ruled out in the northern parts of the segment it is anticipated that this area would have been extremely marginal.
- 20.4.151 **Prehistoric (transient) – nil to low potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period, Neolithic and Bronze Age exploitation of wetland zone cannot be ruled out in the extreme northern part of the segment.
- 20.4.152 **Prehistoric (paleoenvironmental) – medium potential** - remains of the submerged Mesolithic Forest are possible in the northern part of the segment should waterlogged deposits remain beneath the tidal mudflats but these would be at significant depth. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out particularly in respect to the silted-up course of the River Witham (Green 2022 Figure 83) but in AOP A2 in general. The LiDAR review also records a number of anomalies indicative of paleo channels to the north of the rivers’ prehistoric footprint. Whilst no peat deposits are recorded, there is a potential for peat deposits.
- 20.4.153 **Roman – nil to low potential** – salterns possible in the north of the segment.
- 20.4.154 **Anglo-Saxon – negligible to low potential** - mapping of post Roman creeks may infer that this area was not as inundated as adjacent areas during this period, however evidence is still limited, and activity was focused to the southwest of the study area.
- 20.4.155 **Medieval – high potential** – evidence is anticipated to be related to possible settlement and ridge and furrow and field systems. One area is mapped by LiDAR. Moated sites and salterns may also be possible. A medieval road is recorded to cross the segment MLI13317).
- 20.4.156 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The HER records two demolished farmsteads within the footprint of the segment (MLI124196 & MLI124217) and the LiDAR records earthworks associated with another (LiDAR feature 87) and scattered post medieval field boundaries.

A16 Compound

- 20.4.157 **Prehistoric (permanent) – nil potential** - this area was likely tidal by the Neolithic period such that permanent and persistent activity is unlikely.
- 20.4.158 **Prehistoric (transient) – nil to low potential** - for early flint assemblages and ephemeral activity from the late Mesolithic period and early Neolithic periods cannot be ruled out.
- 20.4.159 **Prehistoric (paleoenvironmental) – low to medium potential** - remains of the submerged Mesolithic Forest are possible should waterlogged deposits remain beneath the tidal mudflats at some depth. Relict watercourses and other features are likely to be later. Relict watercourses and other deposits of potential palaeoenvironmental and geoarchaeological interest of prehistoric date cannot be ruled out in AOP A2 in general. No peat deposits known but their presence cannot be ruled out.

- 20.4.160 **Roman – medium potential** – there is evidence to indicate that the coastline may have been east of part of the PEIR footprint during this period. The footprint of the PEIR may have been dry and under arable use at this time.
- 20.4.161 **Anglo-Saxon – low potential** – activity of this date is not entirely ruled out due to the proximity of known settlement at Kirton. It is probable that the area of the compound was dry during this period.
- 20.4.162 **Medieval – low to medium potential** - settlement at Kirton may have been consolidated during this period alongside the establishment of settlement at Frampton. The presence compound may have been part of a wider open field system.
- 20.4.163 **Post-Medieval – high potential** - the land within the footprint of the PEIR was intensively farmed during this period such that drains and remains associated with former farmsteads are likely. The remains of a railway cottage of 1848 date may also be present in the southwestern corner of the compound footprint (MLI13446).

Overall Archaeological Potential Summary

- 20.4.164 For ease of reference, the PEIR boundary overall period potential is provided below. Where appropriate this references Areas of Potential (AOP) as described within Volume 2, Appendix 20.1: Archaeological Desk-Based Assessment Annex 23a (Figures 46-48).

Prehistoric (permanent/persistent)

- 20.4.165 AOP B (Annex 23a Figures 46-48, Annex 23b Figure 47b) = Possible remains of seasonal/marginal structures within peat (organic) deposits. These deposits are recorded in the transects as being deposited between two tidal mudflat phases. This would provide an earliest date of the Late Mesolithic period. Early surviving organic remains could be associated with the prehistoric hunter gatherer exploitation of the area – such as jetties, trackways and fish traps. Current baseline present in segments LN1, LN2 (potentially at less than 2m bgl but relatively thin), WM1, WM2, WM3, WM4, WM5, WM7, WM13 & WM14, A2 and A3. The recorded peat is present at depths of between <2m - 6m bgl within the PEIR boundary. Annex 23a Figures 22, 31 & 42 show a potential for widespread deposits at these depths but at various thicknesses. Apart from segments LN1, LN2 & WM1 where minimal deposits at thicknesses of (0-0.5m) may be present, deposits are generally anticipated to be at least 0.5-1m thick. The isolated thicker deposits are shown on Figures 46-48 and 47b.
- 20.4.166 AOP D & E (Annex 23a Figures 46-48) = Possible remains of occupation sites such as hearths and pits cut into the near surface glaciofluvial and till deposits. Current baseline shows near surface deposits present predominantly in LN2 (<2m bgl Annex 23A Figure 10). These extend into the western part of segment LN1. Other likely deeper, but relatively near surface deposits in comparison to the rest of the PEIR footprint are also possible within segment WM1 (5m bgl Annex 23A Figure 11), WM2 (5m bgl Annex 23a Figure 11), WM5, WM6, WM12, WM14 & A4.
- 20.4.167 AOP A2 (Annex 23a Figures 46-48 and Annex 23b Figure 47b) = Potential remains of occupation sites covered by tidal mudflats. Figures 24, 35, 44 & 35b illustrate the varying thickness of the mudflats. Remains would likely be eroded and potentially not *in situ*. Current baseline shows these types of deposits in segments LN1, LN2, WM1, WM2, WM3, WM4 & WM5 and A1 – A5.

Prehistoric (transient/short lived)

- 20.4.168 AOP A2 (Annex 23a Figures 46-48, Annex 23b Figure 47b) = Possible cut features beneath the second phase of tidal mudflats but likely eroded and not *in situ*. Present in segments LN1, LN2, WM1, WM2, WM3, WM4 & 5 and A1 – A5. Up to 4.5m thick in the north of the PEIR boundary and 1.2-6.5m thick elsewhere on the WM segments but the base of the mudflats present at <2m bgl in segments LN2 and WM2 (Figures 10 and 12). In the Weston Marsh ECC north of the A52 deposits are generally 1m thick with thicker deposits in A5.
- 20.4.169 AOP D (Annex 23a Figures 46-48 and Annex 23b Figure 47b) = Possible Palaeolithic and Mesolithic flint assemblage's *ex situ* within the glaciofluvial deposits. Currently baseline present in segments LN1, LN2, WM1, WM5, WM6, WM12, WM14 and A4. The depth bgl is uncertain, Figure 11 indicates a depth >5m in WM1.
- 20.4.170 AOP D & E (Annex 23a Figures 46-48 and 23b Figure 47b) = Possible Mesolithic and later flint assemblages *in situ* on the surface of the glaciofluvial deposits and the surface of till. Current baseline present in segments LN1, LN2, WM1, WM2, WM5, WM6, WM12, WM14 and A4. Current baseline shows near surface deposits present predominantly in LN2 (<2m bgl Annex 23A Figure 10). These extend into the western part of segment LN1. Other likely deeper, but relatively near surface deposits in comparison to the rest of the PEIR footprint are also possible within segment WM1 (5m bgl Annex 23A Figure 11), WM2 (5m bgl Annex 23A Figure 11), WM5, WM6, WM12 & WM14.
- 20.4.171 AOP A1 (Annex 23a Figures 46-48) = Possible Mesolithic and Neolithic flint assemblages beneath the tidal mudflats. Current baseline present in segments WM6, WM7, WM8, WM9, WM10, WM11, WM12, WM13 & WM14. The thickness of these deposits is at least 6.5m with the depth bgl greater than this including overlying later mudflats and peat.

Palaeo/geo environmental

- 20.4.172 AOP A1 (Annex 23a Figures 46-48) = Very deep waterlogged deposits may hold remains of the submerged Mesolithic Forest beneath the tidal mudflat – see Annex 23A Figures 46-48. Possible in all areas except Segment LN2.
- 20.4.173 AOP A1 & A2 (Annex 23a Figures 46-48 & Annex23b Figure 47b) = Deposits including relict watercourses/features and paleochannels within the tidal mudflats may hold other deposits of palaeoenvironmental and geoarchaeological potential. Deposits in general would inform on periods of marine ingression and transgression. Waterlogged remains similar to those in AOP B (see below) are also possible. Possible in all areas except perhaps segment LN2.
- 20.4.174 AOP B (Annex 23a Figures 46-48 & Annex 23b Figure 47b) = Areas of peat hold high potential for the preservation of plant and animal material which would inform on past environmental conditions and anthropogenic activities in the vicinity - see Annex 23a Figures 46-48. Current baseline present in segments LN1, LN2 (potentially at less than 2m bgl but relatively thin), WM1, WM2, WM3, WM4, WM5, WM7, WM13, WM14 & A1, and A3. The recorded peat is present at depths of between <2m - 6m bgl within the PEIR boundary. Annex 23a Figures 22, 31 & 42 and Annex 23b Figure 31b show a potential for widespread deposits at these depths but at various thicknesses. Apart from segments LN1, LN2 & WM1 where minimal deposits at thicknesses of (0-0.5m) may be present, deposits are generally anticipated to be at least 0.5-1m thick. The isolated thicker deposits are shown on Figures 46-48 and 47b. There is a potential for other deposits of peat to be present.

Roman

20.4.175 Remains associated with agriculture and settlement likely restricted to Segments L1, L2 and WM1 - WM3 and A1 – A4 which were on the landward side of the coastline, although Area WM10 may be an anomaly elsewhere.

20.4.176 Remains associated with salterns possible in segments LN1 and WM2, WM4, WM5, A3, A4, A5 and in the top of the tidal mudflat sequence and within AOP A1 (WM9-WM14).

Anglo-Saxon

20.4.177 Any settlement or agricultural remains are likely to be restricted to segments LN1 & LN2. Other areas likely inundated during this period or marginal to other areas of higher ground where activity would have been focused.

Medieval

20.4.178 Sea walls with specific evidence in segments LN1, WM1, WM5, WM6, WM7, WM8, WM11, WM12, WM13, WM14.

20.4.179 Moated sites are possible with specific evidence in segment WM11 (associated with Multon Hall Scheduled Monument – NHLE 1018584). Remains associated with a scheduled moated site in A3 (NHLE 1016044) may extend across the PEIR boundary; a paved causeway to Friskney. Other sections with potential may include LN1, WM1, WM3, WM4, WM9, WM10, WM12, A4 and A5.

20.4.180 Remains of salterns (clay lined pits/pools, middens, temporary wooden structures) are possible with specific evidence in segments WM7, WM8, WM9, WM11, WM13 and WM14. Other segments with potential include WM5, WM6, WM12, A4 and A5.

20.4.181 Field systems are possible with specific evidence in segments LN1, LN2, WM1, WM2, WM3, WM4, WM5, WM6, WM10, A1, A2, A3 and A5. Potential is also highlighted for A4.

