



**RWE Renewables UK Dogger Bank  
South (West) Limited**

**RWE Renewables UK Dogger Bank  
South (East) Limited**

# **Dogger Bank South Offshore Wind Farms**

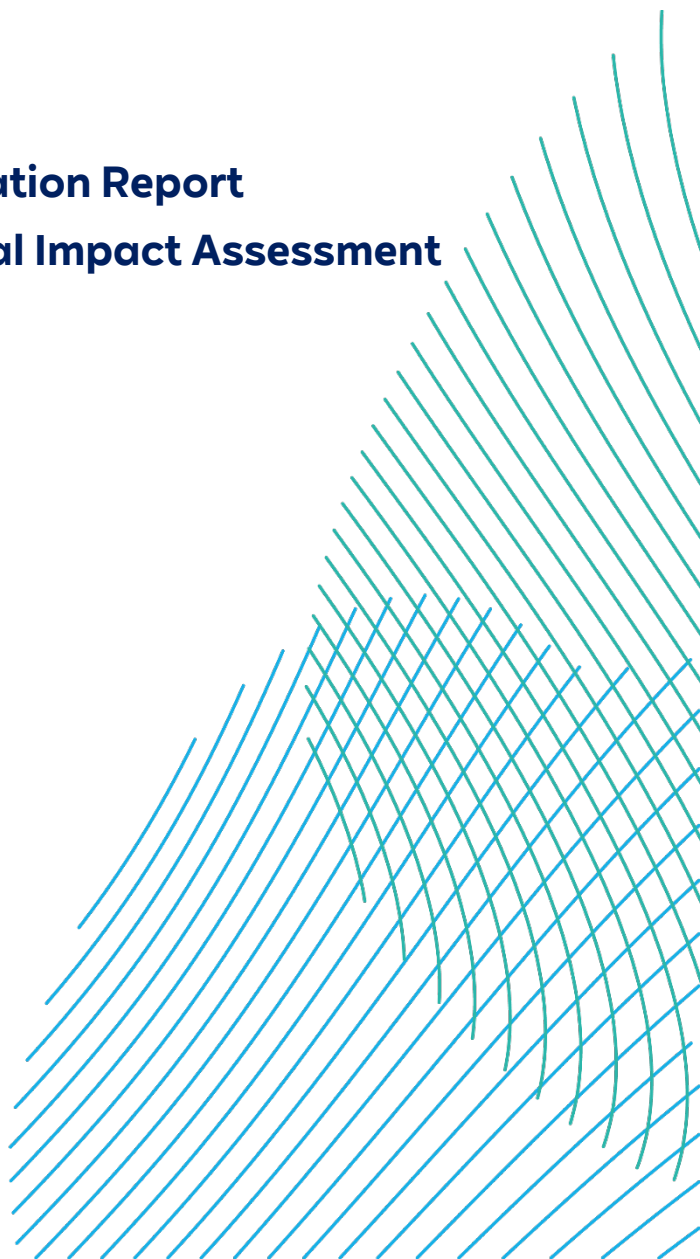
**Preliminary Environmental Information Report  
Chapter 23 – Landscape and Visual Impact Assessment**

**25/04/2023**

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## Dogger Bank South Offshore Wind Farms

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| Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>RWE Renewables UK<br/>Dogger Bank South (West)<br/>Limited and RWE<br/>Renewables UK Dogger<br/>Bank South (East) Limited</b> | Asset:                             | <b>Development</b>             |                   |                        |
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## Glossary

| Term                                  | Definition                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Development Consent Order (DCO)       | An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).                                                                                                                                                                                                             |
| Horizontal Directional Drilling (HDD) | HDD is a trenchless technique to bring the offshore cables ashore at the landfall and can be used for crossing other obstacles such as roads, railways and watercourses onshore.                                                                                                                                                                         |
| Landfall                              | The point on the coastline at which the offshore export cables are brought onshore, connecting to the onshore export cables at the Transition Joint Bay.                                                                                                                                                                                                 |
| Offshore Development Area             | The Offshore Development Area encompasses the wind farm site and the options for the offshore transmission works.                                                                                                                                                                                                                                        |
| Onshore Development Area              | The Onshore Development Area for PEIR is the boundary within which all onshore infrastructure required for the Projects will be located including landfall, onshore export cable route, accesses, construction compounds and onshore substations. The Onshore Development Area is to be refined through the consultation and engineering review process. |
| Substation Zones                      | Parcels of land within the Onshore Development Area where the onshore substation infrastructure (including the haul roads, temporary construction compounds and associated cable routeing) may be located.                                                                                                                                               |
| Onshore Substations                   | A compound containing electrical equipment required to transform and stabilise electricity generated by the Projects so that it can be connected to the electricity transmission network. There will be one onshore substation for each Project.                                                                                                         |

| Term                          | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Onshore export cable corridor | This is the area which includes cable trenches, haul roads, spoil storage areas, and limits of deviation for micro-siting. For assessment purposes, the cable corridor does not include the onshore substations, Transition Joint Bays or temporary access routes; but includes construction compounds (purely for the cable route).                                                                                                                                     |
| Onshore export cables         | Onshore export cables take the electricity from the Transition Joint Bay to the onshore substations.                                                                                                                                                                                                                                                                                                                                                                     |
| The Applicant                 | RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited as the owners of DBS West and DBS East respectively are the named undertakers that will have the benefit of the Development Consent Order. References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited. |
| The Projects                  | DBS East and DBS West (collectively referred to as the Dogger Bank South offshore wind farms).                                                                                                                                                                                                                                                                                                                                                                           |
| Trenching                     | Open cut method for cable or duct installation.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Transition Joint Bay (TJB)    | The Transition Joint Bay (TJB) is an underground structure at the landfall that houses the joint between the offshore export cables and the onshore export cables.                                                                                                                                                                                                                                                                                                       |

## Acronyms

| Term   | Definition                                                                                                                                              |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| AONB   | Area of Outstanding Natural Beauty                                                                                                                      |
| CEA    | Cumulative Effects Assessment                                                                                                                           |
| DBS    | Dogger Bank South                                                                                                                                       |
| DCO    | Development Consent Order                                                                                                                               |
| EPP    | Evidence Plan Process                                                                                                                                   |
| ES     | Environmental Statement                                                                                                                                 |
| ETG    | Expert Topic Group                                                                                                                                      |
| GLVIA3 | Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (Landscape Institute and Institute of Environmental Management and Assessment, 2013) |
| HDD    | Horizontal Directional Drilling                                                                                                                         |
| HSC    | Historic Seascape Characterisation                                                                                                                      |
| ILA    | Important Landscape Area                                                                                                                                |
| LCA    | Landscape Character Area                                                                                                                                |
| LCT    | Landscape Character Type                                                                                                                                |
| LEMP   | Landscape and Environmental Management Plan                                                                                                             |
| LVIA   | Landscape and Visual Impact Assessment                                                                                                                  |
| NCA    | National Character Area                                                                                                                                 |
| NPS    | National Policy Statement                                                                                                                               |
| NRW    | Natural Resources Wales                                                                                                                                 |
| PEIR   | Preliminary Environmental Information Report                                                                                                            |

| Term  | Definition                                       |
|-------|--------------------------------------------------|
| PRoW  | Public Right of Way                              |
| SLVIA | Seascape, Landscape and Visual Impact Assessment |
| SSSI  | Site of Special Scientific Interest              |
| TJB   | Transition Joint Bay                             |
| ZTV   | Zone of Theoretical Visibility                   |

## 23 Landscape and Visual Impact Assessment

### 23.1 Introduction

1. This chapter of the Preliminary Environmental Information Report (PEIR) considers the likely significant effects of the Projects on landscape character and visual amenity. The chapter provides an overview of the existing environment for the proposed Onshore Development Area, followed by an assessment of likely significant effects for the construction, operation, and decommissioning phases of the Projects.
2. The assessment should be read in conjunction with the following linked chapters:
  - **Chapter 18 Terrestrial Ecology and Ornithology;** and
  - **Chapter 22 Onshore Archaeology and Cultural Heritage.**

### 23.2 Consultation

3. Consultation with regard to Landscape and Visual Impact Assessment (LVIA) has been undertaken in line with the general process described in **Chapter 6 EIA Methodology**. The key elements of consultation to date have included scoping and the ongoing Evidence Plan Process (EPP) via the Landscape and Visual Expert Topic Group (ETG). The feedback received has been considered in preparing the PEIR.
4. **Table 23-1** provides a summary of how the consultation responses received to date have influenced the approach that has been taken.
5. This chapter will be updated following consultation on PEIR in order to produce the final assessment that will be submitted with the Development Consent Order (DCO) application. Full details of the consultation process will also be presented in the Consultation Report alongside the DCO application.

Table 23-1 Consultation Responses

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landscape and Visual ETG Pre-Scoping meeting, 23/09/2021</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Yorkshire Wolds currently in the process of being designated as an Area of Outstanding Natural Beauty (AONB). This will need to be taken into account if designated during the projects lifecycle.                                                                                                                                                                                                                                                                              | The landscape baseline refers to currently available information relating to the proposed Yorkshire Wolds AONB. See section 23.5.1.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Stakeholders provided relevant baseline information and sought clarifications on the high-level information presented, but had no comments on the emerging approach to LVIA.                                                                                                                                                                                                                                                                                                    | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Scoping Opinion dated 02/09/2022 in relation to Seascape, Landscape and Visual Impact</b>                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>3.14.1 Offshore export cables.</p> <p>The Scoping Report states that as the offshore export cables will be submerged, they will not be considered further in the assessment. The Inspectorate agrees this matter can be scoped out. Any infrastructure which may be visible from the onshore study area, for example Transition Joint Bays, should be considered within the onshore landscape and visual impact chapter.</p>                                                 | <p>This chapter presents the landscape and visual effects arising from the landfall works within the intertidal and inshore areas, where these may be visible from the landscape and visual study area as defined in section 23.3.1. See section 23.6.</p>                                                                                                                                                                                                                                                                            |
| <p>3.14.2 Visual receptors during operation.</p> <p>The Scoping Report seeks to scope this matter out on the basis that visual receptors in the offshore study area will have low susceptibility to change in their views in the surrounding areas. The Inspectorate agrees that effects from the arrays may be scoped out, however, considers that the ES should assess impacts from the presence in the seascape of the proposed offshore substations or other platforms.</p> | <p>Effects from the arrays have been scoped out by agreement with the Planning Inspectorate.</p> <p>The effects of offshore platforms within the array areas will be the same, or less, than the effects of the arrays themselves. The effects of these platforms within the array boundaries are therefore also scoped out.</p> <p>The Projects may potentially include up to two offshore platforms outside the array areas, within the offshore export cable corridor. The platform(s) would be located at least 52km from the</p> |

