Hornsea Project Four: Environmental Statement (ES)

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Volume A3,
Chapter 4: Landscape and Visual Assessment

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Glossary

Term	Definition
Attenuation feature(s)	Attenuation feature: area within which SuDS measures are to be adopted to facilitate attenuation and/or storage of surface water drainage. Measures can be, but are not limited to, the use of filter drains, swales, attenuation and flow control structures.
Code of Construction Practice (CoCP)	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Commitment	A term used interchangeably with mitigation and enhancement measures. Commitments are Embedded Mitigation Measures. The purpose of Commitments is to reduce and/or eliminate Likely Significant Effects (LSEs), in EIA terms. Primary (Design) or Tertiary (Inherent) are both embedded within the assessment at the relevant point in the EIA (e.g. at Scoping, Preliminary Environmental Information Report (PEIR) or ES). Secondary commitments are incorporated to reduce LSE to environmentally acceptable levels following initial assessment i.e. so that residual effects are acceptable.
Cumulative effects	The combined effect of Hornsea Four in combination with the effects from a number of different projects, on the same single receptor/resource. Cumulative impacts are those that result from changes caused by other past, present or reasonably foreseeable actions together with Hornsea Project Four.
Design Envelope	A description of the range of possible elements that make up the Hornsea Project Four design options under consideration, as set out in detail in the project description. This envelope is used to define Hornsea Project Four for Environmental 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 one or more Nationally Significant Infrastructure Projects (NSIP).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
EIA Directive	European Union Directive 85/337/EEC, as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC and then codified by Directive 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.

Term	Definition
Energy balancing infrastructure (EBI)	The onshore substation includes energy balancing Infrastructure. These provide valuable services to the electrical grid, such as storing energy to meet periods of peak demand and improving overall reliability.
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 EIA Directive and EIA Regulations, including the publication of an Environmental Statement (ES).
Environmental Statement (ES)	A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Export cable corridor (ECC)	The specific corridor of seabed (seaward of Mean High Water Springs (MHWS)) and land (landward of MHWS) from the Hornsea Project Four array area to the Creyke Beck National Grid substation, within which the export cables will be located.
High Voltage Alternating Current (HVAC)	High voltage alternating current is the bulk transmission of electricity by alternating current (AC), whereby the flow of electric charge periodically reverses direction.
High Voltage Direct Current (HVDC)	High voltage direct current is the bulk transmission of electricity by direct current (DC), whereby the flow of electric charge is in one direction.
Hornsea Project Four Offshore Wind Farm	The term covers all elements of the project (i.e. both the offshore and onshore). Hornsea Four infrastructure will include offshore generating stations (wind turbines), electrical export cables to landfall, and connection to the electricity transmission network. Hereafter referred to as Hornsea Four.
Landfall	The generic term applied to the entire landfall area between Mean Low Water Spring (MLWS) tide and the Transition Joint Bay (TJB) inclusive of all construction works, including the offshore and onshore ECC, intertidal working area and landfall compound. Where the offshore cables come ashore east of Fraisthorpe.
Maximum Design Scenario	The maximum design parameters of each Hornsea Four asset (both on and offshore) considered to be a worst case for any given assessment.
Mitigation	A term used interchangeably with Commitment(s) by the Applicant. Mitigation measures (Commitments) are embedded within the assessment at the relevant point in the EIA (e.g. at Scoping, PEIR or ES).
National Grid Electricity Transmission (NGET) substation	The grid connection location for Hornsea Four at Creyke Beck.
Onshore substation (OnSS)	Comprises a compound containing the electrical components for transforming the power supplied from Hornsea Project Four to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid. If a HVDC system is used the OnSS will also house equipment to convert the power from HVDC to HVAC.
Order Limits	The limits within which Hornsea Project Four (the 'authorised project') may be carried out.
Orsted Hornsea Project Four Ltd.	The Applicant for the proposed Hornsea Project Four Offshore Wind Farm Development Consent Order (DCO).
Planning Inspectorate (PINS)	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).

Term	Definition
Trenchless Techniques	Also referred to as trenchless crossing techniques or trenchless methods. These techniques 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.

Acronyms

Acronym	Definition
AONBs	Areas of Outstanding Natural Beauty
CoCP	Code of Construction Practice
DCO	Development Consent Order
DECC	Department of Energy & Climate Change
EBI	Energy Balancing Infrastructure
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ERYC	East Riding of Yorkshire Council
ES	Environmental Statement
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (Landscape Institute and Institute of Environmental Management and Assessment, 2013)
HCC	Hull City Council
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
ILA	Important Landscape Area
LCA	Landscape Character Area
LCT	Landscape Character Type
LDWR	Long-Distance Walking Route
LVIA	Landscape and Visual Impact Assessment
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NCA	National Character Area
NCN	National Cycle Network
NGET	National Grid Electricity Transmission
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
OnSS	Onshore substation
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PRoW	Public right of way
SoCC	Statement of Community Consultation
SoS	Secretary of State
SSSI	Site of Special Scientific Interest

ZTV	Zone of Theoretical Visibility

Units

Unit	Definition
kV	kilovolt
Km	kilometre
m	metre

4.1 Introduction

4.1.1.1 Orsted Hornsea Project Four Limited (the 'Applicant') is proposing to develop the Hornsea Project Four Offshore Wind Farm (hereafter 'Hornsea Four'). Hornsea Four will be located approximately 69 km offshore the East Riding of Yorkshire in the Southern North Sea and will be the fourth project to be developed in the former Hornsea Zone. Hornsea Four will include both offshore and onshore infrastructure including an offshore generating station (wind farm), export cables to landfall, and on to an onshore substation (OnSS) with energy balancing infrastructure (EBI), and connection to the electricity transmission network.

4.1.1.2 This chapter of the Environmental Statement (ES) presents an assessment of the potential impacts of Hornsea Four on landscape and visual amenity receptors. Specifically, this chapter considers the potential impact of Hornsea Four landward of Mean Low Water Springs (MLWS) during its construction, operation and maintenance and decommissioning phases. The impacts seaward of MLWS are considered in **Volume A2, Chapter 11: Seascape and Visual Resources**.

4.1.1.3 This chapter presents the landscape and visual impact assessment (LVIA), which considers the potential effects of Hornsea Four on:

- The landscape as a resource – as a result of changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape; and
- Views and visual amenity as experienced by people – as a result of changes in the appearance of the landscape.

4.1.1.4 This chapter is supported by representative visualisations, which are included in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

4.2 Purpose

4.2.1.1 The primary purpose of the ES is to support the Development Consent Order (DCO) application for Hornsea Four under the Planning Act 2008 (the 2008 Act). This ES constitutes the environmental information for Hornsea Four and sets out the findings of the Environmental Impact Assessment (EIA).

4.2.1.2 The ES has been finalised with due consideration of pre-application consultation to date (see **Volume B1, Chapter 1: Consultation Report** and **Table 4.4**) and the ES will accompany the application to the Planning Inspectorate (PINS) for Development Consent.

4.2.1.3 This ES chapter:

- Presents the existing environmental baseline established from desk studies, a field survey, and consultation;

- Presents the potential environmental effects on landscape and visual amenity arising from the onshore elements of Hornsea Four, based on the information gathered and the analysis and assessments undertaken to date;
- Identifies any assumptions and limitations encountered in compiling the environmental information; and
- Highlights any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce or offset the possible environmental effects identified in the EIA process.

4.3 Planning and Policy Context

4.3.1.1 Planning policy on offshore renewable energy Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to landscape and visual, is contained in the Overarching National Policy Statement (NPS) for Energy (EN-1; DECC 2011a).

4.3.1.2 NPS EN-1 includes guidance on what matters are to be considered in the assessment. These are summarised in **Table 4.1**.

4.3.1.3 The UK planning and policy context for Hornsea Four is set out in **Volume A1, Chapter 2: Planning and Policy Context**.

Table 4.1: Summary of NPS EN-1 provisions relevant to LVIA.

Summary of NPS EN-1 provisions	How and where considered in the ES
"Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity" (EN-1, paragraph 2.4.2).	**Volume F2, Chapter 13: Outline Design Plan** provides the outline approach to embedded design mitigation for the OnSS and EBI, which will be used to inform the detailed design of the OnSS. The design 'vision' is set out in **Volume A4, Annex 4.6: Design Vision Statement** and provides a visual representation of how project mitigation and further enhancement and net gain may interact.
"The Applicant's landscape and visual assessment should include reference to any landscape character impacts relevant to the proposed project. Relevant policies in local development plans should also be considered" (NPS EN-1, paragraph 5.9.5).	Landscape character impacts are considered in **Section 4.11**. Local development plan policies relating to landscape designation are discussed in **Section 4.7.2**.
"The Applicant's assessment should include the likely effects on landscape components and landscape character during construction and operation" (NPS EN-1, paragraph 5.9.6).	Potential effects that are considered in detail in this LVIA are set out in **Table 4.12**. Effects on landscape components and landscape character during construction and operation are assessed in **Section 4.11**. Potential effects assessed in the Preliminary Environmental Information Report (PEIR) (Orsted, 2019b) but not considered in detail in this ES, potential effects not assessed in the PEIR and not considered

Summary of NPS EN-1 provisions	How and where considered in the ES
	further in the EIA, and potential effects scoped out of assessment are provided in the Landscape and Visual section of **Volume A4, Annex 5.1: Impacts Register**.
"The assessment should report on the visibility and conspicuousness of the project at construction as well as the operational effects on views and visual amenity. This should include effects of light pollution on local amenity and nature conservation" (NPS EN-1, paragraph 5.9.7).	Effects on visual amenity and views during construction and operation are assessed in **Section 4.11**. This includes consideration of the effects of light pollution on visual amenity. Potential effects assessed in the PEIR (Orsted, 2019b) but not considered further this ES, potential effects not assessed in the PEIR and not considered further in the EIA, and potential effects scoped out of assessment are provided in the Landscape and Visual section of **Volume A4, Annex 5.1: Impacts Register**. Effects of lighting on nature conservation interests are considered in **Chapter 3: Ecology and Nature Conservation**.
"The existing character of the local landscape, its quality, its value and its capacity to accommodate change should all be considered in judging the impact of a project on landscape" (NPS EN-1, paragraph 5.9.8).	The existing character of the local landscape is discussed in **Section 4.7**. The value and sensitivity to change of the local landscape is considered in **Section 4.10**. Effects on landscape character (LV-C-4 and LV-O-5) are assessed in **Section 4.11** with reference to the susceptibility of the landscape to the change proposed, and the value placed on the landscape, in accordance with good practice guidance (Landscape Institute and Institute of Environmental Management and Assessment, 2013).
NPS EN-1, Paragraphs 5.9.9 to 5.9.11 provide advice in relation to applications affecting nationally designated landscapes (National Parks and Areas of Outstanding Natural Beauty).	There are no nationally designated areas within the Hornsea Four landscape and visual study area, as set out in **paragraph 4.7.2.1**.
"The fact that a proposed project will be visible from within a nationally designated area should not in itself be a reason for refusing consent" (NPS EN-1, paragraph 5.9.13).	There are no nationally designated areas within the Hornsea Four landscape and visual study area, as set out in **paragraph 4.7.2.1**.
"Local landscape designations should not be used in themselves to refuse consent. Attention should be given to local planning policies based on landscape character assessment" (NPS EN-1, paragraph 5.9.14).	Local landscape designations are introduced at **Section 4.7.2**, and are considered in the assessment of effects in **Section 4.11** (LV-C-4 and LV-O-5).
"The IPC [hereafter Secretary of State (SoS)] *should consider the overall balance of any adverse effects and whether any adverse impact on the landscape would be so damaging that is not offset by the*	The predicted adverse effects of Hornsea Four are clearly set out in **Section 4.11** to inform the decision-making process. Potential effects assessed in the PEIR (Orsted, 2019b) but not considered further this ES, potential effects not assessed in the PEIR and not

Summary of NPS EN-1 provisions	How and where considered in the ES
benefits (including need) of the project" (NPS EN-1, paragraph 5.9.15).	considered further in the EIA, and potential effects scoped out of assessment are provided in the Landscape and Visual section of **Volume A4, Annex 5.1: Impacts Register**.
"The SoS should consider the duration and reversibility of any adverse effects and whether any adverse impact on the landscape will be capable of being reversed in a timescale that the SoS considers reasonable" (NPS EN-1, paragraph 5.9.16).	The duration and reversibility of all effects is considered as part of the impact assessment in **Section 4.11**, as prescribed by the methodology set out in **Section 4.10**.
"The SoS should consider the design mitigation of the project and whether this has sought to minimise harm to the landscape" (NPS EN-1, paragraph 5.9.17).	Proposed mitigation for the project is set out in relation to commitments made (see **Table 4.11**), and further mitigation has been identified where appropriate in the assessment in **Section 4.11**. **Volume F2, Chapter 13: Outline Design Plan** provides the outline approach to embedded design mitigation for the OnSS and EBI, which will be used to inform the detailed design of the OnSS. The design 'vision' is set out in **Volume A4, Annex 4.6: Design Vision Statement**, and provides a visual representation of how project mitigation and further enhancement and net gain may interact.
"The SoS should consider whether the visual effects on sensitive receptors outweigh the benefits of the project" (NPS EN-1, paragraph 5.9.181)	The predicted adverse effects of Hornsea Four are clearly set out in **Section 4.11** (LV-C-4 and LV-O-5) to inform the decision-making process.
"The SoS should consider the benefits of the landscape and visual mitigation against the functionality of the project" (NPS EN-1, paragraph 5.9.21).	Proposed mitigation for the project is set out in relation to commitments made (see **Table 4.11**), and further mitigation has been identified where appropriate in the assessment in Section **4.11**. Key elements of embedded mitigation for the OnSS and EBI are set out in **Volume F2, Chapter 13: Outline Design Plan**.
"Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design including colours and materials, and landscaping schemes" (NPS EN-1, paragraph 5.9.22).	Proposed mitigation for the project is set out in relation to commitments made (see **Table 4.11**), and further mitigation has been identified where appropriate in the assessment in **Section 4.11**. **Volume F2, Chapter 13: Outline Design Plan** provides the outline approach to embedded design mitigation for the OnSS and EBI, which will be used to inform the detailed design of the OnSS. The design 'vision' is set out in **Volume A4, Annex 4.6: Design Vision Statement**, and provides a visual representation of how project mitigation and further enhancement and net gain may interact.

Summary of NPS EN-1 provisions	How and where considered in the ES
"Depending on the surrounding topography and nearby receptors, it may be appropriate to provide landscape mitigation off site" (NPS EN-1, paragraph 5.9.23).	The proposed mitigation (i.e. embedded commitments) for Hornsea Four is detailed in **Table 4.11**. **Paragraph 4.11.2.13** and **Volume F2, Chapter 8: Outline Landscape Management Plan**, set out further mitigation that has been identified as a result of the assessment at the OnSS, in the form of woodland and hedge planting within the Hornsea Four Order Limits to help screen or filter views and integrate the OnSS in to the landscape (Co30, secured by Requirement 8 of the DCO). Low-level earth mounding is also identified to assist with reducing impacts further. Following the incorporation of these, no off-site mitigation has been identified that would further reduce residual effects at any location resulting in a lower level of significance.

4.3.1.4 The National Policy Statement for Renewable Energy Infrastructure (NPS EN-3; DECC 2011b) and National Policy Statement for Electricity Networks Infrastructure (NPS EN-5; DECC 2011b) are also relevant and the high-level principles of these documents have been referred to in so far as they relate to landscape and visual effects. These are summarised in **Table 4.2**.

Table 4.2: Summary of NPS EN-3 and EN-5 provisions relevant to LVIA.

Summary of NPS EN-3 and EN-5 provisions	How and where considered in the ES
"Where the Applicant has identified a precise route for the cable from the wind farm to a precise location for the onshore substation and connection to the transmission network, the EIA should assess the effects of the cable". (NPS EN-3, paragraph 2.6.37).	The landscape and visual effects of the onshore export cable corridor (ECC) during construction were assessed in the PEIR (Orsted, 2019b) (LV-C-1) but not considered further this ES. Impacts during operation were scoped out (LV-O-3) or not considered in detail in the EIA (LV-O-2), see **Volume A4, Annex 5.1: Impacts Register**.
"New substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts." (NPS EN-5, paragraph 2.8.2).	The landscape and visual effects of the OnSS are assessed in **Section 4.11** (LV-C-4 and LV-O-5).

4.3.1.5 The National Planning Policy Framework (NPPF, Ministry of Housing, Communities and Local Government 2019) states that "*Planning policies and decisions should contribute to and enhance the natural and local environment*" by, amongst other things, "*protecting and enhancing valued landscapes [...] (in a manner commensurate with their statutory status or identified quality in the development plan*". Landscape value is discussed in **Section 4.10**. The provisions of the development plan in relation to landscape are discussed below.

4.3.1.6 The East Riding of Yorkshire Local Plan 2012-2029: Strategy Document (East Riding of Yorkshire Council (ERYC) 2016) sets out the overall strategic direction for the Local Plan and provides strategic policies to guide decisions on planning applications.

4.3.1.7 The policy relevant to this chapter is *Policy ENV2: Promoting a high-quality landscape* which is summarised in **Table 4.3**.

Table 4.3: Summary of East Riding of Yorkshire Local Plan Strategy Document relevant to LVIA.

Summary of Policy ENV2 provisions	How and where considered in the ES
"Development proposals should be sensitively integrated into the existing landscape, demonstrate an understanding of the intrinsic qualities of the landscape setting and, where possible, seek to make the most of the opportunities to protect and enhance landscape characteristics and features. To achieve this, development should [inter alia]: • *protect and enhance views across valued landscape features including flood meadows, chalk grassland, lowland heath, mudflats and salt marsh, sand dunes and chalk cliffs.* • *protect and enhance the undeveloped coast* *Proposals should protect and enhance existing landscape character in the East Riding Landscape Character Assessment, in particular, within the following Important Landscape Areas:* *I. The Yorkshire Wolds.* *II. The Heritage Coast designations at Flamborough and Spurn Head.* *III. The Lower Derwent Valley.* *IV. The Thorne, Crowle and Goole Moors."*	The existing character of the local landscape is discussed in **Section 4.7**. The value and capacity of the local landscape to accommodate change is considered in **Section 4.10**. Effects on landscape character are assessed in **Section 4.11** (LV-C-4 and LV-O-5) with reference to the susceptibility of the landscape to the change proposed, and the value placed on the landscape, in accordance with good practice guidance (Landscape Institute and Institute of Environmental Management and Assessment, 2013). Protection of landscape features across the site will be sought wherever possible (Co27), as set out in **Volume F2, Chapter 8: Outline Landscape Management Plan**, and enhancement measures are set out in **Volume F2, Chapter 14: Outline Enhancement Strategy**. In relation the Important Landscape Areas (ILA), only the Yorkshire Wolds is within the onshore Hornsea Four landscape and visual study area. The presence of this designation is taken in to account in the assessments presented in **Section 4.11** (LV-C-4 and LV-O-5). Effects of the onshore ECC on the ILA were assessed in the PEIR (Orsted 2019b) but not considered further in this ES, see **Volume A4, Annex 5.1: Impacts Register**. The Yorkshire Wolds ILA was considered during the route planning and site selection process for the OnSS and EBI site to minimise the potential for significant effects (as detailed in **Volume A4, Annex 3.3: Selection and Refinement of Onshore Infrastructure**).

4.4 Consultation

4.4.1.1 Consultation is a key part of the DCO application process. Consultation regarding the LVIA has been conducted through the EIA scoping process (Orsted 2018), formal consultation on the Preliminary Environmental Impact Report (PEIR) under section 42 of the 2008 Act (Orsted 2019b), and the Landscape and Visual Impact Assessment (LVIA) Position Paper (Orsted 2019a). An overview of the project consultation process is presented within **Volume A1, Chapter 6: Consultation**. Agreements made with consultees within the Evidence Plan process are set out in the topic specific Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**Volume B1, Annex 1.1: Evidence Plan**), an annex of the Hornsea Four Consultation Report (**Volume B1, Chapter 1: Consultation Report**). All agreements within the Evidence Plan Logs have unique identifier codes which have been used throughout this document to signpost to the specific agreements made (e.g. ON-HUM-1.1).

4.4.1.2 A summary of the key issues raised to date during consultation specific to LVIA is outlined below in **Table 4.4**, together with how these issues have been considered in the production of this ES.

Table 4.4: Consultation Responses.

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
Planning Inspectorate (PINS)	November 2018 Scoping Opinion, 4.16.1 (PINS 2018)	No parameters have been presented in the Scoping Report for the booster substation location and design. This reduces confidence that significant effects will be avoided.	The parameters of the booster substation (offshore HVAC) are presented in **Volume A1, Chapter 4: Project Description**. Effects of the booster station are considered in **Volume A2, Chapter 11: Seascape and Visual Resources**.
PINS	November 2018 Scoping Opinion 4.16.2 (PINS 2018)	In the absence of information on the extent and nature of landscape features affected by construction of the Proposed Development, and the uncertainty regarding the mitigation measures, the Inspectorate considers that significant long-term effects could arise as a result of operation of the landfall and ECC.	Refer to **Section 4.8** for further justification in relation to why these effects were not considered in detail in the ES. Potential effects assessed in the PEIR (Orsted, 2019b) but not considered further this ES, potential effects not assessed in the PEIR and not considered further in the EIA, and potential effects scoped out of assessment are provided in the Landscape and Visual section of **Volume A4, Annex 5.1: Impacts Register**.
PINS	November 2018 Scoping Opinion 4.16.4 (PINS 2018)	It is not clear from the information in the Scoping Report how decommissioning works will avoid	Refer to **Section 4.8** for further justification in relation to why these effects were not considered in detail in

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		significant effects. A definition of 'short duration' is not provided.	the ES. Potential effects assessed in the PEIR (Orsted, 2019b) but not considered further this ES, potential effects not assessed in the PEIR and not considered further in the EIA, and potential effects scoped out of assessment are provided in the Landscape and Visual section of **Volume A4, Annex 5.1: Impacts Register**.
PINS	November 2018 Scoping Opinion 4.16.5 (PINS 2018)	Appropriate cross-reference to the Seascape and Visual assessment should be made in order for a full assessment of effects on the Flamborough Headland Heritage Coast to be made.	The Heritage Coast is outside the onshore Hornsea Four landscape and visual study area. Effects of the offshore infrastructure on the Heritage Coast are considered in **Volume A2, Chapter 11: Seascape and Visual Resources**, and the Seascape and Visual Resources section of **Volume A4, Annex 5.1: Impacts Register**.
ERYC	January 2019 Scoping Response	The local landscape designation most affected would be the Yorkshire Wolds. The Flamborough Head Heritage Coast is an important consideration in terms of views offshore and to scope out the potential impact should be demonstrated by suitable visualisations.	The Yorkshire Wolds ILA is discussed at **Section 4.7.2** and considered in the assessment. Effects of the offshore infrastructure on the Heritage Coast are considered in **Volume A2, Chapter 11: Seascape and Visual Resources**, the Seascape and Visual Resources section of **Volume A4, Annex 5.1: Impacts Register** and **Volume F2, Annex 2.17: HVAC Booster Station Lighting Plan**.
ERYC	January 2019 Scoping Response	Viewpoints should be agreed in advance with the Council once the location of the substation area is known.	Proposed viewpoints were set out in the LVIA Position Paper (Orsted, 2019a), which was sent to Historic England, Natural England, ERYC and Hull City Council (HCC) in March 2019 for comment prior to the submission of the PEIR. These were agreed by all stakeholders via email correspondence (ON-HUM-1.14).
ERYC	January 2019 Scoping Response	Public right of ways cross the area which increases the visual impact. Drivers and user of the railway	These features are discussed in the baseline (**Section 4.7**) and considered in the impact assessment (**Section**

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		should also be considered. In terms of heritage assets, views of the Grade I Listed Beverley Minster and between St Mary's Church in Cottingham are very important.	4.11, LV-C-4 and LV-O-5). The Minster tower and St Mary's Church are included as representative viewpoints (see Table 4.9). Views of Beverley Minster from the A1079 will not be obstructed by the siting of the OnSS (Co145). Furthermore, no above ground infrastructure associated with Hornsea Four will obstruct the view from St Mary's Church Cottingham to Beverley Minister (Co151).
ERYC	12 April 2019, email response to LVIA Position Paper	The decision to separate the SLVIA and LVIA appears to make sense, and the rationale for doing so is reasonable	Noted. This has been used to inform the scope of the LVIA, as set out in this chapter of the ES.
		Approved of use of GLVIA3 and updated East Riding of Yorkshire Landscape Character Assessment.	
		The study areas proposed for both the cable corridor (2 km) and the substation (5 km) appear to be suitable.	
		Proposed viewpoint locations appear to be from a suitable geographic spread, and from a broad range of aspects and distances. They also, based on the outline descriptions provided, appear to cover locations that are representative, specific and illustrative, as recommended in GLVIA3.	
ERYC	23 September 2019, Section 42 Consultation	The draft PEIR provides sufficient and satisfactory information to allow the Examining Authority to make an appropriate decision.	Noted. This has been used to further inform the LVIA, as set out in this chapter of the ES.

4.5 Study Area

4.5.1 Location and extent

4.5.1.1 The Hornsea Four onshore ECC lies wholly within the East Riding of Yorkshire and runs between the landfall area on the Holderness coast, to the proposed OnSS, to be located between Cottingham and Beverley.

4.5.1.2 The Hornsea Four landscape and visual study area for the LVIA is shown on **Figure 4.1** and is defined as follows:

- A 5 km radius around the refined OnSS; and
- A 2 km buffer either side of the onshore ECC, all temporary logistics compounds and temporary access tracks, landfall area and 400 kV National Grid Electricity Transmission (NGET) connection area.