20.4.182 Nucleated settlement is possible with specific evidence in segments LN1, WM2, WM3, A2, A3

20.4.183 Medieval roads (A5).

Post-Medieval

- Farmsteads/post medieval buildings – all segments.
- Field systems – all segments.
- Drainage ditches – all segments.
- Other - a tramline in segment WM14.
- Other – a railway cottage in A16.

Summary

- 20.4.184 On the baseline available for PEIR, assessment has identified that one Scheduled Monument is located within the PEIR boundary. It is assumed that the footprint of the monument and a potentially associated bank identified on LiDAR would be avoided by the Project. No designated archaeological remains would therefore be physically affected by the Project. However, a possible causeway associated with the Abbey Hills moated site (NHLE reference 1016044) could cross the PEIR boundary. Known/potential non-designated heritage assets identified at the PEIR stage within the PEIR boundary comprise remains from the prehistoric period onwards.
- 20.4.185 In broad terms segment LN2 holds a particular potential for permanent prehistoric activity dating from the Neolithic and Bronze Age periods. This is due to its relatively elevated topography and the presence of near surface presence of glaciofluvial deposits and till (AOP D & E). Other isolated areas of potential permanent activity of Neolithic/Bronze Age on this geology are also possible in areas LN1, WM1, WM2, WM3, WM5, WM6, WM12, WM14 and A4. These specific higher and dryer areas would also have been likely to be attractive for earlier activity of a more transient nature during the Mesolithic period.
- 20.4.186 Excluding the Weaton Marsh ECC north of the A52, it is anticipated that coastal inundation by the end of the Mesolithic period would have made the parts of the land within the PEIR boundary south of segment WM2 tidal at least. In segments WM6-9 and WM11-14 tidal conditions or complete inundation are anticipated to have persisted from the end of the Mesolithic period until post medieval reclamation such that dry land was not present for the Neolithic, Bronze Age, Roman, Anglo Saxon or Medieval periods (Annex 23A Figure 3). The deposition of alluvium over this substantial timespan would have buried any pre tidal/inundation deposits of Mesolithic date beneath a significant depth of 'overburden' (AOP A1). Some peaty deposits (AOP B) within AOP A1 could reveal evidence of localised wetland exploitation and other deposits of palaeoenvironmental potential.
- 20.4.187 In respect to the Weaton Marsh ECC north of the A52, the proximity of the flooding coastline is anticipated to have created salt marsh conditions which persisted into the Iron Age/Roman periods. In respect to earlier prehistoric activity, only transient wetland zone activity of Neolithic or Bronze Age date can be realistically anticipated here albeit the area of glaciofluvial deposits in A4 may have provided for a foci of dryland for some semi-permanent activity.
- 20.4.188 The retreat of the sea into the Roman period may have brought WM10 and the A16 compound into dryer conditions alongside segments L1-L2, WM1-3 and the Weaton Marsh ECC north of the A52. Therefore, potential terrestrial activity of Roman date on dry land is possible within segments LN1, LN2, WM1-3, A1-4), the A16 compound and WM10 (AOP D, E and A2). A potential for Roman salterns also extends for segments LN1, WM1, WM4 and WM5 and the Weaton Marsh ECC north of the A52 and into the rest of the ECC which appears to have remained at least tidal during this period (AOP A1 particularly segments WM9-WM14).

- 20.4.189 Sea level rise appears to have caused the destruction of coastal zone Roman sites and evidence for Anglo Saxon activity at a time of inundation is extremely limited with potential likely to be isolated to segments LN1 and LN2 which were probably the only parts of the land within the PEIR boundary to be dry or at least not marginal during this period. A potential may also exist for the A16 compound.
- 20.4.190 Medieval activity was made possible through the construction of sea walls with settlement or agricultural activity known in segments LN1, LN2, WM1, WM2, WM3, WM4, WM5, WM6 and the Weaton Marsh ECC north of the A52. Settlement of this period may be well preserved and of relatively high importance in certain segments of the ECC. For example, segment WM2 where remains of Slackholme deserted medieval village are present. At this time, other segments are anticipated to have been more marginal with activity perhaps limited to salterns in AOP A1; with HER references to salterns in segment WM8 and LiDAR anomalies of an uncertain nature which may reference salterns in segments WM7, WM8, WM9, WM11, WM13 and WM14. Tidal conditions also present in segments WM4, WM5 and WM6 highlight the potential for medieval salterns.
- 20.4.191 Post medieval activity references land reclamation and agricultural activity across all land within the PEIR boundary. This includes the remains of former farmhouses which are present in all segments.

Existing Environment - Cultural Heritage

- 20.4.192 Cultural Heritage receptors are typically those that may be affected by changes in ‘setting’. These are predominantly built heritage assets such as Listed Buildings, but archaeological remains may also be affected by setting change in some instances. The preliminary HS presented within Volume 2, Appendix 20.2 sets out the designated and non-designated heritage assets within a search area of 2km-5km from the PEIR boundary for which consideration of sensitivity was given. A full list of assets is not replicated here. The assets listed below represent a worst-case scenario for the number of assets considered to be potentially affected through setting change. The list will be refined at EIA stage, subsequent to field observations and a finalised design.

Lincolnshire Node

LN1: Lincolnshire Node - Landfall to A52 – Mumby

- Grade I Listed Building – Church of St Thomas of Canterbury (NHLE reference 1204944) - 220m south of PEIR boundary.
- Non-designated asset – Bank Farm (MLI118803) – 15m south of PEIR boundary.
- Non-designated asset – Unnamed Farmstead (MLI118839) – 15m northwest of PEIR boundary.
- Non-designated asset - potential buried remains of the Anglo Saxon/medieval settlement of Mumby within the PEIR boundary (HER reference MLI82080).
- Non-designated - sea bank in Anderby within the PEIR boundary (HER reference MLI88782).

LN2: Lincolnshire Node - A52 – Mumby to Lincolnshire Node

- Scheduled Monument – Markby Priory (NHLE reference 1004987) - 1.4km north of the OnSS location.
- Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454) – 3.2km north OnSS.
- Grade II Registered Park and Garden – Well Hall - 4.5km southwest OnSS.
- Grade II* Listed Building – Church of St Peter (NHLE reference 1063009) - 1.5km north OnSS.
- Non-designated asset – White House Farm (HER reference MLI116614) – 470m southwest of the PEIR boundary (OnSS).
- Non-designated asset – Dryby Farm (HER reference MLI116617) – 485m southwest of the PEIR boundary (OnSS).
- Non-designated asset – Glebe Farm (HER reference MLI116618) – 385m north of the PEIR boundary (node).
- Non-designated asset – Bilsby Farm (HER reference MLI116616) – 1075m southwest of the PEIR boundary (OnSS).
- Non-designated asset – Willow Farm (HER reference MLI116619) – 560m north of the PEIR boundary (OnSS).
- Non-designated asset – White House Farm (HER reference MLI116620) – 490m north of the PEIR boundary (OnSS).
- Non-designated asset – Red House farmhouse (HER reference MLI116621) – 420m north of the PEIR boundary (OnSS).
- Non-designated asset – Pear Tree farmhouse (HER reference MLI116622) – 410m north of the PEIR boundary (OnSS).
- Non-designated asset – Lynwood farmhouse (HER reference MLI118835) – 21m northeast of the PEIR boundary.
- Non-designated asset – White House Farm (HER reference MLI118836) – 60m north of the PEIR boundary.
- Non-designated asset - potential buried remains of the Anglo Saxon/medieval settlement of Mumby within the PEIR boundary (HER reference MLI82080).

Weston Marsh, via south of the A52

WM1: Weston Marsh - Landfall to A52 – Hogsthorpe

- Non-designated asset – Lowgate Farm (HER reference MLI118859) – 65m north of the PEIR boundary.
- Non-designated asset – Bank Farm (HER reference MLI118803) – within close vicinity to the PEIR boundary.

- Non-designated asset – Chestnut Farm (HER reference MLI118860) – 60m southeast of the PEIR boundary.
- Non-designated asset – Quaker’s Hill Farmhouse (MLI118805) – 210m southeast of the PEIR boundary.
- Non-designated asset – probable medieval earthwork field boundary within the PEIR boundary (HER reference MLI88770).
- Non-designated asset – probable medieval earthwork enclosure within the PEIR boundary (HER reference MLI88775).
- Non-designated - sea bank in Anderby within the PEIR boundary (HER reference MLI88782).

WM2: Weston Marsh - A52 – Hogsthorpe to Marsh Lane

- Non-designated asset – Field Farm (MLI118858) – 55m west of the PEIR boundary.
- Non-designated asset – Un-named farmstead (MLI118865) – 40m east of the PEIR boundary.
- Non-designated asset – Malt Farm (MLI118869) – 60m west of the PEIR boundary.
- Non-designated asset – Slackholme End House Farm (MLI118880) – 70m west of the PEIR boundary.
- Non-designated asset – Jasmine Cottage (MLI118883) – 120m west of the PEIR boundary.
- Non-designated asset – Willcox Farm (MLI119832) – 55m east of the PEIR boundary.
- Non-designated asset – The Grange (MLI41973) – 60m east of the PEIR boundary.
- Non-designated asset- potential remains of medieval enclosures within the PEIR boundary (HER reference MLI98636).
- Non-designated asset- potential remains of a post medieval enclosure within the PEIR boundary (HER reference MLI98637).
- Non-designated asset- potential remains of medieval enclosures within the PEIR boundary (HER reference MLI98638).
- Non-designated asset- potential remains of medieval enclosures and a field system within the PEIR boundary (HER reference MLI98639).
- Non-designated asset- potential remains of Slackholme village within the PEIR boundary (HER reference MLI99418).

WM3: Weston Marsh - Marsh Lane to A158 - Skegness Road

- Non-designated asset – Fir Tree Farm (MLI119851) – 175m east of the PEIR boundary.
- Non-designated asset – Bristol Farm (MLI119871) – 115m east of the PEIR boundary.
- Non-designated asset – possible post medieval earthwork enclosure (MLI87795) – within the PEIR boundary.

- Non-designated asset – probable medieval settlement (MLI88895) – within the PEIR boundary.

WM4/WM5: A158 Skegness Road – Low Road & Low Road to Steeping River

- Non-designated asset – Rookery Farm (MLI120243) – 70m west of the PEIR boundary.
- Non-designated asset – Rivulet House (MLI120244) – 160m west of the PEIR boundary.
- Non-designated asset – Un-named farmstead (MLI120257) – 130m east of the PEIR boundary.
- Non-designated asset – Un-named farmstead (MLI120258) – 150m east of the PEIR boundary.
- Non-designated asset – Bank House (MLI120267) – 320m south of the PEIR boundary.
- Non-designated asset – Havenhouse Cottage (MLI120275) – 300m southwest of the PEIR boundary.
- Non-designated asset – Coddington’s Yard (MLI120258) – 20m south of the PEIR boundary.
- Non-designated asset – medieval ridge and furrow earthworks (MLI98096) – within the PEIR boundary.
- Non-designated asset – medieval ridge and furrow earthworks (MLI98097) – within the PEIR boundary.
- Non-designated asset – medieval ridge and furrow earthworks (MLI98166) – within the PEIR boundary.
- Non-designated asset – sea wall earthworks aligned with the A52 (site observations) – within the PEIR boundary.