| Comment                                                                                                         | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                 | <p>landfall, and therefore at least 37km from the closest land at Flamborough Head. This distance offshore has been increased since Scoping. The offshore platform would be a maximum of 100m high (excluding narrow elements such as masts or cranes).</p> <p>The 'Ready reckoner of visual effects related to turbine size' (White et al., 2019), published by Natural Resources Wales (NRW), indicates that structures would need to be over 250m to have a 'low' magnitude of effect at distances of approximately 37km. Although this document was published by NRW, it is based on a review of impacts of offshore wind farms across the UK.</p> <p>At this distance, therefore, the platform(s) would not have likely significant effects on views from land.</p> <p>Offshore seascape, and visual receptors located in the marine environment, are likely to be of low sensitivity, as set out in the Scoping Report. Therefore, the platform(s) would not have likely significant effects on offshore seascape and visual receptors.</p> <p>Therefore, effects of the platforms outside the array areas are not likely to be significant and they have not been considered further in this assessment.</p> |
| 3.14.3 Impacts on seascape and coastal character, and visual receptors during construction and decommissioning. | The operational effects of the arrays have been scoped out, in agreement with the Planning Inspectorate, due to the low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p>The Scoping Report seeks to scope this out on the basis that impacts during the temporary construction phase of the offshore infrastructure will never be greater than the operational effects of the completed wind farm. The Inspectorate considers that no information has been provided in the Scoping Report to validate this statement. It is also noted that Paragraph 513 (within Chapter 2.13) proposes to scope in Historic Seascape character during construction. As such, the Inspectorate does not agree to scope this matter out and considers the ES should include information regarding the types of construction activities which could create impacts, such as vessel movements, lighting on construction vessels, and impacts relating to the construction of offshore platforms.</p> | <p>susceptibility of offshore receptors, including seascape. The same low susceptibility applies during construction.</p> <p>This chapter describes the landscape and visual effects arising from the landfall works within the intertidal and inshore areas, where these may be visible from the landscape and visual study area as defined in section 23.3.1. See section 23.6.</p> <p>Historic Seascape Characterisation (HSC) is a method of describing historic and cultural influences, and is unconnected to LVIA. HSC is considered in <b>Chapter 17 Offshore Archaeology and Cultural Heritage</b>.</p> <p>Construction works in the Offshore Development Area are detailed in <b>Chapter 5 Project Description</b>. The closest offshore infrastructure (up to two offshore platforms) are located at least 52km from the landfall, and at least 37km from the closest land at Flamborough Head. At this distance, any temporary construction activities would not have likely significant effects on views from land. Therefore, the impacts of offshore construction activities have not been considered further.</p> |
| <p>3.14.4 Impacts on seascape and coastal character during operation.</p> <p>The Scoping Report seeks to scope this matter out on the basis that the operation of the offshore wind</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Agreement noted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p>farm is unlikely to impact on the key characteristics of the Dogger Bank Marine Character Area or other Marine Character Areas within the Seascape, Landscape and Visual Impact Assessment (SLVIA) study area due to the presence of existing and consented wind farms.</p> <p>The Inspectorate agrees that significant effects are unlikely and agrees to scope out this matter out.</p>                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p>3.14.5 Impacts on landscape character during operation.</p> <p>The Scoping Report states that the operation of the offshore wind farm is unlikely to significantly impact on landscape character or landscape designations due to the distance. The Inspectorate agrees that significant effects are unlikely and agrees to scope out this matter out.</p>                                                                                                                                                                                                                                                                                                              | <p>Agreement noted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>3.14.6 Impacts during decommissioning.</p> <p>The Scoping Report states that impacts during the decommissioning phase will never be greater than during construction or operation and therefore seeks to scope this matter out. The Inspectorate considers that no information has been provided in the Scoping Report to validate this statement. As such, the Inspectorate does not agree to scope this matter out and considers the ES should include information regarding the types of decommissioning activities which could create impacts, such as vessel movements, lighting on construction vessels and the removal of the offshore substation platforms.</p> | <p>The operational effects of the arrays have been scoped out, in agreement with the Planning Inspectorate, due to the low susceptibility of offshore receptors, including seascape. The same low susceptibility applies during decommissioning.</p> <p>Decommissioning works in the offshore area are detailed in <b>Chapter 5 Project Description</b>. It is not considered likely that any significant effects would arise from these types of activities taking place within the Offshore Development Area, and these are therefore scoped out.</p> <p>This chapter describes the landscape and visual effects arising from the landfall works within the intertidal and inshore areas, where these may be visible from the landscape and visual</p> |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Project Response                                                                                                                                                                                                                                                                                                                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | study area as defined in section 23.3.1. See section 23.6.                                                                                                                                                                                                                                                                      |
| <p>3.14.7 Cumulative impacts</p> <p>The Scoping Report seeks to scope out cumulative seascape effects with Dogger Bank A, B and C and Sofia offshore wind farms on the basis that the susceptibility of potential seascape and visual receptors is low. The Inspectorate agrees that significant effects are unlikely and agrees to scope this matter out.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        | Agreement noted.                                                                                                                                                                                                                                                                                                                |
| <p>3.14.8 Designated landscapes during operation.</p> <p>The Scoping Report seeks to scope this matter out due to the intervening distance between the land area and the Proposed Development, and therefore the Proposed Development is unlikely to significantly effect landscape character or the special qualities of landscape designations. The Inspectorate agrees this matter may be scoped out.</p>                                                                                                                                                                                                                                                                                                                                                                                          | Agreement noted.                                                                                                                                                                                                                                                                                                                |
| <b>Scoping Opinion dated 02/09/2022 in relation to Landscape and Visual Impact</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                 |
| <p>4.6.1 Impacts resulting from the construction and decommissioning of the landfall(s) and onshore export cable(s).</p> <p>The Inspectorate considers that construction of these elements is likely to involve multiple compounds and substantial working areas and haul routes, and does not agree with the characterisation of 'localised'. In addition, the Inspectorate does not agree with the characterisation of 'short-term', in particular if the two projects making up the Proposed Development are constructed sequentially. In the absence of information about the 'good practice measures' mentioned in Paragraph 751 or other mitigation, and the anticipated timescales of construction for the Proposed Development, the Inspectorate does not agree to scope this matter out.</p> | <p>The potential effects of construction of the landfall and onshore export cables are considered in this chapter.</p> <p>Section 23.3.2 presents the assumptions forming the 'worst case scenario' for construction activities.</p> <p>Section presents good practice measures that are considered as embedded mitigation.</p> |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <p>4.6.2 Operational impacts resulting from the landfall(s) and onshore export cable(s).</p> <p>The Scoping Report seeks to scope this matter out on the grounds that following installation and restoration of ground, underground cables which are part of the onshore infrastructure would not significantly impact landscape or visual receptors. At this stage, the nature of any restoration and planting works have not been finalised. The inspectorate understands that the 'worst-case' in terms of overlap of the two projects will be assessed. The ES should include sufficient information, including on restoration measures and timescales, to allow understanding of any change in appearance of land resulting from the Proposed Development. The ES should therefore assess any likely significant effects of these changes, or demonstrate that no significant effects would occur. The ES should also demonstrate how consultation with the relevant consultation bodies and stakeholders has been taken into account.</p> | <p>Section 23.8 presents the approach to restoration of landscape, including principles for reinstatement of any features affected by the construction works.</p> <p>Application of these principles, to be secured through an outline Landscape and Environment Management Plan (LEMP) that will accompany the ES, will ensure that long term operational effects resulting from the landfall and onshore export cables will not be significant.</p> <p>Details of consultation responses received at scoping stage, and how these have been addressed, are set out in this table.</p> |
| <p>4.6.3 Area of Outstanding Natural Beauty (AONB).</p> <p>The Scoping Report refers to the Yorkshire Wolds, on the edge of the Creyke Beck onshore study area as under consideration by Natural England for designation as an AONB, with consultation in 2022. The Scoping Report then states that the candidate boundary lies outside 10km from the Proposed Development scoping boundary (the Onshore Study area) and will not be considered further. No justification is provided for the use of this 10km distance. The Inspectorate expects the ES to identify landscape receptors on the basis of a Zone of Theoretical Visibility (ZTV) as stated in Paragraph 762 of the Scoping Report. If identified as a receptor, the Inspectorate advises that the ES should assess the Yorkshire Wolds as being of equivalent sensitivity and value to an AONB as part of ensuring that the worst-case scenario is assessed.</p>                                                                                                                 | <p>The study area for assessment of landscape and visual effects is defined in section 23.3.1, with reference to the ZTV and other considerations.</p> <p>The susceptibility and value of landscapes within the study area is evaluated using currently available baseline information, including material relating to the Yorkshire Wolds Important Landscape Area (ILA) and the emerging Yorkshire Wolds AONB. The landscape baseline is presented in section 23.5.1.</p>                                                                                                             |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <p>4.6.4 Study Area.</p> <p>It is noted that the proposed study area for the onshore Landscape and Visual Impact Assessment is 5km radius from the substations and 1km from the onshore cable route(s). The Inspectorate appreciates that there is a current level of uncertainty regarding the location of onshore works, however the study area relied upon for the assessment should be based on a ZTV which demonstrates that the assessment of effects covers an appropriate area to capture potential impacts on receptors who will have views to the onshore development area.</p>                                                                                                                                                                          | <p>The study area for assessment of landscape and visual effects is defined in section 23.3.1, with reference to the ZTV and other considerations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>4.6.5 Viewpoints.</p> <p>The Scoping Report states that viewpoints will be agreed with Natural England and East Riding of Yorkshire Council (ERYC). The Inspectorate considers this consultation should be expanded to include other relevant consultees such as Historic England and local planning authorities in addition to ERYC. A range of viewpoints should be used to represent the various receptors who could be affected by the Proposed Development, including night-time receptors if construction lighting or lighting at the substations are to be used. This could include designated and non-designated heritage assets and their settings. A figure showing locations of viewpoints used for the assessment should be provided in the ES.</p> | <p>Historic England, Hull City Council and East Riding of Yorkshire Council have been consulted on viewpoints as part of the Landscape and Visual ETG.</p> <p>Viewpoints used for the LVIA are set out in section 23.5.2.2, and are shown in <b>Figures 23-2 to 23-4</b>. Viewpoints have been agreed with the members of the Landscape and Visual ETG.</p> <p>Night-time effects are considered as part of the assessment of effects on visual receptors (section 23.6). Night-time visualisations have not been prepared as part of the PEIR.</p> <p>Discussion with the authors of <b>Chapter 22 Onshore Archaeology and Cultural Heritage</b> have informed the selection of viewpoints for use in the LVIA.</p> |
| <p>4.6.6 Mitigation.</p> <p>No specific mitigation measures are proposed in the Scoping Report; however, landscape restoration is referred to in Paragraph 763.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>This chapter includes information on:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Comment                                                                                                                                                                                                                                                                                                                                                                                             | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <p>Mitigation measures should be described in the ES and details of any monitoring requirements including how these will be secured should also be included in the ES.</p>                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• Principles for restoration of the landscape along the cable corridor, following completion of the temporary works; and</li> <li>• Principles for landscape mitigation around the permanent substation.</li> </ul> <p>These principles will be developed further for the Environmental Statement (ES), and will be included within an outline LEMP that will accompany the ES.</p>                                                                                                                                                                                                                           |
| <p><b>Email from Natural England, 08/11/2022</b></p>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>With respect to the Yorkshire Wolds AONB, provided the cables will be underground to the new onshore substation and the substation will be an extension to an existing substation located to the west of Beverley, Natural England will have no concerns regarding potential adverse effects this scheme presents to the candidate Yorkshire Wolds AONB and have no further comment to make.</p> | <p>The onshore export cables will be buried underground.</p> <p>The onshore substations will not be an extension to any existing substations, but will be located in the context of other electrical infrastructure to the south of Beverley.</p> <p>The onshore Substation Zones are at least 15.5km from the Yorkshire Wolds candidate AONB boundary. The candidate boundary has been published for consultation. At this stage the finalised AONB boundary is not known, but this matter would be revisited should an alternative boundary be published by Natural England.</p> <p>Effects on the candidate AONB are scoped out of this LVIA.</p> |
| <p><b>Landscape and Visual ETG meeting, 29/11/2022</b></p>                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>Proposed approach to PEIR was outlined at the meeting, including:</p>                                                                                                                                                                                                                                                                                                                            | <p>Since the ETG, it has been confirmed that any potential offshore platform(s) along the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Comment                                                                                                                                                                                                                                                                                                                                                                                                   | Project Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <ul style="list-style-type: none"> <li>• Scope of the onshore LVIA;</li> <li>• Use of a worst-case scenario combining maximum parameters of different substation solutions;</li> <li>• Definition of study areas;</li> <li>• Representative viewpoint locations; and</li> <li>• Approach to visualisations.</li> </ul> <p>ETG were in agreement that the proposed approach to assessment is suitable.</p> | <p>offshore export cable corridor will be located further offshore than originally identified, and therefore effects are scoped out of the LVIA (refer to Scoping comment 3.14.2 in this table).</p> <p>The Scoping Report stated platform(s) would be located 40km offshore from landfall, but now will be located 52km offshore from the possible landfall locations., and 37km offshore from Flamborough Head. Given the intervening distance of 37km from the closest onshore point, therefore effects are scoped out of the LVIA.</p> <p>Otherwise the approach described at the meeting has been applied to the LVIA presented within this chapter.</p> |

## 23.3 Scope

### 23.3.1 Study Area

6. The landscape and visual study area has been defined on the basis of the likely influence of the project elements on landscape character and visual amenity. Due to the different characteristics of the different project elements, sections of the landscape and visual study area have been defined for:
  - Landfall and onshore export cable corridor; and
  - Onshore substations.
7. The extent of the landscape and visual study area was informed by field survey, baseline analysis, and examination of Zone of Theoretical Visibility (ZTV) maps, to determine the maximum extent of likely significant effects.

#### 23.3.1.1 Landfall and Onshore Export Cable Corridor

8. Temporary construction works will take place at the possible landfall locations and along the length of the onshore export cable corridor. Due to the largely flat nature of the landscape, and the prevalence of trees and hedges, these works are unlikely to be widely visible. In the longer term, no above ground infrastructure will be installed that would be widely visible. It is therefore appropriate to limit the landscape and visual study area for these elements to a 1km buffer around the possible landfall locations and the onshore export cable corridor. This is shown on **Figure 23-1**.

#### 23.3.1.2 Onshore Substations

9. Development of the onshore substations will involve the construction and operation of large permanent buildings. ZTVs have been generated to illustrate potential visibility of these buildings, using the maximum parameters defined in section 23.3.2. Based on analysis of these ZTVs (shown in **Figures 23-2, 23-3 and 23-4**), field work, and informed by the findings of the LVIAs for the Dogger Bank Creyke Beck and Hornsea Project Four offshore wind farms onshore substations (Forewind, 2013; Ørsted, 2021), it is considered that likely significant effects will not occur at distances greater than 5km from the onshore substations. The landscape and visual study area for the onshore substations is therefore defined as a 5km radius around both Substation Zones. This is shown on **Figure 23-1**.