4.5.1.3 The extent of the Hornsea Four landscape and visual study area has been informed by a field survey which was undertaken on 19 July 2018 by a Chartered Landscape Architect. Observations were made from roads and public rights of way (PRoW) to inform the appraisal of the likely landscape and visual effects. To confirm that the Hornsea Four landscape and visual study area is appropriate, more distant areas shown on an indicative Zone of Theoretical Visibility (ZTV) of the OnSS, (**Figure 4.2**) were also visited. Beyond 5 km it is considered that, due to distance and intervening landscape elements, there would be limited visibility of the Hornsea Four OnSS during construction, operation and maintenance, and decommissioning, and therefore significant landscape and visual effects would be unlikely beyond this distance.

4.5.1.4 The Hornsea Four landscape and visual study area for the cumulative effects assessment (CEA) (see **Section 4.12**) was defined as a 5 km radius from the OnSS. It was judged that, due to the flat and settled nature of the landscape, any developments beyond this distance would not visually interact with the OnSS to such an extent that significant landscape or visual effects would arise. No CEA was undertaken for the onshore ECC or landfall, as these are short term temporary works and therefore have no potential for cumulative impacts. The CEA considers the cumulative effects of other planned projects within 5 km of the OnSS during operation and construction.

4.5.1.5 For the purposes of the assessment, the Hornsea Four landscape and visual study area has been divided into five subareas (**Figure 4.1**), based on underlying landscape character, as follows:

- Subarea 1: Landfall area – focusing on the landscape between the coastal edge and the A165. This area east of the A165 is defined by a strong coastal influence;
- Subarea 2: A165 to Rotsea Lane – the flat open farmland plain between the coastal landscape and the more sloping farmland to the west;
- Subarea 3: Rotsea Lane to Leconfield – across the slightly more undulating farmland that rises up towards the Yorkshire Wolds;

- Subarea 4: Leconfield to the OnSS and the 400 kV NGET connection area – including the section of the onshore ECC that passes through the fringes of the Wolds landscape up to the OnSS, and the 400 kV NGET connection area to the east of the OnSS to the NGET substation; and
- Subarea 5: OnSS – focusing on the proposed OnSS site between Cottingham and the A1079, as well as the 5 km buffer around the OnSS, which makes up part of the Hornsea Four landscape and visual study area.

4.5.1.6 Subareas 1-4 are based on the 2 km radius around the landfall and onshore ECC, while subarea 5 comprises the 5 km radius around the OnSS. For this reason, subareas 4 and 5 overlap. The subareas are indicated on **Figure 4.1** and are further described in **Section 4.7.3**.

4.5.2 Changes since PEIR

4.5.2.1 As identified in **Volume A1, Chapter 3: Site Selection and Consideration of Alternatives** and **Volume A1, Chapter 4: Project Description**, the Hornsea Four design envelope has been refined significantly leading up to the DCO submission. This process has been informed by and responded to Section 42 and 47 stakeholder consultation feedback.

4.5.2.2 Design amendments since PEIR of relevance to Landscape and Visual Resources comprise:

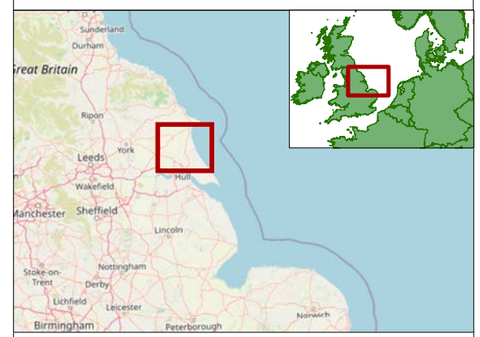
- **OnSS Operational Access**: the access off the A1079 will be created for construction access and will be retained as a permanent operational access, and no access (temporary or permanent) will be required from the south. The operational access is fully described in **Volume A1, Chapter 4: Project Description**, and can be found on Sheet 28 of **Volume D1, Annex 4.2: Works Plan - Onshore**.
- **OnSS Design**: The design of the Hornsea Four OnSS mitigation (inclusive of measures set out in **Volume F2, Chapter 13: Outline Design Plan** and **Figure 4.8**) has further evolved based on the results of the PEIR assessments (Orsted 2019b). Proposed mitigation is shown in **Figure 4.8**.
- **Landfall construction**: The offshore export cables will be brought ashore using a trenchless technique (refer to Commitment (Co) 187), thereby avoiding any requirement for disturbance or closure to the beach area. The approach to landfall construction is fully described in **Volume A1, Chapter 4: Project Description**.

Hornsea Four

Figure 4.1

Landscape and Visual Study Area

- Order Limits
- Study Area
- Sub area 1
- Sub area 2
- Sub area 3
- Sub area 4
- Sub area 5



Coordinate system: British National Grid

Scale@A3: 1:150,000

0 2 4 8 Kilometres

0 1 2 4 Miles

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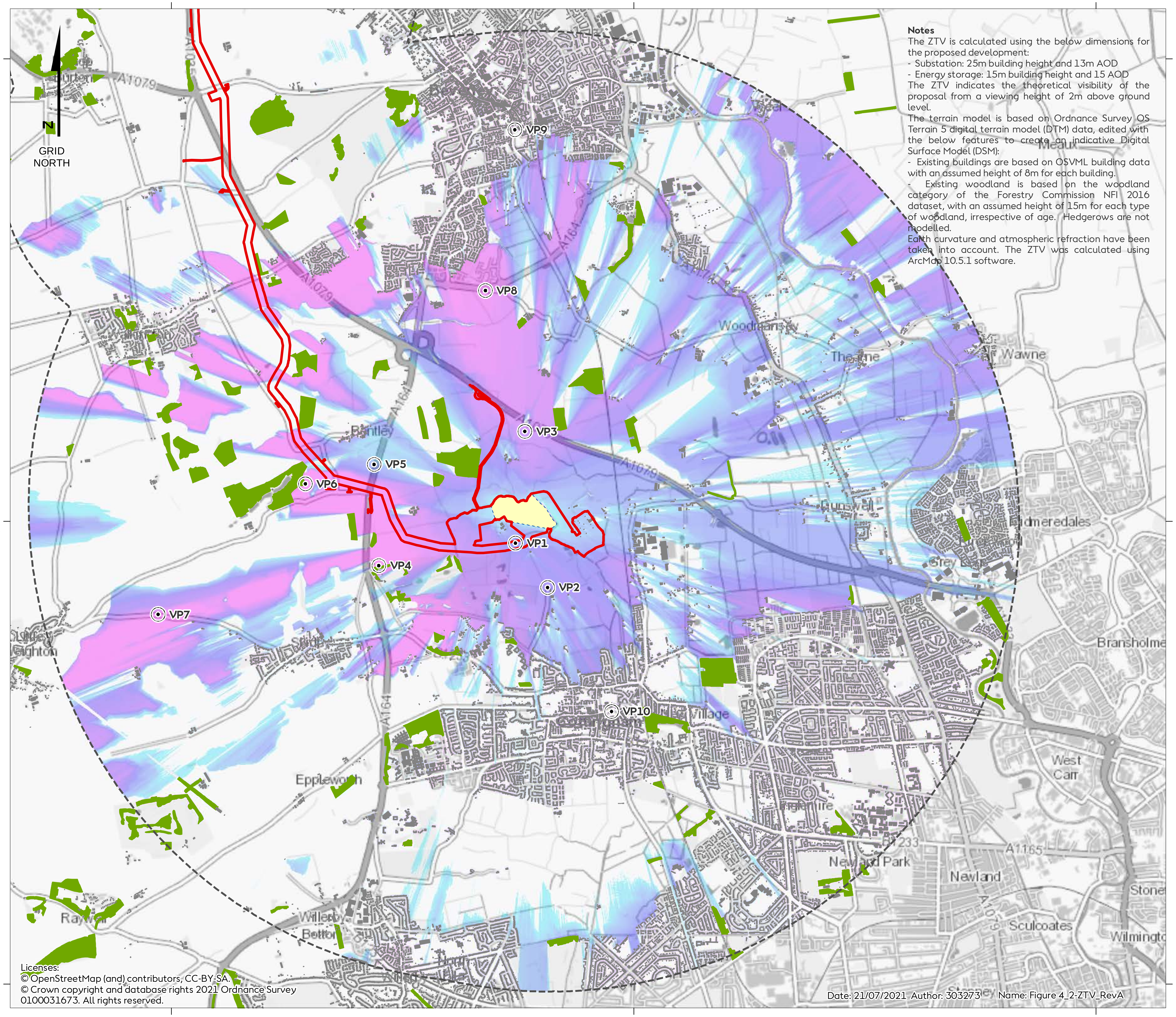
Date: 20/07/2021 Author: 303273 Name: Figure 4_1-Study Area_RevA



Notes

The ZTV is calculated using the below dimensions for the proposed development:
- Substation: 25m building height and 13m AOD
- Energy storage: 15m building height and 15 AOD

The ZTV indicates the theoretical visibility of the proposal from a viewing height of 2m above ground level.

The terrain model is based on Ordnance Survey OS Terrain 5 digital terrain model (DTM) data, edited with the below features to create an indicative Digital Surface Model (DSM):
- Existing buildings are based on OSVML building data with an assumed height of 8m for each building.
- Existing woodland is based on the woodland category of the Forestry Commission NFI 2016 dataset, with an assumed height of 15m for each type of woodland, irrespective of age. Hedgerows are not modelled.

Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcMap 10.5.1 software.

Hornsea Four

Figure 4.2

OnSS Zone of Theoretical Visibility

- Order Limits
- Study Area
- Onshore Substation (Permanent Space)
- Viewpoint location

VP1: PRoW south of Burn Park Farm
VP2: Park Lane, Cottingham
VP3: Footbridge over A1079
VP4: PRoW east of A164
VP5: A164 layby near Bentley
VP6: Fishpond Wood, Risby Hall
VP7: Little Weighton Road
VP8: Minster Way
VP9: Beverley Minster Tower
VP10: St Mary's Church, Cottingham

- Screening by Existing Buildings
- Screening by Existing Woodland

Theoretical visibility of the development

- Higher proportion of the development visible
- Lower proportion of the development visible

Coordinate system: British National Grid
Scale@A3: 1:40,000
0 0.5 1 2 Kilometres
0 0.25 0.5 1 Miles

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4.6 Methodology to inform baseline

4.6.1.1 This section describes the stages that have been followed during the preparation of the baseline. This is in accordance with the approach as set out in the Scoping Report (Orsted 2018).

4.6.2 Desktop Study

4.6.2.1 A desk study was undertaken to obtain information on landscape and visual interest. Data were acquired within the Hornsea Four landscape and visual study area through a detailed desktop review of existing studies and datasets, as set out in Table 4.5.

Table 4.5: Key Sources of Landscape and Visual Data.

Source	Summary	Coverage of Hornsea Four landscape and visual study area
Ordnance Survey	Ordnance Survey mapping, indicating distinct patterns of landscape elements or features. Also informed the locations of potential visual receptors including settlements, residential properties, national trails, PRoWs and tourist and recreational sites.	2 km radius from the onshore ECC and 5 km from the OnSS.
Aerial photography	Aerial photography indicating distinct patterns of landscape elements or features. Also informed the locations of potential visual receptors including settlements and residential properties.	2 km radius from the onshore ECC and 5 km from the OnSS.
Natural England	National Landscape Character Area profiles (Natural England, 2012 and 2013). National level landscape designations designated by Natural England (National Parks and Areas of Outstanding Natural Beauty) neither of which are present in the Hornsea Four landscape and visual study area.	2 km radius from the onshore ECC and 5 km from the OnSS.
ERYC	East Riding of Yorkshire Landscape Character Assessment 2018 (Aecom, 2018) which classifies and describes the landscape. East Riding Local Plan 2012-2029: Policy ENV2 and the local level landscape designations, including ILA. Public Rights of Way was also obtained from ERYC records	2 km radius from the onshore ECC and 5 km from the OnSS.
Dogger Bank Creyke Beck Environmental Statement (Forewind, 2013)	Reference was made to the Dogger Bank Creyke Beck Environmental Statement (Forewind, 2013), in particular the LVIA chapter, since the study area for the converter station within that project was similar to the Hornsea Four landscape and visual OnSS study area. This allowed a cross-check of landscape and visual receptors which had previously been examined as part of a consented scheme.	Approximately 5 km from the OnSS.

4.6.2.2 Computer generated indicative ZTV maps were generated for the OnSS, assuming a maximum height of 25 m above ground level for the OnSS and 15 m for the EBI. Buildings and woodland have been added indicatively to the digital terrain model to give an

impression of the likely screening of views, though not all screening is identified, and the ZTV does not consider smaller structures, individual trees or hedges. The ZTV was used to identify potential receptors within the Hornsea Four landscape and visual study area and is shown in Figure 4.2.

4.6.3 Site Specific Surveys

4.6.3.1 To inform the EIA, site-specific surveys were undertaken in both winter (December 2018) and spring (April 2019). The latter survey included visits to the viewpoints that were agreed with relevant stakeholders as detailed in Table 4.4. Winter represents the maximum design scenario with minimal screening by vegetation and deciduous trees. A further winter site visit was undertaken in January 2020 to confirm the assessment and revisit the agreed viewpoints as visited in April 2019. A summary of all survey data, i.e. photography, completed to date is outlined in Table 4.6.

Table 4.6: Summary of site-specific survey data.

Title, year and reference	Summary	Locations
Hornsea Four summer Viewpoint Photography, April 2019 Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages	Verified photography from ten viewpoint locations was taken in accordance with Landscape Institute's Advice Note 01/11 (Landscape Institute, 2011) on photography and photomontages in LVIA as well as the consultation draft Technical Guidance Note 06/18 of the same name (Landscape Institute, 2018).	10 locations within Hornsea Four landscape and visual OnSS 5 km study area around the OnSS.
Hornsea Four winter Viewpoint Photography, January 2020	Additional photography from the ten viewpoint locations was taken to confirm the assessment undertaken on the original photography acquired in April 2019. This was undertaken in accordance with Landscape Institute's Technical Guidance Note 06/19 (Landscape Institute, 2019b) on Visual Representation of Development Proposals.	10 locations within Hornsea Four landscape and visual OnSS 5 km study area around the OnSS.

4.6.4 Recording and Evaluating the Existing Environment

4.6.4.1 In this chapter, the landscape assessment has been distinguished from the visual assessment. Landscape resources and character are considered to be of importance in their own right and are valued for their intrinsic qualities regardless of whether they are seen by people. Effects on views and visual amenity as perceived by people are clearly distinguished from, although closely linked to and are a consequence of, effects on landscape. The landscape and visual assessments are therefore separate, but linked, processes.

4.6.4.2 The baseline description is therefore set out using the following structure.

Landscape

4.6.4.3 The Guidelines for Landscape and Visual Impact Assessment (GLVIA3; Landscape Institute and Institute of Environmental Management and Assessment 2013) advise that in order to reach an understanding of the effects of development, it is necessary to consider different aspects of the landscape i.e. the individual elements or features that make up the landscape, as well as its wider character, and the characteristics which contribute to this. This assessment therefore considers effects upon:

- Designated landscapes – areas designated for their landscape quality or value at the national, regional or local level, e.g. National Parks, Areas of Outstanding Natural Beauty (AONBs), Heritage Coasts and areas of local landscape value (which may have varying names); and
- Landscape character – the distinct and recognisable pattern of elements (for example associations of field patterns) that occur consistently in a particular type of landscape and create a particular sense of place.

Visual

4.6.4.4 The visual baseline is described in terms of views from representative viewpoints as well as views available to other sensitive visual receptors within the Hornsea Four landscape and visual study area. A viewpoint will typically represent an area over which a broadly similar perspective of the development site is obtained. The sensitivity of the viewers at a particular viewpoint depends upon the activity of the viewers and the extent to which they are affected by changes in their view.

4.6.4.5 Representative viewpoints form the basis of the assessment of effects on views, in line with GLVIA3. Viewpoints within the Hornsea Four landscape and visual study area were selected through desk study, field work and agreed in consultation with stakeholders (see **Table 4.4**). The viewpoints were selected because they:

- Are publicly accessible;
- Represent views likely to be experienced by the highest-sensitivity receptors and/or those with the clearest views towards the site;
- Provide a representative range of viewing distances, from local views within 1 km of the OnSS, out to longer distance views from closer to the edge of the Hornsea Four landscape and visual OnSS 5 km study area;
- Represent a range of viewing experience (i.e. static views, from residential properties and points from sequential views, for example from roads and footpaths); and
- Have a reasonably high potential number of viewers or are in an area of particular importance to the viewers affected.

4.7 Baseline environment

4.7.1 Existing baseline

4.7.1.1 The existing baseline environment of the Hornsea Four landscape and visual study area is described in terms of:

- Designated areas;
- Landscape character; and
- Visual receptors.

4.7.2 Designated areas

4.7.2.1 Nationally valued landscapes are recognised by designation, which may have a formal statutory basis that varies in different parts of the UK. In England, National Parks and AONBs have the highest status of protection to landscape and scenic beauty. There are no National Parks or AONBs within the Hornsea Four landscape and visual study area. The Flamborough Headland Heritage Coast lies approximately 6 km to the north of the landfall zone. This lies outside the Hornsea Four landscape and visual study area and has not been considered in detail in the onshore LVIA, as agreed with stakeholders. However, see **Volume A2, Chapter 11: Seascape and Visual Resources** for consideration of effects of offshore infrastructure on the Heritage Coast.

4.7.2.2 Local authorities also identify locally valued landscapes and recognise them through local designations of various types. As with national designations, the criteria that underpin them vary and so it is important to consider the relevant reasons for the designation.

4.7.2.3 The south-western extent of the Hornsea Four landscape and visual study area includes a small part of the Yorkshire Wolds ILA (see **Figure 4.3**) as defined by Policy ENV2 of the East Riding Local Plan 2012-2029 ('the Local Plan'; ERYC, 2016). Policy ENV2 of the Local Plan states that development within this local designation is required to not have a detrimental effect on the character, appearance or conservation value of the landscape (ERYC 2016).

4.7.2.4 The extent of each ILA is based on the East Riding of Yorkshire Landscape Character Assessment (Aecom 2018), and their boundaries generally coincide with the respective character areas, subject to a detailed boundary review that was undertaken in 2013 (Golder Associates 2013).

4.7.2.5 The Local Plan notes that within the Yorkshire Wolds ILA the landscape illustrates "*varying degrees of quality*" (ERYC 2016), with the areas "*on the western scarp slope and around Sledmere*" (ERYC 2016) (over 10 km from the Hornsea Four landscape and visual study area) being of the highest quality. The Local Plan states that development within the ILA "*should seek to retain the varied landform including but not limited to*:

- The contrasting and varying levels of enclosure and exposure, isolation, and tranquillity;

- Diversity of the landscape;
- Distinctive features and views;
- Field patterns;
- Villages and their distinctive character and setting;
- The historic importance of the Great Wolds Valley; and
- Signs of past human activity" (ERYC 2016).

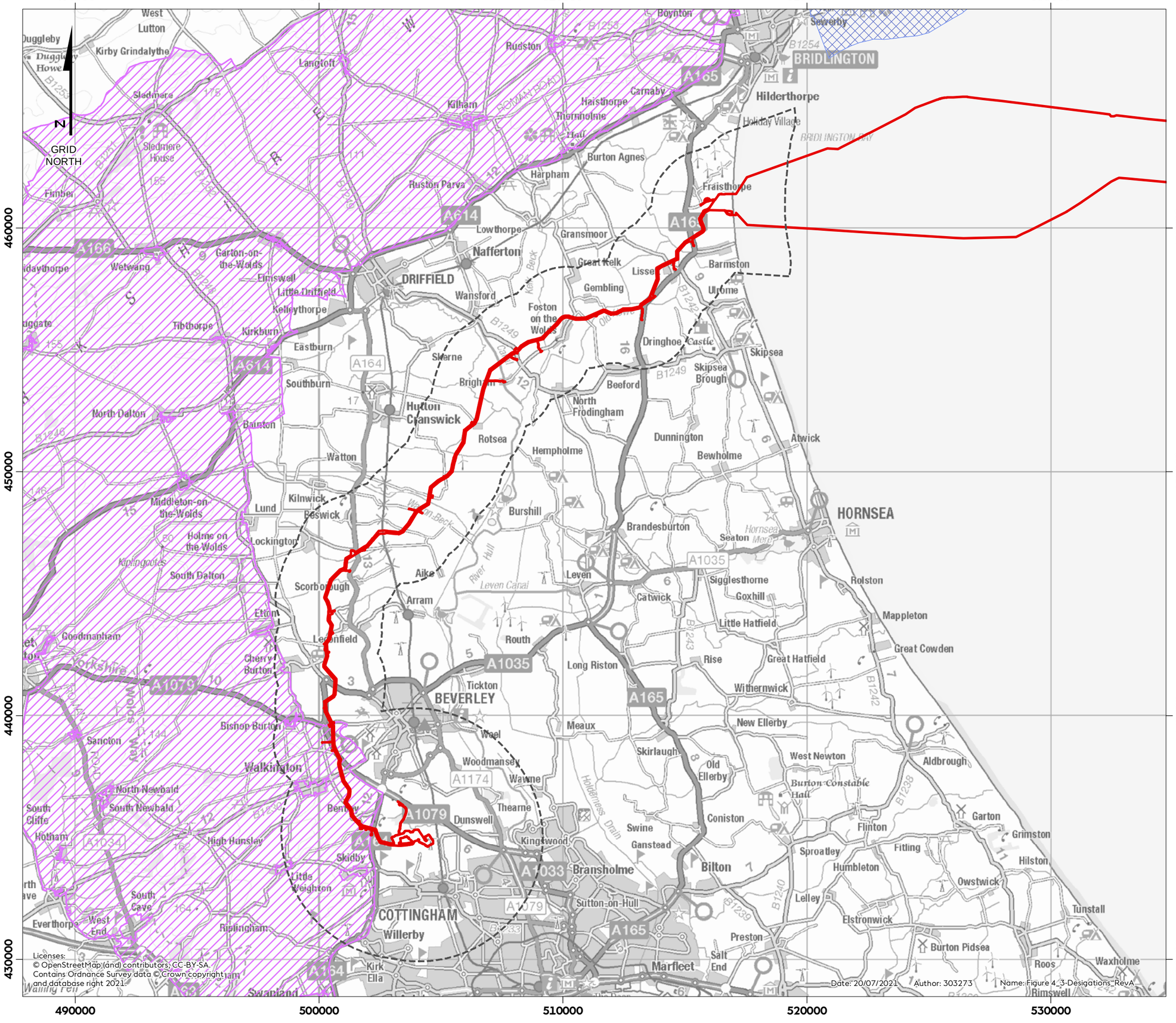
4.7.2.6 Landscape designations are illustrated on **Figure 4.3**.

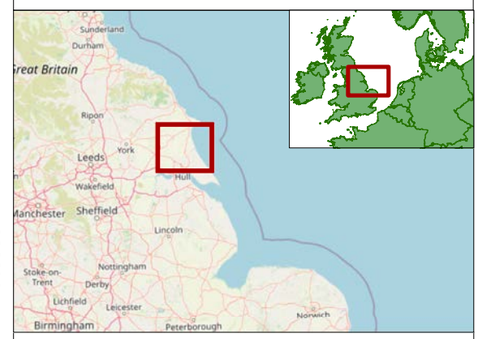
Hornsea Four

Figure 4.3

Landscape Designations

- Order Limits
- Study Area
- Important Landscape Area
- Heritage Coast





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4.7.3 Landscape character

4.7.3.1 This section provides a description of the landscape character across the Hornsea Four landscape and visual study area, drawing on published studies at the national and local level. National and local landscape classifications are presented on **Figure 4.4**.

National character

4.7.3.2 At a national level, the landscapes of England are divided into National Character Areas (NCAs), identified by Natural England. Each NCA is a distinct natural area, defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. The majority of the Hornsea Four landscape and visual study area lies within NCA 40: Holderness (Natural England 2013). According to the published NCA Profile (Natural England 2013), this area comprises a broad, low-lying plain with little relief, bounded by the curving chalk escarpment of the Yorkshire Wolds and Flamborough Head to the west and north respectively. The ridge of the Wolds provides some elevation in contrast to the flat boulder clay plain. To the east, the North Sea erodes the soft boulder clay cliffs at a significant rate. The River Hull flows southwards through Holderness, along a wide, shallow valley, reaching the sea via the Humber Estuary.

4.7.3.3 The NCA Profile also states that the fertile floodplain of the River Hull is important for agriculture, exhibiting large scale field patterns and linear drainage channels. Both arable and livestock farming occur as dominant industries, with farmland interspersed by occasional tree cover in the form of shelter belts and hedgerows. Settlements are generally dispersed, traditional style villages linked by a mesh of minor roads. Larger settlements noted in the NCA Profile include the seaside resort of Bridlington at the northern extent of the NCA and the market town of Beverley in the southwest. An overriding feature of this landscape is the panoramic views offered as a result of the gentle topography, with visible landmarks often being man made features such as church spires (Natural England 2013).

4.7.3.4 A small portion of the Hornsea Four landscape and visual study area to the west of Beverley lies within NCA27: Yorkshire Wolds (Natural England 2012). This character area results from a change in geology, moving from clay to more resistant chalk. Gently rolling hills are cut with steep, wooded dales and there are very few surface watercourses. Agriculture still dominates despite thin calcareous soils and exposed slopes. The area is very rural with evidence of historic settlement (Natural England 2012).