WM6: Weston Marsh - Steeping River to Ivy House Farm/Marsh Yard

- Scheduled Monument – Medieval salt working (NHLE 1004930) – 1.1km west ECC PEIR boundary and 110m north of compound footprint.
- Grade II Listed Building – Toft Farmhouse (NHLE 1224450) – 170m north of compound.
- Non-designated asset – Havenhouse Cottage (MLI120275) – within close vicinity to the PEIR boundary.
- Non-designated asset – Pinchbeck’s Yard (MLI124334) – 230m east of the PEIR boundary.
- Non-designated asset – Hall Farm (MLI124335) – 10m east of the PEIR boundary.
- Non-designated asset – Marsh Yard (MLI124337) – 100m west of the PEIR boundary.
- Non-designated asset – New Yard Farm (MLI124326) – 15m south of the PEIR boundary.

WM7: Weston Marsh Ivy House Farm/Marsh Yard to Staples Farm

- Non-designated asset – Marsh Yard (MLI24337) – within close vicinity to the PEIR boundary.
- Non-designated asset – farmstead (MLI124460) – 115m west of the PEIR boundary.
- Non-designated asset – farmstead (MLI124404) – 80m west of the PEIR boundary.
- Non-designated asset – sea wall earthworks (site observations) - within the PEIR boundary.

WM8: Weston Marsh - Staples Farm to Crowhall Lane

- Grade II Listed Building – Brick Cottage (NHLE reference 1062037) – 50m from the PEIR boundary.
- Grade II Listed Building – The Old Rectory (NHLE reference 1062076) – 50m from the PEIR boundary.
- Non-designated asset – farmstead (MLI124310) – 100m west of the PEIR boundary.
- Non-designated asset – Yew Tree farmstead (MLI124312) – 100m southeast of the PEIR boundary.
- Non-designated asset – Glebe farmstead (MLI124313) – 75m southeast of the PEIR boundary.
- Non-designated asset – Old House Farm (MLI124322) – 10m east of the PEIR boundary
- Non-designated asset – Gandalf’s Garden farmstead (MLI124456) – 55m southeast of the PEIR boundary.
- Non-designated asset – Willow Tree farmstead (MLI124484) – 25m west of the PEIR boundary.
- Non-designated asset – Leverton lodge farmstead (MLI124796) – 70m east of the PEIR boundary.
- Non-designated asset – Bowser farmstead (MLI124797) – 165m west of the PEIR boundary.
- Non-designated asset – un-named farmstead (MLI124801) – 45m west of the PEIR boundary.
- Non-designated asset – Barcroft farm (MLI124485) – 110m west of the PEIR boundary.
- Non-designated asset – sea wall earthworks (site observations) - within the PEIR boundary.

WM9: Weston Marsh - Crowhall Lane to Church End Lane

- Grade I Listed Building – Church of St James (NHLE reference 1308415) – 340m west of the PEIR boundary.
- Non-designated asset – Tekron House (MLI124227) – 110m north of the PEIR boundary.

- Non-designated asset – unnamed farmstead (MLI124283) – 100m southeast of the PEIR boundary.
- Non-designated asset – Old House Farm (MLI124222) – 10m east of the PEIR boundary.
- Non-designated asset – The Firs (MLI124278) – 10m west of the PEIR boundary.

WM10: Weston Marsh - Church End Lane to The Haven

- Grade II Listed Building – Coupledye Hall (NHLE 1308426) – 360m east of the PEIR boundary.

WM11: Weston Marsh - The Haven to Marsh Road

- Scheduled Monument – Moulton Hall moated site (NHLE reference 1018584) – within the PEIR boundary.
- Conservation Area – Frampton – 1.3km west of PEIR boundary.
- Non-designated asset – Marsh Farm (MLI121210) – 270m east of the PEIR boundary.
- Non-designated asset – Hospital Farm (MLI123044) – 195m west of the PEIR boundary.
- Non-designated asset – Sandholme Farm (MLI123089) – 10m west of the PEIR boundary.
- Non-designated asset – Manor Farm (MLI121223) – 195m west of the PEIR boundary.
- Non-designated asset – un-named farm (MLI123045) – 480m west of the PEIR boundary.
- Non-designated asset – White House Farm (MLI123119) – 20m northwest of the PEIR boundary.
- Non-designated asset – two sections of sea wall earthworks along Wyberton Lane and east of Skeldyke (site observations) - within the PEIR boundary.

WM12: Weston Marsh - Marsh Road to Fosdyke Bridge

- Grade II Listed Building – Suffolk House (NHLE reference 1062020) – 70m from the PEIR boundary.
- Grade II Listed Building – Middlecott’s Hospital (NHLE reference 1317493) – 12m northwest of the PEIR boundary.
- Non-designated asset – Lloyds Farm (MLI123128) – 10m north of the PEIR boundary.
- Non-designated asset – Lentons Farm (MLI123053) – 200m west of the PEIR boundary.
- Non-designated asset – two sections of sea wall earthworks at Hundred Acre Farm and through the southern part of the segment - within the PEIR boundary.

WM13: Weston Marsh - Fosdyke to Weston Marsh Substation North

- Scheduled Monument – Wykeham Chapel (NHLE reference 1019096) – 4km south of PEIR boundary.

- Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966) – 5km south.
- Conservation Area – Gosberton – 3.5km west of PEIR boundary.
- Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471) – 4.3km south of the PEIR boundary.
- Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477) – 900m south of PEIR boundary.
- Grade II Listed Building – The Gables (NHLE reference 1146546) – 400m west of the PEIR boundary.
- Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603) – 875m south of PEIR boundary.
- Non-designated asset – Hills Farm (MLI122565) – 260m west of the PEIR boundary (substation north).
- Non-designated asset – Old Three Tuns Farm (MLI122568) – 415m south of the PEIR boundary (substation north).
- Non-designated asset – un-named farm (MLI122577) – 730m southwest of the PEIR boundary (substation north).
- Non-designated asset – un-named farm (MLI122578) – 370m southwest of the PEIR boundary (substation north).
- Non-designated asset – Welland House farm (MLI122570) – 230m southeast of the PEIR boundary.
- Non-designated asset – Vicarage Farm (MLI122878) – 480m north of the PEIR boundary (substation north).
- Non-designated asset – Surfleet farm (MLI122569) – 145m southeast of the PEIR boundary.
- Non-designated asset – un-named farm (MLI122909) – 650m east of the PEIR boundary (substation north).
- Non-designated asset – sea wall earthworks (site observations) - within the PEIR boundary.

WM14: Weston Marsh - Fosdyke to Weston Marsh Substation South

- Scheduled Monument – Wykeham Chapel (NHLE reference 1019096) – 1.4km south of PEIR boundary.
- Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966) - 2.8km south PEIR boundary.
- Scheduled Monument – Elloe Stone (NHLE reference 1005037) – 3.3km south of PEIR boundary.
- Conservation Area – Moulton – 2.8km south of PEIR boundary.
- Conservation Area – Pinchbeck – 4.7km west of PEIR boundary.

- Grade I Listed Building – Church of St Lawrence (NHLE reference 1064403) 3.5km west of the PEIR boundary.
- Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471) –1.9km south of the PEIR boundary.
- Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477) – 900m north of PEIR boundary.
- Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477) – 1.6km south of PEIR boundary.
- Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603) – 1km north of PEIR boundary.
- Grade II Listed Building – Seasend Hall (NHLE reference 1064468) – 2.2km east of PEIR boundary.
- Non-designated asset – Crowtree Farm (MLI122916) – 340m northwest of the PEIR boundary (substation south).
- Non-designated asset – White House Farm (MLI122917) – 600m west of the PEIR boundary (substation south).
- Non-designated asset – Welland Farm (MLI122918) – 500m west of the PEIR boundary (substation south).
- Non-designated asset – Top Yard Farm (MLI122919) – 450m southeast of the PEIR boundary (substation south).
- Non-designated asset – un-named farmstead (MLI123148) – 160m east of the PEIR boundary.
- Non-designated asset – tramway (MLI22401) – within the PEIR boundary.
- Non-designated asset –potential sea wall earthworks - within the PEIR boundary.

Weston Marsh, via north of the A52

A1: Low Road to Steeping River

- Non-designated asset – Sycamore Lodge (MLI120271) – 20m south of the PEIR boundary.
- Non-designated asset – Ridge and furrow (MLI125705) – within the PEIR boundary.
- Non-designated asset – Ridge and furrow (MLI98166) – within the PEIR boundary.
- Non-designated asset – Ridge and furrow south of Croft (site observation) – within the PEIR boundary.

A2: Steeping River to Fodder Dike Bank/Fen Bank

- Scheduled Monument – Decoy Wood decoy pond (NHLE 1019098) – 10m west of the PEIR boundary
- Non-designated asset – Decoy Farm (MLI124366) – 170 west of the PEIR boundary.

- Non-designated asset – Possible medieval drove road (MLI90647) – within the PEIR boundary.
- Non-designated asset – Medieval settlement remains (MLI90648) – within the PEIR boundary.

A3: Fodder Dike Bank/Fen Bank to Broadgate

- Scheduled Monument – Abbey Hills Moated Site (NHLE 1016044) – 30m east PEIR boundary.
- Non-designated asset – Willoughby Farm (MLI1124362) – 50m northwest of the PEIR boundary.
- Non-designated asset – Avenue Farm (MLI1124368) – 30m southeast of the PEIR boundary.
- Non-designated asset – Walnut Farm (MLI1124369) – 25m southeast of the PEIR boundary.
- Non-designated asset – Bleak House (MLI124370) – 45m southeast of the PEIR boundary.
- Non-designated asset – Hawthorn Farm (MLI124441) – 10m southeast of the PEIR boundary.
- Non-designated asset – Settlement of Friskney (MLI125410) – within the PEIR boundary.
- Non-designated asset Mill mound and pond (MLI41778) – within the PEIR boundary.

A4: Broadgate to Ings Drove

- Scheduled Monument – King’s Hill Motte and bailey castle (NHLE 1018398) – 450m north PEIR ECC boundary, 350m east compound.
- Non-designated asset – Farmstead (MLI124437) – 40m south of the PEIR boundary.
- Non-designated asset – Farmstead (MLI124438) – 10m south of the PEIR boundary.
- Non-designated asset – Farmstead (MLI124526) – 10m north of the PEIR boundary.
- Non-designated asset – Old Leake Farmstead (MLI124541) – 20m northwest of the PEIR boundary.
- Non-designated asset – Faunt Bridge Cottage (MLI124506) – 30m northwest of the PEIR boundary.

A5: Ings Drove to Church End Lane

- Grade I Listed Building – Church of St James (NHLE 1308415) – 520m west of PEIR boundary.
- Non-designated asset – Swinedike Farm (MLI124199) – 10m east of the PEIR boundary.