### 23.3.1.3 Subareas of the Landscape and Visual Study Area

10. For the purposes of the LVIA, the landscape and visual study area has been divided into five subareas, shown in **Figure 23-1**, based primarily on underlying Landscape Character Types (LCT), as follows:
- Subarea 1: Landfall area – focusing on the landscape between the coastal edge and 2km inland. The boundary for this subarea is defined by the boundary for LCT 20C, just west of Skipsea (see section 23.5.1 for details of LCTs);
  - Subarea 2: Skipsea to West Road - the flat open farmland plain in north Holderness which stretches between the coastal landscape and central Holderness;
  - Subarea 3: West Road to the River Hull – across the flat open farmland of central Holderness to the River Hull;
  - Subarea 4: River Hull to the onshore Substation Zones - across the slightly more undulating farmland that rises up towards the Yorkshire Wolds in the west before reaching the onshore Substation Zones to the south of Beverley; and
  - Subarea 5: Onshore substation – focusing on the onshore Substation Zones between Cottingham and Beverley, as well as the 5km buffer around the onshore substations, which makes up part of the landscape and visual study area.
11. Subareas 1-4 comprise the 1km buffer around the landfall and onshore export cable corridor, while subarea 5 is the 5km radius around the onshore substations. For this reason, Subareas 4 and 5 overlap. The subareas are indicated on **Figure 23-1** and are further described in section 23.5.1.3.

## 23.3.2 Realistic Worst Case Scenario

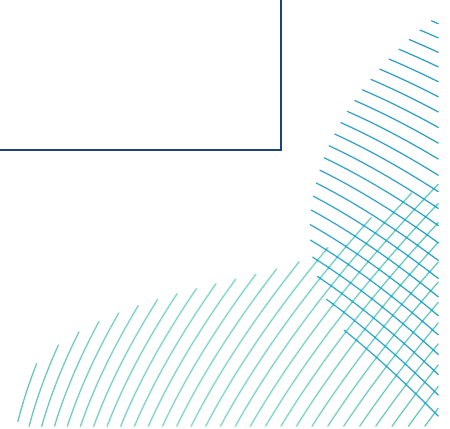
### 23.3.2.1 General Approach

12. The realistic worst case design parameters for likely significant effects scoped into the EIA for the LVIA are summarised in **Table 23-2**. These are based on the project parameters described in **Chapter 5 Project Description**, which provides further details regarding specific activities and their durations.
13. In addition to the design parameters set out in **Table 23-2**, consideration is also given to the different development scenarios still under consideration and the possible phasing of the construction as set out in sections 23.3.2.2 to 23.3.2.5.

Table 23-2 Realistic Worst Case Design Parameters

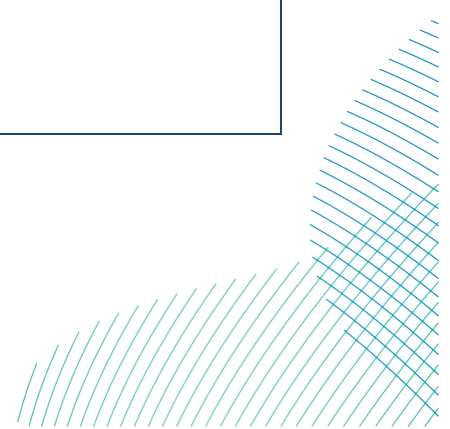
|                     | Parameter                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | DBS East or DBS West in isolation                                                                                                                                                                                                                                                                    | DBS East and DBS West concurrently                                                                                                                                                                                                                                                                   | DBS East and DBS West sequentially                                                                                                                                                                                                                                                                                                             | Notes and rationale                                                                                                                                                                                                                                                                      |
| <b>Construction</b> |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                          |
| Landfall            | <p>HDD compound works area: 230m x 75m</p> <p>Total area for transition joint bays: 1,200m<sup>2</sup></p> <p>Total works area: 582,661m<sup>2</sup></p> <p>Duration of works: up to 18 months overall</p> <p>Temporary lighting during working hours. Temporary out-of-hours security lighting.</p> | <p>HDD compound works area: 310m x 75m</p> <p>Total area for transition joint bays: 1,800m<sup>2</sup></p> <p>Total works area: 602,661m<sup>2</sup></p> <p>Duration of works: up to 18 months overall</p> <p>Temporary lighting during working hours. Temporary out-of-hours security lighting.</p> | <p>HDD compound works area: 310m x 75m</p> <p>Total area for transition joint bays: 1,800m<sup>2</sup></p> <p>Total works area: 602,661m<sup>2</sup></p> <p>Duration of works: up to 42 months overall, across two phases within a 5-year window</p> <p>Temporary lighting during working hours. Temporary out-of-hours security lighting.</p> | <p>The concurrent and sequential scenarios will involve a greater extent of construction works. The sequential scenario will result in the longest duration. Therefore the <b>DBS East and DBS West sequentially</b> scenario is considered worst case and assessed in this Chapter.</p> |

|                            | Parameter                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | DBS East or DBS West in isolation                                                                                                                                                                                                                                                                                                                                           | DBS East and DBS West concurrently                                                                                                                                                                                                                                                                                                                                            | DBS East and DBS West sequentially                                                                                                                                                                                                                                                                                              | Notes and rationale                                                                                                                                                                                                                                                               |
| Onshore export cable route | Corridor length: 39km<br>Working width: 50m, increasing to 125m at trenchless crossings<br>Number of trenchless crossings: 35 locations<br>Main construction compound:<br>Number: 2<br>Area: 100 x 100m<br>Secondary construction compound:<br>Number: 15<br>Area: 75 x 75m<br>HDD compounds:<br>Number: 70<br>Area: 50 x 50m<br>Duration of works: up to 33 months overall | Corridor length: 39km<br>Working width: 100m, increasing to 250m at trenchless crossings<br>Number of trenchless crossings: 35 locations<br>Main construction compound:<br>Number: 4<br>Area: 100 x 100m<br>Secondary construction compound:<br>Number: 30<br>Area: 75 x 75m<br>HDD compounds:<br>Number: 140<br>Area: 50 x 50m<br>Duration of works: up to 33 months overall | Corridor length: 39km<br>Working width: 100m, increasing to 250m at trenchless crossings<br>Number of trenchless crossings: 35 locations<br>Main construction compound:<br>Number: 4<br>Area: 100 x 100m<br>Secondary construction compound:<br>Number: 30<br>Area: 75 x 75m<br>HDD compounds:<br>Number: 140<br>Area: 50 x 50m | The concurrent and sequential scenarios will involve a greater extent of construction works. The sequential scenario will result in the longest duration. Therefore the <b>DBS East and DBS West sequentially</b> scenario is considered worst case and assessed in this Chapter. |



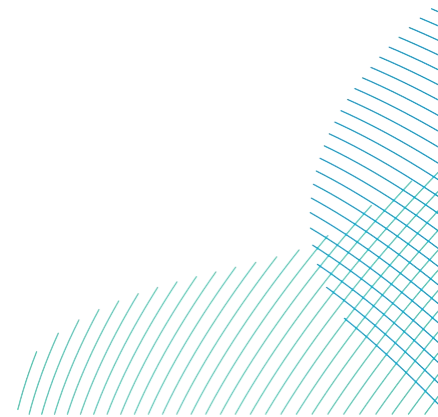
|                     | Parameter                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | DBS East or DBS West in isolation                                                                                                                                                                                                                                    | DBS East and DBS West concurrently                                                                                                                                                                                                                                                                | DBS East and DBS West sequentially                                                                                                                                                                                                                                                                | Notes and rationale                                                                                                                                                                                                                            |
|                     | Temporary lighting during working hours. Temporary out-of-hours security lighting.                                                                                                                                                                                   | Temporary lighting during working hours. Temporary out-of-hours security lighting.                                                                                                                                                                                                                | Duration of works: up to 57 months overall, within a 5-year window<br><br>Temporary lighting during working hours. Temporary out-of-hours security lighting.                                                                                                                                      |                                                                                                                                                                                                                                                |
| Onshore substations | Total construction area: 180,000m <sup>2</sup> (one substation plus temporary construction compound)<br><br>Construction within one Zone<br><br>Duration of works: 4 years<br><br>Temporary lighting during working hours. Temporary out-of-hours security lighting. | Total construction area: 274,416m <sup>2</sup> (one HVDC substation, one HVAC substation, plus temporary construction compounds)<br><br>Construction within two Zones<br><br>Duration of works: 4 years<br><br>Temporary lighting during working hours. Temporary out-of-hours security lighting. | Total construction area: 274,416m <sup>2</sup> (one HVDC substation, one HVAC substation, plus temporary construction compounds)<br><br>Construction within two Zones<br><br>Duration of works: 6 years<br><br>Temporary lighting during working hours. Temporary out-of-hours security lighting. | The concurrent and sequential scenarios will involve a greater extent of construction works. The sequential scenario will result in the longest duration. Therefore the <b>DBS East and DBS West sequentially</b> scenario is considered worst |

|                            | Parameter                                                                                                                                                                                                                               |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                         |                                                                                      |
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|                            | DBS East or DBS West in isolation                                                                                                                                                                                                       | DBS East and DBS West concurrently                                                                                                                                                                                                      | DBS East and DBS West sequentially                                                                                                                                                                                                      | Notes and rationale                                                                  |
|                            |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                         | case and assessed in this Chapter.                                                   |
| <b>Operation</b>           |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                         |                                                                                      |
| Landfall                   | <p>All construction disturbance restored to pre-existing condition</p> <p>No permanent above-ground infrastructure, other than manholes for 4 link boxes</p>                                                                            | <p>All construction disturbance restored to pre-existing condition</p> <p>No permanent above-ground infrastructure, other than manholes for 6 link boxes</p>                                                                            | <p>All construction disturbance restored to pre-existing condition</p> <p>No permanent above-ground infrastructure, other than manholes for 6 link boxes</p>                                                                            | There is no substantive difference in the likely effects of the different scenarios. |
| Onshore export cable route | <p>All construction disturbance restored to pre-existing condition</p> <p>Hedgerows and trees cannot be replanted over the cable easement</p> <p>No permanent above-ground infrastructure, other than manholes for link boxes every</p> | <p>All construction disturbance restored to pre-existing condition</p> <p>Hedgerows and trees cannot be replanted over the cable easement</p> <p>No permanent above-ground infrastructure, other than manholes for link boxes every</p> | <p>All construction disturbance restored to pre-existing condition</p> <p>Hedgerows and trees cannot be replanted over the cable easement</p> <p>No permanent above-ground infrastructure, other than manholes for link boxes every</p> | There is no substantive difference in the likely effects of the different scenarios. |



|                     | Parameter                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                            |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | DBS East or DBS West in isolation                                                                                                                                                                                                                                                                                                                                                                                 | DBS East and DBS West concurrently                                                                                                                                                                                                                                                                                                                                                                                             | DBS East and DBS West sequentially                                                                                                                                                                                                                                                                                                                                                                                             | Notes and rationale                                                                                                                                                                                                                                                                                                        |
|                     | 0.75-1.5km along the cable route                                                                                                                                                                                                                                                                                                                                                                                  | 0.75-1.5km along the cable route                                                                                                                                                                                                                                                                                                                                                                                               | 0.75-1.5km along the cable route                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                            |
| Onshore substations | <p>Permanent substation area: 135,000m<sup>2</sup> (based on one HVAC substation)</p> <p>Substation buildings:<br/>Tallest building: 24 m<br/>Largest building footprint: 55 m x 45 m<br/>Tallest structure: 27 m height</p> <p>Implementation of basic landscape screening (details TBC).</p> <p>All other construction disturbance restored to pre-existing condition</p> <p>Operational duration: 30 years</p> | <p>Permanent substation area: 199,416m<sup>2</sup> (based on one HVAC and one HVDC substation)</p> <p>Substations are not co-located</p> <p>Substation buildings:<br/>Tallest building: 24 m<br/>Largest building footprint: 55 m x 45 m<br/>Tallest structure: 27 m height</p> <p>Implementation of basic landscape screening (details TBC).</p> <p>All other construction disturbance restored to pre-existing condition</p> | <p>Permanent substation area: 199,416m<sup>2</sup> (based on one HVAC and one HVDC substation)</p> <p>Substations are not co-located</p> <p>Substation buildings:<br/>Tallest building: 24 m<br/>Largest building footprint: 55 m x 45 m<br/>Tallest structure: 27 m height</p> <p>Implementation of basic landscape screening (details TBC).</p> <p>All other construction disturbance restored to pre-existing condition</p> | <p>The concurrent and sequential scenarios will require two substations therefore will have greater effects than DBS West or DBS East in isolation. The sequential scenario will result in a slightly longer operational duration, due to the assumed two-year lag in construction between the two Projects. Therefore</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Parameter                                          |                                                                                      |                                                                                      |                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DBS East or DBS West in isolation                  | DBS East and DBS West concurrently                                                   | DBS East and DBS West sequentially                                                   | Notes and rationale                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Security /operational lighting within the compound | Operational duration: 30 years<br>Security /operational lighting within the compound | Operational duration: 32 years<br>Security /operational lighting within the compound | the <b>DBS East and DBS West sequentially</b> scenario is considered worst case and assessed in this Chapter. |
| <b>Decommissioning</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                    |                                                                                      |                                                                                      |                                                                                                               |
| No final decision regarding the final decommissioning policy for the onshore project infrastructure including landfall, onshore cable route and onshore substation has yet been made. It is also recognised that legislation and industry best practice change over time. However, it is likely that the onshore project equipment, including the cable, will be removed, reused or recycled wherever possible and the transition bays and cable ducts being left in place. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and will be agreed with the regulator. It is anticipated that for the worst case scenario, the impacts will be no greater than those identified for the construction phase. |                                                    |                                                                                      |                                                                                      |                                                                                                               |



## 23.3.2.2 Development Scenarios

14. There are currently two possible electrical solutions being considered for DBS West, HVAC or HVDC. Due to the distance of the array area offshore DBS East will be an HVDC project. Therefore, there are two possible electrical solutions for the Projects:
  - One HVDC project and one HVAC project; or
  - Two HVDC projects.
15. There are different parameters required for the onshore substations depending on which electrical solution is selected. Therefore, there are four possible development scenarios within the onshore substation zones that could be taken forward:
  - Two HVDC substations in Substation Zone 4;
  - One HVDC substation in Substation Zone 1 and one HVAC substation in Substation Zone 4;
  - One HVDC substation in Substation Zone 4 and one HVAC substation in Substation Zone 1; or
  - One HVDC substation in Substation Zone 1 and one HVDC substation in Substation Zone 4.
16. In order to ensure that a robust assessment has been undertaken, parameters representing the maximum level of development across both Substation Zones have been agreed. These are presented in **Table 23-2**, and serve as the basis for the LVIA. To assess the maximum level of development, a mix of parameters has been used to illustrate and assess a maximum 'volume', that would not be exceeded under any scenario. This volume is based on the maximum footprint of the HVAC substation, combined with the maximum height of the HVDC footprint (up to 27m). The level of development across the Substation Zones, in any of the above scenarios, will not be greater than the maximum parameters that have been assessed.