Hornsea Four

Figure 4.4

Landscape Character

Order Limits

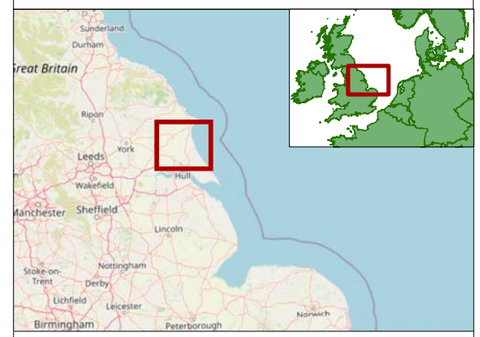
Study Area

National Character Area

East Riding of Yorkshire Landscape Character Area

Landscape Character Type (LCT)

- Urban
- 1: Flat Open Farmland
- 6: Wooded Open Farmland
- 8: M62 Corridor
- 10: Complex Incised Sloping Wooded Farmland
- 11: Jurassic Hills Farmland
- 12: Sloping Wooded Farmland
- 13: Open High Rolling Farmland
- 14: Central Dissected Plateau
- 15: Wolds Valley Farmland
- 16: Sloping Farmland (Edge of Wolds)
- 17: Farmed Urban Fringe
- 18: Low Lying Drained Farmland
- 19: Open Farmland
- 20: Coastal Farmland



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LUC Ørsted

Hornsea Four Order Limits

Date: 20/07/2021 Author: 303273 Name: Figure 4_4-Character_RevA

Local character

4.7.3.5 The recently updated East Riding of Yorkshire Landscape Character Assessment (Aecom 2018) has been consulted as the principal source of information at the local level. The Hornsea Four landscape and visual study area includes 13 Landscape Character Areas (LCAs) within six Landscape Character Types (LCTs) as listed in **Table 4.7** and illustrated on **Figure 4.4**.

Table 4.7: Landscape Character Types and Areas (see Figure 4.4) within the Hornsea Four landscape and visual study area.

Landscape Character Type	Landscape Character Areas
13 Open High Rolling Farmland	13B Bishop Burton Estate Farmland 13C South Wolds Rolling Farmland
16 Sloping Farmland	16B Kilnwick Percy Wooded Farmland 16C Beverley Westwood 16E Lund Sloping Farmland 16F Beverley Parks Farmland
17 Farmed Urban Fringe	17B North Cottingham Farmland 17C South Cottingham Farmland
18 Low Lying Drained Farmland	18A River Hull Corridor 18E Kelk Beck Farmland 18F Figham and Swine Moor Common
19 Open Farmland	19C North Holderness Open Farmland
20 Coastal Farmland	20C Bridlington to Hornsea Coast

4.7.3.6 The key characteristics of the LCTs within the Hornsea Four landscape and visual study area are presented in **Table 4.8**. These are summarised from the East Riding of Yorkshire Landscape Character Assessment (Aecom 2018).

Table 4.8: Summary of Landscape Character Types.

Landscape Character Type	Key characteristics
13 – Open High Rolling Farmland	• Elevated rolling landform of the Yorkshire Wolds dip slope falling east. • Large scale open landscape with long distance views and dominated by the sky. • Sparsely populated area with scattered villages and farmsteads. • Large and very large rectilinear regular arable fields. • Fragmented hedgerows that are severely clipped. • Very few trees resulting in an open landscape. • Shelterbelts around farmsteads on the hill tops are a prominent feature. • Pockets of parkland and estate land to the east on the lower slopes provide diversity. • Enclosure roads that conform to the enclosure field pattern alongside older routes are well spaced. • Numerous PRoWs.

Landscape Character Type	Key characteristics
	• South Dalton Church spire is a prominent landmark in the relatively featureless landscape.
16 – Sloping Farmland	• Gently rolling landform sloping gradually down to the east. • Intermittent scattered woodland blocks throughout. • Intensively farmed rectilinear arable fields of large to medium size, interspersed with less regular early enclosure fields particularly around villages. • Free draining land with dispersed streams arising in the Wolds and flowing east to the River Hull. • Horticultural development between Beverley and Hull. • Views across the open landscape and views of Beverley Minster. • Hedgerow trees in places. • Scattered villages and farmsteads. • Parkland characteristics at Beverley Westwood, Risby Park and Kilnwick Percy. • A number of turbine developments within the landscape with others visible beyond.
17 – Farmed Urban Fringe	• Gently undulating to flat landform generally below 20m AOD. • Strong urban influences encroaching into rural areas. • Community land use e.g. sports pitches, allotments, cemeteries. • Hedgerow boundaries around medium to large sized fields. • Mixed land use combining agriculture, horticulture and recreation. • Lighting along major roads and in settlements. • Neglected appearance of some fields and hedgerows. • Presence of recreation activities both formal and informal. • Enclosed character with many areas surrounded by urban development on three sides.
18 – Low Lying Drained Farmland	• Flat, low lying flood plain generally below 10m AOD. • Sparse settlement in the floodplain. Farmsteads and villages concentrated on the edge of the flood plain. • Few crossing points on the River Hull contributing to low density of development between North Frodingham and Tickton. • Pockets of fens and reed swamps indicating a former landscape. • Sparse tree and woodland cover. • Rectilinear field systems with hedgerow and drainage ditch boundaries. • A history of sand and gravel extraction. • River Hull and Beverley Barmston Drain are major watercourses with embankments. • Numerous water bodies particularly associated with gravel extraction. • Recreation associated with water bodies and the River Hull. • Several medieval scheduled monuments.
19 – Open Farmland	• Gently undulating topography, hummocky in places. • Very open landscape with few trees overall. • Irregular field pattern of pre-parliamentary enclosure. • Dispersed villages linked by winding roads. • Red brick buildings with pantile roofs sometimes painted white. • Churches are often prominent features on the skyline. • Irregular drainage pattern overall. • Hedgerow field boundaries with few trees. • Intensive farmed arable landscape. • Large number of wide developments visible across the landscape both within LCT 19 and adjoining LCTs.

Landscape Character Type	Key characteristics
20 – Coastal Farmland	• Flat to gently undulating topography sloping gently eastwards. • Boulder clay cliffs eroding into the sea. • Seaside resorts of Bridlington, Hornsea and Withernsea. • Coastal static caravan parks are prominent. • Limited tree cover due to exposed windswept coastal landscape. • Smaller villages and farmsteads and minor roads threatened by erosion. • Fragments of historic field pattern around villages and hamlets. • Tourism development along the coast. • Large scale turbine development visible within the landscape, both within this LCT and within adjoining LCTs.

Site-specific character

4.7.3.7 This section sets out the specific character of the Hornsea Four landscape and visual study area and is set out by individual subarea (**Figure 4.1**), as defined in **Section 4.5.1.5**. The key landscape elements or features within each subarea that contribute to the distinctiveness of the area are identified.

Subarea 1: Landfall area

4.7.3.8 The landfall subarea lies within the 20C Bridlington to Hornsea Coast LCA (Coastal Farmland LCT) (see **Figure 4.4**).

4.7.3.9 The beaches of Fraisthorpe Sands and nearby Barmston Sands comprise narrow shingle beaches backed by mud cliffs that rise up to 6 m. These beaches are used for recreation with access and parking provided by the holiday parks at Barmston and at Auburn. Both holiday parks are visible features along this coast, as are the church spires within Barmston and Ulrome, which form prominent landmarks on the skyline. The beaches are locally distinctive resources, although they do not form an integral part of the local landscape character, being largely obscured away from the immediate coastal edge. Inland, this area encompasses agricultural land comprising open, exposed farmland with large fields, bounded by fragmented hedgerows with occasional small trees.

Subarea 2: A165 to Rotsea Lane

4.7.3.10 This subarea around the onshore ECC crosses three LCAs: 18A River Hull Corridor, 18E Kelk Beck Farmland (Low Lying Drained Farmland LCT); and 19C North Holderness Open Farmland (Open Farmland LCT) (see **Figure 4.4**). The onshore ECC crosses a number of arable fields in the east where it partly runs parallel to Sheepdike Lane, Cowslam Lane and Cruckley Lane in a westerly direction before it heads south.

4.7.3.11 The majority of the landscape within this subarea is characterised by open and largely flat arable farmland, set within a low floodplain with little tree cover present. Farmland is large scale, with rectilinear fields, bounded by deep drainage ditches and hedgerows which are often gappy, with occasional hedgerow trees in some places. Clusters of buildings situated around farms form prominent features within an open landscape that is relatively devoid of

any vertical elements, given the flatness of the landform, although with the exception of a few small woodland copses / plantations. The area does also contain key watercourses; namely the River Hull and Foston Beck (extending from Kelk Beck), (which both form part of the River Hull Headwaters Site of Special Scientific Interest (SSSI), as well as the Driffield Canal running north-south, which along with the drainage ditches and the vegetation cover (albeit limited) in the landscape, are more sensitive features. A few PRoWs cross fields and follow some of the water courses. The area also contains the Lissett Wind Farm, a prominent feature within the largely flat and horizontal landscape.

Subarea 3: Rotsea Lane to Leconfield

4.7.3.12 This subarea around the onshore ECC crosses 16E Lund Sloping Farmland LCA (Sloping Farmland LCT) (see **Figure 4.4**).

4.7.3.13 The onshore ECC runs in a south-westerly direction before heading directly south where it meets the western edge of Leconfield. This subarea comprises intensively farmed rectilinear arable fields of medium scale, bounded by drains and hedgerows, with streams dispersed across the area. The landform is predominantly flat, although with gentle undulation along the northern and southern edges, resulting in long distant views being afforded, including towards the Wolds in the west. There are occasional blocks of woodland although these are small and are not considered to be prominent in a relatively open landscape.

4.7.3.14 Wetlands occur within the subarea, with the Bryan Mills Field SSSI being located in the southern part of this section, comprising a spring-fed tall fen surrounded by planted trees. The area is crossed by the Hull to Scarborough Railway Line and is in proximity to the Leconfield Airfield, resulting in locally lower levels of tranquillity. Pylons cross the landscape in the north forming visual detractors on the skyline. The subarea also contains scattered farmsteads and extends past the southern edge of Beswick, which is designated as a Conservation Area. PRoWs cross through this landscape, including the Minster Way Long Distance Walking Route (LDWR).

Subarea 4: Leconfield to the OnSS and the 400kV NGET connection area

4.7.3.15 This subarea around the onshore ECC extends across five LCAs: 16C Beverley Westwood, 16E Lund Sloping Farmland and 16F Beverley Parks Farmland (Sloping Farmland LCT); and 13B Bishop Burton Estate Farmland and 13C South Wolds Rolling Farmland (Open High Rolling Farmland LCT) (see **Figure 4.4**).

4.7.3.16 From Leconfield the onshore ECC runs directly to the south towards the OnSS, offset from but parallel to the western edge of Beverley – a historic market town. The landform is gently undulating and rises up above the flat plain to the east. In this section the onshore ECC partly follows roads including the A1079, as well as crossing arable farmland consisting of rectilinear medium scale fields that are typically defined by hedgerows with occasional hedgerow trees. Drains occur in the landscape, although at a much lower frequency compared to the areas to the north. Vegetation cover continues to be limited with only a

few woodland blocks present, including a small area of ancient woodland at Burton Bushes SSSI located within the Westwood. This historic area to the west of Beverley also contains a number of Scheduled Monuments dating from the Neolithic to Roman periods.

4.7.3.17 A few scattered farmsteads exist within this subarea, typically enclosed by mature trees, and there are larger villages at Cherry Burton, Bishop Burton and Walkington. Recreation is of high value as not only is the Westwood popular with visitors but also a number of routes that form part of the Yorkshire Wolds Way National Trail cross the landscape. The onshore ECC abuts the eastern edge of Risby Hall; a Grade II Registered Park and Garden. Pylons in the south form visual detractors on the skyline in an overall flat and horizontal landscape where long distant views are afforded.

Subarea 5: OnSS

4.7.3.18 The OnSS site is located within LCA 16F Beverley Parks Farmland (Sloping Farmland LCT) (see **Figure 4.4**). Other LCAs within the 5 km OnSS Hornsea Four landscape and visual study area are: 13C South Wolds Rolling Farmland (Open High Rolling Farmland LCT); 16C Beverley Westwood (Sloping Farmland LCT); 17B North Cottingham Farmland and 17C South Cottingham Farmland (Farmed Urban Fringe LCT); and 18A River Hull Corridor and 18F Figham and Swine Moor Common (Low Lying Drained Farmland LCT) (see **Figure 4.4**).

4.7.3.19 The OnSS site is framed by transport corridors: the A1079 to the north; the Hull to Scarborough railway line to the east; and the A164 to the west. The area between comprises a number of medium to large scale agricultural fields that have been intensively managed. These are irregular in pattern and bounded by a mixture of hedgerows in various states of repair, as well as drainage ditches and post and wire fencing, with some hedgerow trees. The area is crossed frequently by PRoWs that typically follow field boundaries, including the Beverley 20 LDWR which forms part of the wider Yorkshire Wolds Way National Trail. A few blocks of woodland are found to the north-west while to the east is the NGET substation. The tall lattice structures and numerous large-scale overhead power lines mounted on pylons that converge here together form a large and prominent feature, which strongly influences the character of the open landscape at a local scale. The movement of vehicles on the A1079, the movement of trains on the Hull to Scarborough railway line and the large number of tall structures within the area contribute to the general perception of a modified landscape that is busy and complex in nature.

4.7.3.20 The wider 5 km Hornsea Four landscape and visual study area is well settled, taking in parts of Hull and Beverley, and the settlements of Cottingham, Skidby and Walkington. Transport and infrastructure continue to be a feature, though less so in the west which is on the fringe of the Wolds and is more rural in character. The tower of Beverley Minster is a key landmark in the wider area and is highly visible across the flat landscape. Other landmarks include church towers and Skidby Windmill.

4.7.4 Key visual receptors

4.7.4.1 This section sets out the people (visual receptors) that have the potential to be affected by the landfall, onshore ECC and OnSS. These are set out by the subareas defined in **Paragraph 4.5.1.5**. The locations of PRoWs are shown in **Figure 4.5** and **Figure 4.6**, and should be considered in conjunction with the Onshore Crossing Schedule (**Volume A4, Annex 4.2**) where PRoWs crossed by Hornsea Four are identified, as well as **Chapter 6: Land Use and Agriculture** and **Volume F2, Chapter 2: Outline Code of Construction Practice** which contains the Outline PRoW Management Plan).

4.7.4.2 Given the nature of the landscape it is assumed that all receptors within the Hornsea Four landscape and visual study area will have potential visibility of the onshore ECC and landfall area construction works, while for the OnSS, only receptors within the ZTV (**Figure 4.2**) are considered.

Subarea 1: Landfall area

4.7.4.3 Residential and community receptors include:

- Farms close to the landfall site, including Auburn Farm, Manor Farm, Lodge Farm and Hamilton hill Farm;
- The villages of Barmston to the south and Fraisthorpe to the west; and
- Farms and houses along A165 Bridlington Road to the west.

4.7.4.4 Recreational receptors include:

- Users of local PRoWs close to the landfall site;
- Visitors to Barmston Sands and Fraisthorpe Sands, including the car park and facilities at Auburn Farm;
- Visitors to South Cliff Holiday Park and Royal Yorkshire Yacht Club to the north;
- Visitors to Barmston Beach Holiday Park to the south; and
- Recreational boat users (dinghies, kayaks, etc.) in Bridlington Bay.

4.7.4.5 Transport receptors include those using:

- The A165 to the west;
- The A1038 to the west; and
- The wider local road network beyond these routes.

Subarea 2: A165 to Rotsea Lane

4.7.4.6 Residential and community receptors include:

- The villages of Lissett, Foston on the Wolds and Brigham to the south;
- The villages of Great Kelk and the hamlet of Gembling to the north;
- The northern edge of North Frodingham;

- The southern edge of Wansford; and
- Farms and houses along A165 Bridlington Road, Gransmoor Road, B1249 and Rotsea Lane.

4.7.4.7 Recreational receptors include:

- Those using local PRoWs close to the onshore ECC and connecting nearby settlements.

4.7.4.8 Transport receptors include those using:

- The A165;
- Gransmoor Road;
- The B1242 Allison Lane;
- Old How Lane and Foston Lane;
- The B1249;
- Rotsea Lane; and
- The wider local road network beyond these routes.

Subarea 3: Rotsea Lane to Leconfield

4.7.4.9 Residential and community receptors include:

- The villages of Scorborough, Leconfield, Lockington and Beswick; and
- Farms and houses along Carr Lane, Wilfholme Road, Beswick Road and Station Road.

4.7.4.10 Recreational receptors include:

- Those using local PRoWs close to the onshore ECC and connecting nearby settlements; and
- Users of the Minster Way LDWR.

4.7.4.11 Transport receptors include those using:

- Rotsea Lane, Carr Lane, Wilfholme Road, Beswick Road and Station Road;
- The A164;
- Miles Lane;
- The B1248;
- The Yorkshire Coast railway line; and
- The wider local road network beyond these routes.

Subarea 4: Leconfield to the OnSS and the 400 kV NGET connection area

4.7.4.12 Residential and community receptors include:

- The settlements of Leconfield, Cherry Burton, Bishop Burton, Walkington, Little Weighton and Skidby;
- The western edge of Beverley; and
- Farms and houses along the A1035 and Dunflat Road.

4.7.4.13 Recreational receptors include:

- Those using local PRoWs close to the onshore ECC;
- Users of the Hudson Way, Beverley 20, High Hunsley Circuit and Wilberforce Way LDWRs;
- Users of the National Cycle Network (NCN) 1 and NCN 164;
- Visitors to Beverley Westwood park;
- Visitors to Beverley Racecourse; and
- Visitors to Beverley and East Riding Golf Club and Cherry Burton Golf Club.

4.7.4.14 Transport receptors include those using:

- Miles Lane
- The B1248;
- The A164;
- The A1035;
- The A1079;
- The A1174;
- The B1230;
- The Hull to Scarborough railway line to the east of the OnSS site; and
- The wider local road network beyond these routes.

Subarea 5: OnSS

4.7.4.15 For the purposes of the 5 km OnSS Hornsea Four landscape and visual study area, only receptors within the ZTV (**Figure 4.2**) are listed below.

4.7.4.16 Residential and community receptors include:

- Farms close to the OnSS site, including Burn Park Farm, Wanlass Farm, Poplar Farm and Platwoods Farm;
- The north edge of the settlement of Cottingham;
- The Orchard Park estate, on the north edge of the City of Hull;
- Farms and houses along Dunswell Road, and Dunswell village to the east;
- Farms north of the A1079 including Model Farm, White Hall and Beverley Parks Crossing;
- The village of Woodmansey on the A1174;
- The south edge of Beverley,
- The villages of Bentley and Walkington to the west; and
- The village of Skidby to the south-west.

4.7.4.17 Recreational receptors include:

- Those using PRoWs close to the OnSS site, including the Beverley 20 LDWR and the NCN Route 1 (see **Figure 4.6**);
- In particular, users of PRoW Skidby 16, which would need to be diverted around the OnSS;
- Visitors to the hotel, golf courses and leisure club north of Cottingham;
- Visitors to Beverley Parks Local Nature Reserve, and users of PRoWs to the north of the A1079;
- People on the Beverley 20 and PRoWs around Risby, west of the A164;
- Visitors to Skidby Windmill to the south-west; and
- Visitors to Beverley Minster to the north.

4.7.4.18 Transport receptors include those using:

- The A1079 to the north of the OnSS site;
- The A164 to the west of the OnSS site;
- The Hull to Scarborough railway line to the east of the OnSS site; and
- The wider local road network beyond these routes.

Hornsea Four

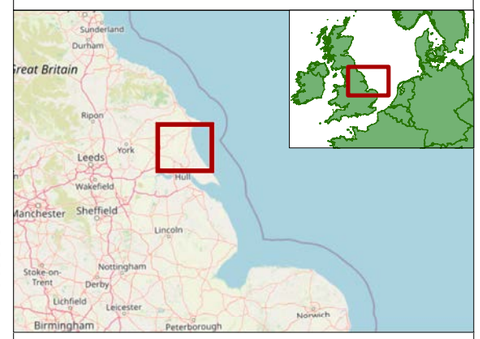
Figure 4.5

Recreational Routes

- Order Limits
- Study Area
- National Cycle Network (NCN)
- NCN Link
- Regional Cycle Route
- Public Rights of Way

Long Distance Walks

- Minster Way
- Wilberforce Way
- Yorkshire Wolds Way



Coordinate system: British National Grid

Scale@A3: 1:150,000

0 2 4 8 Kilometres

0 1 2 4 Miles

REV	REMARK	DATE
	First Issue	21/06/2019
A	Updated following PEIR consultations, for DCO	20/07/2021

Title: Recreational Routes
Document no: HOW04LUC5
Created by: EL
Checked by: BG
Approved by: PDM

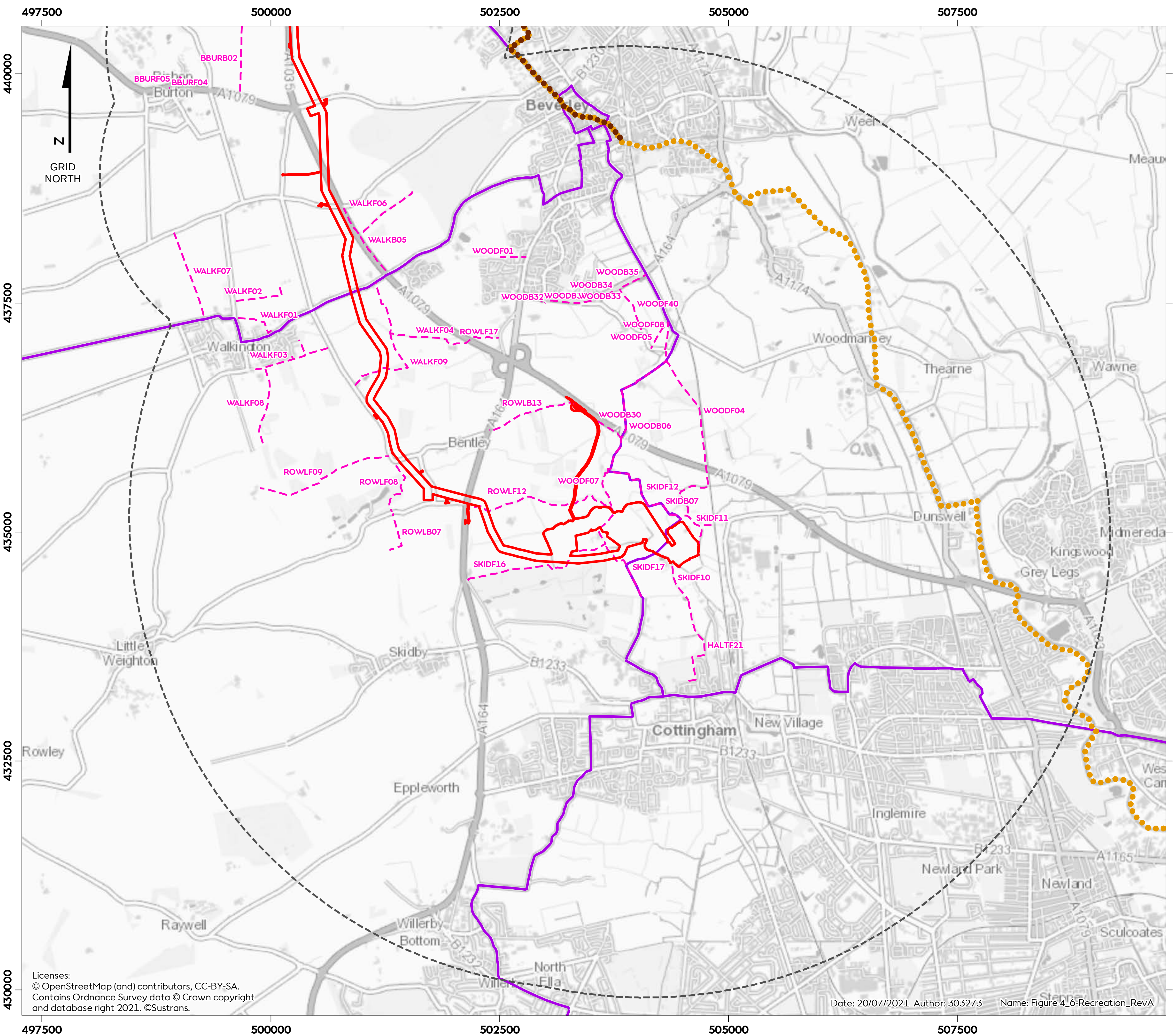
LUC Ørsted

Date: 20/07/2021 Author: 303273 Name: Figure 4_5-Recreation_RevA

Hornsea Four

Figure 4.6

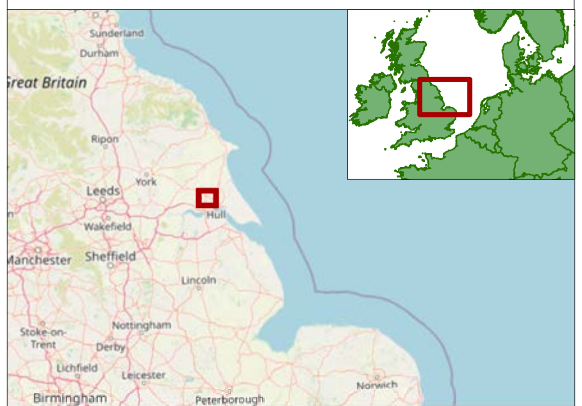
Recreational Routes: OnSS



Order Limits
Study Area
National Cycle Network (NCN)
Public Rights of Way

Long Distance Walks

Minster Way
Wilberforce Way



Coordinate system: British National Grid
Scale@A3: 1:40,000

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0 0.25 0.5 1 Miles

REV	REMARK	DATE
	First Issue	21/06/2019
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Date: 20/07/2021 Author: 303273 Name: Figure 4_6-Recreation_RevA

4.7.5 Viewpoint selection

4.7.5.1 Representative viewpoints have been identified to inform the detailed assessment of the OnSS only (ON-HUM-1.14). This section sets out the viewpoints selected to represent views from publicly accessible areas, for the receptors within subarea 5 (Figure 4.1). A total of ten viewpoints were selected and agreed with stakeholders as set out in Table 4.4. Details of the viewpoints are provided in Table 4.9 and their locations are shown in Figure 4.2.