- Non-designated asset – Reesons Farmstead (MLI124216) – 50m northeast of the PEIR boundary.
- Non-designated asset – Ings Farm (MLI124255) – 30m east of the PEIR boundary.
- Non-designated asset – Little Beeches (MLI124256) – 60m west of the PEIR boundary.
- Non-designated asset – possible medieval road (MLI13280) – within the PEIR boundary.

A16 Compound

- Frampton Conservation Area 500m southeast of the compound.
- Non-designated asset – Old Farm (MLI121208) – 90m west of the compound.

Future Baseline

20.4.193 In a do-nothing scenario any archaeological receptors listed above would remain within a buried horizon or within above ground earthworks. These would be subject to natural erosion and drainage fluctuations. Arable activity may cause manmade erosion in some instances where remains are exposed or shallow.

20.4.194 In a do-nothing scenario any setting elements that currently contribute towards the significance of the cultural heritage assets listed above would be retained.

20.5 Basis of Assessment

Scope of the Assessment

20.5.1 The following impacts have been scoped into this assessment:

- Construction:
 - Impact 1: Permanent direct impacts to buried archaeological remains through the construction of the ECC and OnSS.
 - Impact 2: Temporary in-direct impacts to designated and non-designated heritage assets through setting change caused by the construction of the ECC and OnSS.
- Operation and maintenance:
 - Impact 1: Permanent in-direct impacts to designated and non-designated heritage assets through setting change caused by the presence of the OnSS.
- Decommissioning:
 - Impact 1: Temporary in-direct impacts to designated and non-designated heritage assets through setting change caused by the demolition of the OnSS.
 - Impact 2: Permanent direct impacts to buried archaeological remains through the removal of infrastructure.

20.5.2 In line with the Scoping Opinion (The Planning Inspectorate, 2022), and based on the receiving environment, expected parameters of the Project (Volume 1, Chapter 3: Project Description), and expected scale of impact/potential for a pathway for effect on the environment, the following impacts have been scoped out of the assessment:

- Construction:
 - Transboundary heritage effects.
- Operation and maintenance:
 - In-direct impacts to designated and non-designated heritage assets through setting change caused by the offshore turbines and OSP.

Realistic Worst-Case Scenario

20.5.3 The following section identifies the MDS in environmental terms, defined by the project design envelope.

Table 20.3: Maximum design scenario for Onshore Archaeology and Heritage for the Project alone

Potential effect	Maximum adverse scenario assessed	Justification
Construction		
Impact 1: Permanent direct impacts to buried archaeological remains through the construction of the ECC and OnSS	<ul style="list-style-type: none"> ▪ Landfall – 4 compound footprints – a total of 20,000m². ▪ Landfall - up to 4 Trenchless works entry pits totalling 200m². ▪ Landfall - up to 4 Trenchless works exit pits totalling 2000m². ▪ ECC compounds - Primary (300 x 150 m) and Secondary (80 x 60 m) temporary logistic compounds (TLCs) will be required along the route – 72 TLCs in total, see Volume 1, Chapter 1 for further detail. Trenchless works compounds will be required with maximum dimensions of 150 x 30 m. ▪ ECC – the stripping of topsoil is anticipated for an easement of 80m. ▪ ECC - The cut for the cable trench is anticipated to be a maximum of 3m bgl and 5m wide at the surface – 1.5m wide at the base. ▪ ECC – Trenchless entry pits are expected to be a maximum footprint of 200m² to a depth of 6m. ▪ ECC – joint bays will be required every 800m – 342 pits at 9m x 25m and 2.5m deep. ▪ ECC - Haul routes (6.8m wide) may necessitate a strip of 1m. ▪ OnSS - 1 x OnSS temporary construction compound with an area of 27,000m². ▪ OnSS Gas Insulated building – the maximum footprint of construction disturbance is anticipated to be 347m by 209m. ▪ OnSS Air Insulated building - with a footprint of 285m x 325m. <p>OnSS – disturbance through tree planting, boundary fencing, and SUDS is anticipated to be a maximum footprint of 180,000m² for the indicative site area (up to the permanent fencing) with depths of disturbance extending to the subsoil and natural geology.</p>	The maximum dimensions of disturbance will allow for the worst-case scenario of disturbance in the assessment of impact to potential buried archaeological remains.
Impact 2: Temporary in-direct impacts to designated and	Construction activity would predominantly be anticipated to extend across a 12-hour working day (07:00 to 19:00 Monday – Saturday) although longer working hours may be required at landfall and at the OnSS. Construction activity would comprise or result in:	Consideration of all potential effects on the sensory experience of an asset where changes may affect an understanding of significance.

<p>non-designated heritage assets through setting change caused by the construction of the ECC and OnSS.</p>	<ul style="list-style-type: none"> ▪ Plant and haulage movements resulting in noise, dust and visual change; ▪ The creation of spoil mounds resulting in visual change; and ▪ Light spillage from any temporary lighting required during Winter months. <p>Direct impact to one part of an asset affecting the ‘setting’ of other parts for example breach or severance of component parts (temporary nature assumes reinstatement).</p>	
Operation and Maintenance		
<p>Impact 1: Permanent indirect impacts to designated and non-designated heritage assets through setting change caused by the presence of the OnSS</p>	<p>The Project would result in the presence of the following elements which could be located within the setting of a cultural heritage receptor:</p> <ul style="list-style-type: none"> ▪ OnSS Gas Insulated building– the permanent above ground infrastructure would extend to an anticipated maximum of 19m above ground level. All other equipment (e.g., transformers, switchgear) would not exceed a height of 19m above ground level. ▪ OnSS Air Insulated building– the permanent above ground infrastructure would extend to an anticipated maximum of 15m above ground level. ▪ OnSS – tree planting to screen – TBC at EIA. ▪ OnSS – lighting – TBC at EIA. <p>OnSS – fencing and signage – TBC at EIA.</p>	<p>These elements represent all the above ground elements which would permanently alter the character of the area and have the potential to effect important elements of an asset’s setting.</p>
Decommissioning		
<p>Impact 1: Temporary indirect impacts to designated and non-designated heritage assets through setting change caused by the demolition of the OnSS</p>	<p>The visible removal of structures would be restricted to: OnSS – removal of the OnSS.</p>	<p>The decommissioning phase of the Project would cause a visual change at the OnSS only.</p>

<p>Impact 2: Permanent direct impacts to buried archaeological remains through the removal of infrastructure</p>	<p>As referenced by Table 20.4, ground disturbance associated with the decommissioning would be anticipated to be entirely within the footprint of disturbance caused by the construction of the Project.</p>	<p>Precautionary assessment in the event that the footprint of disturbance exceeds construction parameters.</p>
--	---	---

Embedded Mitigation

20.5.4 Mitigation measures that were identified and adopted as part of the evolution of the Project design (embedded into the Project design) and that are relevant to Onshore Archaeology and Cultural Heritage are listed in Table 20.4. General mitigation measures, which would apply to all parts of the Project, are set out first. Thereafter mitigation measures that would apply specifically to Onshore Archaeology and Cultural Heritage issues associated with the ECC and OnSS are described separately.

Table 20.4: Embedded mitigation relating to Onshore Archaeology and Cultural Heritage

Project phase	Mitigation measures embedded into the project design
General	
Project design	Careful routing of the onshore cable route to avoid key areas of heritage and archaeological sensitivity.
Construction	
ECC	<ul style="list-style-type: none"> ▪ The footprint of all designated heritage assets will be avoided. Total avoidance of remains of national importance where possible. ▪ The use of trenchless techniques to avoid an open cut trench and minimise disturbance footprint to other remains of high importance. ▪ The restriction of an easement within the maximum 80m to minimise ground disturbance to other remains of high importance. ▪ The ground restoration would be flush with the extant ground surface with no evidence of its presence apart from inspection covers which will be non-intrusive in their visual appearance.
OnSS	<ul style="list-style-type: none"> ▪ The footprint of all designated heritage assets has been avoided.
Operation and Maintenance	
OnSS	<ul style="list-style-type: none"> ▪ Screen planting shown on landscape mitigation plans including woodland shelter belts, Volume 1, Chapter 28: Landscape and Visual Assessment Figures 9.29-9.31
Decommissioning	
OnSS	<ul style="list-style-type: none"> ▪ No new ground disturbance

20.6 Assessment Methodology

20.6.1 The applicable guidance is summarized as follows:

- National Planning Practice Guidance (DCLG 2014, as updated).
- Principles of Cultural Heritage Impact Assessment in the UK (IEMA, IHBC & CifA 2021).
- Statements of Heritage Significance: Analysing Significance in Heritage Assets Historic England Advice Note 12 (Historic England 2019).
- The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (2nd edition, Historic England 2017).
- Design Manual for Roads and Bridges –

- LA 104 Environmental Assessment and Monitoring (Highways England 2019)
- LA 106 Cultural Heritage Assessment (Highways England 2019).
- The Lincolnshire Archaeology Handbook. ¹

20.6.2 The magnitude of the impact is defined in Table 20.5. This is in accordance with guidance presented in the Design Manual for Roads and Bridges and is considered relevant to a linear Project of this nature. ²

20.6.3 This may be in reference to a direct impact i.e., through physical disturbance or it may be in reference to an indirect effect i.e., through changes to setting that affect significance.

Table 20.5: Impact magnitude definitions

Magnitude	Description/reason
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements.

20.6.4 The sensitivity/importance of the receptor is defined in Table 20.6. This is in accordance with guidance presented in the Design Manual for Roads and Bridges and is considered relevant to a linear Project of this nature. ³

20.6.5 The NPPF, in paragraph 200 part (b), infers a grading of significance in referring to ‘assets of the highest significance’ in reference to Scheduled Monuments, registered battlefields, Grade I and Grade II* Listed Buildings, Grade I and Grade II* Registered Parks and Gardens and World Heritage Sites. . These categories of heritage assets has been incorporated into Table 20.6.

Table 20.6: Sensitivity/importance of the environment

Receptor sensitivity/importance	Definition
Very High	Very high importance and rarity, international scale and very limited potential for substitution. <ul style="list-style-type: none"> ▪ World Heritage Sites
High	High importance and rarity, national scale, and limited potential for substitution. <ul style="list-style-type: none"> ▪ Assets described as being of the ‘highest significance’ within the NPPF (paragraph 200) ▪ Scheduled Monuments

¹ <https://www.lincolnshire.gov.uk/historic-environment/archaeological-handbook>

²

Receptor sensitivity/importance	Definition
	<ul style="list-style-type: none"> ▪ Registered Battlefields ▪ Grade I and II* Listed Buildings ▪ Grade I and II* Registered Parks and Gardens ▪ Conservation Areas including a high number of Grade I and II* Listed Buildings ▪ Non-designated archaeological remains of demonstrable equivalence to a Scheduled Monument
Medium	<p>Medium or high importance and rarity, regional scale, limited potential for substitution. Assets inferred as not being of the highest importance due to their omission from NPPF paragraph 200.</p> <ul style="list-style-type: none"> ▪ Grade II Listed Buildings ▪ Other Conservation Areas ▪ Grade II Registered Parks and Gardens ▪ Archaeological remains contributing to regional research frameworks
Low	<p>Low or medium importance and rarity, local scale</p> <ul style="list-style-type: none"> ▪ Locally listed buildings ▪ Other archaeological remains
Negligible	<p>Very low importance and rarity, local scale</p>

20.6.6 Table 20.7 cross references the importance of the receptor with the magnitude of effect and refers to a DMRB matrix with 'slight' replaced by 'minor' and 'large' replaced with 'major' to achieve conformity across all chapters of this PEIR.