## 23.3.2.3 Construction Scenarios

17. The following principles set out the framework for how the Projects may be constructed (relating to both onshore and offshore works):
  - DBS East and DBS West may be constructed at the same time, or at different times;
  - If built concurrently, both Projects could be constructed in five years;
  - If built non-concurrently, either Project could be built first;
  - If built non-concurrently, each Project would require a five year period of construction;
  - If built non-concurrently, it is anticipated that there would be up to a two year lag between the start of construction for the first project and the start of construction for the second project; and
  - Assuming a maximum construction period per Project of five years, and taking the above into account, the maximum construction period over which the construction of both Projects could take place is seven years.
18. In order to determine which construction scenario presents the realistic worst case for each receptor and impact, the assessment considers both maximum duration effects and maximum peak effects, in addition to each Project being developed in isolation, drawing out any differences between each of the two Projects.
19. The three construction scenarios considered by the LVIA are therefore:
  - Build DBS East or build DBS West in isolation;
  - Build DBS East and DBS West concurrently – reflecting the maximum peak effects; and
  - Build the Projects sequentially with a lag of up to two years – reflecting the maximum duration of effects.
20. The individual, concurrent and sequential construction scenarios all allow for flexibility to build out the Projects using a phased approach. This will allow the Projects to adapt to National Grid Electricity Transmission Operator's development plans for the onshore grid connection points. Under a phased approach the maximum timescales for individual elements of the construction have been assessed.

21. Any differences between the Projects, or differences that could result from the manner in which the first and the second Projects are built (concurrent or sequential and the length of any gap) are identified and discussed where relevant in section 23.6. For each potential impact, only the worst case construction scenario for two Projects is presented, i.e. either concurrent or sequential. The justification for what constitutes the worst case is provided, where necessary, in **Table 23-2**.

#### 23.3.2.4 Operation Scenarios

22. Operation scenarios are described in detail in **Chapter 5 Project Description**. The assessment considers the following scenarios:
- Only DBS East in operation;
  - Only DBS West in operation; and
  - The two projects operating concurrently, with or without a lag of up to two years between each Project commencing operation.
23. If the Projects are built out using a phased approach, there would also be a phased approach to starting the operational stage. The worst case scenario for the operational phase for the Projects have been assessed. See section 5.1.1 of **Chapter 5 Project Description** for further information on phasing scenarios for the Projects.
24. The operations lifetime of each Project is expected to be 30 years.

#### 23.3.2.5 Decommissioning Scenarios

25. Decommissioning scenarios are described in **Chapter 5 Project Description**. Decommissioning arrangements will be agreed through the submission of a Decommissioning Programme prior to construction, however for the purpose of this assessment it is assumed that decommissioning of the Projects could be conducted separately, or at the same time.

## 23.3.3 Mitigation Embedded in the Design

26. This section outlines the embedded mitigation relevant to the LVIA, which has been incorporated into the design of the Projects (**Table 23-3**). Where other mitigation measures are proposed, these are detailed in the impact assessment (section 23.6).

Table 23-3 Embedded Mitigation Measures

| Parameter          | Mitigation Measures Embedded into the Project Design                                                                                                                                                                                                                                                               |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Routeing           | The onshore export cable corridor has been designed to avoid sensitive landscape elements, such as woodland, buildings and trees, where the loss of such features would be detrimental to the character of the area. See <b>Chapter 4 Site Selection and Assessment of Alternatives</b> .                          |
| Site selection     | The onshore Substation Zones have been selected from a number of alternatives, with landscape and visual considerations being key factors in the selection process. See <b>Chapter 4 Site Selection and Assessment of Alternatives</b> .                                                                           |
| Project dimensions | All parameters for the Project, such as substation dimensions and working widths, are the smallest that can reasonably be defined at the PEIR stage.                                                                                                                                                               |
| Offshore platform  | Any proposed offshore platform (including those in the offshore export cable route and in the more distant array areas) will be over 52km from the landfall point, and over 37km from the closest location on land (Flamborough Head). It will therefore not have likely significant effects on onshore receptors. |

## 23.4 Assessment Methodology

### 23.4.1 Policy, Legislation and Guidance

#### 23.4.1.1 National Policy Statements

27. The assessment of potential impacts upon landscape character and visual amenity has been made with specific reference to the relevant National Policy Statements (NPS). The specific assessment requirements for LVIA, as detailed in the NPS, are summarised in **Table 23-4** together with an indication of the section of this chapter where each is addressed.
28. It is noted that the EN-1, EN-3 and EN-5 are in the process of being revised and draft versions were published for consultation in September 2021 (Department for Business Energy and Industrial Strategy, 2021). **Table 23-4** therefore also includes consideration of any additional requirements.
29. Following the consultation in 2021 on the draft energy NPS, a new consultation opened on the 30<sup>th</sup> March 2023 on revised drafts of the energy NPSs, including EN1, EN3 and EN5. Due to the timing of this consultation, and finalisation of this PEIR we have been unable to review and take these revised draft NPS into account within these documents. However, these will be reviewed and incorporated into the final ES where relevant.

Table 23-4 NPS Assessment Requirements

| NPS Requirement                                                                                                                                                                                                       | NPS Reference               | PEIR Section Reference                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EN-1 NPS for Energy</b>                                                                                                                                                                                            |                             |                                                                                                                                                                                                        |
| Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity.                                                                                              | Paragraph 2.4.2 of NPS EN-1 | Landscape and visual amenity has been considered in the refinement of the design of the Projects. Further information is available in <b>Chapter 4 Site Selection and Assessment of Alternatives</b> . |
| 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. | Paragraph 5.9.5 of NPS EN-1 | Landscape character impacts are considered in section 23.6.<br><br>Local development plan policies relating to landscape designation are discussed in section 23.4.1.                                  |

| NPS Requirement                                                                                                                                                                                                                                            | NPS Reference               | PEIR Section Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Applicant's assessment should include the likely effects on landscape components and landscape character during construction and operation.                                                                                                            | Paragraph 5.9.6 of NPS EN-1 | Effects which are scoped in to this LVIA are set out in <b>Table 23-1</b> .<br><br>Effects on landscape components and landscape character, during construction and operation, are assessed in section 23.6.                                                                                                                                                                                                                                                                                                   |
| 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. | Paragraph 5.9.7 of NPS EN-1 | Effects on visual amenity and views are assessed during construction and operation area assessed, in section 23.6.<br><br>This includes consideration of the effects of light pollution on visual amenity. Effects of lighting on nature conservation interests are considered in <b>Chapter 18 Terrestrial Ecology and Ornithology</b> .                                                                                                                                                                      |
| 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.                                                                     | Paragraph 5.9.8 of NPS EN-1 | The existing character of the local landscape is discussed in section 23.5.1. The method for determining the value and susceptibility of the local landscape is considered in section 23.4.3. Effects on landscape character are assessed in section 23.6 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 Requirement                                                                                                                                                                                                                  | NPS Reference                          | PEIR Section Reference                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paragraphs 5.9.9 to 5.9.13 of NPS EN-1 provide advice in relation to applications affecting nationally designated landscapes (National Parks and Areas of Outstanding Natural Beauty).                                           | Paragraphs 5.9.9 to 5.9.13 of NPS EN-1 | There are no nationally designated landscapes within the landscape and visual study area, as set out in section 23.5.                                                     |
| 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.                                                   | Paragraph 5.9.14 of NPS EN-1           | Local landscape designations are introduced at section 23.5, and are considered in the assessment of effects in section 23.6.                                             |
| The Secretary of State 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 benefits (including need) of the project.       | Paragraph 5.9.15 of NPS EN-1           | The predicted adverse effects of the Projects are clearly set out in section 23.6 to inform the decision-making process.                                                  |
| The Secretary of State 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 IPC considers reasonable. | Paragraph 5.9.16 of NPS EN-1           | The duration and reversibility of all effects is considered as part of the impact assessment in section 23.6, as prescribed by the methodology set out in section 23.4.3. |
| The Secretary of State should consider the design mitigation of the project and whether this has sought to minimise harm to the landscape.                                                                                       | Paragraph 5.9.17 of NPS EN-1           | Proposed mitigation for the project is set out in relation to embedded measures (section 23.3.3), and further mitigation has been identified in section 23.8.             |
| The Secretary of State should consider whether the visual effects on sensitive receptors outweigh the benefits of the project.                                                                                                   | Paragraph 5.9.18 of NPS EN-1           | The predicted adverse effects of the Projects are clearly set out in section 23.6 to inform the decision-making process.                                                  |

| NPS Requirement                                                                                                                                                      | NPS Reference                          | PEIR Section Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Secretary of State should consider the benefits of the landscape and visual mitigation against the functionality of the project.                                 | Paragraph 5.9.21 of NPS EN-1           | Proposed embedded mitigation is identified in <b>Table 23-3</b> , and further mitigation has been identified where appropriate in the assessment in section 23.6.                                                                                                                                                                                                                                                                                                                                                                                     |
| Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design including colours and materials, and landscaping schemes. | paragraph 5.9.22 of NPS EN-1           | Proposed embedded mitigation is identified in <b>Table 23-3</b> , and further mitigation has been identified where appropriate in the assessment in section 23.6.                                                                                                                                                                                                                                                                                                                                                                                     |
| Depending on the surrounding topography and nearby receptors, it may be appropriate to provide landscape mitigation off site.                                        | paragraph 5.9.23 of NPS EN-1           | Mitigation will be developed to inform the ES, once the proposal for the onshore substations are at a more advanced stage. Outline mitigation is suggested in section 23.6.                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Draft EN-1 NPS for Energy</b>                                                                                                                                     |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| For seascapes, applicants should consult the Seascape Character Assessment and the Marine Plan Seascape Character Assessments, and any successors to them.           | Paragraph 5.10.5 of the Draft NPS EN-1 | Effects on seascape character arising from the Offshore Development Area are scoped out of the assessment.<br><br>The operational effects of the arrays have been scoped out, in agreement with the Planning Inspectorate, due to the low susceptibility of offshore receptors, including seascape. The same low susceptibility applies during construction. It is not considered likely that any significant effects would arise from construction activities taking place within the Offshore Development Area, and these are therefore scoped out. |

| NPS Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NPS Reference                           | PEIR Section Reference                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The assessment should demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views, will be minimised.                                                                                                                                                                                                                                                                                            | Paragraph 5.10.8 of the Draft NPS EN-1  | Effects on visual amenity and views as a result of light pollution during the construction and operational phases are assessed, in section 23.6.           |
| Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.                                                                                                                                                                                                                                                                                            | Paragraph 5.10.10 of the Draft NPS EN-1 | Opportunities for mitigation and enhancement have been identified where appropriate in the assessment in section 23.6, and are summarised in section 23.8. |
| <b>EN-3 NPS for Renewable Energy Infrastructure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                                                                                                                                            |
| 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.                                                                                                                                                                                                                                                                   | Paragraph 2.6.37 of NPS EN-3            | The landscape and visual effects of the onshore export cable corridor are assessed in section 23.6.                                                        |
| <b>Draft EN-3 NPS for Renewable Energy Infrastructure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         |                                                                                                                                                            |
| Where the applicant does not know the precise location of the transmission cable connection to the offshore connection point or the location for connection with onshore networks, including any necessary onshore and/or offshore substations and the onshore landing point, a corridor should be identified within which the specific infrastructure is proposed to be located. The ES for the proposed project should assess the effects of including this infrastructure within that corridor. | Paragraph 2.23.2 of the Draft NPS EN-3  | The landscape and visual effects of the onshore export cable corridor are assessed in section 23.6.                                                        |

| NPS Requirement                                                                                                                                                                                                               | NPS Reference               | PEIR Section Reference                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------|
| <b>EN-5 NPS for Electricity Networks Infrastructure</b>                                                                                                                                                                       |                             |                                                                                           |
| 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. | Paragraph 2.8.2 of NPS EN-5 | The landscape and visual effects of the onshore substations are assessed in section 23.6. |

## 23.4.1.2 Other

30. In addition to the NPS, there a number of pieces of legislation, policy and guidance applicable to the assessment of landscape and visual effects.
31. Relevant national and local development planning policy includes:
  - The National Planning Policy Framework (NPPF, Ministry of Housing, Communities and Local Government, 2021) states, in paragraph 174, 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 23.6. The provisions of the development plan in relation to landscape are discussed below.
  - The East Riding of Yorkshire Local Plan 2012-2029: Strategy Document (East Riding of Yorkshire Council, 2016) sets out the overall strategic direction for the Local Plan and provides strategic policies to guide decisions on planning applications. The policy relevant to this chapter is Policy ENV2: Promoting a high-quality landscape, which is summarised in **Table 23-5**.