4.7.5.2 It was further agreed with stakeholders via the LVIA Position Paper (Orsted 2019a), that only the four closest viewpoints (Viewpoints 1-4) would be illustrated with detailed photomontage visualisations (ON-HUM-1.14) (see Section 4.10.10). Photography is included in Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages.

Table 4.9: Representative Viewpoints and Baseline Description of Views (see Figure 4.2).

Viewpoint Location	Grid reference	Description of view	Figure Reference
VP1 PRoW south of Burn Park Farm	503721, 434766	Panoramic, long-distance views are afforded from this local PRoW (SKIDF17) across flat, arable farmland which is divided into large scale irregular fields. The NGET substation and associated pylons are prominent features in the mid-ground to the north and east. A small number of traditional isolated farmsteads are present, some with adjoining horse paddocks delineated by hedgerows and trees. Occasional single wind turbines introduce movement, although these are confined to the far distance. The viewpoint sits on a surfaced track serving Burn Park Farm, along which the PRoW (SKIDF17) runs. Walkers and other recreational users of the PRoW (SKIDF17) receive sustained views in all directions, with very little screening from vegetation or buildings. Similar views are likely to be experienced from other PRoWs in the vicinity of Burn Park Farm, and by community receptors from the farm itself.	Figure 1 to Figure 3 in Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages.
VP2 Park Lane, Cottingham	504068, 434286	Wide, long-distance views of the flat, arable landscape are available to the north from this viewpoint on Park Lane, along which both the NCN Route 1 and the PRoW (SK1DF17) run. A line of mixed, mature trees immediately south of the viewpoint screens views to and from this direction. Isolated farmsteads, hedgerows and shelter belts illustrate the agricultural character of this area. Large scale fields are cut by a single-track road which provides access to Burn Park Farm. The mid-ground view is characterised by NGET substation and associated pylons to the northeast. In the distance, movement of traffic on the A1079 is visible. Beverley Minster is a distinctive feature on the distant, varied skyline. Motorists or walkers experiencing these views	Figure 4 to Figure 6 in Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages.

Viewpoint Location	Grid reference	Description of view	Figure Reference
		are likely to be local recreational or community receptors. Cyclists on the NCN Route 1 may be tourists or local visitors with an interest in the surrounding landscape.	
VP3 Footbridge over A1079	503823, 435970	From this locally elevated viewpoint, situated on NCN Route 1 and on local footpaths (WOODB06) forming part of the 'Beverley 20' LDWR, views to the north are restricted by a dense hedge, beyond which the A1079 runs. This is raised up on an embankment to the east, providing some change in relief in an otherwise flat landscape. To the south there are wide ranging and distant views of large-scale arable fields delineated by ditches and occasional trees. Large, mature woodland blocks are visible to the southwest. A low, horizontal skyline is broken only by man-made features and occasional wooded blocks. NGET substation and overhead lines are noticeable. Road noise from the A1079 is obvious. The opportunity for elevated views at this viewpoint is very localised, due only to the footbridge over the road.	Figure 7 to Figure 9 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.
VP4 PRoW East of A164	502245, 434523	Topography is broadly sloping, with medium scale arable fields defined by mature hedgerows punctuated with occasional trees. A strong hedge line immediately to the south marks the boundary of the adjoining golf course. Wooded hills at the edge of Beverley are visible, with Beverley Minster rising from a wooded skyline. When looking east along the footpath (SKIDF16), NGET substation is visible in the distance. Distant turbines coupled with pylons immediately overhead impart an urbanising influence on the farmland. The viewpoint is in close proximity to the A164 and the Lazaat hotel building, which is out of keeping with the more traditional vernacular that is characteristic of the local area. Receptors include visitors to the hotel and local recreational users of the footpath (SKIDF16).	Figure 10 to Figure 12 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.
VP5 A164 Layby near Bentley	502192, 435617	Views to the east are screened by a well-developed hawthorn hedgerow approximately 3.5m in height, and directly adjacent to the road. Sporadic gaps in the hedge provide glimpses of smooth, flat, arable land beyond. Views to the east are similarly screened. A large tarmacked layby is marked by a small clump of trees. Traffic on the busy A164 introduces noise and movement. There is a noticeable overhead line to the south. Due to the continuous hedgerow along the east side of the road, this viewpoint is representative of views experienced for several hundred metres along the A164. Motorists are likely to gain only fleeting glimpses beyond the hedgerow, with their views primarily channelled north/south along the road.	Figure 13 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

Viewpoint Location	Grid reference	Description of view	Figure Reference
VP6 Fishpond Wood, Risby Hall	501448, 435405	This viewpoint captures the view from a local PRoW (ROWLF08) forming part of the 'Beverley 20' LDWR, at the edge of Risby Hall Registered Park and Garden. Sloped, smooth arable fields are defined by hedgerows interspersed with trees. Extensive, distant views are available from the northeast to the southeast, although the gently sloping landform limits mid-ground views to the east. A minor road to the east is noticeable by noise and movement in an otherwise peaceful setting, glimpsed occasionally through gaps in its bounding hedgerow. There is a large farm building associated with an isolated farmstead, however there is little other development nearby. The distant yet distinctive tower of Beverley Minster is visible to the northeast. Distant views include medium sized blocks of woodland and a varied skyline broken by overhead lines. To the west, a woodland backdrop restricts views. Receptors are likely to be recreational users moving along the footpath (ROWLF08).	Figure 14 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.
VP7 Little Weighton Road	499856, 433993	This viewpoint sits on top of a very broadly sloping hill, with large scale, regular, arable fields defined by hedgerows extending to the south. Elevated views are available from Little Weighton Road which crosses the slopes of the Yorkshire Wolds ILA. Blocks of mature woodland stand amongst undulating farmland. Panoramic views are available from this relatively elevated point and long-distance views extend to the north and east. The landscape is largely rural, with isolated dwellings and farmsteads. The skyline is broken by occasional trees and a string of pylons extending across the view from south to east.	Figure 15 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.
VP8 Minster Way	503395, 437494	The view from this point on the Beverley southern by-pass (which also serves as PRoW, WOODB34) consists of large, broadly undulating to flat fields with mature hedgerows and occasional trees. Shelter belts partially screen views to the south and wooded blocks are visible in the distance. A distant turbine is visible in the south. The varied skyline is punctuated by several power lines, converging on NGET substation. The substation and pylons break the skyline. The edge of a settlement can be seen to the northwest, where houses and facilities are noticeable. In views to the north, Beverley Minster forms a clear landmark, set above woodland. Road noise and movement is immediately obvious from the A164. Receptors experiencing comparable views to this include recreational users of Woodmansey Bridleway, which follows alongside the A164 in this vicinity, who are likely to be moving through the landscape.	Figure 16 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

Viewpoint Location	Grid reference	Description of view	Figure Reference
		Motorists on the A164 itself are likely to experience similar, although short-lived, views in passing.	
VP9 Beverley Minster tower	503714, 439232	Wide, extensive, panoramic views across a flat plain extend southwards across the Humber to a backdrop of the gently rising hills of the Lincolnshire Wolds. Low density settlement in the foreground gives way to smaller scale, irregular, flat, arable fields with scattered farms in the mid-ground. Further into the distance, large, regular fields with sparse hedgerows are crosscut by the noticeable A164. The transition from settlement to rural farmland is evident from this elevated, exposed viewpoint. Vast 360° views are available.	Figure 17 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.
VP10 St Mary's Church tower, Cottingham	504759, 432945	Looking north, a small playing field in the foreground is enclosed by low density housing and tree-lined streets, behind which industrial structures recede into the far distance. Several turbines and pylons break the skyline. NGET substation is noticeable to the north, just below the horizon. The visual link with Beverley Minster tower is partially obscured by a pylon at the site of the NGET substation. Elevated, long views towards Hull are possible to the south, with high rise buildings prominent. Receptors are likely to be members of the public, visiting the tower as part of a guided tour.	Figure 18 in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

4.7.5.3 The current baseline description above provides an accurate reflection of the current state of the existing environment. The earliest possible date for the start of construction for the onshore elements of Hornsea Four is 2024 with an expected operational life of 35 years, and therefore there exists the potential for the baseline to evolve between the time of assessment and point of impact. Outside of short-term or seasonal fluctuations, changes to the baseline in relation to LVIA usually occur over an extended period of time (considered in **Section 4.7.6**). Based on current information regarding reasonably foreseeable events over the next four years, the baseline environment is not anticipated to have fundamentally changed from its current state at the point in time when the impacts occur.

4.7.6 Evolution of the Baseline

4.7.6.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require that "an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge" is included within the ES (EIA Regulations, Schedule 4, Paragraph 3). From the point of assessment, over the course of the development and operational lifetime of the Hornsea Four (operational lifetime anticipated to be 35 years), long-term trends mean that the condition of the baseline environment is expected to evolve. This section provides a qualitative description of the evolution of the baseline environment, on the assumption that

Hornsea Four is not constructed, using available information and specialist technical knowledge of LVIA.

4.7.6.2 In the absence of Hornsea Four, the landscape of the Hornsea Four landscape and visual study area is likely to continue to be used primarily for farming, and the appearance of the farmed landscape is likely to be relatively constant. Existing trees will mature, while others may die or be felled. Some may succumb to plant diseases that may become more prevalent, affecting particular species. Based on the current condition of defunct hedges, it is unlikely that these will be replanted and therefore over time would appear to have an increasing area of gaps. Alternately they may become absent altogether. In the longer term, climate change may lead to longer growing seasons, affecting the types of crop that are grown, and the management regimes that they are grown under. Coastal erosion is a feature of the Holderness coast, and over the longer term this process may accelerate if predicted sea-level changes occur by mid-century.

4.7.6.3 Built development is likely to continue. The converter station for the Dogger Bank Offshore Wind Farm is proposed for a site to the north of the A1079, around 1 km north of the OnSS. This comprises two large converter halls, compounds, access and landscape treatment. This has consent and construction of cable works has commenced, therefore there is a high level of certainty that the converter station will be built. Pressure for residential and commercial development is likely to continue in the areas closer to Beverley and Hull. Away from these major settlements, more limited changes in the built environment are to be expected in the smaller villages and hamlets. Further changes to electricity infrastructure and transport corridors (road and rail) may also influence the character of the landscape. Consideration of the cumulative impacts of the two projects is set out in **Section 4.12**.

4.7.7 Data Limitations

4.7.7.1 Generally, the baseline landscape and visual state of the Hornsea Four landscape and visual study area is well understood from the site visits completed to date and the available publications and data. No substantive limitations have been identified.

4.7.7.2 Photography for visualisations and primary site visits were undertaken at a time when trees and other vegetation were in partial leaf, which is not the optimum time for taking photography (which would be during winter when trees provide minimal screening). However, additional site visits were undertaken in winter (December 2018 and January 2020), allowing a full assessment of effects to be carried out. This is not considered to represent a limitation to the LVIA.

4.8 Project basis for assessment

4.8.1 Impact register and impacts "Not considered in detail in the ES"

4.8.1.1 Upon consideration of the baseline environment, the project description outlined in **Volume A1, Chapter 4: Project Description**, the Hornsea Four Commitments (**Volume A4, Annex 5.2: Commitments Register**) and response to formal consultation on the PEIR, several potential impacts upon on the LVIA are "Not considered in detail in the ES". These impacts are outlined,

together with a justification for why they are not considered further, in Table 4.10, which should be read in conjunction with Volume A4, Annex 5.1: Impacts Register.

Table 4.10: LVIA impact register - Impacts not considered in detail in the ES and justification.

Project activity and impact	Likely significance of effect	Approach to assessment	Justification
Permanent/long-term effects resulting from construction activities: operational phase Permanent impacts of the landfall, and onshore ECC may affect visual receptors in settlements and at individual properties, along key routes (national trails and tourist routes), along other roads and public rights of way, and in accessible and recreational landscapes. (LV-O-3)	No likely significant effects	Scoped Out	Post-construction, all landscape features will be restored or replaced, and no above-ground structures will be present (Co2, Co10, Co25, Co26, Co27, Co28, Co30, Co68, Co124, Co157, Co168, Co187). Agreed during EIA Scoping (PINS Scoping Opinion, November 2018, ID: 4.16.3).
Temporary effects on landscape and viewers: decommissioning phase Decommissioning of all works could affect the landscape. (LV-D-6)	No likely significant effects	Not considered in detail in the ES	Decommissioning works will be of short duration and impacts will be similar but not greater than those arising from construction works (see Section 4.13 of Volume A1, Chapter 4: Project Description for further information on decommissioning). Further justification for not considering this further in the ES was set out in the LVIA Position Paper (Orsted, 2019a), which was agreed by HCC, ERYC and Natural England as noted in Table 4.4 (ON-HUM-1.14). Further detail was also provided in the PEIR (Orsted, 2019b), including reference to the Onshore Decommissioning Plan (Co127). No adverse comment on the approach taken at PEIR (Orsted, 2019b) was

Project activity and impact	Likely significance of effect	Approach to assessment	Justification
			received during the formal Section 42 consultation process.
Permanent/long-term effects resulting from construction activities: operational phase Permanent impact of the landfall and onshore ECC may affect designated and non-designated landscape receptors (including landscape features such as woodlands and hedgerows) (LV-O-2).	No likely significant effects	Not considered in detail in the ES	Post-construction, all landscape features will be restored or replaced, and no above-ground structures will be present (See commitments listed in **Volume A4, Annex 5.1: Impacts Register** under impact ID). Further justification for not considering in detail in the ES was set out in the LVIA Position Paper (Orsted, 2019a), which was agreed by HCC, ERYC and Natural England as noted in **Table 4.4** (ON-HUM-1.14). Further detail was also provided at PEIR (Orsted, 2019b). No adverse comment on the approach taken at PEIR (Orsted, 2019b) was received during the formal consultation process.
Temporary effects: construction phase Construction activity associated with the landfall and onshore ECC will temporarily occupy the landfall work area, the ECC working width, compounds and means of access, leading to loss of landscape features and a change to landscape character and to views. Temporary change to views in the landfall area and onshore ECC from construction activities (LV-C-1).	No likely significant effects	Not considered in detail in the ES.	Post-construction, all landscape features will be restored or replaced, and no above-ground structures will be present (See commitments listed in **Volume A4, Annex 5.1: Impacts Register** under impact ID). Assessed as part of the EIA, as set out in the PEIR (Orsted, 2019b) and confirmed in the Impacts Register (**Volume A4, Annex 5.1**), and no likely significant effect identified except in one specific 'worst case' relating to open cut at landfall. The offshore export cables will now be brought ashore at the landfall using HDD (or other trenchless technologies) (Co187) and no beach closure will take place (Co192). Therefore, no likely significant effect

Project activity and impact	Likely significance of effect	Approach to assessment	Justification
			and no need to consider in detail in the ES as agreed with ERYC.

Notes:
Grey – Potential impact is scoped out at EIA Scoping and both PINS and Hornsea Four agree.
Red – Potential impact is not considered in detail in the ES with no consensus between PINS and Hornsea Four at EIA Scoping and further justification provided during the pre-application stage.
Purple – Not considered in detail in the ES. No likely significant effect identified at PEIR.

4.8.2 Commitments

4.8.2.1 Hornsea Four has adopted commitments (primary design principles inherent as part of Hornsea Four, installation techniques and engineering designs/modifications) as part of their pre-application phase, to eliminate or reduce the likely significant effect (LSE) of a number of impacts. These are outlined in **Volume A4, Annex 5.2 Commitments Register**. Further commitments (adoption of best practice guidance), referred to as tertiary commitments in **Table 4.11** below, are embedded as an inherent aspect of the EIA process. Secondary commitments are incorporated to reduce LSE to environmentally acceptable levels following initial assessment i.e. so that residual effects are reduced to environmentally acceptable levels.

4.8.2.2 The commitments adopted by Hornsea Four in relation to the landscape and visual assessment are presented in **Table 4.11**.

Table 4.11: Relevant Landscape and Visual Commitments.

Commitment ID	Measure Proposed	How the measure will be secured
Co1	Primary: All Environment Agency (EA) main rivers, Internal Drainage Board (IDB) maintained drains, main roads and railways will be crossed by HDD or other trenchless technology as set out in the Onshore Crossing Schedule. Where HDD technologies are not practical, the crossing of Ordinary watercourses may be undertaken by open cut methods. In such cases, temporary measures will be employed to maintain flow of water along the watercourse. Main rivers will not be temporarily dammed and/or rerouted.	DCO Requirement 17 Code of Construction Practice (CoCP)
Co2	Primary: A range of sensitive historical, cultural and ecological conservation areas (including statutory and non-statutory designations) have been directly avoided by the permanent Hornsea Four footprint, at the point of Development Consent Order Submission (DCO). These include, but are not restricted to: Listed Buildings (564 sites); Scheduled Monuments (30 sites); Registered Parks and Gardens (Thwaite Hall and Risby Hall); Onshore Conservation Areas (18 sites); Onshore National Site Network (one site); Offshore National Site Network (three sites); Offshore Marine Conservation	DCO Works Plan - Onshore

Commitment ID	Measure Proposed	How the measure will be secured
	Zones (two sites); Sites of Special Scientific Interest (two sites); Local Nature Reserves (none have been identified); Local Wildlife sites (33 sites); Yorkshire Wildlife Trust Reserves (none have been identified); Royal Society for the Protection of Birds (RSPB) Reserves (none have been identified); Heritage Coast; National Trust land; Ancient Woodland (10 sites and known Tree Preservation Orders (TPOs)); non-designated built heritage assets (334 sites); and historic landfill (none have been identified). Where possible, unprotected areas of woodland, mature and protected trees (i.e. veteran trees) have and will also be avoided.	
Co7	Primary: The construction work area associated with onshore export cable corridor will be 80 m working width to minimise the construction footprint, except at the Network Rail Crossing near Beswick, the approach to landfall and the approach to the onshore substation. At the Network Rail Crossing the working width is extended up to 120 m to facilitate HDD of the railway line. The permanent onshore export cable corridor width will be 60 m except where obstacles are encountered such as the Network Rail Crossing near Beswick (where the permanent footprint may be extended up to 120 m to facilitate HDD of the railway line), and on the approach to the landfall and onshore substation.	DCO Works Plan - Onshore
Co10	Tertiary: Post-construction, the working area will be reinstated to pre-existing condition as far as reasonably practical in line with DEFRA 2009 Construction Code of Practice for the Sustainable Use of Soils on Construction Sites PB13298 or latest relevant available guidance.	DCO Requirement 17 (CoCP); and DCO Requirement 20 (Restoration of land used temporarily for construction)
Co25	Primary: The onshore export cable corridor (inclusive of the 400kV export cables) will be completely buried underground for its entire length. No overhead pylons will be installed as part of the consented works for Hornsea Four.	DCO Schedule 1, Part 1 Authorised Development
Co26	Primary: Where hedgerows and/or trees require removal, this will be undertaken prior to topsoil removal. Sections of hedgerows and trees which are removed will be replaced using like for like hedgerow species.	DCO Requirement 17 (CoCP); and DCO Requirement 10 (Ecological Management Plan)
Co27	Primary: Trees identified to be retained within the Onshore Crossing Schedule will be fenced off and worked around. Where works are required close to trees that will remain in situ, techniques will be used to safeguard the root protection zone.	DCO Requirement 17 (CoCP); and DCO Requirement 10 (Ecological Management Plan)
Co28	Primary: Joint Bays will be completely buried, with the land above reinstated except where access will be required from ground level, e.g. via link box chambers and manholes.	DCO Requirement 17 (CoCP); and DCO Requirement 20 (Restoration of

Commitment ID	Measure Proposed	How the measure will be secured
		land used temporarily for construction)
Co30	Secondary: A Landscape Management Plan will be developed in accordance with the Outline Landscape Management Plan. The Landscape Management Plan will include details of mitigation planting at the onshore substation site, including the number, location, species and details of management and maintenance of planting. Where practical, landscape mitigation planting will be established as early as reasonably practicable in the construction phase.	DCO Requirement 8 (Provision of landscaping)
Co49	Primary: There will be no permanent High Voltage infrastructure installed above surface within 110 m of residential properties and sub surface infrastructure (including the onshore export cable) within 50 m of residential properties.	DCO Requirement 7 (Detailed design approval onshore)
Co68	Secondary: All logistics compounds will be removed and sites will be reinstated when construction has been completed.	DCO Requirement 17 (CoCP); and DCO Requirement 20 (Restoration of land used temporarily for construction
Co69	Secondary: Construction site lighting will only operate when required and will be positioned and directed to avoid unnecessary illumination to residential properties, sensitive ecological receptors, footpath users, and minimise glare to users of adjoining public highways. Construction site lighting will be designed in accordance with relevant latest relevant available guidance and legislation and the details of the location, height, design and luminance of lighting to be used will be detailed within the final Code of Construction Practice. The design of construction site lighting will accord with the details provided in the Outline Code of Construction Practice (Co124) and Outline Ecological Management Plan (Co168).	DCO Requirement 17 (CoCP); and DCO Requirement 10 (Ecological Management Plan)
Co79	Primary: Disturbance to PRoWs will be temporary where reasonably practicable and PRoWS will be reinstated as soon as reasonably practical. A PRoW Management Plan will be developed in accordance with the Outline PRoW Management Plan. The PRoW Management Pan will include details of temporary and permanent diversions, closures, gated crossings and signage to be provided during construction.	DCO Requirement 17 (CoCP)
Co124	Tertiary: A Code of Construction Practice (CoCP) will be developed in accordance with the outline CoCP. The outline CoCP will include measures to reduce temporary disturbance to residential properties, recreational users, and existing land users	DCO Requirement 17 (CoCP)
Co127	Tertiary: An Onshore Decommissioning Plan will be developed prior to decommissioning in a timely manner. The Onshore Decommissioning Plan will include provisions for the removal of all onshore above ground	DCO Requirement 24 (onshore decommissioning)

Commitment ID	Measure Proposed	How the measure will be secured
	infrastructure and the decommissioning of below ground infrastructure and details relevant to flood risk, pollution prevention and avoidance of ground disturbance. The Onshore Decommissioning Plan will be in line with the latest relevant available guidance.	
Co134	Primary: Cable installation works at the landfall area will be located at least 200 m from residential receptors.	DCO Works Plan - Onshore
Co135	Primary: Temporary construction highway access points along the onshore export cable corridor (ECC) will be located at least 150 m from residential receptors, with the exception of three receptors: Bridge Farm Holiday Cottages; Arms Farm and Elm Tree Farm, in Brigham, Driffield.	DCO Requirement 18 (Construction traffic management plan)
Co145	Primary: Views of Beverley Minster from the A1079 will not be obstructed by the siting of the onshore substation.	DCO Requirement 7 (Detailed design approval onshore)
Co151	Primary: No above ground infrastructure associated with Hornsea Four will obstruct the view from St Mary's Church Cottingham to Beverley Minister through considered design of the OnSS and site selection.	DCO Requirement 7 (Detailed design approval onshore)
Co157	Secondary: Fences, walls, ditches and drainage outfalls will be retained along the onshore export cable corridor and landfall, where possible. Where it is not reasonably practicable to retain them, any damage will be repaired and reinstated as soon as reasonably practical. The Environment Agency must be notified if damage occurs to any EA Main river or related flood infrastructure.	DCO Requirement 17 (CoCP)
Co158	Secondary: Impacts on the English Coast Path national route will be minimised through site design considerations and phasing within working constraints for the landfall construction. In addition, Co79 will be applied to the English Coast Path national route.	DCO Requirement 17 (CoCP)
Co165	Secondary: Where Public Rights of Way (PRoWs) are required to be closed during the construction of the onshore export cable corridor and landfall connection works, they will not be closed for any longer than three months at any one time, or for six months in total over the whole construction period. Where closures are required for longer period due to unforeseen circumstances encountered during construction, East Riding of Yorkshire Council will be informed in writing.	DCO Requirement 17 (CoCP)
Co168	Tertiary: An Ecological Management Plan (EMP) will be developed in accordance with the Outline Ecological Management Plan (OEMP). The OEMP includes but is not limited to pre-construction (Section 3), construction (Section 4) and post-mitigation measures (Section 5) relating to: habitats, hedgerows, birds, bats, badgers, otters, water voles, reptiles, great crested newts, terrestrial invertebrates, and other protected or notable species where relevant. The EMP will include details of any long-term mitigation and management measures relevant to onshore ecology and nature conservation. The EMP will be developed in consultation with the relevant responsible authorities.	DCO Requirement 10 (Ecological Management Plan)

Commitment ID	Measure Proposed	How the measure will be secured
Co187	Secondary: The installation of the offshore export cables at landfall will be undertaken by Horizontal Directional Drilling or other trenchless methods.	DCO Requirement 17 (CoCP)
Co192	Secondary: The beach at landfall will not be closed for public access during construction, unless an unforeseen and unplanned event occurs during which emergency access is required. Details will be agreed through the approval of a Code of Construction Practice (CoCP) with ERYC prior to construction of the connection works.	DCO Requirement 17 (CoCP)
Co193	Secondary: Operational site lighting at the onshore substation will be designed in accordance with latest relevant available guidance and legislation and the details of the location, height, design and luminance of lighting to be used will be provided as part of detailed design for the onshore substation. The design of operation site lighting will accord with the details provided in the Outline Design Plan (Co195) and Outline Ecological Management Plan (Co168).	DCO Requirement 7 (Detailed design approval onshore)
Co194	Enhancement: Where agreed with landowners, removed hedgerows and trees will be replaced with hedgerows of a more diverse and locally native species composition than that which was removed.	DCO Requirement 22 (Enhancement Strategy)
Co195	Secondary: Detailed design will be developed for the Onshore Substation in accordance with the Outline Design Plan which will include details regarding design and access. Examples of such detailed design information include (but are not limited to): building heights and form; site layout; external appearance and colours; vehicular and pedestrian access.	DCO Requirement 7 (Detailed design approval onshore)
Co196	Enhancement: The design of the attenuation feature will incorporate an appropriate landscaping to create an area of biodiverse habitat, as outlined in the Outline Enhancement Strategy.	DCO Requirement 22 (Enhancement Strategy)

4.8.2.3 Further to Co195, an Outline Design Plan (**Volume F2, Chapter 13**) has been produced which provides the outline approach and key embedded design mitigations of the OnSS and EBI which will inform the detailed design, including layout, scale, finished ground levels, external appearance and materials, hard surfacing. In addition, **Volume A4, Annex 4.6: Design Vision Statement** presents the 'vision' of Hornsea Four design onshore, setting out how the project mitigation and further enhancement and net gain measures interact.