Table 20.7: Matrix to determine effect significance

		Magnitude of impact			
		<i>Negligible</i>	<i>Minor</i>	<i>Moderate</i>	<i>Major</i>
Sensitivity of receptor	<i>Negligible</i>	Negligible	Negligible or Minor	Negligible or Minor	Minor
	<i>Low</i>	Minor	Minor	Minor	Minor or Moderate
	<i>Medium</i>	Minor	Minor	Moderate	Moderate or Major
	<i>High</i>	Minor	Minor or Moderate	Moderate or Major	Major
	<i>Very High</i>	Minor	Moderate or Major	Major	Major

Table 20.7: Matrix to determine effect significance

20.6.7 It should be noted that a 'significant' impact in EIA terms does not necessarily equate to 'substantial harm' in reference to NPPF terminology. Also, as referenced within the DMRB guidance and considered applicable:

'the effect on the cultural heritage resource is not significant when the impact does not substantially diminish the heritage interest of the cultural heritage resource'.⁴

20.6.8 A conclusion on whether or not an impact is considered significant will be made by the author of the EIA with regards to a narrative prepared outside of the tabulated summary.

Assumptions and Limitations

20.6.9 The preliminary prediction of direct impacts has been prepared with regard to a baseline as set out within Volume 2, Appendix 20.1: Onshore Archaeology and Cultural Heritage Desk-Based Assessment and Volume 2, Appendix 20.2: Onshore Archaeology and Cultural Heritage - Heritage Statement.

20.6.10 The preliminary baseline assessment is considered reasonably reflective of the archaeological potential of the footprint of the Proposed Development albeit this will be refined at EIA with additional baseline including the results of archaeological fieldwork as appropriate and in consultation with the Lincolnshire County Council Historic Environment Officer and Historic England.

20.6.11 The preliminary assessment of in-direct (setting) effects was also undertaken using all standard desk-based resources and is presented as a worst-case scenario such that field observations undertaken at EIA and embedded mitigation may reduce the number of impacts identified and their magnitude.

20.7 Impact Assessment

Construction

20.7.1 This section presents the preliminary assessment of impacts arising from the construction phase of the Project. The following tabulated matrices are provided as a worst-case scenario. The importance of an asset is provided in accordance with Table 20.5.

20.7.2 Remains as set out in the baseline section would be of varying archaeological interest contributing towards an understanding of activity from the prehistoric period onwards. More detailed assessments of significance will be set out prior to application. Nevertheless, it is anticipated that remains would predominantly be gauged at no greater than local or regional importance, albeit remains of national significance cannot be wholly discounted.

- 20.7.3 At this stage, apart from remains associated with Multon Hall scheduled monument (in segment WM11) and potentially remains associated with Abbey Hills Moated Site (in segment A3) and anticipating the avoidance of these remains, no remains of known national importance are present, however it is understood that other remains of national importance may be present, for example medieval remains may be particularly well preserved, such as those at Slackholme deserted medieval village in segment WM2. In general, however, the importance of remains would generally be anticipated to equate to those of 'up to medium importance' in EIA terminology.
- 20.7.4 The significance of effect is provided in accordance with Table 20.7. A more detailed narrative behind the tables will be provided at EIA. This will include proportionate statements of significance for effected assets in full adherence with Historic England guidance. Also at EIA, the Hydrology, Hydrogeology and Flood Risk Chapter will be referenced in respect to potential changes to the water table.

Impact 1: Permanent direct impacts to buried archaeological remains through the construction of the ECC and OnSS

- 20.7.5 A summary of the permanent direct impacts to buried archaeological remains through the construction of the ECC and OnSS are summarised within Table 20.8.

Table 20.8: Permanent direct impacts to buried archaeological remains

Asset		Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
Prehistoric (permanent/persistent)	Organic deposits within peat i.e., trackways and jetties	Based on AOP: LN1 -LN2 WM1-WM15 A1-A5	Medium	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
	Occupation features on near surface till and glacial deposits	Based on AOP: LN1-LN2 WM1 WM2 WM5 WM6 WM12 WM14 A4	Medium	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
	Occupation features covered by tidal mudflats	Based on AOP: LN1-LN2 WM1 WM2 WM3 WM4 WM5 A1-A5	Medium	Negligible to Minor	Minor or Moderate (Not significant)	Permanent
Prehistoric (transient/short lived)	Occupation features covered by tidal mudflats	Based on AOP: LN1-LN2 WM1 WM2 WM3 WM4 WM5	Medium	Negligible to Minor	Minor or Moderate (Not significant)	Permanent

Asset	Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
	A1-A5				
	Flint mixed within glaciofluvial deposits Based on AOP: LN1 LN2 WM1 WM5 WM6 WM12 WM14 A4	Low	Major	Minor or Moderate (Not significant)	Permanent
	Flint in-situ on surface of till and glaciofluvial deposits Based on AOP: LN1 LN2 WM1 WM2 WM5 WM6 WM12 WM14 A4	Medium	Major	Minor or Moderate (Not significant)	Permanent
	Flint beneath tidal mudflats Based on AOP: WM6 WM7 WM8 WM9 WM10 WM11 WM12 WM13 WM14	Medium	Negligible to Minor	Minor (Not significant)	Permanent

Asset		Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
Palaeo/geo environmental	Mesolithic Forest trunks	ALL	Medium	Minor	Minor (Not significant)	Permanent
	Relict watercourses/paleochannels and other deposits	ALL	Medium	Minor	Minor (Not significant)	Permanent
	Peat	Based on AOP: LN1 LN2 WM1 WM2 WM3 WM4 WM5 WM7 WM13 WM14 A2 A3	Medium	Minor to moderate	Moderate (Potentially significant)	Permanent
Roman	Agriculture	LN1 LN2 WM1 WM2 WM3 WM4 WM5 WM10 A1-A4	Low	Minor to moderate	Minor (Not significant)	Permanent
	Settlement	LN1 LN2	Medium	Moderate-Major	Moderate-Major	Permanent

Asset		Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
		WM1 WM2 WM3 WM4 WM5 WM10 A1-A4			(Potentially significant)	
	Salterns	LN1 WM2 WM4 WM8-WM14 A1-A5	Medium	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
Anglo Saxon	Settlement	LN1 LN2	Medium	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
	Agricultural	LN1 LN2	Medium	Minor to moderate	Moderate-Major (Potentially significant)	Permanent
Medieval	Seas walls *upstanding	LN1/WM1* WM5* WM6 WM7* WM8* WM11* WM12* WM13* WM14	Medium	Minor	Minor (Not significant)	Permanent
	Moated Sites	LN1 WM1 WM3	Medium/high	Moderate-Major	Moderate-Major (Potentially significant)	Permanent

Asset		Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
		WM4 WM9 WM10 WM11 WM12 A3 A4 A5				
	Salterns	WM5 WM6 WM7 WM8 WM9 WM11 WM12 WM13 WM14 A4 A5	Medium	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
	Agricultural	LN1-LN2 WM1-WM6 WM10 A1-A5	Low	Minor to moderate	Minor (Not significant)	Permanent
	Nucleated Settlement	LN1 WM2 WM3	Medium/high	Moderate-Major	Moderate-Major (Potentially significant)	Permanent
Post Medieval	Farmsteads	ALL	Low	Moderate-Major	Minor (Not significant)	Permanent

Asset	Segment	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
Field systems	ALL	Negligible	Negligible to Minor	Negligible (Not significant)	Permanent
Drainage ditches	ALL	Negligible	Minor	Negligible (Not significant)	Permanent
Tramline	WM14	Negligible to Low	Minor	Minor (Not significant)	Permanent
Railway cottage	A16	Negligible to Low	Moderate-Major	Minor (Not significant)	Permanent

Impact 2: Temporary in-direct impacts to designated and non-designated heritage assets through setting change caused by the construction of the ECC and OnSS.

- 20.7.6 This section presents the preliminary assessment of impacts arising from the construction phase of the Project. The following tabulated matrices are provided as a worst-case scenario. The importance of an asset is provided in accordance with Table 20.5. The magnitude of impact is provided in accordance with Table 20.6. The significance of effect is provided in accordance with Table 20.7.
- 20.7.7 A more detailed narrative is presented for selected assets within Volume 2, Appendix 20.2: Onshore Archaeology and Cultural Heritage - Heritage Statement. Sections 5 and 6 of Appendix 20.2 include statements of significance and a detailed impact assessment for assets which were assessed to be at a potential risk of significant impact due to either their level of importance and/or the anticipated nature of impact. All assets referenced in more detail in Appendix 20.2 are presented in italics in the tables below. Assets not presented in italics were subject to a high-level impact assessment only at PEIR stage, it being anticipated that any impact to them would not be significant in EIA terms, with due regard to either their importance and/or the anticipated nature of any impact.
- 20.7.8 At EIA cross reference will be made to other chapters providing for information on setting change. These will be:
- Volume 1, Chapter 26 Noise and Vibration;
 - Volume 1, Chapter 27 Traffic and Transport; and
 - Volume 1, Chapter 28 Landscape and Visual Assessment.
- 20.7.9 It is noted here that it is anticipated that any 'significant' impacts identified here under EIA terminology are not indicative of 'substantial harm' as referenced by the NPPF.