Table 23-5 Summary of East Riding of Yorkshire Local Plan Strategy Document relevant to LVIA

| Summary of Policy ENV2 provisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PEIR Section Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>“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]:</i></p> <ul style="list-style-type: none"> <li>• protect and enhance views across valued landscape features including flood meadows, chalk grassland, lowland heath, mudflats and salt marsh, sand dunes and chalk cliffs.</li> <li>• protect and enhance the undeveloped coast.</li> </ul> <p><i>Proposals should protect and enhance existing landscape character in the East Riding Landscape Character Assessment, in particular, within the following Important Landscape Areas:</i></p> <p><i>I. The Yorkshire Wolds.</i></p> <p><i>II. The Heritage Coast designations at Flamborough and Spurn Head.</i></p> <p><i>III. The Lower Derwent Valley.</i></p> <p><i>IV. The Thorne, Crowle and Goole Moors.”</i></p> | <p>The existing character of the local landscape is discussed in section 23.5.1. The value and capacity of the local landscape to accommodate change is considered in section 23.6. Effects on landscape character are assessed in section 23.6 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).</p> <p>The presence of the ILA designation is taken in to account in the assessments presented in section 23.6.</p> |

32. Relevant guidance on landscape and visual impact assessment includes:

- European Landscape Convention;
- Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment ('GLVIA3'); and
- Landscape Institute Technical Guidance Note 06/19: Visual Representation of development proposals.

33. Further detail is provided in **Chapter 3 Policy and Legislative Context**.

## 23.4.2 Data and Information Sources

### 23.4.2.1 Site Specific Surveys

34. In order to provide site specific and up to date information on which to base the impact assessment, several site visits were conducted by the LVIA specialists. This included visits to the area to inform site selection, prior to undertaking the LVIA. Site visits were undertaken between 2021 and 2023, at different times of the year. Photography for use in visualisations was captured during site visits in October 2022 and January 2023.

### 23.4.2.2 Other Available Sources

35. Other sources that have been used to inform the assessment are listed in **Table 23-6**.

Table 23-6 Other Available Data and Information Sources

| Data Set                                                | Spatial Coverage                 | Year | Notes                                                                                                      |
|---------------------------------------------------------|----------------------------------|------|------------------------------------------------------------------------------------------------------------|
| Heritage Coast                                          | England                          | 2010 | Identifies extent of Heritage Coast designation at Flamborough Head                                        |
| National Character Areas                                | England                          | 2014 | National classification of landscape character to inform baseline assessment                               |
| East Riding of Yorkshire Landscape Character Assessment | East Riding of Yorkshire         | 2018 | Local level classification of landscape character                                                          |
| Important Landscape Areas                               | East Riding of Yorkshire         | 2016 | Identifies extent of ILA within the landscape and visual study areas                                       |
| Ordnance Survey Mapping, aerial photography             | Landscape and visual study areas | 2022 | Provides general information about the landscape of the study areas, and the locations of visual receptors |
| Ordnance Survey Digital Terrain Mapping                 | Landscape and visual study areas | 2022 | Used for generation of ZTVs and visualisations                                                             |

| Data Set                                                         | Spatial Coverage                              | Year | Notes                                                                                                                               |
|------------------------------------------------------------------|-----------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------|
| Dogger Bank Creyke Beck Environmental Statement (Forewind, 2013) | Parts of the landscape and visual study areas | 2013 | Cross-check of landscape and visual receptors which have previously been examined as part of a consented project in a similar area. |
| Hornsea Project Four Environmental Statement (Ørsted, 2021)      | Parts of the landscape and visual study areas | 2021 | Cross-check of landscape and visual receptors which have previously been examined as part of a submitted project in a similar area. |

### 23.4.3 Impact Assessment Methodology

36. **Chapter 6 EIA Methodology** provides a summary of the general impact assessment methodology applied. The following sections describe the topic-specific methodology used to assess the likely significant effects on landscape and visual receptors.
37. The assessment methodology for the LVIA is based on the principles set out in GLVIA3 (Landscape Institute and Institute of Environmental Management and Assessment, 2013).
38. The approach to determining the significance of effects is a two-stage process that involves defining the sensitivity of the receptor and the magnitude of the impact. The assessments of sensitivity and magnitude 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.

## 23.4.3.1 Sensitivity of Landscape Receptors

39. 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 landscape resource.
40. 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 23-7**.

Table 23-7 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.                                                                                                   |

41. Value of the landscape resource is determined in line with **Table 23-8**, 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 23-8 Value of Landscape Resource

| Value  | Definition                                                                                                                                                                                                                                                                                                                                                                                           |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High   | <p>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</p> <p>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).</p> |
| Medium | <p>Areas or features designated at a county or local level e.g. local authority designated landscapes or key features of designated landscapes.</p> <p>and/or</p> <p>Landscapes with some scenic quality, and/or or some recreational value, or important cultural associations which are valued at a district level.</p>                                                                            |
| Low    | <p>Areas or features that are not formally designated but may be valued at a community level.</p> <p>and/or</p> <p>Landscape of lower aesthetic qualities than the landscapes described above e.g. character that is widespread.</p>                                                                                                                                                                 |

42. 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 23-9**.

Table 23-9 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.     |

## 23.4.3.2 Sensitivity of Visual Receptors

43. 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.
44. 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 23-10**.

Table 23-10 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.                                                                                                                                             |

45. Recognition of the value of a view is determined in accordance with **Table 23-11**, with reference to:
- Planning designations specific to views;
  - Whether a view is recorded as important in relation to the special qualities of a designated landscape;
  - 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 23-11 Value of Visual Receptors

| Value  | Definition                                                                                                                                                                                                                                                                                                     |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High   | Views recorded in World Heritage Site Management Plans or associated with nationally designated landscapes (i.e. 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.                                                                                                                                                                                                                  |

46. 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 23-12**.

Table 23-12 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         | 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.         |

### 23.4.3.3 Magnitude of Landscape Impact

47. The magnitude of the impact on each landscape receptor is reported in terms of its scale, geographical extent, duration and reversibility.
48. 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 23-13**.

Table 23-13 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.                                  |
| Barely Perceptible | A barely perceptible/ imperceptible change to landscape character and characteristics.                                                                                                         |

49. 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 landscape and visual study areas, so that a 'widespread' effect would be one affecting all or most of the relevant study area. The geographical extent is generally described by defining an area over which the effect will occur, with reference to identifiable landscape features.

50. 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 onshore substations, or are permanent effects which continue after the operational phase.
51. Reversibility is reported as reversible, partially reversible or not reversible (permanent), and is related to whether the change can be reversed. For example, effects arising from presence of construction traffic will cease at the end of construction, and are therefore reversible. Effects arising from presence of new built development are not readily reversible so would be considered permanent. In some cases, effects can be considered partially reversible if mitigation (e.g. landscape planting) helps reverse some of the effects. The duration across which any effect could be reversed, or partially reversed, would be considered as noted in the preceding paragraph.
52. The magnitude of impact is derived by combining professional judgements on scale, geographical extent, duration and reversibility as set out in **Table 23-14**.

Table 23-14 Magnitude of Landscape Impact

| Magnitude  | Definition                                                                                                                                                                                                                                                                                 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High       | A clearly evident and frequent/continuous change in landscape features and characteristic affecting an extensive area (relative to the 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.                                           |
| Low        | 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.                                                                                                                           |

#### 23.4.3.4 Magnitude of Visual Impact

53. The magnitude of the impact on visual receptors is reported in terms of its scale, geographical extent, duration and reversibility.
54. 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.
55. The assessment assumes winter conditions with minimal screening by deciduous vegetation and trees. In this assessment, scale is described as being imperceptible, small, medium or large, with reference to the definitions set out in **Table 23-15**.

Table 23-15 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.                                                 |
| Negligible | Change in view which is barely perceptible.                                                                                                                                                              |

56. 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.
57. For the purposes of this assessment, duration has been determined in relation to the phases of the development, as outlined in paragraph 52.
58. Reversibility is reported as reversible, partially reversible or not reversible (permanent), and is related to whether the change can be reversed. For example, effects arising from presence of construction traffic will cease at the end of construction, and are therefore reversible. Effects arising from presence of new built development are not readily reversible so would be considered permanent. In some cases, effects can be considered partially reversible if mitigation (e.g. landscape planting) helps reverse some of the effects. The duration across which any effect could be reversed, or partially reversed, would be considered as noted in the preceding paragraph.
59. The magnitude of impact is derived by combining professional judgements on scale; geographical extent; duration and reversibility as set out in **Table 23-16**.

Table 23-16 Magnitude of Visual Impact

| Magnitude  | Definition                                                                                                                                                                                                          |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High       | Major changes in view at close distances, affecting a substantial part of the view, continuously visible over the long term, 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. |
| Low        | Minor changes in views, at long distances, or visible over the short term, 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, and which generally blends with the existing view.                                     |

### 23.4.3.5 Significance of Effect

60. The assessment of significance of an effect is informed by the sensitivity of the receptor and the magnitude of the impact as described above. The determination of significance 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 each instance. Judgements are made on a case by case basis, guided by the considerations set out in **Plate 23-1**. Definitions of each level of significance are provided in **Table 23-17**. For the purposes of this assessment, any effect that is of major or moderate significance is considered to be significant in EIA terms, whether this be adverse or beneficial. Any effect that has a significance of minor or negligible is not significant.
61. 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.

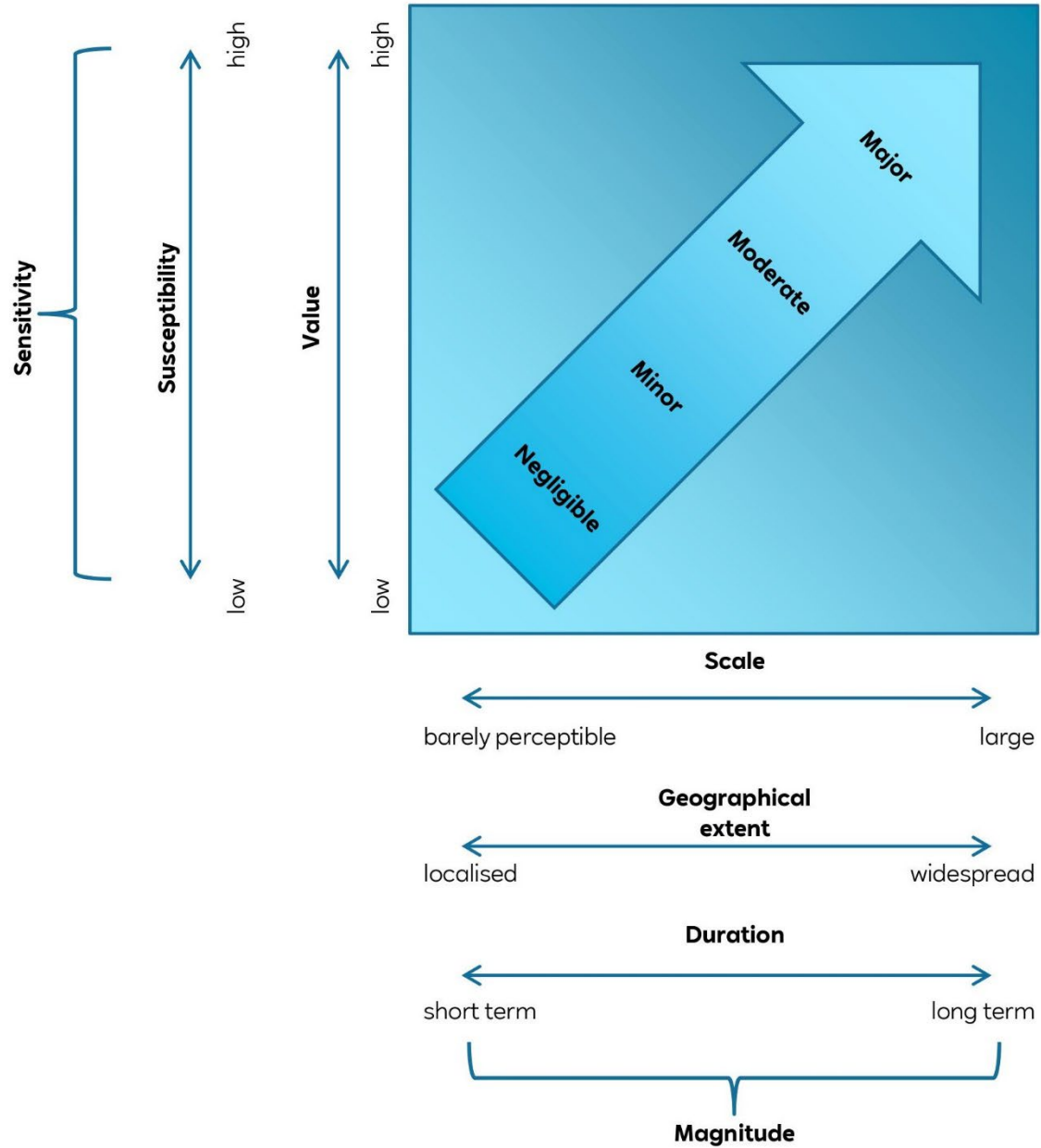


Plate 23-1 Matrix Guiding the Assessment of Significance for Landscape and Visual Effects