4.9 Maximum Design Scenario

4.9.1.1 This section describes the Maximum Design Scenario (MDS) parameters on which the LVIA has been based. These are the parameters which are judged to give rise to the maximum levels of effect for the assessment undertaken, as set out in **Volume A1, Chapter 4: Project Description**. Should Hornsea Four be constructed to different parameters within the design envelope, then the impacts will not be any greater than those set out in this ES using the MDS presented in **Table 4.12**.

Table 4.12: Maximum design scenario for impacts on Landscape and Visual.

Impact and Phase	Embedded Mitigation Measures	Maximum Design Scenario / Rochdale Envelope	Justification
Construction			
Temporary loss of landscape features and changes to landscape character in the OnSS area from construction activities. (LV-C-4) Temporary change to views in the OnSS area from construction activities. (LV-C-4)	Primary: Co2 Co26 Co27 Co49 Co79 Co145 Co151 Co165 Tertiary: Co10 Co124 Secondary: Co30 Co69 Co168	**Onshore Substation and Energy Balancing Infrastructure:** • Construction duration: 43 months; • Permanent area of site for all infrastructure: 164,000 m^2 of which 34,000 m^2 will comprise landscaping and 4,000 m^2 will comprise attenuation feature(s); • Temporary works area: 130,000 m^2; • Temporary access road: Number: 1, Length: 1,800 m, Width: 15 m (7 m road, 8 m soil storage); • Temporary fencing: To be erected around entirety of OnSS/EBI permanent and temporary works area, inclusive of access track; and • All vegetation within these areas will be removed, except the areas of Works Number 7d and 7f along the northern boundary of the OnSS (Sheet 28, **Volume D1, Annex 4.2**).	These parameters provide the maximum losses of /disturbance to landscape features and resulting visual intrusion.
Operation			
Permanent loss of landscape features, and changes to landscape character from operation of the OnSS. (LV-O-5)	Primary: Co2 Co27 Co79 Co145	**Onshore Substation and Energy Balancing Infrastructure:** • Onshore Operational life: 35 years; • Permanent area (inclusive of landscaping and attenuation feature(s)): 164,000 m^2 of which 34,000 m^2 will comprise	MDS covers the maximum parameters stated for the OnSS and EBI structures which are considered likely to have

Impact and Phase	Embedded Mitigation Measures	Maximum Design Scenario / Rochdale Envelope	Justification
Permanent change to views from operation of the OnSS. (LV-O-5)	Co151 Secondary: Co30 Co168 Co193 Co195 Enhancement: Co196	landscaping and 4,000 m^2 will comprise attenuation feature(s), with the remaining 126,000 m^2 used for the OnSS and EBI; and • Permanent access road: Number 1; Length: 1, 800 m; Width: 10 m (7 m road, 3 m soil stabilisation and below ground utilities). **Onshore Substation:** • Main Buildings: Number: 2, Length: 240 m (if single building), Width: 80 m (if single building), Height: 25 m; • Secondary Buildings: Number: 15, Total Combined Area: 7,000 m^2, Height: 15 m; and • Height of lightning protection for main building: 30 m. **Energy Balancing Infrastructure:** • Main and Secondary Buildings: Total Area (within permanent infrastructure area): 17,300 m^2; • Main buildings: Height: 15 m; • Secondary buildings: Height: 20 m (type one); • Height of fire walls: 25 m; • Lightning protection: Height: 25 m; and • Minimum landscape treatment as per Section 4.2.6, **Volume A1, Chapter 4: Project Description**. The infrastructure has been placed in the most sensitive parts of the landscape to provide the maximum design scenario.	greatest effects and potentially be less easy to mitigate.

4.10 Assessment methodology

4.10.1.1 The assessment methodology for the LVIA is consistent with that presented in Annex C of the Scoping Report (Orsted 2018). The methodology is based on the principles set out in GLVIA3 (Landscape Institute and Institute of Environmental Management and Assessment 2013).

4.10.2 Impact assessment criteria

4.10.2.1 The criteria for determining the significance of effects is a two-stage process that involves defining the sensitivity of the receptors and the magnitude of the impacts. This section describes the criteria applied in this chapter to assign values to the sensitivity of receptors and the magnitude of potential impacts. The assessments of sensitivity and magnitude in turn rely on a number of subsidiary judgements, in line with the approach set out in GLVIA3. GLVIA3 also recommends that these are judged differently for landscape and visual receptors. The following sections set out all criteria used for judging the sensitivity of landscape and visual receptors, and the magnitude of landscape and visual impacts.

4.10.3 Sensitivity of landscape receptors

4.10.3.1 GLVIA3 states that the sensitivity of landscape receptors should be assessed in terms of the susceptibility of the receptor to the type of change proposed, and the value attached to the resource.

4.10.3.2 The susceptibility of a landscape receptor is a measure of its ability to accommodate the proposed development "*without undue consequences for the maintenance of the baseline situation*" (paragraph 5.40, GLVIA3). As recommended in GLVIA3 judgements on the susceptibility of landscape receptors are recorded as high, medium or low according to Table 4.13.

Table 4.13: Susceptibility of Landscape Receptors.

Susceptibility	Definition
High	The landscape receptor is less able to accommodate the type of development proposed without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape offer limited opportunities for accommodating the change without key characteristics being fundamentally altered, leading to a different landscape character.
Medium	The landscape receptor is partly able to accommodate the proposed development without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape offer some opportunities for accommodating the change without key characteristics being fundamentally altered.
Low	The landscape receptor is more able to accommodate the proposed development without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape are resilient to being changed by the type of development proposed.

4.10.3.3 Value of the landscape resource is determined in line with **Table 4.14** , with reference to:

- a review of designations and the level of policy importance that they signify (such as landscapes designated at international, national, or local level); and
- application of criteria that indicate value (such as landscape quality, scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects, associations e.g. with artists or writers).

Table 4.14: Definitions of landscape value.

Value	Definition
High	Areas or features designated at a national level e.g. National Parks or AONBs, or key features of these with national policy level protection AND/OR Landscapes with high scenic quality, and/or conservation interest, and/or recreational value, and/or cultural associations, which are valued at a national level (based on a review of nationally designated sites and features).
Medium	Areas or features designated at a county or local level e.g. local authority designated landscapes or key features of designated landscapes. AND/OR Landscapes with some scenic quality, and/or or some recreational value, or important cultural associations which are valued at a district level.
Low	Areas or features that are not formally designated but may be valued at a community level. AND/OR Landscape of lower aesthetic qualities than the landscapes described above e.g. character that is widespread.

4.10.3.4 The sensitivity of a landscape receptor to change is defined as high, medium or low and is based on weighing up professional judgements regarding susceptibility and value, as set out in **Table 4.15**.

Table 4.15: Sensitivity of landscape receptors.

Sensitivity	Definition
High	Landscapes which by nature of their character would be less able to accommodate development without change in character, due to their relatively higher susceptibility to the type of change proposed, and/or the higher value placed upon them by society.
Medium	Landscapes which by nature of their character would be able to accommodate development, subject to careful siting and design, due to their more moderate susceptibility to the type of change proposed, and/or relatively moderate value placed upon them by society.
Low	Landscapes which by nature of their character would be more able to accommodate development without substantive change in character, due to their relatively lower susceptibility to the type of change proposed, and/or lower value placed upon them by society.

4.10.4 Sensitivity of visual receptors

4.10.4.1 GLVIA3 states that the nature of visual receptors should be assessed in terms of the susceptibility of the receptor to change in views/visual amenity and the value attached to particular views.

4.10.4.2 The susceptibility of visual receptors to changes in views/visual amenity is a function of the occupation or activity of people experiencing the view, and the extent to which their attention is focussed on views (GLVIA3, paragraph 6.32). This is recorded as high, medium or low according to Table 4.16.

Table 4.16: Susceptibility of Visual Receptors.

Susceptibility	Definition
High	Communities where views contribute to the landscape setting enjoyed by residents; people engaged in outdoor recreation (including users of public rights of way whose interest is likely to be focussed on the landscape); visitors to heritage assets or other attractions where views of surroundings are an important contributor to experience.
Medium	Travellers on road, rail or other transport routes.
Low	People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; people at their place of work whose attention is not on their surroundings.

4.10.4.3 Recognition of the value of a view is determined in accordance with Table 4.17, with reference to:

- planning designations specific to views;
- whether it is recorded as important in relation to designated landscapes (such as views specifically mentioned in the special qualities of a National Park, AONB or National Scenic Area);
- whether it is recorded as important in relation to heritage assets (such as designed views recorded in citations of Registered Parks and Gardens, or views recorded as of importance in Conservation Area Appraisals); and/or
- the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature and art.

Table 4.17: Definitions of Value Attached to Views.

Value	Definition
High	Views recorded in World Heritage Site Management Plans or associated with nationally designated landscapes (perhaps identified in management plans), designed views recorded in citations for historic parks and gardens/scheduled monuments or a view regularly used in guidebooks for that part of the country.
Medium	Views associated with local authority designated landscapes or recorded as of importance in Conservation Area Appraisals or experienced by a visitor to an area as well as the local community.
Low	Views valued at a community level and likely to be experienced mostly by the local community.

4.10.4.4 The sensitivity of a visual receptor to change is defined as high, medium or low and is based on weighing up professional judgements regarding susceptibility and value, as set out in Table 4.18.

Table 4.18: Sensitivity of visual receptors.

Sensitivity	Definition
High	Larger numbers of viewers and/or those with proprietary interest and prolonged viewing opportunities such as residents and users of attractive and well-used recreational facilities. The quality of the existing view, as likely to be perceived by the viewer, is considered to be high.
Medium	Small numbers of residents or moderate numbers of recreational viewers, with an interest in their environment. Larger numbers of recreational road users. The quality of the existing view, as likely to be perceived by the viewer, is considered to be medium.
Low g	Small numbers of recreational viewers with interest in their surroundings. Viewers with a passing interest not specifically focussed on the landscape e.g. workers, commuters. The quality of the existing view, as likely to be perceived by the viewer, is considered to be low.

4.10.5 Magnitude of Landscape Impact

4.10.5.1 The magnitude of the impact on each landscape receptor is reported in terms of its scale, geographical extent, duration and reversibility.

4.10.5.2 For landscape receptors, the scale of change depends on the degree to which the character of the landscape is changed through removal of existing landscape components or addition of new ones. Of particular concern is how the changes affect the key characteristics of the landscape. In this assessment scale is described as being imperceptible, small, medium or large, with reference to the definitions set out in Table 4.19.

Table 4.19: Scale of Landscape Change.

Scale	Definition
Large	Extensive loss or modification of landscape elements or addition of new elements and features which alter the key characteristics and perceptual character of the landscape to a large extent.
Medium	Loss of landscape elements and features or addition of new ones which result in discernible and distinct changes to landscape characteristics and character.
Small	A perceptible but small change to landscape characteristics and character as a result of the loss of landscape elements and features or addition of new ones.
Imperceptible	A barely perceptible/ imperceptible change to landscape character and characteristics.

4.10.5.3 The geographical extent over which the landscape effect will be felt is described on a continuum between 'localised', i.e. restricted to the site and immediate surroundings, and 'widespread', across a whole landscape. This is set in the context of the Hornsea Four landscape and visual study area, so that a 'widespread' effect would be one affecting all or most of the study area. The geographical extent is generally described by defining an area over which the effect will occur, with reference to identifiable landscape features.

4.10.5.4 GLVIA3 states that "*duration can usually be simply judged on a scale such as short term, medium term or long term.*" For the purposes of this assessment, duration has been determined in relation to the phases of the development, as follows:

- 'short-term' effects are those that occur during construction, and may extend into the early part of the operational phase, e.g. construction activities;
- 'medium-term' effects are those that occur during part of the operational phase, e.g. relating to mitigation planting, where effects may cease or reduce on maturation of planting; and
- 'long-term' effects are those which occur throughout the operational phase, e.g. presence of the OnSS, or are permanent effects which continue after the operational phase.

4.10.5.5 Reversibility is reported as reversible, partially reversible or not reversible (permanent), and is related to whether the change can be reversed (e.g. effects arising from presence of construction traffic will cease at the end of construction, whereas effects arising from presence of new built development will be not reversible).

4.10.5.6 The magnitude is derived by combining professional judgements on scale; geographical extent; duration and reversibility as set out in **Table 4.20**.

Table 4.20: Definition of terms relating to magnitude of landscape impact.

Magnitude	Definition
Large	A clearly evident and frequent/continuous change in landscape features and characteristic affecting an extensive area (relative to the Hornsea Four landscape and visual study area), or the characteristics, and/or notable widespread alteration to the special or key qualities of designated areas.
Medium	A moderate change in landscape features and character, frequent or continuous, and over a wide area, or a clearly evident change either over a restricted area, and/or with some alteration to the special or key qualities of designated areas.
Small	A small change in landscape features and character over a wide area or a moderate change over a more restricted area, and/or barely altering the special of key qualities of designated areas.
Negligible	An imperceptible, barely or rarely perceptible change in landscape features and character, and/or not altering the special or key qualities of designated areas.

4.10.6 Magnitude of Visual Impact

4.10.6.1 The magnitude of the impact on visual receptors is reported in terms of its scale, geographical extent, duration and reversibility.

4.10.6.2 For visual receptors, the scale of change depends on:

- the scale of the change in view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;

- the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and/or
- the nature of the view of the proposed development, in terms of whether views will be full, partial or glimpses.

4.10.6.3 The assessment assumes winter conditions with minimal screening by deciduous vegetation and trees, based on winter site visits to the area and comparison of the baseline photography obtained in spring with observations made during the site visits in December 2018 and January 2020 (see **paragraph 4.6.3.1**). In this assessment, scale is described as being imperceptible, small, medium or large, with reference to the definitions set out in **Table 4.21**.

Table 4.21: Scale of Visual Change.

Scale	Definition
Large	Large change in view, perhaps where the development is in close proximity in a direct line of vision, or affecting a substantial part of the view, or providing contrast with the existing view.
Medium	Clearly perceptible change in view, perhaps where the development is relatively close but at an oblique angle or further away in the direct line of vision, creating a distinct new element in the view.
Small	Small change in view, perhaps where the development is at a distance or oblique angle, or where the scale of the landscape absorbs the development well.
Imperceptible	Change in view which is barely perceptible.

4.10.6.4 The geographical extent records the area over which the changes would be visible e.g. whether there is only one point from where the development can be glimpsed, or whether similar views can be gained from large areas. It can also relate to the number of people affected with a larger geographical extent applying where larger numbers of people will be affected. The geographical extent is generally described in terms of a defined area.

4.10.6.5 For the purposes of this assessment, duration has been determined in relation to the phases of the development, as outlined in **paragraph 4.10.5.4**.

4.10.6.6 Reversibility is reported as reversible, partially reversible or not reversible (permanent), and is related to whether the change can be reversed (e.g. effects arising from presence of construction traffic will cease at the end of construction, whereas effects arising from presence of new built development will be not reversible).

4.10.6.7 The magnitude is derived by combining professional judgements on scale; geographical extent; duration and reversibility as set out in **Table 4.22**.

Table 4.22: Definition of terms relating to magnitude of visual impact.

Magnitude	Definition
Large	Major changes in view at close distances, affecting a substantial part of the view, continuously visible over the long term (as defined in paragraph 4.10.5.4), or obstructing a substantial part or important elements of the view.
Medium	Clearly perceptible changes in views at intermediate distances, resulting in either a distinct new element in a significant part of the view, or a more wide-ranging, less concentrated change across a wider area.
Small	Minor changes in views, at long distances, or visible over the short term (as defined in paragraph 4.10.6.5), perhaps at an oblique angle, or which blends to an extent with the existing view.
Negligible	A change which is barely visible, perhaps at very long distances or at an oblique angle, and/or visible over the short term (as defined in paragraph 4.10.6.5), and which generally blends with the existing view.

4.10.7 Significance of Landscape and Visual Impacts

4.10.7.1 The significance of the impact upon landscape and visual receptors is determined by correlating the magnitude of the impact and the sensitivity of the receptor. This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. Judgements are made on a case-by-case basis, guided by the principles set out in Figure 4.7.

4.10.7.2 For the purposes of this assessment, all effects with a significance level of moderate or greater are considered to be 'significant' in the context of the EIA Regulations. Any effects with a significance level of slight or less have been concluded to be 'not significant' in EIA terms.

4.10.8 Direction of effects

4.10.8.1 The direction of effect (positive/beneficial, negative/adverse, or neutral) is determined in relation to the degree to which the proposal fits with landscape character and the contribution to the landscape that the development makes. In this assessment, taking a precautionary stance, all effects are considered to be adverse unless specifically stated otherwise in the assessment.

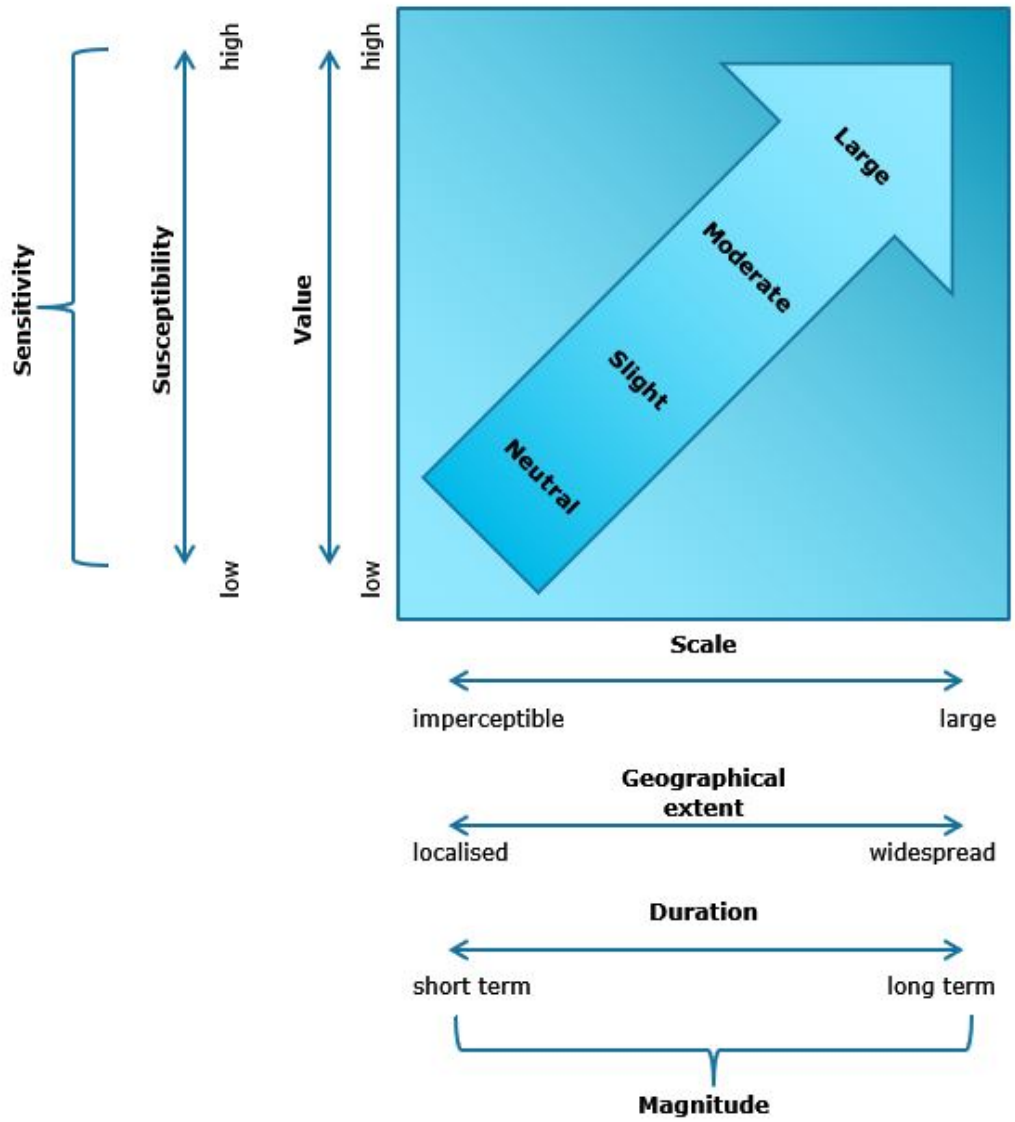

Figure 4.7: Matrix showing the methodology used for the assessment of the significance of the effect.

4.10.9 Simple and detailed assessment

4.10.9.1 Two approaches have been followed for the reporting of impacts: simple and detailed. The same approach set out above is applied in each case, but the difference is in the level of detail given in the reporting of effects.

4.10.9.2 For a simple assessment:

- Receptors are grouped by their location, context and/or proximity to the scheme, and are considered together where professional judgement indicates that effects are likely to be similar;
- Assessments consider the groups as opposed to the individual receptors; and
- No ZTVs or photomontages are provided given as it is not considered necessary for temporary works, or elements which will be beneath the ground surface.

4.10.9.3 For a detailed assessment:

- Receptors are considered individually, or as small groups where professional judgement indicates that receptors are likely to experience identical effects – these groups are likely to be limited to 3-4 properties;
- A ZTV for the OnSS is provided (**Figure 4.2**); and
- Representative viewpoints were identified and agreed with the relevant stakeholders (see **Table 4.4**) – these are introduced in **Section 4.7.5** and listed in **Table 4.9**, and views are illustrated in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages** using photography and photomontages, as set out in **Section 4.10.10**.

4.10.10 Approach to visualisations

4.10.10.1 No photography or photomontages are provided for the landfall and cable works, given the works within these areas will be temporary and all permanent works will be below ground.

4.10.10.2 Baseline photography was taken for all ten representative viewpoints listed in **Table 4.9**, and is presented in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, to illustrate the existing view and the landscape context in which the OnSS will be seen to inform the assessment of impact LV-O-5.

4.10.10.3 For each of the ten representative viewpoints listed in **Table 4.9**, a simple 'block visualisation' has been prepared in relation to LV-O-5, showing a basic model that illustrates the MDS outlined in **Table 4.12**, including placement of the largest buildings in the most visually prominent locations. These block visualisations represent the worst case in terms of visual obstruction and serve as a primary reference for the LVIA.

4.10.10.4 For the four closest representative viewpoints (VP1 to VP4 in **Table 4.9**), further photomontages have been prepared to show an illustrative 3D model (in line with the MDS) of the OnSS, prepared by Hornsea Four. The illustrative model selected for use shows the High Voltage Direct Current (HVDC) option, which includes larger buildings and is likely to be more intrusive than the High Voltage Alternate Current (HVAC) option in most views. These visualisations present a more photorealistic impression of the OnSS than the block visualisations. The model shown in these visualisations may differ from the final design of the OnSS. Three iterations of these photomontages have been prepared, showing the illustrative model immediately following construction (Year 1), and at Year 10 and Year 30 following completion, to show the effect of maturing mitigation planting. The depiction of

landscape mitigation is similarly illustrative, and these photomontages therefore serve as a secondary reference for the LVIA.

4.10.10.5 All photography and photomontages have been generated in accordance with the Landscape Institute's Technical Guidance Note 06/19 (Landscape Institute 2019b) on use of photography and photomontage in LVIA, or the earlier Advice Note 01/11 (Landscape Institute 2011) on the same topic in the case of photography taken before June 2019.

4.10.10.6 Photomontages have been produced to illustrate the scale and massing of the OnSS but do not show details of finishes or colours as these are yet to be determined. These elements are considered further in **Volume F2, Chapter 13: Outline Design Plan** and **Volume A4, Annex 4.6: Design Vision Statement**. Landscape planting proposals have also been shown indicatively at this time and have been based on the Indicative Landscape Mitigation Plan shown in **Figure 4.8**. Further detail is provided in **Volume F2, Chapter 8: Outline Landscape Management Plan**.

4.10.10.7 All baseline photography, block visualisations and photomontages are included in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

4.11 Impact assessment

4.11.1 Construction

4.11.1.1 The likely impacts of the onshore construction of Hornsea Four have been assessed on the landscape and visual receptors. The environmental impacts arising from the construction of Hornsea Four on landscape and visual receptors are listed in **Table 4.12** along with the MDS against which each construction phase impact has been assessed.