Lincolnshire Node

Table 20.9: LN1 - Temporary indirect effects

Asset	Importance	Magnitude of Effect	Significance of Effect (Adverse)	Duration
<i>Grade I Listed Building – Church of St Thomas of Canterbury (NHLE reference 1204944)</i>	<i>High</i>	<i>Negligible</i>	<i>Minor (Not significant)</i>	<i>Temporary</i>
Non designated asset – Bank Farm (MLI118803)	Low	Minor to moderate	Minor (Not significant)	Temporary
Non designated asset – Unnamed farmstead (MLI118839)	Low	Minor to moderate	Minor (Not significant)	Temporary
<i>Non-designated asset - potential buried remains of the Anglo Saxon/medieval settlement of Mumby (HER reference MLI82080).</i>	<i>Medium</i>	<i>Minor to moderate</i>	<i>Moderate (Potentially significant)</i>	<i>Temporary (assuming reinstatement)</i>
<i>Non-designated - sea bank in Anderby (HER reference MLI88782).</i>	<i>Medium</i>	<i>Minor to moderate</i>	<i>Moderate (potentially significant)</i>	<i>Temporary (assuming reinstatement)</i>

Table 20.10: LN2 - Temporary indirect effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
<i>Scheduled Monument – Markby Priory (NHLE reference 1004987)</i>	<i>High</i>	<i>Negligible to Minor</i>	<i>Minor (Not significant)</i>	<i>Temporary</i>
<i>Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)</i>	<i>High</i>	<i>Negligible to Minor</i>	<i>Minor (Not significant)</i>	<i>Temporary</i>
<i>Grade II Registered Park and Garden – Well Hall</i>	<i>Medium</i>	<i>Negligible</i>	<i>Negligible (Not significant)</i>	<i>Temporary</i>
<i>Grade II* Listed Building – Church of St Peter (NHLE reference 1063009)</i>	<i>High</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>
Non-designated asset – White House Farm (HER reference MLI116614)	Low	Minor	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Dryby Farm (HER reference MLI116617)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Glebe Farm (HER reference MLI116618)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Willow Farm (HER reference MLI116619)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Bilsby Farm (HER reference MLI116616)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (HER reference MLI116620)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Red House farmhouse (HER reference MLI116621)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Pear Tree farmhouse (HER reference MLI116622)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Lynwood farmhouse (HER reference MLI118835)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (HER reference MLI118836)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset - potential buried remains of the Anglo Saxon/medieval settlement of Mumby (HER reference MLI82080).	Medium	Minor/moderate	Moderate (Not significant)	Temporary (assuming reinstatement)

Weston Marsh

Table 20.11: WM1 - Temporary indirect effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Lowgate Farm (HER reference MLI118859)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Bank Farm (HER reference MLI118803)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Chestnut Farm (HER reference MLI118860)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Quaker’s Hill Farmhouse (MLI118805)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – probable medieval earthwork field boundary (HER reference MLI88770).	Low	Minor to moderate	Minor (Not significant)	Temporary
Non-designated asset – probable medieval earthwork enclosure (HER reference MLI88775).	Low	Minor to moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated - sea bank in Anderby (HER reference MLI88782)	Medium	Minor to moderate	Moderate (Potentially significant)	Temporary (assuming reinstatement)

Table 20.12: WM2 Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Field Farm (MLI118858)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Un-named farmstead (MLI118865)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Malt Farm (MLI118869)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Slackholme End House Farm (MLI118880)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Jasmine Cottage (MLI118883)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Willcox Farm (MLI119832)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – The Grange (MLI141973)	Low	Minor/moderate	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset- potential remains of medieval enclosures (HER reference MLI98636).	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset- potential remains of a post medieval enclosure (HER reference MLI98637).	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset- potential remains of medieval enclosures and a field system (HER reference MLI98638).	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset- potential remains of medieval enclosures and a field system (HER reference MLI98639).	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset- potential remains of Slackholme village (HER reference MLI99418).	Medium/high	Minor/moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.13: WM3 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Fir Tree Farm (MLI119851)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Bristol Farm (MLI119871)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – possible post medieval earthwork enclosure (MLI87795)	Low	Minor to Moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset – probable medieval settlement (MLI88895)	Medium	Negligible	Minor (Not significant)	Temporary (assuming reinstatement)

Table 20.14: WN4/5 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Rookery Farm (MLI120243)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Rivulet House (MLI120244)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Un-named farmstead (MLI20257)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Un-named farmstead (MLI20258)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Bank House (MLI20267)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Havenhouse Cottage (MLI20275)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Coddington’s Yard (MLI20258)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – medieval ridge and furrow earthworks (MLI98096)	Low	None	N/A	N/A
Non-designated asset – medieval ridge and furrow earthworks (MLI98097)	Low	Negligible to Minor	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset – medieval ridge and furrow earthworks (MLI98166)	Low	None	N/A	N/A
Section of sea wall identified by site observations at A52	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.15: WM6 Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Medieval salt working (NHLE 1004930)	High	Negligible	Minor (Not significant)	Temporary
Non-designated asset – Havenhouse Cottage (MLI20275)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Toft Farmhouse (NHLE 1224450)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Pinchbecks Yard (MLI124334)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Havenhouse Cottage (MLI20275)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Hall Farm (MLI24335)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Marsh Yard (MLI24337)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – New Yard Farm (MLI24326)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Table 20.16: WM7 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Marsh Yard (MLI24337)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – farmstead (MLI24460)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – farmstead (MLI24404)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.17: WM8 -Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade II Listed Building – Brick Cottage (NHLE reference 1062037)	Medium	Minor	Minor (Not significant)	Temporary
Grade II Listed Building – The Old Rectory (NHLE reference 1062076)	Medium	Minor	Minor (Not significant)	Temporary
Non-designated asset – farmstead (MLI24310)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Yew Tree farmstead (MLI24312)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Glebe farmstead (MLI24313)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old House Farm (MLI24322)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Gandalf’s Garden farmstead (MLI24456)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Willow Tree farmstead (MLI24484)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Leverton lodge farmstead (MLI24796)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Bowser farmstead (MLI24797)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Barcroft farm (MLI24485)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farmstead (MLI24801)	Low	Negligible to Minor	Minor	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.18: WM9 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade I Listed Building – Church of St James (NHLE 1308415)	High	Negligible	Minor (not significant)	Temporary
Non-designated asset – Tekron House (MLI124227)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – unnamed farmstead (MLI24283)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old House Farm (MLI24222)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – The Firs (MLI24278)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Table 20.19: WM10 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade II Listed Building – Coupledye Hall (NHLE 1308426)	Medium	Minor	Minor (Not significant)	Temporary

Table 20.20: WM11 Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Multon Hall moated site (NHLE reference 1018584)	High	Negligible to minor	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Conservation Area – Frampton	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Marsh Farm (MLI21210)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Hospital Farm (MLI23044)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Sandholme Farm (MLI23089)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Manor Farm (MLI21223)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI23045)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (MLI23119)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.21: WM12 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade II Listed Building – Suffolk House (NHLE reference 1062020)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Listed Building – Middlecott’s Hospital (NHLE reference 1317493)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Lloyds Farm (MLI23128)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Lentons Farm (MLI23053)	Low	Negligible to Minor	Minor	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.22: WM13 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Negligible	Minor (Not significant)	Temporary
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Conservation Area – Gosberton	Medium	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Negligible	Minor (Not significant)	Temporary
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – The Gables (NHLE reference 1146546)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Hills Farm (MLI22565)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old Three Tuns Farm (MLI22568)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI22577)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI22578)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Welland House farm (MLI22570)	Low	Negligible to Minor	Minor	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Non-designated asset – Vicarage Farm (MLI22878)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Surfleet farm (MLI22569)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI22909)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.23: WM14 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Negligible to Minor	Minor (Not significant)	Temporary
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Scheduled Monument – Elloe Stone (NHLE reference 1005037)	High	None	N/A	N/A
Conservation Area – Moulton	Medium	None	N/A	N/A
Conservation Area – Pinchbeck	Medium	None	N/A	N/A
Grade I Listed Building – Church of St Lawrence (NHLE reference 1064403)	High	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Negligible to Minor	Minor (Not Significant)	Temporary
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Medium	Negligible	Minor (Not Significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Medium	Negligible	Minor (Not significant)	Temporary
Non-designated asset – Crowtree Farm (MLI22916)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (MLI22917)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Welland Farm (MLI22918)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Top Yard Farm (MLI22919)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farmstead (MLI23148)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – tramway (MLI22401)	Low	Minor	Minor (Not significant)	Temporary
Sections of sea wall identified by site observations	Medium	Minor to moderate	Moderate (potentially significant)	Temporary (assuming reinstatement)

Table 20.24: A1 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Decoy Wood decoy pond (NHLE 1019098)	High	None	N/A	N/A
Non-designated asset – Sycamore Lodge (MLI20271)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Ridge and furrow (MLI125705)	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Ridge and furrow (MLI98166)	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated – ridge and furrow south of Croft	Low to medium	Minor/moderate	Moderate (Potentially significant)	Temporary (assuming reinstatement)

Table 20.25: A2 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
<i>Scheduled Monument – Decoy Wood decoy pond (NHLE 1019098)</i>	<i>High</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>
Non-designated asset – Decoy Farm (MLI124366)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – possible medieval Drove Road (MLI190647)	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)
Non-designated asset – medieval settlement remains (MLI90648)	Low	Minor/moderate	Minor (Not significant)	Temporary (assuming reinstatement)

Table 20.26: A3 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
<i>Scheduled Monument – Abbey Hills Moated Site (NHLE 1016044)</i>	<i>High</i>	<i>Negligible to minor</i>	<i>Minor (Not significant)</i>	<i>Temporary</i>
Non-designated asset – Willoughby Farm (MLI124362)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Avenue Farm (MLI124368)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Non-designated asset – Walnut Farm (MLI24369)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Bleak House (MLI24370)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Hawthorn Farm (MLI124441)	Low	Negligible to Minor	Minor (Not significant)	Temporary
<i>Non-designated asset – Settlement of Friskney (MLI125410)</i>	<i>Medium</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>
<i>Non-designated asset Mill mound and pond (MLI41778)</i>	<i>Low to Medium</i>	<i>Minor to moderate</i>	<i>Moderate (Potentially significant).</i>	Temporary

Table 20.27: A4 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Kings Motte and Bailey Castle (NHLE 1018398)	High	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset –Farmstead (MLI1124437)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset –Farmstead (MLI124438)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset –Farmstead (MLI1124526)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old Leake Farmstead (MLI24541)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Fauntbridge Cottage (MLI124506)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Table 20.28: A5 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Grade I Listed Building – Church of St James (NHLE 1308415)	High	Negligible	Minor (Not significant)	Temporary
Non-designated asset – Swinedike Farm (MLI1124199)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Farmstead (MLI124216)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Ings Farmstead (MLI124255)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Little Beeches (MLI124256)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – possible medieval road (MLI13280)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Table 20.29: A16 Compound – Temporary indirect effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Frampton Conservation Area	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old Farm (MLI121208)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Operations and Maintenance

- 20.7.10 At the operational phase, impacts are anticipated to be restricted to those caused by upstanding buildings and associated features at the OnSS. These would be impact caused by change within the setting of a heritage receptor which would be anticipated to affect the significance of the heritage receptor. It is noted here that change within the setting of a heritage receptor does not necessarily equate to adverse harm under this specific consideration.
- 20.7.11 A more detailed narrative is presented for selected assets within Appendix 20.2. Sections 5 and 6 of Appendix 20.2 include statements of significance and a detailed impact assessment for assets which were assessed to be at a potential risk of significant impact due to either their level of importance and/or the anticipated nature of impact. All assets referenced in more detail in Appendix 20.2 are presented in italics. Assets not presented in italics were subject to a high-level impact assessment only at PEIR stage, it being anticipated that any impact to them would not be significant in EIA terms, with due regard to either their importance and/or the anticipated nature of any impact.
- 20.7.12 It is noted here that it is anticipated that any 'significant' impacts identified here under EIA terminology are not indicative of 'substantial harm' as referenced by the NPPF.

Impact 1: Permanent in-direct impacts to designated and non-designated heritage assets through setting change caused by the presence of the OnSS.