Table 23-17 Definition of Effect Significance

| Significance | Definition                                                                                                                                      |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Major        | Very large or large change in the landscape or the view, which is likely to be an important consideration at a regional or district level.      |
| Moderate     | Intermediate change in the landscape or the view, which is likely to be an important consideration at a local level.                            |
| Minor        | Small change in the landscape or the view, which may be raised as a local issue but is unlikely to be important in the decision making process. |
| Negligible   | Very limited discernible change in the landscape or the view, unlikely to be a concern even at the local level.                                 |
| No change    | No impact, therefore no change in the landscape or the view.                                                                                    |

## 23.4.3.6 Simple and Detailed Assessment

62. 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.
63. A simple assessment approach is used for temporary works, or elements which will be beneath the ground surface:
  - Receptors are grouped by their location, context and/or proximity to the works, 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, as the works being considered are transient or unlikely to be widely visible.
64. A detailed assessment approach is used for permanent above-ground elements of the Projects:
  - Receptors are considered individually, or as small groups where professional judgement indicates that receptors are likely to experience identical effects;
  - ZTVs are provided; and

- Representative viewpoints were identified and agreed with the relevant stakeholders (see **Table 23-1**) – these are introduced in section 23.5.2.2 and listed in **Table 23-20**. Photography and visualisations have been prepared, as set out in section 23.4.3.7.

#### 23.4.3.7 Approach to Visualisations

65. No photography or photomontages are provided for the landfall and onshore export cable corridor, given the works within these areas will be temporary and all permanent infrastructure will be below ground.
66. Baseline photography was taken for representative viewpoints listed in **Table 23-20**. Baseline photography illustrates the existing view and the landscape context in which the permanent elements of the Projects will be seen.
67. For each of the representative viewpoints listed in **Table 23-20**, a simple 'block visualisation' has been prepared. This shows a basic model that illustrates the worst case scenario outlined in **Table 23-2**. These block visualisations represent the worst case in terms of visual obstruction and serve as a primary reference for the LVIA. The worst case is based on a mix of parameters in order to show worst case, and so illustrates a maximum 'volume', that would not be exceeded under any scenario. This volume is based on the maximum footprint of the HVAC substation, combined with the maximum height of the HVDC footprint (up to 27m).
68. All photography and visualisations have been generated in accordance with the Landscape Institute's Technical Guidance Note 06/19 (Landscape Institute, 2019) on use of photography and photomontage in LVIA.
69. Visualisations do not show any detail of final scale or massing of the onshore substations. No mitigation is shown, as this will be developed based on a refined design. Mitigation will be included within visualisations to be submitted with the ES.

## 23.4.4 Cumulative Effect Assessment Methodology

70. The cumulative effect assessment (CEA) considers other plans and projects that may result in cumulation of effects with the Projects. **Chapter 6 EIA Methodology** provides details of the general framework and approach to the CEA that will be undertaken for the Projects.
71. The final assessment of cumulative effects will be undertaken during the later stages of the EIA, once further information is available on a number of projects, such as the Hornsea Project Four decision. However, for the purposes of the PEIR, it is possible to identify a number of projects and plans which are likely to feature in that assessment and consider the extent to which cumulative effects might arise. Section 23.7 presents the following preliminary information regarding cumulative effects:
- Screening for cumulative effects; and
  - A preliminary short list of plans and projects considered for CEA, including a brief description as to how projects have been screened in and the initial tier level they have been assigned.

## 23.4.5 Assumptions and Limitations

72. This preliminary assessment is considered to be an interim stage in the EIA process. The results presented in the following sections are based on early design assumptions and initial assessments which will be refined and presented in the final Environmental Statement (ES) to be submitted as part of the DCO application.
73. The early design assumptions form the basis of the worst case scenario, and as such the basis for assessment is likely to over-estimate the level of development at the Substation Zones.
74. No further overarching assumptions or limitations have been identified that apply to the LVIA. Where routine assumptions have been made in the course of undertaking the assessment, these are noted throughout.

## **23.5 Existing Environment**

### **23.5.1 Landscape Baseline**

#### **23.5.1.1 Landscape Character**

75. 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.
76. The majority of the landscape and visual study area lies within NCA 40: Holderness. 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.
77. 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. 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).
78. Part of subareas 4 and 5 of the landscape and visual study area, to the west of Beverley, lies within NCA27: Yorkshire Wolds (Natural England, 2012a). 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, 2012a).

79. Part of subarea 5 of the landscape and visual study area to the south-east of Beverley lies within NCA41: Humber Estuary (Natural England, 2012b). This character area is a low-lying estuarine landscape with extensive areas of intertidal habitats found along the open and expansive waters of the Humber. Land adjacent to the Humber has been reclaimed with the former inter-tidal landscape providing high-quality soils which give rise to productive arable farming. There is great contrast within this landscape, primarily the presence of large towns such as Hull. The area of this NCA within the landscape and visual study area forms part of the built-up landscape of Hull.
80. The East Riding of Yorkshire Landscape Character Assessment (Aecom, 2018) has been consulted as the principal source of information at the local level. The landscape and visual study area includes 14 Landscape Character Areas (LCAs) within six Landscape Character Types (LCTs), as listed in **Table 23-18** and illustrated on **Figure 23-5**.

Table 23-18 Landscape Character Types and Areas within the landscape and visual study area

| Landscape Character Type            | Landscape Character Area                                                                               |
|-------------------------------------|--------------------------------------------------------------------------------------------------------|
| 13 Open High Rolling Farmland       | 13B Bishop Burton Estate Farmland<br>13C South Wolds Rolling Farmland                                  |
| 16 Sloping Farmland (Edge of Wolds) | 16C Beverley Westwood<br>16E Lund Sloping Farmland<br>16F Beverley Parks Farmland                      |
| 17 Farmed Urban Fringe              | 17B North Cottingham Farmland<br>17C South Cottingham Farmland                                         |
| 18 Low Lying Drained Farmland       | 18A River Hull Corridor<br>18B Quarry Farmland<br>18C Catfoss Dyke<br>18F Figham and Swine Moor Common |
| 19 Open Farmland                    | 19C North Holderness Open Farmland<br>19D Central Holderness Open Farmland                             |
| 20 Coastal Farmland                 | 20C Bridlington to Hornsea Coast                                                                       |

81. The key characteristics of the LCTs within the landscape and visual study area are presented in **Table 23-19**. These are summarised from the East Riding of Yorkshire Landscape Character Assessment (Aecom, 2018).

*Table 23-19 Summary of Landscape Character Types*

| Landscape Character Type      | Key Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 Open High Rolling Farmland | <p>Elevated rolling landform of the Yorkshire Wolds dip slope falling east.</p> <p>Large scale open landscape with long distance views and dominated by the sky.</p> <p>Sparsely populated area with scattered villages and farmsteads.</p> <p>Large and very large rectilinear regular arable fields.</p> <p>Fragmented hedgerows that are severely clipped.</p> <p>Very few trees resulting in an open landscape.</p> <p>Shelterbelts around farmsteads on the hill tops are a prominent feature.</p> <p>Pockets of parkland and estate land to the east on the lower slopes provide diversity.</p> <p>Enclosure roads that conform to the enclosure field pattern alongside older routes are well spaced.</p> <p>Numerous Public Right of Ways (PRoWs).</p> <p>South Dalton Church spire is a prominent landmark in the relatively featureless landscape.</p> |
| 16 Sloping Farmland           | <p>Gently rolling landform sloping gradually down to the east.</p> <p>Intermittent scattered woodland blocks throughout.</p> <p>Intensively farmed rectilinear arable fields of large to medium size, interspersed with less regular early enclosure fields particularly around villages.</p> <p>Free draining land with dispersed streams arising in the Wolds and flowing east to the River Hull.</p> <p>Horticultural development between Beverley and Hull.</p> <p>Views across the open landscape and views of Beverley Minster.</p> <p>Hedgerow trees in places.</p>                                                                                                                                                                                                                                                                                       |

| Landscape Character Type      | Key Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | <p>Scattered villages and farmsteads.</p> <p>Parkland characteristics at Beverley Westwood, Risby Park and Kilnwick Percy.</p> <p>A number of turbine developments within the landscape with others visible beyond.</p>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 17 Farmed Urban Fringe        | <p>Gently undulating to flat landform generally below 20m AOD.</p> <p>Strong urban influences encroaching into rural areas.</p> <p>Community land use e.g. sports pitches, allotments, cemeteries.</p> <p>Hedgerow boundaries around medium to large sized fields.</p> <p>Mixed land use combining agriculture, horticulture and recreation.</p> <p>Lighting along major roads and in settlements.</p> <p>Neglected appearance of some fields and hedgerows.</p> <p>Presence of recreation activities both formal and informal.</p> <p>Enclosed character with many areas surrounded by urban development on three sides.</p>                |
| 18 Low Lying Drained Farmland | <p>Flat, low lying flood plain generally below 10m AOD.</p> <p>Sparse settlement in the floodplain. Farmsteads and villages concentrated on the edge of the flood plain.</p> <p>Few crossing points on the River Hull contributing to low density of development between North Frodingham and Tickton.</p> <p>Pockets of fens and reed swamps indicating a former landscape.</p> <p>Sparse tree and woodland cover.</p> <p>Rectilinear field systems with hedgerow and drainage ditch boundaries.</p> <p>A history of sand and gravel extraction.</p> <p>River Hull and Beverley Barmston Drain are major watercourses with embankments.</p> |

| Landscape Character Type | Key Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | <p>Numerous water bodies particularly associated with gravel extraction.</p> <p>Recreation associated with water bodies and the River Hull.</p> <p>Several medieval scheduled monuments.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 19 Open Farmland         | <p>Gently undulating topography, hummocky in places.</p> <p>Very open landscape with few trees overall.</p> <p>Irregular field pattern of pre-parliamentary enclosure.</p> <p>Dispersed villages linked by winding roads.</p> <p>Red brick buildings with pantile roofs sometimes painted white.</p> <p>Churches are often prominent features on the skyline.</p> <p>Irregular drainage pattern overall.</p> <p>Hedgerow field boundaries with few trees.</p> <p>Intensive farmed arable landscape.</p> <p>Large number of wide developments visible across the landscape both within LCT 19 and adjoining LCTs.</p>                  |
| 20 Coastal Farmland      | <p>Flat to gently undulating topography sloping gently eastwards.</p> <p>Boulder clay cliffs eroding into the sea.</p> <p>Seaside resorts of Bridlington, Hornsea and Withernsea.</p> <p>Coastal static caravan parks are prominent.</p> <p>Limited tree cover due to exposed windswept coastal landscape.</p> <p>Smaller villages and farmsteads and minor roads threatened by erosion.</p> <p>Fragments of historic field pattern around villages and hamlets.</p> <p>Tourism development along the coast.</p> <p>Large scale turbine development visible within the landscape, both within this LCT and within adjoining LCTs.</p> |

## 23.5.1.2 Landscape Designations

82. There are no statutory landscape designations (National Parks or AONBs) within the landscape and visual study area. The candidate Yorkshire Wolds AONB is over 10.5km to the north-west of the landscape and visual study area (and 13.5km and 15.5km from the onshore cable corridor and Substation Zones, respectively). The ZTVs indicate extensive areas of no visibility within 5km of the Substation Zones, and at distances of greater than 15km, visibility will be minimal. There is no potential for effects on the candidate Yorkshire Wolds AONB, as currently defined, to be significant. This has been scoped out in agreement with Natural England (see **Table 23-1**).
83. The western extents of the landscape and visual study area (subareas 4 and 5) includes a part of the Yorkshire Wolds ILA (see **Figure 23-6**) as defined by Policy ENV2 of the East Riding Local Plan 2012-2029 (East Riding of Yorkshire Council, 2016).
84. 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 (East Riding of Yorkshire Council, 2016).
85. The Local Plan notes that within the Yorkshire Wolds ILA the landscape illustrates “*varying degrees of quality*”, with the areas of the highest quality being “*on the western scarp slope and around Sledmere*” (over 10km from the landscape and visual study area). The Local Plan states that development “*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.”* (East Riding of Yorkshire Council, 2016).