4.11.1.2 A description of the potential effect on landscape and visual receptors caused by each identified impact is given below. All construction phase effects (i.e. LV-C-4) are presented as a simple assessment, as defined at **Section 4.10.9**, and are set out in relation to the subareas described at **Section 4.5**.

Temporary effects on landscape and viewers of the OnSS site: Construction phase.
Temporary loss of landscape features and changes to landscape character. (LV-C-4)

4.11.1.3 This section considers the impacts of construction works on subarea 5 of the Hornsea Four landscape and visual study area as shown on **Figure 4.6**. However, the focus is on the OnSS site and associated temporary work and access areas, as these will be the main areas of disturbance.

Sensitivity of the receptor

4.11.1.4 The area between the A164, A1079, and the Hull to Scarborough railway is intensively farmed, and is generally open in aspect. It includes some sizeable areas of woodland, as

well as small field boundary trees and occasional shelter belts that locally contain views. Mature trees can be seen to be associated with properties, as at Burn Park Farm. Trees are also clustered along meandering watercourses. These trees and woodlands are highly susceptible to disturbance by construction works, though the most significant areas lie outside the Hornsea Four Order Limits and could serve to screen and accommodate the works in the landscape. Otherwise, there are few landscape features that are susceptible to the construction works. The landscape character of this location is influenced by infrastructure, including the A1079 embankments and overhead power lines. This influence becomes stronger further east, due to the presence of the NGET substation and the nearby gas peaking plant, as well as large glasshouses. Across the western part of this area the landscape remains more rural. Overall, the susceptibility of the landscape to construction activity is judged to be **low**.

4.11.1.5 The landscape that will be affected by the construction works is not designated for its landscape value. The outer edge of the Yorkshire Wolds ILA is 1 km to the west, beyond the A164. The landscape is not of high scenic quality and is not rare. However, it does have recreational value represented by a range of PRoWs, the Beverley 20 LDWR, and the NCN Route 1. Overall, the value of this landscape is judged to be **medium**.

4.11.1.6 The landscape that will be affected by construction of the OnSS and associated works is deemed to be of low susceptibility to construction and medium value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact

4.11.1.7 Construction of the OnSS will lead to disturbance and activity across the area within the Hornsea Four Order Limits, including the temporary access tracks across fields, an extensive temporary logistics compound area, and the OnSS construction site, with associated fencing, storage bunds, equipment, signage and other temporary features. Within the OnSS site, there will be excavations and construction activity as work progresses on the various buildings, earth bunds, and other infrastructure. Vegetation clearance at the project outset, other than arable land, will be minimal as most trees are outside the Hornsea Four Order Limits and will be not be affected by the works. Approximately 210 m of native, species-poor hedgerow (Tree Survey ID 109) will be removed from within the OnSS site, including a single mature oak tree (Tree Survey ID 108). Given the nature of the change, from rural or semi-rural farmland to an extensive construction site, the scale of change in the landscape is large. The geographical extent of the change in landscape character will extend across an area defined by: the railway line to the east; the A1079 to the north; Birkhill Wood and Jillywood Lane to the north-west; the A164 to the west; conifers along the edge of the golf course to the south-west; and glasshouses and trees at Pillwood Farm to the south-east (see **Figure 4.6**). The works for the OnSS are expected to last up to 43 months, though different elements will be carried out at different times within this. Works at different stages may be more or less intense and may affect different areas. However, effects will not be greater than assessed here. Some effects will continue beyond the 43-month period, as the construction effects are partly reversible, in that areas affected by the temporary compound and temporary part of the OnSS access track will be reinstated to their former

condition as agricultural land (Co10). The effects of permanent features are assessed separately below (**paragraphs 4.11.2.4** to **4.11.2.111**).

4.11.1.8 The impact of the construction works for the OnSS is predicted to be of **large** scale and **relatively localised** geographical extent. It will be **medium term** and partly reversible. The magnitude is therefore considered to be **medium**.

Significance of the effect

4.11.1.9 Overall, it is assessed that the sensitivity of the receptor is **medium,** and the magnitude is **medium**. The impact is of **moderate adverse** significance, which is significant in EIA terms. Beyond the immediate geographical extent of the OnSS, the impact on the landscape will not be significant.

Further mitigation

4.11.1.10 Landscape mitigation planting should be established as early as possible in the construction phase, ideally before the stripping of soil and other vegetation from the site. Proposed landscape mitigation planting is illustrated indicatively in **Figure 4.8**, and the early establishment of all or part of this scheme (Co30) will help to integrate the works into the landscape, though it is likely that **significant** residual effects (of no more than **moderate adverse** significance) would remain for the duration of the works, due to the level and extent of disturbance. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**.

Temporary effects on landscape and viewers of the OnSS: Construction phase.
Temporary change to views from construction activities. (LV-C-4)

4.11.1.11 This section considers the impacts of construction works on views experienced by receptors (people) in proximity to the OnSS site and associated temporary works areas (refer to **Figure 4.6**).

Sensitivity of the receptor

4.11.1.12 Receptors in close proximity to the OnSS and temporary works areas include residential receptors at Burn Park Farm, Burn Park Cottages, Poplar Farm, Jillywood Farm and Platwoods Farm, all within 500 m of the Hornsea Four Order Limits. Other nearby residential receptors include those along Dunswell Road east of the railway, at Cottingham Parks to the south and, north of the A1079, and at Model Farm and Halfway House.

4.11.1.13 Recreational receptors include people walking on PRoWs, cyclists on NCN Route 1, and users of the golf course to the south. PRoWs where walkers may experience changes in views include: Skidby Footpaths 7, 11, 12, 16 and 17; Woodmansey Footpaths 4, 6, 7 and 30 and Rowley Footpath 12. The Rowley Bridleway 13 will be permanently diverted to run adjacent to the OnSS access road and as the Skidby Footpath 16 crosses the OnSS site, this will also be permanently diverted (Co79) (see the Outline PRoW management plan in

Volume F2, Chapter 2: Outline Code of Construction Practice). Other PRoWs that pass close to the OnSS will be subject to temporary closure or temporary diversion (Co79, Co165). To the north, PRoWs form part of the Beverley 20 LDWR, which crosses the A1079 and then runs parallel to it, heading west. NCN Route 1 links Cottingham Parks with Beverley, via the NGET substation and the A1079 overbridge.

4.11.1.14 Other receptors include road users passing on the A1079 and railway passengers, as well as people working in the area, such as on farms, at the NGET substation, or at the nearby glasshouses. Views of construction works from other roads are likely to be limited.

4.11.1.15 Views in this area are not subject to any particular recognition. Views are likely to be valued by the local community, who will be the primary receptors at the locations noted above.

4.11.1.16 Residential receptors are of high susceptibility, and the value of the views they experience is low as defined in Table 4.17. The sensitivity of residential receptors to the construction works is therefore judged to be high. Recreational receptors are also of high susceptibility, and the value of their views is low. The sensitivity of recreational receptors is judged to be medium, as their exposure to changes in views is temporary as they pass along routes or take part in recreational activity. Susceptibility of other receptors in the area, e.g. transport and employment receptors, is judged to be low, and the value of their views is low. The sensitivity of these receptors is therefore low.

Magnitude of impact

4.11.1.17 Construction works will be apparent in views as a broad area of disturbance. There will be limited loss of visual features in the landscape, as trees will be protected, but the visual presence of ground clearance, site cabins, vehicle movements, fencing and lighting at night will be very apparent, particularly at close range, i.e. within 1 km of the works.

4.11.1.18 The scale of the change will be greatest for residents at Burn Park Farm, who will experience construction activity to the north and north east from the OnSS site, and the temporary logistics compound to the west and north west. Residents at Burn Park Farm will also experience construction to the south and east from the onshore ECC, although this may not occur concurrently with construction of the OnSS. Other local residential receptors will also have clear views of the construction works, though these will only be in one direction: construction works will nevertheless occupy a wide angle of view from Burn Park Cottages and Poplar Farm. The scale of visual change at all the properties within 750 m of the Order Limits will be large. A similar scale of change is anticipated for views experienced by recreational users in the area, on the routes noted above.

4.11.1.19 At other locations noted in paragraph 4.11.1.12, with the exception of Burn Park Farm, Burn Park Cottages and Poplar Farm discussed in the preceding paragraph, receptors will experience more limited changes, as ground level disturbance and activity will be less visible due to intervening trees, buildings and other landscape features, such as the A1079.

Construction works will still be a visual presence in the view but will constitute a smaller element within it. The scale of the change from these receptors will be medium or low.

4.11.1.20 The geographical extent of the large-scale changes in view will be limited by the A1079 to the north; Birkhill Wood to the north-west; coniferous trees around the golf course to the south-west; glasshouses and trees to the south-east; and the NGET substation to the east. Though there will be views of the construction works from beyond this area, the resulting changes will be of smaller scale as noted above.

4.11.1.21 The works are expected to last up to 43 months. Some effects will continue beyond this as the construction effects are partly reversible, in that areas affected by the temporary logistics compound and temporary access track will be reinstated to their former condition as agricultural land (Co10). The effects of permanent features are assessed separately below (**paragraph 4.11.2.4** to **paragraph 4.11.2.111)**.

4.11.1.22 The impact of the construction works for the OnSS on nearby receptors is predicted to be of large scale and relatively localised geographical extent. It will be medium term and partly reversible. The magnitude is judged to be **large** for receptors at Burn Park Farm, Burn Park Cottages, Poplar Farm and Platwoods Farm, and for users of PRoWs and NCN Route 1 within 750 m of the works. For more distant receptors the scale of change will be medium or low, resulting in a **small** magnitude.

Significance of the effect

4.11.1.23 Overall, it is assessed that the sensitivity of residential receptors is **high** and that of recreational receptors is **medium**. The magnitude will be **large** at the receptors within 750 m noted above, though less for other more distant receptors. The impact of construction works on views experienced by the nearest residential receptors (Burn Park Farm, Burn Park Cottages and Poplar Farm) is therefore of **large adverse** significance, while the impact on nearby recreational receptors is of **moderate adverse** significance, both of which are significant in EIA terms.

Further mitigation

4.11.1.24 Landscape mitigation planting should be established as early as possible in the construction phase, ideally before the stripping of soil and other vegetation from the site. Proposed landscape mitigation planting is illustrated indicatively in **Figure 4.8**, and the early establishment of all or part of this scheme will help to reduce the visibility of the works in close range views, though it is likely that significant (**moderate adverse** significance) residual effects would remain for the duration of the works, due to the level and extent of disturbance that will be apparent. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**.

Future monitoring

4.11.1.25 No requirement for monitoring of landscape and visual impacts during construction has been identified.

Hornsea Four
Figure 4.8
Indicative Landscape Plan

Onshore Substation

- Proposed Trees
- Proposed Scrub
- Proposed Riparian Scrub
- Proposed Attenuation Feature
- Proposed Wildflower Planting
- Proposed Landscape Bund
- Proposed Hedgerow
- Existing Woodland & Hedgerow
- Indicative Building Footprint
- Existing Pylons and OHL
- Proposed Public Footpaths
- Existing Public Footpaths
- Potential Vehicular Entrance Into Site
- Proposed Barrier Fence

Coordinate system: British National Grid
Scale@A3: 1:3,000

0 25 50 100 Metres

0 25 50 100 Yards

REV	REMARK	DATE
	First Issue	21/06/2019
A	Updated following PEIR consultations, for DCO	07/08/2020

Title: Indicative Landscape Mitigation Plan
Document no: HOW04LUC8
Created by:
Checked by:
Approved by:

LUC Ørsted

4.11.2 Operation and Maintenance

4.11.2.1 The landscape and visual impacts assessed in this ES chapter arising from the operation and maintenance of Hornsea Four are listed in **Table 4.12** along with the MDS against which each operation and maintenance phase impact has been assessed.

4.11.2.2 A description of the potential effect on landscape and visual receptors caused by each identified impact is given below. All operational phase effects are presented as a detailed assessment, as defined at **Section 4.10.9**. Reference is made to the ZTV (**Figure 4.2**) and the photomontages presented in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**.

4.11.2.3 The following sections relate to subarea 5 only, being the Hornsea Four landscape and visual study area for the OnSS, as described at **paragraph 4.5.1.5**.

Permanent effects on landscape and viewers of the OnSS site: Operational phase.
Permanent loss of landscape features and changes to landscape character from operation of the OnSS. (LV-O-5)

4.11.2.4 This section considers the direct effects of the OnSS on the local landscape character, as well as the indirect effects on the character of the wider landscape of the 5 km Hornsea Four landscape and visual study area. The latter are presented by the LCTs into which the OnSS falls, as set out in **Section 4.7.3** and shown in **Figure 4.4**.

4.11.2.5 Effects on the landscape are considered at Year 1 following completion of the OnSS. Where significant Year 1 effects are identified, additional mitigation is detailed, and a further assessment is made at Year 10, when mitigation planting will be maturing and starting to take full effect, and at Year 30 when planting will be fully matured. As such, Year 10 and Year 30 effects represent the residual effects following the implementation of secondary mitigation. **Figure 4.8** provides an indicative illustration of the mitigation planting.

Landscape of the OnSS site, within the Sloping Farmland (LCT 16)

Sensitivity of the receptor

4.11.2.6 The sensitivity of the landscape of the OnSS site and the area around it is described at **paragraph 4.11.1.4** in relation to construction works. It is judged that the sensitivity of this area to the operational OnSS is the same as for construction works: the landscape that will be affected by the operational phase of the OnSS is judged to be of **low** susceptibility and **medium** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.7 The OnSS site is currently divided into two large fields by a native, species-poor hedgerow approximately 210 m in length (Tree Survey ID 109), with a single mature oak tree towards the south western end of this hedge (Tree Survey ID 108). These are the only notable

landscape elements that will be permanently lost. The OnSS will be bounded to the south by the existing overhead power lines, to the east and west by field boundaries and to the north by existing vegetation along the stream. Other landscape features north of the permanent Order Limits (Works Number 7d and 7f, see Sheet 28, **Volume D1, Chapter 4.2: Works Plans – Onshore**) will be protected during construction works and retained (Co27) as detailed in **Volume F2, Chapter 8: Outline Landscape Management Plan**.

4.11.2.8 The OnSS will include buildings, electrical infrastructure and overhead lines extending across a site some 500 m long from east to west and 250 m wide from north to south. The OnSS will be similar in character to the existing NGET substation to the east. It will be enclosed within security fencing, and signage will be provided. When operational, night-time security lighting reserved for essential areas only (e.g. key routes and building entrances) will influence the character of the landscape and views during hours of darkness (see **Volume F2, Chapter 13: Outline Design Plan**).

4.11.2.9 The presence of the OnSS will affect the existing landscape character within around a 750 m radius of the site. The extent of this effect will be contained to the east by the existing NGET substation, to the north by the A1079 and the vegetation along its embankments. Birkhill Wood to the north west and tall hedgerows to the west will limit the geographical extent of effects to the west, as will the vegetation bordering Cottingham Parks Golf Course and the glasshouses fringing Cottingham to the south.

4.11.2.10 New woodland and hedgerow planting around the perimeter of the site will also be apparent as a new feature within this open landscape, but given it will take time to grow, it is unlikely to influence the character of the landscape at Year 1.

4.11.2.11 The operational impact of the OnSS is predicted to be of **large** scale and **relatively localised** geographical extent. It will be **long term** and **partly reversible**. The magnitude is therefore considered to be **large**.

Significance of the effect: Year 1

4.11.2.12 Overall, it is assessed that the sensitivity of the landscape is **medium,** and the magnitude will be **large**, across the site and local to it (within about 750 m of the OnSS). The effect will be of **large adverse** significance, which is significant in EIA terms.

Further mitigation

4.11.2.13 Woodland and hedge planting will be incorporated around the perimeter of the OnSS, in so far as services, access and maintenance restrictions allow. This will help screen or filter views to lower elements of the OnSS and will help integrate it into the landscape, particularly in summer months when deciduous vegetation is in leaf. Some low-level earth mounding to the south west, planted with scrub, will also assist in integration of the new structures into the landscape. The attenuation feature(s) to the south-east will include landscaping to create a positive landscape feature, subject to the final and detailed

drainage requirements (Co196). Site lighting will be designed to avoid unnecessary illumination (Co193). Early establishment of screen planting where practical (Co30), and use of fast-growing species, will ensure mitigation is effective as quickly as possible. No off-site mitigation has been identified that would further reduce residual effects at any location resulting in a lower level of significance. An indicative landscape plan is included in **Figure 4.8**, showing how landscape treatment will be designed to reduce the impacts on the local landscape. **Volume F2, Chapter 8: Outline Landscape Management Plan** provides further detail of proposed landscape planting.

4.11.2.14 Proposals for lighting, fencing, landscape treatment and other design approaches at the OnSS are addressed in **Volume F2, Chapter 13: Outline Design Plan** and **Volume F2, Chapter 8: Outline Landscape Management Plan**.

Significance of the effect: Year 10

4.11.2.15 By Year 10, it is anticipated that maturing mitigation planting is likely to be effective in partly absorbing the OnSS into the landscape, reducing the effect on landscape character. Disturbance arising from construction works will have fully recovered. It is judged that the magnitude at Year 10 will have reduced to **medium**. The effect will be of **moderate adverse** significance, which is significant in EIA terms.

Significance of the effect: Year 30

4.11.2.16 By Year 30, it is anticipated that mature mitigation planting is likely to be more effective in absorbing the OnSS into the landscape, and the OnSS will be seen as an established feature of the local landscape character. It is judged that the magnitude at Year 30 will have reduced to **small**. The effect will be of **slight adverse** significance, which is not significant in EIA terms. The above ground visible elements of the OnSS can be removed at the end of its operational life and the land returned to agriculture or woodland. The new additional perimeter planting, which will have matured by the end of the operational life, is expected to remain as a permanent feature of the landscape.

Farmed Urban Fringe (LCT 17)

4.11.2.17 The Farmed Urban Fringe LCT includes the area along the northern edge of the City of Hull and includes the settlement of Cottingham as well as the landscape immediately south of the OnSS (see **Figure 4.4**). The whole LCT is within the Hornsea Four landscape and visual study area, and it extends to within a few hundred metres of the OnSS. The part of this LCT in close proximity to the OnSS is considered along with the landscape of the OnSS site, at **paragraph 4.11.2.6**.

Sensitivity of the receptor

4.11.2.18 The landscape fringes the urban area of Cottingham and north Hull and is characterised by horticultural and recreational land uses including large glasshouses and golf courses with

non-native tree belts. Roads, overhead power lines and settlement affect the remaining agricultural areas, which tend to be smaller in scale and more enclosed than the open Sloping Farmland to the north. The landscape is not designated, although the Yorkshire Wolds ILA is close to the western edge. The formal recreational facilities and numerous PRoWs are valued by local communities.

4.11.2.19 The landscape of the Farmed Urban Fringe is judged to be of **medium** susceptibility to permanent changes outside the LCT, and of **low** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.20 As shown by the ZTV (**Figure 4.2**), the OnSS will only be seen from the northern part of this LCT, with no visibility from within or south of Cottingham. The OnSS will frequently be screened or filtered by hedgerows, tree belts and by built structures such as the glasshouses. The Farmed Urban Fringe is at a similar elevation as the Sloping Farmland and, as such, does not allow elevated views across it. The OnSS will be apparent in a similar way to the glimpses of the existing electrical infrastructure installations to the north. The scale of the change in landscape character will be small, and the geographical extent limited as experienced from this area. The effect will extend over the lifetime of the project (35 years) and will be partly reversible as the above ground visible elements of the OnSS can be removed at the end of its operational life and the land returned to agriculture or woodland.

4.11.2.21 The operational impact of the OnSS on the Farmed Urban Fringe LCT is predicted to be of **small** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **small**.

Significance of the effect: Year 1

4.11.2.22 Overall, and considering the factors set out above, the sensitivity of the landscape is **medium,** and the magnitude of change will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Open High Rolling Farmland (LCT 13)

4.11.2.23 The Open High Rolling Farmland LCT covers the western part of subarea 5, including the villages of Walkington and Skidby. It lies around 1.2 km from the OnSS site and extends well beyond the Hornsea Four landscape and visual study area to the west (see **Figure 4.4**).

Sensitivity of the receptor

4.11.2.24 The landscape comprises large scale open fields, sloping very gently down to the east, with long-distance views, few trees and low hedges. There is more woodland around Risby Park, west of the A146, which helps to screen views across to the flatter and low-lying landscape of the Sloping Farmland to the east. The Open High Rolling Farmland is almost

all within the locally designated Yorkshire Wolds ILA. The area is a focus for recreation, with several long-distance routes, and the Yorkshire Wolds have associations with art and artists.

4.11.2.25 The landscape of the Open High Rolling Farmland is judged to be of **medium** susceptibility to permanent changes outside the LCT, and of **medium** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.26 The OnSS will be apparent as a relatively small and distant feature from most of this LCT and will frequently be screened or filtered by woodland and hedgerows. The ZTV (**Figure 4.2**) indicates that visibility of the OnSS will be limited to the ridge east of Little Weighton and scattered areas to the north. It will be set within a lower landscape and one in which similar electrical infrastructure installations, as well as major roads, glasshouses, and a variety of other built development are commonplace, set within a framework of agricultural land. The scale of the effect will be small, and the geographical extent limited as shown by the ZTV. The effect will extend over the lifetime of the project (35 years). The above ground visible elements of the OnSS can be removed at the end of its operational life and the land returned to agriculture or woodland. The new additional perimeter planting, which will have matured by the end of the operational life, is expected to remain as a permanent feature of the landscape.

4.11.2.27 The operational impact of the OnSS on the Open High Rolling Farmland LCT is predicted to be of **small** scale and **relatively localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **small**.

Significance of the effect: Year 1

4.11.2.28 Overall, and considering the factors set out above, the sensitivity of the landscape is **medium,** and the magnitude of change will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Low-Lying Drained Farmland (LCT 18)

4.11.2.29 The Low-Lying Drained Farmland LCT occurs in the north-east of subarea 5 (see **Figure 4.4**). It is centred on the River Hull and includes the villages of Woodmansey and Thearne. It is 2.8 km from the OnSS at its closest point.

Sensitivity of the receptor

4.11.2.30 This low lying LCT extends up the flood plain of the River Hull. It is characterised by horticultural land uses including large glasshouses as well as industrial units set within a pattern of smaller fields, with some being used for pasture. Roads, overhead power lines and settlements fragment this area. The landscape is not designated, neither nationally nor

locally. PRoWs follow the river and canal, including the Wilberforce Way LDWR and are valued by local communities.

4.11.2.31 The landscape of the Low-Lying Drained Farmland is judged to be of **medium** susceptibility to permanent changes outside the LCT, and of **low** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.32 The OnSS will be very occasionally apparent as a feature in the landscape as seen from the Low-Lying Drained Farmland LCT, as shown in the ZTV (Figure 4.2). It will be apparent as a relatively small and distant feature and will frequently be screened or filtered by hedgerows, tree belts and by built structures such as the glasshouses. The Low-Lying Drained Farmland is below or at a similar elevation as the Sloping Farmland and, as such, does not allow elevated views across it. The upper parts and structures of the OnSS will be apparent in a similar way to the glimpses of the existing electrical infrastructure installations at the NGET substation. The scale of the effect will be small, and the geographical extent limited as experienced from this area. The effect will extend over the lifetime of the project (35 years) and will be partly reversible as the above ground visible elements of the OnSS can be removed at the end of its operational life and the land returned to agriculture or woodland.

4.11.2.33 The operational impact of the OnSS on the Low-Lying Drained Farmland LCT is predicted to be of **small** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **small**.

Significance of the effect: Year 1

4.11.2.34 Overall, and considering the factors set out above, the sensitivity of the landscape is **medium**, and the magnitude of change will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Permanent change to views from operation of the OnSS. (LV-O-5)

4.11.2.35 This section sets out the impacts of presence of the OnSS on views experienced by people within the 5 km Hornsea Four landscape and visual study area (i.e. subarea 5). The assessment is based on consideration, using field survey and visualisations, of ten representative viewpoints that were selected to represent the range of views and viewers within the Hornsea Four landscape and visual study area. These viewpoints were agreed in consultation with ERYC as noted in Section 4.4 (ON-HUM-1.14). The locations of the viewpoints are shown in Figure 4.2, and baseline descriptions of the currently available view are provided in Table 4.9.

4.11.2.36 Photographs from each of the ten viewpoints are included in Volume A6, Annex 4.1, alongside block visualisations showing the MDS (see Table 4.12). In addition, illustrative photomontage visualisations have been prepared for four of the closest viewpoints

(Viewpoints 1 to 4), to illustrate the potential appearance of the OnSS with indicative mitigation planting at Year 1, Year 10 and Year 30 following completion.

4.11.2.37 Effects on views are considered at Year 1 following completion of the OnSS. Where significant Year 1 effects are identified, additional mitigation is detailed, and further assessments are made at Year 10 when mitigation planting is maturing and taking effect, and at Year 30 when it will be fully matured. As such, Year 10 and Year 30 effects represent the residual effects following the implementation of secondary mitigation. The landscape planting shown indicatively in **Figure 4.8** and described in **Volume F2, Chapter 8: Outline Landscape Management Plan** has been given consideration in the assessment process (see **Section 4.10.10**).

Viewpoint 1 PRoW South of Burn Park Farm

4.11.2.38 Baseline photography for this viewpoint, a block visualisation of the MDS, and illustrative photomontages at Year 1, Year 10 and Year 30, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figures 1 to 3.