Lincolnshire Node

Table 20.30: LN2-A52 - Permanent Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Markby Priory (NHLE reference 1004987)	High	Negligible to Minor	Minor (Not significant)	Permanent
Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)	High	Negligible to Minor	Minor (Not significant)	Permanent
Grade II Registered Park and Garden – Well Hall	Medium	Negligible	Negligible (Not significant)	Permanent
Grade II* Listed Building – Church of St Peter (NHLE reference 1063009)	High	None	N/A	N/A
Non-designated asset – White House Farm (HER reference MLI116614)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Dryby Farm (HER reference MLI116617)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Glebe Farm (HER reference MLI116618)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Willow Farm (HER reference MLI116619)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Bilsby Farm (HER reference MLI116616)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – White House Farm (HER reference MLI116620)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Red House farmhouse (HER reference MLI116621)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – Pear Tree farmhouse (HER reference MLI116622)	Low	Minor	Minor (Not significant)	Permanent
Non-designated asset – White House Farm (HER reference MLI1118836)	Low	Minor	Minor (Not significant)	Permanent

Weston Marsh

Table 20.31: WM13 - Permanent Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Negligible	Minor (Not significant)	Permanent
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Conservation Area – Gosberton	Medium	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Negligible	Minor (Not significant)	Permanent
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – The Gables (NHLE reference 1146546)	Medium	Negligible to Minor	Minor (Not significant)	Permanent
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Hills Farm (MLI22565)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Old Three Tuns Farm (MLI22568)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – un-named farm (MLI22577)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – un-named farm (MLI22578)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Welland House farm (MLI22570)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Vicarage Farm (MLI22878)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Surfleet farm (MLI22569)	Low	Negligible to Minor	Minor	Permanent

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Non-designated asset – un-named farm (MLI22909)	Low	Negligible to Minor	Minor (Not significant)	Permanent

Table 20.32: WM14 - Permanent Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Negligible to Minor	Minor (Potentially Significant)	Permanent
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Scheduled Monument – Elloe Stone (NHLE reference 1005037)	High	None	N/A	N/A
Conservation Area – Moulton	Medium	None	N/A	N/A
Conservation Area – Pinchbeck	Medium	None	N/A	N/A
Grade I Listed Building – Church of St Lawrence (NHLE reference 1064403)	High	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Minor	Moderate (Potentially Significant)	Permanent
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Medium	Negligible	Minor (Not Significant)	Permanent
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Permanent
Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Medium	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Crowtree Farm (MLI22916)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – White House Farm (MLI22917)	Low	Negligible to Minor	Minor	Permanent

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Non-designated asset – Welland Farm (MLI22918)	Low	Negligible to Minor	Minor (Not significant)	Permanent
Non-designated asset – Top Yard Farm (MLI22919)	Low	Negligible to Minor	Minor (Not significant)	Permanent

Decommissioning

Impact 1: Temporary in-direct impacts to designated and non-designated heritage assets through setting change caused by the demolition of the OnSS.

Lincolnshire Node

Table 20.33: LN2 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Markby Priory (NHLE reference 1004987)	High	Negligible to Minor	Minor (Not significant)	Temporary
Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)	High	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Registered Park and Garden – Well Hall	Medium	Negligible	Negligible (Not significant)	Temporary
Grade II* Listed Building – Church of St Peter (NHLE reference 1063009)	High	None	N/A	N/A
Non-designated asset – White House Farm (HER reference MLI116614)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Dryby Farm (HER reference MLI116617)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Glebe Farm (HER reference MLI116618)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Willow Farm (HER reference MLI116619)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Bilsby Farm (HER reference MLI116616)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (HER reference MLI116620)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Red House farmhouse (HER reference MLI116621)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – Pear Tree farmhouse (HER reference MLI116622)	Low	Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (HER reference MLI1118836)	Low	Minor	Minor (Not significant)	Temporary

Weston Marsh

Table 20.34: WM13 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Negligible to Minor	Minor (Not significant)	Temporary
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Conservation Area – Gosberton	Medium	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Negligible	Minor (Not significant)	Temporary
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – The Gables (NHLE reference 1146546)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Hills Farm (MLI22565)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Old Three Tuns Farm (MLI22568)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI22577)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – un-named farm (MLI22578)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Welland House farm (MLI22570)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Vicarage Farm (MLI22878)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Surfleet farm (MLI22569)	Low	Negligible to Minor	Minor	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Non-designated asset – un-named farm (MLI22909)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Table 20.35: WM14 - Temporary Indirect Effects

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	High	Minor	Moderate (Potentially Significant)	Permanent
Scheduled Monument – Pinchbeck Engine (NHLE reference 1004966)	High	None	N/A	N/A
Scheduled Monument – Elloe Stone (NHLE reference 1005037)	High	None	N/A	N/A
Conservation Area – Moulton	Medium	None	N/A	N/A
Conservation Area – Pinchbeck	Medium	None	N/A	N/A
Grade I Listed Building – Church of St Lawrence (NHLE reference 1064403)	High	None	N/A	N/A
Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	High	Negligible to Minor	Minor (Not Significant)	Temporary
Grade II Listed Building – Pigeoncote to the south of Wraggmarsh House (NHLE reference 1064477)	Medium	None	N/A	N/A
Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Medium	Negligible	Minor (Not Significant)	Temporary
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Medium	Negligible to Minor	Minor (Not significant)	Temporary
Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Medium	Negligible	Minor (Not significant)	Temporary
Non-designated asset – Crowtree Farm (MLI22916)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – White House Farm (MLI22917)	Low	Negligible to Minor	Minor	Temporary

Asset	Importance	Magnitude of Effect	Significance of Effect	Duration
			(Not significant)	
Non-designated asset – Welland Farm (MLI22918)	Low	Negligible to Minor	Minor (Not significant)	Temporary
Non-designated asset – Top Yard Farm (MLI22919)	Low	Negligible to Minor	Minor (Not significant)	Temporary

Impact 2: Permanent direct impacts to buried archaeological remains through the removal of infrastructure

It is anticipated that the footprint of ground disturbance associated with decommissioning would be within the zone of disturbance associated with the construction phase of the Project. On this assumption, there would be no potential significant impact to archaeological remains which would have been removed or heavily truncated by construction activity. However, in the worst-case scenario of the decommissioning extending beyond the footprint of former disturbance, the impacts presented in Table 20.8 would remain as potential impacts into the decommissioning phase.

20.8 Mitigation

- 20.8.1 It is noted that subsequent revisions to an understanding of archaeological potential will be provided by forthcoming programmes of assessment and survey. These include geophysical survey and geoarchaeological monitoring of site investigations, undertaken in reference to a broad method statement prepared by SLR Consulting.⁵
- 20.8.2 The results of these surveys will inform on a programme of further evaluation and mitigation to be undertaken in accordance with an outline Written Scheme of Investigation to be submitted with the final DCO application. The Outline WSI to be submitted with the final DCO application is anticipated to reference potential additional geophysical survey, geoarchaeological boreholes and trial trenching in the first instance with site specific mitigation set out thereafter.
- 20.8.3 Any potential harm to archaeological remains of national importance could be avoided by the careful routing of the onshore export cable around particularly sensitive locations, such as Scheduled Monuments or other areas containing remains of national importance identified through baseline data collection. The potential necessity for/consideration of this could arise during initial baseline collection for the selected route but may not arise until the undertaking of archaeological fieldwork.
- 20.8.4 Any potential harm to the setting of a designated heritage asset could be minimised (reduced) through sympathetic massing and locating of above ground infrastructure (the substation(s)) such that any identified important views are protected where possible. Screening to the substation(s) could also be strengthened or introduced as part of any landscaping proposals to minimise any harm to a designated heritage asset through visual change within setting. Lighting proposals could also be designed to prevent light spillage should this be identified as a potential impact to a designated heritage asset through setting change.

20.9 Cumulative Impact Assessment

- 20.9.1 This cumulative impact assessment for Onshore Archaeology and Cultural Heritage has been undertaken in accordance with the methodology provided in Volume 1, Annex 5.1: Cumulative Impact Assessment Methodology.

⁵ SLR Consulting (2023) Outer Dowsing Offshore Wind outline written scheme of investigation for archaeological evaluation

- 20.9.2 The projects and plans selected as relevant to the assessment of impacts to Onshore Archaeology and Cultural Heritage are based upon an initial screening exercise undertaken on a long list. Each project, plan or activity has been considered and scoped in or out on the basis of effect-receptor pathway, data confidence and the temporal and spatial scales involved. For the purposes of assessing the impact of the project on Archaeology and Cultural Heritage in the region, the cumulative effect assessment technical note submitted through the EIA Evidence Plan and forming Volume 1, Annex 5.1 of this PEIR screened out all foreseeable projects due to the lack of common receptors.
- 20.9.3 No heritage assets identified as being potentially sensitive to setting change as a consequence of the Project proposals were anticipated to be sensitive to change as a consequence of the projects within the foreseeable list. Furthermore, no projects were identified in proximity to the Project proposals such that a direct impact on a common archaeological receptor would be anticipated.

20.10 Inter-Relationships

- 20.10.1 Archaeological and Cultural Heritage receptors may also be identified as a receptor within other specialist disciplines such as 'Noise and Vibration', 'Hydrology and Flood Risk' and 'Landscape and Visual Assessment'. Any vibration or water environment effects would be important to understand in respect to potential harm to the fabric or deposits of a heritage asset and this will be considered prior to application as part of the impact assessment where necessary to do so. In respect to visual change assessed by the Landscape and Visual Assessment, it is important to understand that the receptor considered within the Archaeology and Cultural Heritage Assessment is the heritage asset itself whilst the receptor considered in the LVIA is the person only. The effects identified by each discipline may well therefore be different. It is recognised that visibility (or not) of proposals does not necessarily equate to adverse effects.

20.11 Transboundary Effects

- 20.11.1 No transboundary effects are anticipated.

20.12 Conclusions

- 20.12.1 This assessment, undertaken with due regard to the guidance published by Historic England, the NPPF and EN-1, has identified those heritage assets located within the PEIR boundary and its vicinity that may be sensitive to direct disturbance and changes in setting.
- 20.12.2 Assuming the avoidance of all Scheduled Monuments, no potentially significant direct or indirect impacts have been identified for designated heritage assets.
- 20.12.3 Potentially significant direct and indirect impacts have been identified in respect to non-designated heritage assets. This includes potentially significant impacts to remains associated with potential medieval moated sites and potential medieval settlement sites. These remains could be of high importance. Evaluation fieldwork undertaken prior to application will clarify these potential impacts.