## 23.5.1.3 Landscape Description

86. This section sets out the specific character of the landscape and visual study area, in terms of the subareas described at section 23.5.1.3 and shown in **Figure 23-5**. The key landscape elements or features within each subarea that contribute to local distinctiveness are identified.

### 23.5.1.3.1 Subarea 1: Landfall Area

87. The landfall subarea lies within the 20C Bridlington to Hornsea Coast LCA (Coastal Farmland LCT) (see **Figure 23-5**).
88. The beaches of Skipsea Sands and nearby Ulrome Sands and Atwick Sands comprise narrow sandy and shingle beaches backed by boulder clay cliffs that have a height between 7.5m and 13m. These beaches are used for recreation with access and parking provided by the holiday parks at Ulrome, Skipsea, Skirlington and Atwick. Each of these holiday parks are visible features along this coast. The church steeples in Skipsea and Ulrome form prominent landmarks on the skyline. The beaches are locally distinctive, although they do not form an integral part of the local landscape character, being largely obscured from the immediate coastal edge. Inland, this subarea encompasses agricultural land comprising open, exposed farmland with large fields, bounded by fragmented hedgerows with occasional small trees.

### 23.5.1.3.2 Subarea 2: Skipsea to West Road

89. This subarea around the onshore export cable corridor crosses three LCAs: 18B Quarry Farmland and 18C Catfoss Dyke (Low Lying Drained Farmland LCT); and 19C North Holderness Open Farmland (Open Farmland LCT) (see **Figure 23-5**). The onshore export cable corridor crosses a number of arable fields and Dunnington Sewer in a westerly direction before it heads south towards Siggleshorne.
90. The majority of the landscape within this subarea is characterised by open and largely flat arable farmland, with little tree cover. Farmland is large scale, with rectilinear fields, bounded by hedgerows with occasional hedgerow trees in some places. Hedgerows are often irregular with intermittent gaps along the boundaries. Built development is largely comprised of farmsteads and small hamlets and villages. Due to the flat and open nature of this landscape, these buildings can often form prominent features in the landscape. Likewise, occasional woodland copses and plantations appear prominent, introducing vertical elements into an otherwise flat landscape. This subarea contains several watercourses and drains, notably Dunnington Sewer and Catfoss Drain.

### 23.5.1.3.3 Subarea 3: West Road to the River Hull

91. This subarea around the onshore export cable corridor extends across three LCAs: 18A River Hull Corridor and 18C Catfoss Dyke (Low Lying Drained Farmland LCT); and 19D Central Holderness Open Farmland (Open Farmland LCT) (see **Figure 23-5**).
92. From the A1035 west of Sigglesthorne the onshore export cable corridor runs south-west, to the south of Catwick, Leven and Routh across a number of arable fields, drains and dikes. At Routh the corridor crosses the A1035 and runs in a westerly direction to the north of Tickton before reaching the River Hull.
93. As with Subarea 2, the majority of the landscape within this subarea consists of large scale gently undulating or flat arable farmland under expansive skies. Large, rectilinear fields are the dominant landcover, bordered by hedgerows and tracks. Woodland is present in the form of occasional semi-natural blocks and boundary trees, forming visually prominent features in this open landscape. Settlement in the subarea consists of numerous scattered farmsteads and small hamlets and villages, including Sigglesthorne, Long Riston, Routh and Tickton. Small scale wind turbines are relatively common throughout the subarea, primarily associated with farmsteads. The subarea contains several watercourses and drains, most notably Monk Dike and Holderness Drain.

### 23.5.1.3.4 Subarea 4: River Hull to Onshore Substation Zones

94. This subarea around the onshore export cable corridor extends across seven LCAs: 16A River Hull Corridor, 16C Beverley Westwood, 16E Lund Sloping Farmland and 16F Beverley Parks Farmland (Sloping Farmland LCT); 13B Bishop Burton Estate Farmland and 13C South Wolds Rolling Farmland (Open High Rolling Farmland LCT); and 17B North Cottingham Farmland (Farmed Urban Fringe LCT) (see **Figure 23-5**).
95. From the River Hull the onshore export cable corridor runs west, routing to the north of Beverley. Before reaching the A1035 it turns, before continuing southwards to the onshore substation zones, offset from but parallel to the western edge of Beverley. The two onshore Substation Zones are located to the east and west of the A164/A1079 intersection, between Beverley and Cottingham. From these zones the onshore export cable corridor continues towards the onshore grid connection points.

96. From the River Hull the landform slowly transitions from primarily flat, open land, to more undulating hills, towards the elevated Yorkshire Wolds in the west. The cable corridor crosses arable farmland consisting of rectilinear medium scale fields which are typically defined by hedgerows with occasional hedgerow trees. Once the cable export corridor turns south near the A1035, it broadly runs parallel to the A1079. Drains are present across this landscape, with a particular concentration to the north of Beverley. Vegetation cover continues to be limited with only a few woodland blocks present, including a small area of woodland at Burton Bushes Site of Special Scientific Interest (SSSI).
97. A few scattered farmsteads exist within this subarea, typically enclosed by mature trees. There are some larger settlements, including the small village of Hull Bridge and the northern and south-western urban extents of Beverley. Recreation is of high value as not only is the Westwood popular with visitors but there are also a number of routes that form part of the Yorkshire Wolds Way National Trail. Pylons in the south form prominent features on the skyline in an overall flat and horizontal landscape where long distance views are afforded.

#### 23.5.1.3.5 Subarea 5: Onshore Substation Zones

98. The onshore Substation Zones are located within LCA 16F Beverley Parks Farmland (Sloping Farmland LCT) (see **Figure 23-5**). Other LCAs within this subarea, which corresponds to the 5km radius around these Substation Zones, are:
  - 13B Bishop Burton Estate Farmland and 13C South Wolds Rolling Farmland (Open High Rolling Farmland LCT);
  - 16C Beverley Westwood and 16E Lund Sloping Farmland (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 23-5**).

99. The onshore Substation Zones are framed by transport corridors: the A1079 runs to the north of Substation Zone 4, and the south of Substation Zone 1; and the A164 runs to the east of Substation Zone 4 and west of Substation Zone 1. In addition, the Hull to Scarborough railway line runs to the east of Substation Zone 1. The area comprises a number of medium to large scale agricultural fields that have been intensively managed and are 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 around the onshore Substation Zones is crossed frequently by PRowS that typically follow field boundaries, including the Beverley 20 long distance walking route which forms part of the wider Yorkshire Wolds Way National Trail. There are several blocks of woodland around Substation Zone 4.
100. To the south-east is the existing Creyke Beck substation and the Dogger Bank A & B offshore wind farm converter stations (under construction). 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 main roads, 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.
101. The wider subarea is well settled, taking in parts of Hull and Beverley, and the settlements of Cottingham, Skidby, Little Weighton, Bishop Burton and Walkington. The presence of transport and infrastructure is reduced in the west of the landscape and visual study area, 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.

## 23.5.2 Visual Baseline

### 23.5.2.1 Key Visual Receptors

102. This section sets out the people (visual receptors) that have the potential to be affected by the landfall, onshore export cable and onshore substations. These are set out by the subareas defined in section 23.5.2.1. The locations of recreational routes noted are shown in **Figure 23-7**.
103. Given the nature of the landscape it is assumed that all receptors within the landscape and visual study area will have potential visibility of the onshore export cable and landfall area construction works.

#### 23.5.2.1.1 Subarea 1: Landfall Area

104. Residential and community receptors include:
- The villages of Ulrome to the north, Atwick to the south and Skipsea to the west; and
  - Farms and houses along the B1242 road.
105. Recreational receptors include:
- Users of local PRowWs close to the possible landfall locations;
  - Visitors to Ulrome Sands, Skipsea Sands, Skirlington Sands, and Atwick Sands; and
  - Visitors to Seaside Caravan Park to the north, Skipsea Sands Holiday Park, Strawberry Fields Holiday Park, and Far Grange Holiday Park and Cliff Top Caravan Park to the south.
106. Transport receptors include those using:
- The B1242 and B1249 to the west; and
  - The wider local road network beyond these routes.

#### 23.5.2.1.2 Subarea 2: Skipsea to West Road

107. Residential and community receptors include:
- The villages of Dunnington in the north, and Sigglesthorne to the south; and
  - Farms and houses along the A165 Beverley Road, Billings Lane, Catfoss Road, Harsell Lane and Catwick Heads.

108. Recreational receptors include:
- Those using local PRowS close to the onshore export cable corridor and connecting nearby settlements.
109. Transport receptors include those using:
- The A165 to the west;
  - The A1035 to the south; and
  - The wider local road network beyond these routes.

### *23.5.2.1.3 Subarea 3: West Road to the River Hull*

110. Residential and community receptors include:
- The villages of Sigglesthorne and Catwick to the east;
  - The northern extents of the village of Long Rishton, to the south;
  - The villages of Tickton and Routh to the west;
  - Farms and houses along West Road, Whitecross Road, and the A1035; and
  - Other scattered residential properties.
111. Recreational receptors include:
- Those using local PRowS close to the onshore export cable corridor and connecting nearby settlements; and
  - Recreational users of the River Hull.
112. Transport receptors include those using:
- The A1035 running through the subarea and to the north near Sigglesthorne;
  - The A165 / Whitecross Road cutting across the subarea near Long Rishton; and
  - The wider local road network beyond these routes.

## 23.5.2.1.4 Subarea 4: River Hull to the Onshore Substations

113. Residential and community receptors include:
- The villages of Hull Bridge in the north-east and Bentley in the south;
  - The northern and south-western edges of Beverley;
  - The eastern edges of Walkington in the west; and
  - Other scattered residential properties and farmsteads along the A165, A1035, A1174 and B1230.
114. Recreational receptors include:
- Those using local PRoWs close to the onshore export cable corridor;
  - Users of the Hudson Way and Beverley 20 long distance walking routes;
  - Users of the NCN 1 and NCN 164;
  - Visitors to Beverley Westwood park;
  - Visitors to Beverley Racecourse; and
  - Visitors to Beverley and East Riding Golf Club;
115. Transport receptors include those using:
- The A1079;
  - The A164;
  - The A1035;
  - The A1174; and
  - The B1230.

## 23.5.2.1.5 Subarea 5: Onshore Substation

116. Residential and community receptors include:
- Farms close to the onshore Substation Zones, including Bramble Hill Farm, Model Farm, White Hall, Old Hall, Jillywood Farm, Platwoods Farm, Black House Farm, Holycroft Farm, and Butt Farm;
  - The southern and south-western edge of Beverley;
  - The north edge of the settlements of Cottingham and Hull (notably the Orchard Park estate);
  - Farms and houses along Dunswell Lane, and Dunswell village to the south-east;
  - The village of Woodmansey on the A1174;
  - The village of Bishop Burton in the north-west;
  - The village of Walkington to the west; and
  - The villages of Bentley, Skidby and Little Weighton to the south-west.
117. Recreational receptors include:
- Those using PROWs close to the onshore Substation Zones, including the Beverley 20 long distance walking route, the High Huntley Circuit, and the National Cycle Network (NCN) Route 1;
  - Visitors to the hotel, golf courses and leisure club north of Cottingham;
  - Visitors to Beverley Parks Local Nature Reserve;
  - Visitors to Skidby Windmill to the south-west; and
  - Visitors to Beverley Minster to the north.
118. Transport receptors include those using:
- The A1079 to the south of Substation Zone 1 and north of Substation Zone 4;
  - The A164 to the east of Substation Zone 4 and west and north of Substation Zone 1;
  - The A1035 to the north and B1230 to the north-west;
  - The A1174 to the east;
  - The Hull to Scarborough railway line to the east; and
  - The wider local road network beyond these routes.