Sensitivity of the receptor

4.11.2.39 A small number of residential receptors (Burn Park Farm and Burn Park Cottages) and a small to moderate number of recreational receptors (users of footpaths SKIDF16, SKIDF17, NCN Route 1) are likely to experience views of this nature. The landscape is not designated but is valued locally by residents and people who walk through it. The presence of existing energy infrastructure is apparent as an existing feature of the view.

4.11.2.40 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.41 There will be large scale changes to the view, with new landscape features seen at close distances, affecting a substantial part of the view. The OnSS structures will be visible at close range in northward views from the dwellings and recreational routes noted above. The scale of the structures will be apparent, seen behind the pylons in the foreground. The characteristic panoramic views of arable land associated with this viewpoint are likely to be significantly altered by the proposed development, albeit that the change will be seen in the context of the existing overhead power lines, and electrical infrastructure around the NGET substation. The OnSS will be visible to residents and users of PRoW SKIDF16 at very close range from Burn Park Farm, covering approximately 150° of the view to the north-east, though foreground vegetation will be retained in these views. Security lighting will be apparent during hours of darkness, though again in the context of existing lighting in the area.

4.11.2.42 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **large** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **large**.

4.11.2.43 A residential visual amenity assessment has not been undertaken in terms of the process set out in published guidance (Landscape Institute, 2019a). However, given the proximity of Burn Park Farm, some consideration has been given to the potential for effects on residential visual amenity or 'living conditions' at this location. The dwelling house at Burn Park Farm is located to the south-east of a group of outbuildings. The principal aspect of the house faces south-east away from these buildings, across lawns and paddocks, and framed by mature trees. The rear (north-west) façade faces farm buildings, with a pylon beyond that is likely to be visible from the house. There are no windows on the north-east side of the house. It is likely that the OnSS will be visible from upper rear windows, partly filtered by trees around the house and in the context of the pylon to the north-west, and from the approach to the house. It is not considered likely that these views will be so extensive or inescapable that 'living conditions' at the property would be affected. On this basis no residential visual amenity assessment is considered necessary at this or any other property.

Significance of the effect: Year 1

4.11.2.44 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **large**. The effect will be of **large adverse** significance, which is significant in EIA terms.

Further mitigation

4.11.2.45 Vegetation in the form of woodland planting and hedgerows will be established as part of secondary mitigation measures, to help provide a framework and integrate the development into the landscape (see **Figure 4.8**). Earthwork mounds up to approximately 1.85 m high, topped with scrub and tree planting, along the southern boundary, will assist integrating the development into this view. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**. The design of lighting at the OnSS will minimise the amount of light spill that may affect views (Co193). No off-site mitigation has been identified that would further reduce residual effects to a lower level of significance. The 'vision' for Hornsea Four mitigation to be used for reducing effects through lighting and other aspects of the OnSS design are explored further in **Volume A4, Annex 4.6: Design Vision Statement**. Key embedded mitigations are set out in **Volume F2, Chapter 13: Outline Design Plan**, including external finishes and the use of colour to reduce visual impact.

Significance of the effect: Year 10

4.11.2.46 By Year 10, it is anticipated that screening and filtering of views from maturing mitigation planting is likely to be effective, reducing the effect that the OnSS has on visual amenity in the vicinity of this viewpoint. Growth of the mitigation planting is likely to obscure the lower level structures in the OnSS, though upper parts of buildings, gantries and lightning protection masts will still be visible. Remaining effects of construction works will have been

fully restored, and weathering of built features will reduce their apparent prominence. It is judged that the magnitude at Year 10 will have reduced to **medium**. The effect will be of **moderate adverse** significance, which is **significant** in EIA terms.

Significance of the effect: Year 30

4.11.2.47 By Year 30, mitigation planting will be fully mature, with additional understorey providing a dense visual barrier between the PRoW and the OnSS. It is anticipated that views of the OnSS, particularly taller structures, will be available, but that these would form part of the established context of the views in this part of the countryside. It is judged that the magnitude at Year 30 will have reduced to **small**. The effect will be of **slight adverse** significance, which is not significant in EIA terms. The change in view will last for 35 years and after this time the OnSS structures will be removed.

Viewpoint 2 Park Lane, Cottingham

4.11.2.48 Baseline photography for this viewpoint, a block visualisation of the MDS, and illustrative photomontages at Year 1, Year 10 and Year 30, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figures 4 to 6.

Sensitivity of the receptor

4.11.2.49 Receptors are likely to be moving through the landscape, experiencing close range views of the site for a moderate duration. Residential receptors in the house immediately south of the viewpoint (Oaklands, Park Lane) are unlikely to experience similar views, due to the line of trees obscuring views northwards from the house. This viewpoint is on NCN Route 1, which is signposted and promoted nationally, it is valued highly by recreational receptors. The view at this point is considered to be of modest quality, with some typical arable landscape features and some existing energy infrastructure, though with a distant view to Beverley Minster on the wooded skyline to the north.

4.11.2.50 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.51 There will be a large-scale change to the view and new landscape features seen at close distances will affect a substantial part of the view. The OnSS will be visible at increasingly close range as seen by viewers moving north on the path. The scale of the structures will be apparent, seen behind houses and pylons in the foreground. A substantial portion of the view from this point will be affected by the proposed development. Extensive, panoramic views will be interrupted by the OnSS, and the tower of Beverley Minster will be obscured from view. The change will be seen in the context of the existing electrical infrastructure around

the NGET substation. Security lighting will be apparent during hours of darkness, again in the context of existing lighting in the area.

4.11.2.52 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **large** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **large**.

Significance of the effect: Year 1

4.11.2.53 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **large**. The effect will be of **large adverse** significance, which is **significant** in EIA terms.

Further mitigation

4.11.2.54 Vegetation in the form of woodland planting and hedgerows will be established as part of secondary mitigation measures, to help provide a framework and integrate the development into the landscape (see **Figure 4.8**). In this view, tree planting along the southern boundary, which is raised on an earth bund, and around the attenuation feature(s), will reduce visibility of the lower infrastructure over time. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**. No off-site mitigation has been identified that would further reduce residual effects to a lower level of significance. The design of lighting at the OnSS will minimise the amount of light spill that may affect views (Co193). The 'vision' for Hornsea Four mitigation to be used for reducing effects through lighting and other aspects of the OnSS design are explored further in **Volume A4, Annex 4.6: Design Vision Statement**. Key embedded mitigations are set out in **Volume F2, Chapter 13: Outline Design Plan**, including external finishes and the use of colour to reduce visual impact.

Significance of the effect: Year 10

4.11.2.55 By Year 10, it is anticipated that maturing mitigation planting will have become effective in absorbing the OnSS into the wider view, which is already characterised by large-scale infrastructure. While the OnSS is unlikely to be fully screened from view, and the visual obstruction of Beverley Minster will remain, the structures will appear less stark as construction disturbance will have been fully restored and recovered by Year 10. It is judged that the magnitude at Year 10 will have reduced to **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Significance of the effect: Year 30

4.11.2.56 By Year 30, it is anticipated that mitigation planting will be fully mature, further reducing the effect that the OnSS has on visual amenity in the vicinity of this viewpoint. It is judged that the magnitude at Year 30 will remain **small**. The effect will be of **slight adverse**

significance, which is **not significant** in EIA terms. The change in view will last for 35 years and after this time the OnSS structures will be removed.

Viewpoint 3 Footbridge over A1079

4.11.2.57 Baseline photography for this viewpoint, a block visualisation of the MDS, and illustrative photomontages at Year 1, Year 10 and Year 30, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figures 7 to 9.

Sensitivity of the receptor

4.11.2.58 Receptors at this point may include recreational users of the bridle path, including cyclists, experiencing sustained views to the south if travelling in this direction. Motorists on the A1079 may experience views that are similar in composition, although more fleeting due to lower elevation and screening by roadside vegetation. The presence of existing energy infrastructure is apparent in the form of pylons and overhead lines, and a single wind turbine. This viewpoint is located on a PRoW which forms part of the NCN Route 1 and the Beverley 20 LDWR. The view is valued locally by residents and people who walk, cycle or ride this route.

4.11.2.59 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.60 The proposed development is likely to result in a clearly perceptible change to the mid-ground composition of the view from this point. New elements are likely to break the skyline, as is the case with the existing energy infrastructure associated with the NGET substation. Views are expected to be similar from other nearby PRoWs to the south of the A1079, and at occasional, intermittent points whilst travelling along the A1079. Although viewed from a distance at this viewpoint, the OnSS is expected to break the skyline, becoming more noticeable. The proposed development will increase the presence of energy infrastructure in this landscape. The large scale of the pylons and wind turbine in the foreground will assist in absorbing the structures into the view, and some existing vegetation will also screen the lower level elements. Security lighting will be apparent during hours of darkness, in the context of existing lighting in the area.

4.11.2.61 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **medium** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **medium**.

Significance of the effect: Year 1

4.11.2.62 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **medium**. The effect will be of **moderate adverse** significance, which is **significant** in EIA terms.

Further mitigation

4.11.2.63 Vegetation in the form of woodland planting and hedgerows will be established as part of secondary mitigation measures, to help provide a framework and integrate the development into the landscape (see **Figure 4.8**). Woodland blocks, such as Birkhill Wood to the south-west, contribute to the visual amenity in this area. More substantial areas of planting would be in-keeping with the view from this location. The retention of existing woodland, and the establishment of new planting along the northern boundary, will frame this view of the OnSS and reduce its visual presence over time. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**. No off-site mitigation has been identified that would further reduce residual effects to a lower level of significance. The design of lighting at the OnSS will minimise the amount of light spill that may affect views (Co193). The 'vision' for Hornsea Four mitigation to be used for reducing effects through lighting and other aspects of the OnSS design are explored further in **Volume A4, Annex 4.6: Design Vision Statement**. Key embedded mitigations are set out in **Volume F2, Chapter 13: Outline Design Plan**, including external finishes and the use of colour to reduce visual impact.

Significance of the effect: Year 10

4.11.2.64 By Year 10, it is anticipated that some screening and filtering of views from maturing mitigation planting is likely to be effective, reducing the effect that the OnSS has on visual amenity in the vicinity of this viewpoint. Although due to the elevated viewpoint more of the OnSS will be visible above maturing planting, this is only the case for a short section of this path on the bridge and is therefore a passing view. Taller structures such as lightning protection masts will remain visible elsewhere. It is judged that the magnitude at Year 10 will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Significance of the effect: Year 30

4.11.2.65 By Year 30, it is anticipated that mature mitigation planting is likely to be fully effective, although the upper parts of the OnSS will still be visible from this slightly elevated viewpoint. It is judged that the magnitude at Year 30 will remain **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms. The change in view will last for 35 years and after this time the OnSS structures will be removed.

Viewpoint 4 PRoW east of A164

4.11.2.66 Baseline photography for this viewpoint, a block visualisation of the MDS, and illustrative photomontages at Year 1, Year 10 and Year 30, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figures 10 to 12.

Sensitivity of the receptor

4.11.2.67 Receptors at this point may include hotel guests, recreational users of the footpath, experiencing sustained views to the east if travelling in this direction, or those playing golf who are less likely to be observing the landscape. Motorists on the A164 may experience views that are similar in composition, although more fleeting due to speed of travel and screening from roadside vegetation. The presence of existing energy infrastructure is apparent as an existing feature, particularly in the form of pylons and power lines running immediately overhead. This viewpoint is located on a public footpath, and the view is valued locally by people who walk along it.

4.11.2.68 Visual receptors at this location are judged to be of **medium** susceptibility to changes in the view, and their views are of **low** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.69 The viewpoint is situated approximately 1km from the OnSS site. From this distance, accounting for topography and land cover, the OnSS is likely to generate a small change in the view. The development will be clearly visible but will occupy a restricted portion of the view. The taller structures may obscure part of the long-distance view across wooded farmland to the east. Changes in the view would be felt over a limited area, although the change will be experienced by a concentration of people, expected to be using facilities such as the hotel and golf club.

4.11.2.70 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **medium** scale and **relatively localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **medium**.

Significance of the effect: Year 1

4.11.2.71 Overall, it is judged that the sensitivity of the visual receptors at this location is **medium** and the magnitude will be **medium**. The effect will be of **moderate adverse** significance, which is **significant** in EIA terms.

Further mitigation

4.11.2.72 Vegetation in the form of woodland planting and hedgerows will be established as part of secondary mitigation measures, to help provide a framework and integrate the development into the landscape (see **Figure 4.8**). The planting of larger areas of woodland

on the west boundary will provide a foreground to the OnSS and assist in integrating the structures into the wider view. Mitigation planting is described further in **Volume F2, Chapter 8: Outline Landscape Management Plan**. No off-site mitigation has been identified that would further reduce residual effects to a lower level of significance. The 'vision' for Hornsea Four mitigation to be used for reducing effects through lighting and other aspects of the OnSS design are explored further in **Volume A4, Annex 4.6: Design Vision Statement**. Key embedded mitigations are set out in **Volume F2, Chapter 13: Outline Design Plan**, including external finishes and the use of colour to reduce visual impact.

Significance of the effect: Year 10

4.11.2.73 By Year 10, it is anticipated that mitigation planting will be maturing, which will help to absorb the OnSS into the landscape from this viewpoint. Although due to elevation, planting will not fully screen views, by Year 10 the finishes of the structures will have weathered somewhat, reducing their visual prominence. It is judged that the magnitude at Year 10 will have reduced to **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Significance of the effect: Year 30

4.11.2.74 By Year 30, mitigation planting will be fully mature, though is unlikely to obscure the OnSS from this elevated viewpoint. The visible parts of the OnSS will be seen as an established element of this view, with limited effect on visual amenity in the vicinity of this viewpoint. It is judged that the magnitude at Year 30 will remain **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms. The change in view will last for 35 years and after this time the OnSS structures will be removed.

Viewpoint 5 A164 layby near Bentley

4.11.2.75 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 13.

Sensitivity of the receptor

4.11.2.76 Receptors represented by this viewpoint are motorists travelling on the A164, and those motorists who may stop in the layby for a limited time. The viewpoint is on the boundary of the Yorkshire Wolds ILA, but is not representative of views from or to the designated landscape. The view is very restricted due to the roadside vegetation.

4.11.2.77 Visual receptors at this location are judged to be of **low** susceptibility to changes in the view, and their views are of **low** value. The sensitivity of the receptor is therefore considered to be **low**.

Magnitude of impact: Year 1

4.11.2.78 The OnSS will be barely perceptible from this viewpoint due to the presence of a well-developed hawthorn hedgerow, obscuring views to the east. Through occasional gaps in the hedge, distant fleeting views towards the site may be offered, although the change in view is likely to be barely evident. Motorists are likely to be focused on the view north/south along the road, gaining only occasional, very brief glimpses towards site.

4.11.2.79 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **imperceptible** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **negligible**.

Significance of the effect: Year 1

4.11.2.80 Overall, it is judged that the sensitivity of the visual receptors at this location is **low** and the magnitude will be **negligible**. The effect will be of **neutral** significance, which is **not significant** in EIA terms.

Viewpoint 6 Fishpond Wood, Risby Hall

4.11.2.81 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 14.

Sensitivity of the receptor

4.11.2.82 Receptors in this area are likely to be visitors engaged in recreational activities where landscape is a contributing factor to the overall experience. This viewpoint is representative of views experienced from the edge of Risby Hall Gardens, which is valued as a Grade II Registered Park and Garden. It is also within the Yorkshire Wolds ILA. The viewpoint is located on a PRoW which forms part of the Beverley 20 LDWR. The view is valued locally by residents and visitors who walk along the path.

4.11.2.83 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.84 The presence of energy infrastructure in the view presents a contrast to the designed landscape of Risby Hall. The scale of change is, however, considered to be minimal due to the distance from site and screening offered by hedgerows and shelter belts. Due to the topography, obscuring views to the east, the geographical extent of effects is limited.

4.11.2.85 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **imperceptible** scale and **relatively localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **negligible**.

Significance of the effect: Year 1

4.11.2.86 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **negligible**. The effect will be of **neutral** significance, which is **not significant** in EIA terms.

Viewpoint 7 Little Weighton Road

4.11.2.87 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 15.

Sensitivity of the receptor

4.11.2.88 Receptors are primarily motorists on the short section of road from Little Weighton to Skidby, experiencing transient views. This viewpoint is situated within the Yorkshire Wolds ILA, as designated by the local authority, and is representative of panoramic views that are available from the designated area.

4.11.2.89 Visual receptors at this location are judged to be of **medium** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.90 The OnSS will be barely perceptible from this viewpoint, which provides panoramic views in all directions. Distant, fleeting views towards the site may be offered, although these are not likely to be conspicuous to receptors. The noticeable presence of an overhead line suggests that additional energy infrastructure will not present great contrast to the existing landscape.

4.11.2.91 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **imperceptible** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **negligible**.

Significance of the effect: Year 1

4.11.2.92 Overall, it is judged that the sensitivity of the visual receptors at this location is **medium** and the magnitude will be **negligible**. The effect will be of **neutral** significance, which is **not significant** in EIA terms.

Viewpoint 8 Minster Way

4.11.2.93 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 16.

Sensitivity of the receptor

4.11.2.94 Receptors at this point may include recreational users of the bridleway, including cyclists, experiencing open views to the south. Motorists on the A164 south of Beverley may experience views that are similar in composition. The presence of existing energy infrastructure is apparent as an existing feature. This viewpoint is situated on a recreational route which is valued locally by those who walk or ride through the landscape.

4.11.2.95 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **low** value. The sensitivity of the receptor is therefore considered to be **medium**.

Magnitude of impact: Year 1

4.11.2.96 The proposed development is likely to be visible on the distant skyline from this point. It will occupy a small portion of the view, alongside the NGET substation and other pylons which are noticeable features of this view.

4.11.2.97 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **small** scale and **localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **small**.

Significance of the effect: Year 1

4.11.2.98 Overall, it is judged that the sensitivity of the visual receptors at this location is **medium** and the magnitude will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Viewpoint 9 Beverley Minster Tower

4.11.2.99 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 17.

Sensitivity of the receptor

4.11.2.100 Receptors, primarily visitors attending a Minster tower guided tour, are likely to be overawed by the view as a whole, perhaps locating key landmarks such as the Humber Bridge, which is clearly identifiable in the distance. The view described is specific to this point, and similar effects would not be felt from ground level or nearby lower buildings (i.e. by

residential receptors). Grade I Listed Beverley Minster is an important historic asset to the area, drawing many visitors. The extensive and impressive view from the tower forms part of the overall experience of a guided tour of the Minster. The visual link between Beverley Minster and Cottingham St Mary's has also been highlighted by consultees.

4.11.2.101 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **high** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.102 The OnSS will be clearly visible but will occupy a very small proportion of the rich and varied view experienced from the Minster tower. The changes to the view will be absorbed into the overall landscape as the OnSS will be seen from a distance in the context of other energy infrastructure, with taller buildings in the city of Hull being visible nearby. The presence of intermittent vegetation partly obscures views towards the OnSS site, and therefore the OnSS will not significantly detract from the overall quality of the view. The OnSS structures will not interrupt the view to the tower of St Mary's Church in Cottingham (Co151). Similar views are not available from any other location therefore the geographical extent is limited.

4.11.2.103 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **imperceptible** scale and **very localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **negligible**.

Significance of the effect: Year 1

4.11.2.104 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **negligible**. The effect will be of **neutral** significance, which is **not significant** in EIA terms.

Viewpoint 10 St Mary's Church Tower, Cottingham

4.11.2.105 Baseline photography for this viewpoint, and a block visualisation of the MDS, are shown in **Volume A6, Annex 4.1: Landscape and Visual Resources: Photography and Photomontages**, Figure 18.

Sensitivity of the receptor

4.11.2.106 Receptors, primarily visitors attending a guided tour of the church and tower, are likely to be impressed by the view from St Mary's Church Tower. The view is specific to this point (the tower), and similar effects would not be felt from ground level or nearby lower buildings (i.e. by residential receptors). Views described are from an important local landmark and historic asset, with a visual link to Beverley Minster. The view of Beverley Minster from this point is partially obscured by a pylon associated with the NGET substation.

4.11.2.107 Visual receptors at this location are judged to be of **high** susceptibility to changes in the view, and their views are of **medium** value. The sensitivity of the receptor is therefore considered to be **high**.

Magnitude of impact: Year 1

4.11.2.108 The OnSS will occupy a small proportion of the rich and varied view experienced from the tower. Although it will be clearly visible, foreground buildings and trees are likely to break up the scale of the development. The OnSS will be seen in the middle distance in the context of other energy infrastructure and will not detract from the wider view available from the church tower. Similar views are not available from any other location therefore the geographical extent is limited.

4.11.2.109 The operational impact of the OnSS on views from this location, at Year 1, is judged to be of **small** scale and **very localised** geographical extent and will be **long term** and **partly reversible**. The magnitude is therefore considered to be **small**.

Significance of the effect: Year 1

4.11.2.110 Overall, it is judged that the sensitivity of the visual receptors at this location is **high** and the magnitude will be **small**. The effect will be of **slight adverse** significance, which is **not significant** in EIA terms.

Future monitoring

4.11.2.111 No requirement for long-term monitoring of landscape and visual impacts during construction has been identified. In the short term, mitigation planting will be monitored for an agreed maintenance period (of up to 5 years, see DCO Requirement 9)), to ensure the establishment of all plants, and if any plants are removed or die within this 5 year period, they will be replaced unless agreed otherwise with ERYC. This will be detailed in a Landscape Management Plan which will be prepared in accordance with **Volume F2, Chapter 8: Outline Landscape Management Plan** (Co30).

4.11.3 Decommissioning

4.11.3.1 The impacts of the decommissioning of Hornsea Four is not considered in detail in the ES, as set out in **Table 4.10**, and by impact number LV-D-6, in **Volume A4, Annex 5.1: Impacts Register**.

4.12 Cumulative effect assessment (CEA)

4.12.1.1 Cumulative effects can be defined as:

- effects upon a single receptor to arise as a result of impact interaction between different environmental topics from Hornsea Four; and

- incremental effects on that same receptor from other proposed and reasonably foreseeable projects and developments in combination with Hornsea Four. This includes all projects that result in a comparative effect that is not intrinsically considered as part of the existing environment and is not limited to offshore wind projects.

4.12.1.2 The overarching method followed in identifying and assessing potential cumulative effects in relation to the onshore environment is set out in **Volume A4, Annex 5.5: Onshore Cumulative Effects** and **Volume A4, Annex 5.6: Location of Onshore Cumulative Schemes**. The approach is based upon the PINS Advice Note 17: Cumulative Effects Assessment (PINS 2019). The approach to the CEA is intended to be specific to Hornsea Four and takes account of the available knowledge of the environment and other activities around the Hornsea Four Order Limits.

4.12.1.3 The CEA has followed a four-stage approach developed from PINS Advice Note 17. These stages are set out in Table 2 of **Volume A4, Annex 5.5: Onshore Cumulative Effects**, with Table 4 detailing the onshore long list search areas extents or Zone of Impacts for each topic area. The proposed tier structure that is intended to ensure that there is a clear understanding of the level of confidence in the cumulative assessments provided in the Hornsea Four ES is set out in Table 3 of **Volume A4, Annex 5.5: Onshore Cumulative Effects**.

4.12.2 CEA Stage 2 Shortlist and Stage 3 Information Gathering

4.12.2.1 A short list of projects for CEA has been produced using the screening buffer/criteria set out in Table 2 of **Volume A4, Annex 5.5: Onshore Cumulative Effects**. Information regarding all projects is provided in **Volume A4, Annex 5.5: Onshore Cumulative Effects** and **Volume A4, Annex 5.6: Location of Onshore Cumulative Schemes**.

4.12.2.2 Seven projects have been identified for inclusion on the shortlist of projects to be assessed cumulatively for landscape and visual impacts. The remaining projects have not been considered as they are considered unlikely to result in a cumulative significant effect (for the LVIA). Summary information on the shortlist projects progressing through this exercise (i.e. the short-list of other projects) for LVIA is provided below.

- **Lawns Farm Battery Storage**, a 49.5MW facility with 17 battery units, associated infrastructure and landscaping, located to the south-east of the NGET substation, (approved planning application, ref. 19/01449/STPLF);
- **Jocks Lodge Highway Improvement Scheme**, involving a new roundabout at the A1079/A164 junction, with new slip roads, and dualling of the A164 (in development, planning application ref. 20/01073/STPLF). Located 1,100 m north-west of the Hornsea Four OnSS;
- **Dogger Bank A and B**, two converter stations for offshore wind farms, up to 20m high, to be co-located on the north side of the A1079 south of Model Farm, with associated access, earthworks and landscape planting (Development Consent Order issued February 2015);

- **Low Farm, Dunswell Lane**, new and extended commercial glasshouses, with associated access, ancillary buildings, reservoirs and landscape planting, at Low Farm, to the north of the A1079 and east of the railway line (approved planning application, ref. 19/00908/STPLF). Located 1.1 km east of the Hornsea Four Order Limits;
- **Albanwise Solar Farm**, a 49.9 MW solar farm across approximately 89 hectares, between the A164 and Poplar Farm, on land immediately north of the Hornsea Four OnSS, and including a substation and battery storage compound adjacent to the gas peaking plant (undecided planning application ref. 21/02335/STPLF); and
- **NGET Creyke Beck Substation Extension**, anticipated to be up to 300 m by 250 m in extent, and up to 18 m high, located on land to the east or south-east of the Hornsea Four OnSS. Full details are not available at the time of writing, but it is expected that construction works could overlap with construction of Hornsea Four.

4.12.3 CEA Stage 3 Assessment

4.12.3.1 As stated in Table 2 of **Volume A4, Annex 5.5: Onshore Cumulative Effects**, the assessment is undertaken in two phases:

- **Table 4.23** sets out the potential impacts assessed in this chapter and identifies the potential for cumulative effects to arise, providing a rationale for such determinations; and
- **Table 4.24** sets out the CEA for each of the projects/developments that have been identified on the short-list of projects screened.