- 20.12.4 The non-designated assets where potentially significant impacts through setting change are predicted include a medieval sea wall at landfall (segments LN1 and WM1) (HER reference MLI88782) and a deserted medieval village in segment WM2 (HER reference MLI99418). Other sections of sea wall identified within sections WM5, WM7, WM8, WM11, WM12, WM13 and potentially WM14 would also be affected by potentially significant indirect effects to setting through their potential breaching. A possible significant impact is also identified in respect to disturbance to ridge and furrow at Mumby (LN1), Croft (A1) and earthworks associated with a mill in A3. The in-direct nature of these impacts is referenced as being potentially temporary based on restoration of earthworks post construction.
- 20.12.5 Where potential significant effects through direct impact are referenced, fieldwork undertaken prior to application will clarify the level of potential impact. Where impacts are realised, the residual effect will generally remain as cited, albeit archaeological recording is provided as a mitigation measure to offset this effect. Archaeological mitigation cannot avoid the impact, but it facilitates the positive release of heritage capital as a consequence of archaeological recording. The output of a programme of archaeological mitigation would provide both academic and public communities with knowledge and data in respect to the archaeology and history of this part of the Lincolnshire.
- 20.12.6 Further impacts may be identified at EIA as the baseline is finalised.

Table 20.36: Summary of the Residual Impacts for each Effect

Description of effect	Effect	Additional mitigation measures	Residual impact
Construction			
Disturbance to prehistoric organic deposits within peat i.e., trackways and jetties	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to prehistoric occupation features on near surface till and glacial deposits	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to prehistoric occupation features covered by tidal mudflats	Minor or Moderate (Not significant) Permanent	Archaeological recording as necessary	Minor or Moderate (Not significant). Permanent
Disturbance to prehistoric flint mixed within glaciofluvial deposits	Minor or Moderate (Not significant) Permanent	Archaeological recording as necessary	Minor or Moderate (Not significant). Permanent
Disturbance to prehistoric flint in-situ on surface of till and glaciofluvial deposits	Minor or Moderate (Not significant) Permanent	Archaeological recording as necessary	Minor or Moderate (Not significant). Permanent
Disturbance to prehistoric flint beneath mudflats	Minor (Not significant) Permanent	Archaeological recording as necessary	Minor (Not significant). Permanent
Disturbance to Mesolithic forest remains	Minor (Not significant) Permanent	Archaeological recording as necessary	Minor (Not significant). Permanent
Disturbance to relict watercourses/palaeochannels and other deposits of palaeo potential	Minor (Not significant) Permanent	Archaeological recording as necessary	Minor (Not significant). Permanent
Disturbance to peat deposits	Moderate (Potentially significant) Permanent	Archaeological recording as necessary	Moderate (Potentially significant). Permanent

Description of effect	Effect	Additional mitigation measures	Residual impact
Disturbance to Roman remains - agriculture	Moderate (Potentially significant) Permanent	Archaeological recording as necessary	Moderate (Potentially significant). Permanent
Disturbance to Roman remains - settlement	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to Roman remains - salterns	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to Anglo Saxon remains - settlement	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to Anglo Saxon remains - agriculture	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to medieval remains – sea walls	Minor (Not significant) Permanent	Archaeological recording as necessary	Minor (Not significant). Permanent
Disturbance to medieval remains – moated sites	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to medieval remains – salterns	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent
Disturbance to medieval remains – agriculture	Minor (Not significant) Permanent	Archaeological recording as necessary	Minor (Not significant). Permanent
Disturbance to medieval remains – nucleated settlement	Moderate-Major (Potentially significant) Permanent	Archaeological recording as necessary	Moderate-Major (Potentially significant). Permanent

Description of effect	Effect	Additional measures	mitigation	Residual impact
Disturbance to post -medieval remains – farmsteads	Minor (Not significant) Permanent	Archaeological recording as necessary	recording as necessary	Minor (Not significant). Permanent
Disturbance to post -medieval remains – field systems	Negligible (Not significant) Permanent	Archaeological recording as necessary	recording as necessary	Negligible (Not significant). Permanent
Disturbance to post -medieval remains – drainage systems	Negligible (Not significant) Permanent	Archaeological recording as necessary	recording as necessary	Negligible (Not significant). Permanent
Disturbance to post -medieval remains – tramline	Minor (Not significant) Permanent	Archaeological recording as necessary	recording as necessary	Minor (Not significant). Permanent
Disturbance to post -medieval remains –railway cottage	Minor (Not significant) Permanent	Archaeological recording as necessary	recording as necessary	Minor (Not significant). Permanent
Setting change - Grade I Listed Building – Church of St Thomas of Canterbury (NHLE reference 1204944)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change - Scheduled Monument – Markby Priory (NHLE reference 1004987)	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Setting change - Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change - Grade II Registered Park and Garden – Well Hall	Negligible (Not significant) Temporary	None		Negligible (Not significant). Temporary

Description of effect	Effect	Additional mitigation measures	Residual impact
Setting change - Scheduled Monument – Medieval salt working (NHLE 1004930)	Minor (Not significant) Temporary	None	Minor (Not significant). Temporary
Setting change - Grade II Listed Building – Brick Cottage (NHLE reference 1062037)	Minor (Not significant) Temporary	None	Minor (Not significant). Temporary
Setting change - Grade II Listed Building – The Old Rectory (NHLE reference 1062076)	Minor to moderate (not significant) Temporary	None	Minor to moderate (not significant). Temporary
Setting change – Grade I Listed Building – Church of St James (NHLE 1308415)	Minor (not significant) Temporary	None	Minor (not significant). Temporary
Setting change – Grade II Listed Building – Coupledyeke Hall (NHLE 1308426)	Minor (Not significant) Temporary	None	Minor (Not significant). Temporary
Setting change – Scheduled Monument – Multon Hall moated site (NHLE reference 1018584)	Minor (Not significant) Temporary	None	Minor (Not significant). Temporary
Setting change – Conservation Area – Frampton	Minor (Not significant) Temporary	None	Minor (Not significant). Temporary

Description of effect	Effect	Additional measures	mitigation	Residual impact
Setting change – Grade II Listed Building – Suffolk House (NHLE reference 1062020)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Grade II Listed Building – Middlecott’s Hospital (NHLE reference 1317493)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Setting change – Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Grade II Listed Building – The Gables (NHLE reference 1146546)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Minor (Not Significant) Temporary	None		Minor (Not Significant). Temporary

Description of effect	Effect	Additional measures	mitigation	Residual impact
Setting change – Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Scheduled Monument – Abbey Hills Moated Site (NHLE 1016044)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Scheduled Monument – Kings Motte and Bailey Castle (NHLE 1018398)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Grade I Listed Building – Church of St James (NHLE 1308415)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Numerous non-designated farmsteads	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary
Setting change – Non-designated asset - potential buried remains of the Anglo Saxon/medieval settlement of Mumby (HER reference MLI82080).	Moderate (Potentially significant) Temporary	Restoration of earthworks as necessary		Moderate (Potentially significant). Temporary assuming restoration
Setting change – Non-designated - sea bank in Anderby (HER reference MLI88782).	Moderate (potentially significant) Temporary	Restoration of earthworks as necessary		Moderate (potentially significant). Temporary assuming restoration

Description of effect	Effect	Additional measures	mitigation	Residual impact
Setting change – Non-designated asset- potential remains of Slackholme village (HER reference MLI99418).	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Non-designated asset – probable medieval settlement (MLI88895)	Minor (Not significant) Temporary	None		Minor (Not significant). Temporary.
Setting change – Section of sea wall identified by site observations at A52	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Sections of sea wall in WM7 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Sections of sea wall in WM8 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration

Description of effect	Effect	Additional measures	mitigation	Residual impact
Setting change – Sections of sea wall in WM11 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Sections of sea wall in WM12 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Sections of sea wall in WM13 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Sections of sea wall in WM14 identified by site observations	Moderate (potentially significant) Temporary	None		Moderate (potentially significant). Temporary assuming restoration
Setting change – Non-designated – ridge and furrow south of Croft	Moderate (Potentially significant) Temporary	None		Moderate (Potentially significant) Temporary assuming restoration

Description of effect	Effect	Additional measures	mitigation	Residual impact
Setting change – Non-designated asset Mill mound and pond (MLI41778)	Moderate (Potentially significant) Temporary	None		Moderate (Potentially significant). Temporary assuming restoration
Operation and Maintenance				
Setting change - Scheduled Monument – Markby Priory (NHLE reference 1004987)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change - Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change - Grade II Registered Park and Garden – Well Hall	Negligible (Not significant) Permanent	None		Negligible (Not significant) Permanent
Setting change – Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change – Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change – Grade II Listed Building – The Gables (NHLE reference 1146546)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change –	Minor	None		Minor

Description of effect	Effect	Additional mitigation measures	Residual impact
Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	(Not significant) Permanent		(Not significant) Permanent
Setting change – Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Minor (Not Significant) Permanent	None	Minor (Not Significant) Permanent
Setting change – Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Minor (Not significant) Permanent	None	Minor (Not significant) Permanent
Setting change – Numerous non-designated farmsteads	Minor (Not significant) Permanent	None	Minor (Not significant) Permanent
Decommissioning			
Setting change - Scheduled Monument – Markby Priory (NHLE reference 1004987)	Minor (Not significant) Temporary	None	Minor (Not significant) Permanent
Setting change - Scheduled Monument - Hagnaby Abbey (NHLE reference 1011454)	Minor (Not significant) Temporary	None	Minor (Not significant) Permanent
Setting change - Grade II Registered Park and Garden – Well Hall	Negligible (Not significant) Temporary	None	Negligible (Not significant) Permanent
Setting change –	Minor (Not significant)	None	Minor (Not significant)

Description of effect	Effect	Additional measures	mitigation	Residual impact
Scheduled Monument – Wykeham Chapel (NHLE reference 1019096)	Temporary			Temporary
Setting change – Grade I Listed Building – The Wykeham Chapel of St Nicholas (NHLE reference 1064471)	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Setting change – Grade II Listed Building – The Gables (NHLE reference 1146546)	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Setting change – Grade II Listed Building - Wraggmarsh House Farmhouse (NHLE reference 1147603)	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Setting change – Grade II Listed Building – Chapel Farmhouse (NHLE reference 1064477)	Minor (Not Significant) Temporary	None		Minor (Not Significant) Temporary
Setting change – Grade II Listed Building – Seasend Hall (NHLE reference 1064468)	Minor (Not significant) Permanent	None		Minor (Not significant) Permanent
Setting change – Numerous non-designated farmsteads	Minor (Not significant) Temporary	None		Minor (Not significant) Temporary
Cumulative				
No impacts	-	-		-

20.13 References

CIfA (2014) Standards and Guidance for Historic Environment Desk-Based Assessment, Reading: Chartered Institute for Archaeologists

East Lindsay District Council. (2018) East Lindsay local plan core strategy

Highways England (2019) DMRB LA 104 Environmental Assessment and Monitoring

Highways England (2019) DMRB LA 106 Cultural Heritage Assessment

Historic England. (2017) The setting of heritage asset historic environment good practice advice in planning note 13

Historic England. (2019) Statement of heritage significance: analysing significance in heritage assets Historic England advice note 12

Ministry of Housing, Communities and Local Government. (2021) National Planning Policy Framework

South East Lincolnshire Joint Strategy Planning Committee. (2019) South East Lincolnshire local plan 2011-2036

SLR Consulting (2023) Outer Dowsing Offshore Wind outline WSI for archaeological evaluation.

SLR Consulting. (2023). Outer Dowsing Offshore wind outline written scheme of investigation for evaluation.