4.12.3.2 It should be noted that the second phase of this assessment is only undertaken if the first phase identifies that cumulative effects are possible. This summary assessment is set out in **Table 4.23**.

Table 4.23: Potential Cumulative Effects.

Impact		Potential for Cumulative Effect?	Rationale
Construction of the OnSS			
LV-C-4	Impacts of construction on the landscape resulting from the addition of new types of change or from increasing or extending the effects of Hornsea Four.	Yes	Cumulative landscape effects could occur if other developments are constructed concurrently with the construction phase of Hornsea Four.
LV-C-4	Impacts of construction on views and visual amenity resulting from the change in the content and character of views experienced in particular places due to introduction of new elements or removal of or damage to existing ones.	Yes	Cumulative visual effects could occur if other developments are constructed concurrently with the construction phase of Hornsea Four.
Operation of the OnSS			
LV-O-5	Impacts of operation on the landscape resulting from the addition of new types	Yes	Any other projects that alter the landscape character within the Hornsea

Impact		Potential for Cumulative Effect?	Rationale
	of change or from increasing or extending the effects of Hornsea Four.		Four landscape study area may have cumulative landscape effects at operation.
LV-O-5	Impacts of operation on views and visual amenity resulting from the change in the content and character of views experienced in particular places due to introduction of new elements or removal of or damage to existing ones.	Yes	Any other projects that are visible within the Hornsea Four visual study area may have cumulative visual effects at operation.
Decommissioning			
The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. A decommissioning plan will be provided (Co127). As such, cumulative impacts during the decommissioning stage are assumed to be the same as those identified during the construction stage. Additionally, PINS have stated in their Scoping Opinion that cumulative decommissioning effects are scoped out of the EIA (PINS Scoping Opinion, November 2018, ID: 4.23.1). See impact LV-D-6, in **Volume A4, Annex 5.1: Impacts Register** for further details.			

4.12.3.3 The second stage of the CEA is a project specific assessment of the potential for any significant cumulative effects to arise due to the construction and/or operation and maintenance of Hornsea Four. To identify whether this may occur each shortlisted project is discussed in **Table 4.24**.

4.12.3.4 The CEA has been based on information available on each potential project (e.g. as set out on ERYC planning portal or in an attendant, available ES) and it is noted that the project details available may change in the period up to construction or may not be available in detail at all. The assessment presented here is therefore considered to be conservative, with the level of impacts expected to be reduced compared to those presented here.

Table 4.24: CEA Landscape and Visual.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
Lawns Farm Battery Storage	1	The situation of the Lawns Farm Battery Storage in close proximity (c.600m) to the OnSS means that there is the potential for cumulative effects of a direct nature on the landscape character of the Sloping Farmland (LCT 16) and on views experienced by people using the local PRoW north of Cottingham. The Lawns Farm Battery Storage project will be relatively enclosed by existing vegetation and built development and will be of a similar character to the adjacent substation. As such it will not greatly alter the baseline landscape. Considering this project, there will	No potential for significant cumulative effects, due to limited change to the baseline, and relatively small scale of the battery storage in the context of the NGET substation.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		be a small magnitude of cumulative change and a slight adverse (not significant) cumulative effect on landscape character. The absence of tall structures in the Lawns Farm Battery Storage project means that it is unlikely to be widely visible. There will be few locations where both the OnSS and the battery storage will be seen simultaneously. There may be sequential effects on people using local PRoWs, who would see the Lawns Farm Battery Storage project in the context of an abundance of existing electricity pylons, overhead lines and the NGET substation, and will also view the OnSS at relatively close range, but separately. It is assumed that landscape mitigation will be applied to both projects to reduce their visual impact. The presence of both projects will likely result in a small magnitude of change and slight adverse (not significant) cumulative visual effect.	
Jocks Lodge Highway Improvement Scheme	1	The location of the Jocks Lodge Highway Improvement Scheme within 2 km of the OnSS means that there is the potential for cumulative effects of a direct nature on the landscape character of Sloping Farmland (LCT 16) and on views experienced by people using the Beverley Twenty Long Distance Walking Route as well as local PRoW north of Cottingham. *Construction* The construction phase of the Jocks Lodge Highway Improvement Scheme is currently planned to overlap with the construction of the OnSS, although this may change. The Jocks Lodge Highway Improvement Scheme will be largely focussed on the existing roads although the A164 will be shifted further east. Landscape effects are likely to be localised, although the extent of disturbance and construction activity across both projects will be greater than for the OnSS alone. This will likely result in a small magnitude of change and a slight adverse (not significant) cumulative landscape effect at construction, if the construction phases overlap.	Potential for significant cumulative effects on landscape and views during construction, in the case that construction phases overlap. During operation, the presence of the new road scheme will not substantially alter the baseline situation, and significant effects are not anticipated.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		Intervening vegetation between the Jocks Lodge Highway Improvement Scheme and the OnSS will restrict the opportunities to view the two developments at the same time. People travelling along the local PRoW network will perceive an increased level of construction activity across the area and will see construction activity in several different directions from the PRoWs. This will likely result in a medium magnitude of cumulative change and a moderate adverse (significant) cumulative visual effect at construction, if the construction phases overlap. *Operation* It is assumed that the Jocks Lodge Highway Improvement Scheme will include new and replacement planting to integrate into the landscape and following construction it is not expected to change the baseline environment in which the OnSS will be experienced. The presence of both projects will likely result in a small magnitude of change and a slight adverse (not significant) cumulative effect on local landscape character. The presence of major roads including the A164 in existing long-distance views towards the OnSS means that the magnitude of change will be imperceptible. This will likely result in a negligible (not significant) cumulative visual effect.	
Dogger Bank A and B	1	The Dogger Bank Converter Stations will be located around 700m north of the OnSS. This means that there is the potential for cumulative effects of a direct nature on the landscape character of Sloping Farmland (LCT 16) and on views experienced by people using the local PRoW north of Cottingham and the A1079. The introduction of the Dogger Bank Converter Stations adjacent to the A1079 will be noticeable in the landscape covering an area of approx. 11 hectares and including buildings up to 20 m in height, though it is sited in the context of existing woodland, and further woodland screening is proposed. The presence of this large-scale project and the OnSS in close proximity will likely result in a medium magnitude of change and a	Potential for significant cumulative effects on landscape and views during operation, due to the scale and proximity of the Dogger Bank Converter Stations and the OnSS. Significant cumulative effects would be localised to areas between the two sites, including views from local footpaths. Proposed landscape planting around both Dogger Bank

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		moderate adverse (significant) cumulative effect on local landscape character. There will be few locations where both the OnSS and the Dogger Bank Converter Stations will be seen simultaneously, though they may also both be visible from the A1079 overbridge. There may be sequential effects on people using local PRoWs, who would see the Dogger Bank Converter Stations and will subsequently also view the OnSS at relatively close range. It is assumed that landscape mitigation will be applied to both projects to reduce their visual impact. The presence of both projects will have additional effects on the views from the PRoW and will likely result in a medium magnitude of change and moderate adverse (significant) cumulative visual effect. Views from the A1079 may include both schemes but cumulative effects are unlikely for these passing receptors.	Converter Stations and the OnSS will reduce these impacts over time.
Low Farm, Dunswell Lane	1	The Low Farm project, adjacent to the A1079, will be approximately 1.4 km from the OnSS, and there is the potential for cumulative effects of a direct nature on the landscape character of Sloping Farmland (LCT 16) and on views experienced by people using the A1079 and local PRoW network. The Low Farm project will be relatively enclosed by existing vegetation and built development and will be of a similar character to the adjacent greenhouses. This will likely result in a small magnitude of cumulative change and a slight adverse (not significant) cumulative effect on landscape character. The absence of tall structures in the Low Farm project means that it is unlikely to be widely visible. There will be few locations where both the OnSS and the Low Farm development will be seen simultaneously. There may be sequential effects on people using local PRoWs, although there are no direct PRoW links that pass both sites, and the A1079. People would see the Low Farm project in the context of existing glasshouse development and will separately view the OnSS in a similar context. It is assumed that landscape mitigation	No potential for significant cumulative effects due to limited intervisibility, and similarity of the proposal with the character of the landscape baseline.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		will be applied to both projects to reduce their visual impact. The presence of both projects will not have additional effects on the views from the PRoW and will likely result in a small magnitude of change and slight adverse (not significant) cumulative visual effect.	
Albanwise Solar Farm	3	The Albanwise Solar Farm would be adjacent to the Hornsea Four OnSS and would extend across a large area to the north west, bounded by the A164 and A1079. Although existing woodland and field boundaries would be retained, the solar farm would replace several agricultural fields with solar panels, and introduce fencing, CCTV poles, and other ancillary features. There is potential for cumulative effects of a direct nature on the landscape character of Sloping Farmland (LCT 16). There is also potential for cumulative effects on views experienced by people using the local PRoW network (particularly Jillywood Lane), the A164 and the A1079. The solar farm will be extensive, but the existing landscape structure of woodlands and field boundaries will largely be retained, albeit with additional fencing and CCTV poles. There would be a change to the baseline character across this area. The substation/storage compound will be close to the existing gas peaking plant and will not alter the character of this area. The presence of both the Hornsea Four OnSS and the solar farm across this area will likely result in a medium magnitude of change and a moderate adverse (significant) cumulative effect on local landscape character. Users of local PRoWs, particularly Jillywood Lane (Rowley Footpath 12) will see the solar farm and the Hornsea Four OnSS successively at close range over local sections of these routes. The magnitude of cumulative change for recreational receptors on these routes will be medium and will likely result in a moderate adverse (significant) cumulative effect. The solar farm will be low-lying and is unlikely to be visible at longer range. The magnitude of cumulative change experienced by users of the A1079 and A164 will be small, likely to result in a slight adverse (not significant) cumulative visual effect. For receptors beyond these	Potential for significant cumulative effects on landscape and views during operation, due to the scale and proximity of the solar farm and the Hornsea Four OnSS. Significant cumulative effects would be localised to the landscape and recreational visual receptors located between the A164, A1079 and the. proposed landscape mitigation and enhancement planting (once established) around the Hornsea Four OnSS will reduce these impacts over the lifetime of Hornsea Four.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		roads there will be a negligible (not significant) cumulative visual effect.	
Creyke Beck substation expansion	3	It is assumed that the Creyke Beck Substation expansion would be within the vicinity of the existing Creyke Beck Substation and would effectively double its size. The NGET expansion is likely to be located within 500 m of the Hornsea Four OnSS. The NGET expansion would replace agricultural fields with a fenced compound, containing buildings and tall structures. There is potential for cumulative effects of a direct nature on the landscape character of the Sloping Farmland (LCT 16). There is also potential for cumulative effects on views experienced by people using the local PRoW network and the NCN Route 1 which passes the existing NGET substation. *Construction* The construction phase of the NGET expansion may overlap with the construction of the Hornsea Four OnSS. Construction works for the NGET expansion are likely to be widespread across the area to the south-east of the OnSS, including the NGET expansion itself as well as a temporary works area. The extent of disturbance and construction activity across both projects will be greater than for the Hornsea Four OnSS alone, although localised and over the short term. This will likely result in a small magnitude of change and a slight adverse (not significant) cumulative landscape effect at construction, if the construction phases overlap. People travelling along the local PRoW network, and particularly along the NCN Route 1, will perceive an increased level of construction activity across the local area. They may see construction activity in several different directions at once and may be required to use diverted routes around construction compounds. Although short term and localised, this will likely result in a medium magnitude of cumulative change and a moderate adverse (significant) cumulative visual effect at construction, if the construction phases overlap. *Operation*	Potential for significant cumulative effects on views during construction, should the construction phases overlap. Potential for significant cumulative effects on landscape and views during operation, due to the scale and proximity of the NGET Substation expansion and the Hornsea Four OnSS. Significant cumulative effects (during construction and operation) would be localised to the landscape and recreational visual receptors located between Poplar Farm, Burn Park Farm, Cottingham Parks and the railway line. Proposed landscape mitigation and enhancement planting (once established) around the Hornsea Four OnSS will reduce these impacts over the lifetime of Hornsea Four.

Project	Tier	Discussion	Likelihood and Significance of Cumulative Effects
		The proposed NGET expansion will be a prominent feature, but will be in the context of, and will be similar in character to, the existing Creyke Beck Substation and the gas peaking plant. There would be a localised change to the baseline character across this area, arising from an intensification of the existing energy installations. The presence of both the NGET expansion and the Hornsea Four OnSS within this area will likely result in a medium cumulative magnitude of change and a moderate adverse (significant) cumulative effect on landscape character. Users of local PRoWs and the NCN Route 1 will see both the NGET expansion and the Hornsea Four OnSS at close range over local sections of these routes. The magnitude of cumulative change for recreational receptors on these routes will be medium and will likely result in a moderate adverse (significant) cumulative effect. The NGET expansion will be visible at longer range, but in the context of the existing Creyke Beck Substation. The magnitude of cumulative change experienced by more distant recreational receptors (e.g. people travelling on the A1079) will be small, and likely to result in a slight adverse (not significant) cumulative visual effect.	

4.12.3.5 The CEA has identified five projects which may, when considered as part of the assessment baseline, give rise to cumulative effects that may be significant:

- Construction of the Jocks Lodge Highway Improvement Scheme in proximity to construction of the OnSS may lead to significant cumulative effects on views, during the construction phase, if the two projects overlap temporally, due to the potential for widespread disturbance and activity;
- The presence of the Dogger Bank Converter Stations, 700 m north of the OnSS, may lead to significant cumulative effects on landscape character and views, during the operational phase, due to the proximity of these two large-scale developments, and their proximity to local PRoWs;
- Operation of the Albanwise Solar Farm, immediately north-west of the OnSS, may lead to significant cumulative effects on landscape character and views, particularly for users of Jillywood Lane, as the two schemes are both close by and extensive, despite their differing nature; and

- Construction of the NGET Substation Extension may lead to significant cumulative effects on views if the construction phases overlap, and localised significant effects on both landscape character and recreational visual receptors, particularly users of the NCN Route 1, are considered likely during operation of this scheme alongside the OnSS.

4.12.3.6 The Jocks Lodge Highway Scheme is currently under development and has been approved at the planning stage. The scheme is likely to be constructed at the same time as, or consecutively with, construction of the OnSS, and significant cumulative effect are predicted during construction only.

4.12.3.7 Greater certainty is attached to the Dogger Bank Converter Stations, as these have commenced construction. The construction phases of both projects are unlikely to overlap, although the operational phases will.

4.12.3.8 When considering a potential future baseline that includes both Tier 1 projects (Jock's Lodge Highway Scheme and Dogger Bank Converter Stations), the additional effect of Hornsea Four must be considered. In this scenario, the future baseline landscape and visual environment will not have changed substantively from the current baseline, except for the expansion of the roadways and the addition of converter buildings north of the A1079. There will be landscape and visual interactions between the three schemes, and the additional magnitude of cumulative change due to the OnSS will be medium. The cumulative effect will be moderate and significant within the area between the OnSS, Jock's Lodge and the Dogger Bank Converter Stations.

4.12.3.9 The Albanwise Solar Farm is an undetermined planning application, so although significant cumulative effects are predicted during operation, less certainty is attached to these.

4.12.3.10 Although limited detail of the NGET Substation Extension is available, it is understood that this work is required to facilitate Hornsea Four. Therefore, there is a higher level of certainty attached to the predicted cumulative effects during both construction and operation.

4.12.3.11 When considering a less certain potential future baseline that includes the Tier 1 and Tier 3 projects, the future baseline landscape and visual environment will have changed further with the addition of extensive solar panels, and intensification of the Creyke Beck substation, as well as expansion of the roadways and the addition of converter buildings north of the A1079. There will be landscape and visual interactions between all of these schemes, however the additional magnitude of cumulative change will remain medium as the OnSS will be of similar character to these schemes, rather than introducing a new element. The cumulative effect will be moderate and significant within the area between the A164, Jock's Lodge, the Dogger Bank Converter Stations, and the Creyke Beck substation.

4.12.3.12 For the other projects examined, impacts are not considered to be of any greater significance than those identified in isolation and no cumulative effects of significance are forecast.

4.13 Transboundary effects

4.13.1.1 A screening of transboundary impacts is presented in Appendix K of the EIA Scoping Report (Orsted 2018). This screening exercise identified that there was no potential for significant transboundary effects regarding landscape and visual effects from Hornsea Four upon the interests of other European Economic Area (EEA) States and this is not discussed further.

4.14 Inter-related effects

4.14.1.1 Inter-related effects consider impacts from the construction, operation or decommissioning of Hornsea Four on the same receptor (or group). The potential inter-related effects that could arise in relation to landscape and visual amenity are presented in **Table 4.25**. Such inter-related effects include both:

- **Project lifetime effects**: i.e. those arising throughout more than one phase of the project (construction, operation, and decommissioning) to interact to potentially create a more significant effect on a receptor than if just one phase were assessed in isolation; and
- **Receptor led effects**: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor (or group). Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.

4.14.1.2 A description of the process to identify and assess these effects is presented in Section 2 of **Volume A1, Chapter 5: Environmental Impact Assessment Methodology**.

Table 4.25: Inter-related effects assessment for landscape and visual amenity.

Project phase(s)	Nature of inter-related effect	Assessment alone	Inter-related effects assessment
Project-lifetime effects			
Construction and Operation (LV-C-4 and LV-O-5)	Effects on landscape character and views arising from construction and operation of the OnSS	Impacts were assessed as being of up to major adverse significance in the construction phase, and up to major adverse significance (Year 1) and moderate adverse significance (Year 10) at operation.	The construction stage effects arise from disturbance and construction activity around the OnSS, including construction compounds, works to the ECC, and the emerging OnSS. Following construction, temporarily disturbed areas will be restored and landscape planting will be carried out. The operational effects arise from the presence of the completed OnSS in the landscape and views. It is not anticipated that there will be any inter-related effects of greater significance compared to the impacts considered alone.
Receptor-led effects			
Ecology and nature conservation: Introduction of new habitat elements in landscape planting (**Chapter 3: Ecology and Nature Conservation**).		Landscape planting is provided for mitigation purposes and has no intrinsic effect on landscape or visual receptors. Any benefits for ecology and nature conservation would be wholly separate to landscape and visual effects. Therefore, there will be no inter-related effects that are of greater significance than the impacts considered alone.	
Historic environment: Changes in setting of historical assets (HE-C-2, HE-C-4, HE-O-5 and HE-O-6) (**Chapter 5: Historic Environment**).		No historic assets have been identified which are also subject to significant effects on the visual amenity of views that are available from them. Therefore, there will be no inter-related effects that are of greater significance than the impacts considered alone.	
Land use and agriculture: Negative effects on tourism and visitor perception (LUA-C-2, LUA-C-3 and LUA-C-4) (**Chapter 6: Land Use and Agriculture**).		Other than a short section of one national cycle route and local PRoWs, no tourist assets have been identified which are also subject to significant effects on the visual amenity of views that are available from them. Therefore, there will be no inter-related effects that are of greater significance than the impacts considered alone.	
Socio-economic characteristics: Effects on tourism leading to negative economic effects (SE-A-9) (**Chapter 10: Socio-economic**).		Other than a short section of a national cycle route, no tourist assets have been identified which are also subject to significant effects on the visual amenity of views that are available from them. Therefore, there will be no inter-related effects that are of greater significance than the impacts considered alone.	

4.14.1.3 The assessment of inter-related effects has not identified any effects that would be of greater significance than those effects assessed in isolation.

4.15 Conclusion and summary

4.15.1.1 This chapter of the ES has assessed the impacts from the onshore development of Hornsea Four on landscape and visual amenity receptors.

4.15.1.2 **Table 4.26** presents a summary of the impacts assessed within this chapter, any mitigation, and the residual effects.

4.15.1.3 Construction works at the OnSS are likely to have significant effects on the local landscape within the immediate vicinity of the site. The affected area will be bounded by Birkhill Wood, the A1079, the railway line, glasshouses to the south-east, and woodland alongside the golf course. Within this area, visual effects experienced by residential and recreational receptors will be significant during construction, particularly for Burn Park Farm and other nearby residential receptors, and users of the closest PRoWs.

4.15.1.4 During the operational phase, significant effects of the OnSS on the landscape will be similarly localised to significant effects upon the area noted above. Beyond this area there will be no significant effects on landscape character, including that of the Yorkshire Wolds ILA. Significant effects on views are predicted for high sensitivity receptors with clear views of the site from within 2 km. Beyond this distance, or from locations where intervening vegetation filters views, effects will be not significant.

4.15.1.5 A landscape plan has been developed and is shown indicatively in **Figure 4.8**. The landscape plan (**Volume F2, Chapter 8: Outline Landscape Management Plan**) has been designed to reduce landscape and visual effects and to help absorb the OnSS into the local landscape. As this proposed planting matures, some of the identified effects will be reduced, though they are predicted to remain significant in EIA terms.

4.15.1.6 Potentially significant effects cumulative effects may arise from the construction of the Jocks Lodge Highway Improvement Scheme in proximity to construction of the OnSS, if construction works overlap temporally. Significant localised cumulative effects on landscape character and views are predicted as a result of the presence of both Hornsea Four OnSS and Dogger Bank converter stations, during the operational phase, due to the proximity of these two large-scale developments and their proximity to local PRoWs. Similar localised significant cumulative effects are predicted in relation to the Albanwise Solar Farm (operational phase) and the NGET Creyke Beck Substation Extension (construction and operational phase).

4.15.1.7 At the end of the 35-year life of the OnSS, all above and below ground structures will be removed and the site returned to agriculture. All landscape and visual effects from the OnSS will then cease.

Table 4.26: Summary of potential impacts assessed for landscape and visual receptors.

Impact and Phase	Receptor and value/sensitivity	Magnitude and significance	Mitigation	Residual impact (Year 10)
Construction				
Temporary loss of landscape features and changes to landscape character in the OnSS area from construction activities. (LV-C-4)	Subarea 5 Low susceptibility Medium value Medium sensitivity	Medium magnitude **Moderate adverse** significance	Primary: Co2 Co26 Co27 Co49 Co79 Co145 Co151 Co165 Tertiary: Co10 Co124 Secondary: Co30 Co69 Co168	N/A
Temporary change to views in the OnSS area from construction activities. (LV-C-4)	Residential receptors High susceptibility Low value High sensitivity	Large magnitude **Large adverse** significance		
	Recreational receptors High susceptibility Low value Medium sensitivity	Large magnitude **Moderate adverse** significance		
	Other receptors Low susceptibility Low value Low sensitivity	Small magnitude **Neutral** significance		
Operation				
Permanent loss of landscape features, and changes to landscape character from operation of the OnSS (LV-O-5)	OnSS site / Sloping Farmland LCT Low susceptibility Medium value Medium sensitivity	Large magnitude **Large adverse** significance	Primary: Co2 Co27 Co79 Co145 Co151	Medium magnitude **Moderate adverse** significance
	Open High Rolling Farmland LCT Medium susceptibility Medium value	Small magnitude **Slight adverse** significance		N/A

Impact and Phase	Receptor and value/sensitivity	Magnitude and significance	Mitigation	Residual impact (Year 10)
	Medium sensitivity		Secondary: Co30 Co168 Co193 Co195 Enhancement: Co196 Refer to indicative landscape plan in **Figure 4.8** and **Volume F2, Chapter 8: Outline Landscape Management Plan**.	
	Farmed Urban Fringe LCT Medium susceptibility Low value Medium sensitivity	Small magnitude **Slight adverse** significance		N/A
	Low Lying Drained Farmland LCT Medium susceptibility Low value Medium sensitivity	Small magnitude **Slight adverse** significance		N/A
Permanent change to views from operation of the OnSS (LV-O-5)	VP1 PRoW South of Burn Park Farm High susceptibility Medium value High sensitivity	Large magnitude **Large adverse** significance	Primary: Co2 Co27 Co79 Co145 Co151 Secondary: Co30 Co168 Co193 Co195	Medium magnitude **Moderate adverse** significance
	VP2 Park Lane, Cottingham High susceptibility Medium value High sensitivity	Large magnitude **Large adverse** significance		Small magnitude **Slight adverse** significance
	VP3 Footbridge over A1079 High susceptibility Medium value High sensitivity	Medium magnitude **Moderate adverse** significance		Small magnitude **Slight adverse** significance

Impact and Phase	Receptor and value/sensitivity	Magnitude and significance	Mitigation	Residual impact (Year 10)
	VP4 PRoW East of A164 Medium susceptibility Low value Medium sensitivity	Medium magnitude **Moderate adverse** significance	Enhancement: Co196 Refer to indicative landscape plan in Figure 4.8 and F2, Chapter 8: Outline Landscape Management Plan.	Small magnitude **Slight adverse** significance
	VP5 A164 Layby near Bentley Low susceptibility Low value Low sensitivity	Negligible magnitude **Neutral** significance		N/A
	VP6 Fishpond Wood, Risby Hall High susceptibility Medium value High sensitivity	Negligible magnitude **Neutral** significance		N/A
	VP7 Little Weighton Road Medium susceptibility Medium value Medium sensitivity	Negligible magnitude **Neutral** significance		N/A
	VP8 Minster Way High susceptibility Low value Medium sensitivity	Small magnitude **Slight adverse** significance		N/A
	VP9 Beverley Minster tower High susceptibility High value High sensitivity	Negligible magnitude **Neutral** significance		N/A
	VP10 St Mary's Church tower, Cottingham High susceptibility Medium value High sensitivity	Small magnitude **Slight adverse** significance		N/A

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