## 23.5.2.2 Representative Viewpoints

119. Representative viewpoints have been identified to inform the detailed assessment of the onshore substations only. This section sets out the viewpoints selected to represent views from publicly accessible areas, for the receptors within subarea 5 as identified above. A total of ten viewpoints were selected and agreed with stakeholders as set out in **Table 23-1**. Details of the viewpoints are provided in **Table 23-20** and their locations are shown in **Figures 23-2** to **23-4**.
120. Three viewpoints have been selected for each of the two Substation Zones. A further four viewpoints represent longer views that may take in both substations. Therefore, in total 10 viewpoints have been identified

Table 23-20 Representative Viewpoints and Baseline Description of Views

| Viewpoint Location                           | Grid Reference    | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VP1:<br>Shepherd Lane<br>(Substation Zone 1) | 503533,<br>437484 | <p>The view from this point on Shepherd Lane consists of large, broadly flat fields with mature, dense hedgerows and occasional trees. Shelter belts partially screen distant views to the south and wooded blocks are visible in the distance. Existing infrastructure is notable in southerly views, with several overhead power lines crossing the distant horizon in the vicinity of Dogger Bank A &amp; B offshore wind farm converter station. These overhead lines, pylons and the converter station all appear to break the skyline. A wind turbine is also visible on the horizon in the south.</p> <p>To the north of the viewpoint, the A164 south-Beverley bypass is visible. A bridleway runs adjacent to the south of this road. The settlement edge comprising the new Deira Park development is visible beyond the A164, to the north-west of the viewpoint. Beverley Minster is also a prominent feature in distant northerly views, beyond the by-pass and housing development.</p> <p>The presence of the A164 to the north of the viewpoint introduces continuous noise and movement. Motorists on the A164 itself are likely to experience similar views to this viewpoint. However, views of the Projects would be short-lived and viewed at an oblique angle to the direction cars are travelling along this road.</p> |

| Viewpoint Location                                                             | Grid Reference    | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VP2:<br>Beverley 20<br>near<br>Jillywood<br>Farm<br><br>(Substation<br>Zone 1) | 502988,<br>436362 | <p>This viewpoint is located on the Beverley 20 long distance walking route, near Jillywood Farm. Views north-east consist of slightly undulating fields with dense hedgerow trees and shelter belt in the middle distance. These largely screen longer ranging views and visibility of the A1079. In the foreground of the view is a large pylon and overhead line which runs broadly adjacent to the A1079 before converging with other overhead lines at Creyke Beck substation in the south-east.</p> <p>In views north-east, other more distant overhead lines are visible against the skyline, and Beverley Minster forms a prominent feature on the horizon. Dense vegetation in the middle-distance screens longer ranging views to the north and south-east, however the overhead lines remain prominent in views. A wind turbine is also visible on the horizon in the south-east.</p> <p>Views to the south-west are screened by an area of woodland adjacent to the viewpoint.</p>                                                                                                                                                 |
| VP3:<br>Beverley<br>Parks<br><br>(Substation<br>Zone 1)                        | 504307,<br>436867 | <p>This viewpoint is located along Park Lane, just before the entrance to Model Farm and Poplar Farm. Views west, towards Substation Zone 1 focus on small scale fields adjacent to the access track leading to the farms in the middle distance. The field is bounded by post and wire fencing along the access track, and dense hedgerows and hedgerow trees on the far side. This vegetation screens longer ranging views, however localised gaps allow for some greater visibility, with the settlement edge of Beverley visible in hedgerow gaps looking north-west.</p> <p>An overhead line is visible against the skyline in westerly views towards the farm. Another overhead line is visible, in closer proximity, in views to the north-east. Several others are visible in the distance near the settlement of Woodmansey which is visible in the distance, albeit partly screened by vegetation and intervening infrastructure. Several closer properties located along Long Lane are visible to the north-east of this viewpoint. The Scarborough to Hull railway line is just visible in the foreground of these properties.</p> |

| Viewpoint Location                                   | Grid Reference | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |                | Views south extend across a medium-large scale field bounded by shelterbelts and hedgerows. This vegetation largely screens longer-ranging views; however some houses/ farms are visible in intermittent gaps in the hedgerow.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VP4: Butt Farm<br>(Substation Zone 4)                | 502102, 437056 | <p>This viewpoint is located along the access track to Butt Farm, west of the A1079. South-westerly views towards Substation Zone 4 overlook undulating farmland which is bounded by hedgerows and hedgerow trees. Views towards the site are framed by Butt Farm. The boundary vegetation and undulating landform screen longer ranging views across the landscape, however taller structures such as pylons and overhead lines can be seen against the skyline in the distance to the south and south-west.</p> <p>Views to the south-east, east and west are largely confined due to dense vegetation. Immediately adjacent to the viewpoint is a pylon with an overhead line which crosses over the access track towards the north-west. Further pylons are visible to the north-west, cutting across the undulating farmland which comprise fields defined by hedgerows and hedgerow trees. Although not visible, there is evidence of the A1079 to the north due to the presence of traffic cameras.</p> |
| VP5: Coppleflat Lane, Bentley<br>(Substation Zone 4) | 502310, 436070 | <p>This viewpoint is located along Coppleflat Lane, Bentley, on the south-eastern boundary of Substation Zone 4. The viewpoint is situated just off the road, at the entrance to a field.</p> <p>Views towards Substation Zone 4 in the north-west extend across farmland which comprises a large scale undulating rectilinear field which is well defined by hedgerows and occasional hedgerow trees in the distance. Larger blocks of woodland in the distance prevent long-ranging views in some directions to the north-west and north of the viewpoint. Houses within the Walkington Broadgate development are visible in the distance, partially filtered by intervening vegetation. Several steel lattice pylons form prominent features in views across the horizon to the north-west and north, where they appear to sit against the horizon.</p>                                                                                                                                                     |

| Viewpoint Location                                                 | Grid Reference    | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                    |                   | Views to the north-east, south-east and south-west are largely limited due to intervening roadside vegetation along Coppleflat Lane to the west/ south-west and the A164 to the south-east. The presence of the A164 introduces continuous noise and movement, however most road users travelling along this road would only experience passing views at an oblique angle to the direction of travel as they pass the Coppleflat Lane junction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| VP6:<br>Beverley 20<br>near<br>Broadgate<br>(Substation<br>Zone 4) | 501311,<br>437243 | <p>This viewpoint is located along the Beverley 20 long distance path, south of Broadgate. This viewpoint offers expansive, long ranging views across undulating farmland towards Substation Zone 4 in the south-east. The fields are large scale, and well defined by continuous hedgerows with occasional hedgerow trees. Shelter belts to the south screen longer ranging views, as does the undulating nature of the landform.</p> <p>Overhead lines are a notable feature in views, with large pylons visible heading towards Butt Farm in the south-east. A smaller, wood pole, overhead line runs broadly parallel to the larger one, passing Butt Farm to the south. This wood pole overhead line is visible in the foreground of views towards the Substation Zone, forming prominent features on the skyline. In the far distance another overhead line is visible across the horizon, running to the Creyke Beck substation.</p> <p>Houses on the southern boundary of the Walkington Broadgate development can be seen in views to the north-east. Westerly views are largely confined by a hedgerow running immediately adjacent to the footpath.</p> |
| VP7:<br>Walkington<br>(Both<br>Substation<br>Zones)                | 500375,<br>436926 | <p>This viewpoint is located on a footpath at the south-eastern corner of the settlement of Walkington. This viewpoint offers views across slightly undulating agricultural land towards the Substation Zones in the south-east. Due to elevated nature of the viewpoint, longer ranging views are experienced across the landscape. However, the presence of several trees forming a small shelterbelt partially filter views in this direction. More distant hedgerow trees and blocks of woodland provide further screening in views to the further south. Where more open views are experienced, an overhead line can be seen</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Viewpoint Location                                                 | Grid Reference | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                    |                | <p>cutting across the landscape, with the pylon forming a prominent feature along the horizon. Other overhead lines are also visible in the distance.</p> <p>Views north are experienced over a medium distance, with the undulating and vegetated landscape providing screening of longer views. Occasional houses located along the B1230 are visible in views north, partially screened by intervening vegetation. Several steel pylons and their associated overhead lines are visible in northerly view, set against the skyline.</p> <p>Views to the south and west are limited due to screening by nearby vegetation, including the mature hedgerow running south from the viewpoint, and trees around the settlement of Walkington. These trees, and the village itself are located behind galvanised steel palisade fencing adjacent to the viewpoint.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| VP8:<br>Beverley 20 footpath, Risby<br><br>(Both Substation Zones) | 501317, 434726 | <p>This viewpoint is located on the Beverley 20 long distance footpath near Risby. It offers open views of the surrounding agricultural landscape in all directions. Views north-east, towards the Substation Zones, extend across a medium scale, relatively flat field which is bounded by mature hedgerows and several hedgerow trees, which largely screen longer distance views. Due to the elevated nature of the viewpoint, the distant landscape is visible above the intervening hedgerow and between the hedgerow trees. Beverley Minster is present in distant views, as are wind turbine and several pylons cutting across the horizon. These features are partially screened by intervening vegetation, and partially backclothed by distant landform.</p> <p>Views east are largely limited by a woodland block in the middle distance, however several overhead lines are visible to the south-east, forming prominent features on the skyline. The overhead lines are visible running to the south-west of the viewpoint, however, vegetation screens lower level views across the landscape.</p> <p>Open and distant views are afforded to the west, with a house at Risby visible in the middle distance in views north-west across a medium scale field. Mature vegetation (the</p> |

| Viewpoint Location                                                   | Grid Reference    | Description of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                      |                   | woodland near fishing ponds) is present along the northern boundary of the field, which prevents longer ranging views.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| VP9:<br>Woodmansey<br><br>(Both Substation Zones)                    | 505736,<br>437665 | <p>This viewpoint is located at a site entrance along Hull Road in the village of Woodmansey. Views west towards the Substation Zones extend across an area of land which is undergoing groundworks and is evidently modified. The site is largely devoid of vegetation, except for areas of scrub. The land has been disturbed by vehicle activity, with the main surface comprising mud and gravel chippings. Mounds of earth are present in the foreground, and ponds of water have formed near the site entrance. Beyond this site area, relatively flat agricultural land is present, largely defined by hedgerows and shelterbelts in the distance. Some built development is visible between trees and hedges, and a wooden pole overhead line cuts across the horizon, although is partially backclothed in areas by distance vegetation.</p> <p>Views to the north, south and west are largely limited by built development and roadside vegetation.</p> |
| VP10:<br>Beverley<br>Minster<br>Tower<br><br>(Both Substation Zones) | 503714,<br>439232 | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |

### 23.5.3 Future Trends

121. In the event that the Projects are not developed, a review of likely future conditions for landscape character and visual amenity has been carried out and is described within this section.
122. In the absence of the Projects, the landscape of the 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. Relatively rapid 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.
123. Built development is likely to continue. Pressure for residential and commercial development is likely to continue in the areas closer to Beverley and Hull. Further infrastructure is likely to be built in the area around the existing National Grid Electricity Transmission substation at Creyke Beck, including the consented Creyke Beck Solar Farm to the north-west around Birkhill Wood and Jillywoods. Additional electrical infrastructure is required to accommodate planned and future generation projects, including the proposed Hornsea Project Four offshore wind farm. Away from the 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.

## **23.6 Assessment of Significance**

### **23.6.1 Potential Effects on Landscape Character During Construction**

#### **23.6.1.1 Landscape Effects of Landfall and Onshore Export Cable Corridor – Subarea 1 (Landfall)**

##### *23.6.1.1.1 Magnitude of Impact – DBS East or DBS West in Isolation*

124. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

##### *23.6.1.1.2 Magnitude of Impact – All scenarios*

125. Construction of the landfall will lead to disturbance and activity across the area within the Onshore Development Area, including excavation, compounds, fencing, storage bunds and temporary access. There will be an increase in activity, noise and vehicle movements, leading to a reduction in tranquillity. There will be a large change in character from open farmland to a construction site where the transition joint bays and associated compounds are sited and along the onward 100m working width of the onshore export cable corridor. Seaward, works and vessels may be visible within the intertidal zone and inshore area. Works may extend into hours of darkness in the winter months, when construction lighting may be visible and uncharacteristic.
126. Generally, vegetation clearance will be limited as the landfall area and indicative onshore export cable corridor route has been designed to avoid trees and woodland. However, sections of hedgerows and occasional field trees may need to be removed to allow installation of cables.
127. The changes will affect the local landscape in the landfall area and along the onshore export cable corridor. Given the flat landscape and the low height of the works, the geographical extent will be quite narrow, up to a maximum of 1km from the Onshore Development Area, but often much less where containment is provided by hedges, trees and built development. The overall duration of the construction works at landfall will be 42 months, and 57 months for onshore export cable corridor works. Fencing could be in place throughout this term. Periods of active construction works are likely to be much less than this. Therefore, the duration is considered to be short term. On completion of construction, the landfall area will be fully reinstated to its previous condition and therefore effects of construction are reversible.
128. The impact of the construction works in subarea 1 is predicted to be of large scale, of local geographical extent, and short term and reversible. The magnitude is therefore considered to be low.

### *23.6.1.1.3 Sensitivity of Receptor*

- 129. The landscape of subarea 1 is described in section 23.5.1.3.1.
- 130. The landscape of subarea 1 contains few features that are vulnerable to the proposed temporary works, although hedges and trees are more susceptible. Boulder clay cliffs are a distinctive feature of this coast and are more susceptible to change than the farmland inland, though they will not be directly affected. The character of the landscape, being flat and with some screening, means that changes will be localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
- 131. The Holderness Coast is a recreational resource, with access to the beach and holiday parks nearby, but is not designated for its landscape value. The receptor is deemed to be of medium value.
- 132. The sensitivity of the receptor is therefore considered to be medium.

### *23.6.1.1.4 Significance of Effect – All Scenarios*

- 133. Overall, it is assessed that the sensitivity of the receptor in subarea 1 is medium and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

### *23.6.1.1.5 Mitigation and residual significance of effect – All Scenarios*

- 134. On completion of construction, the landfall area and onshore export cable corridor will be fully reinstated to its previous condition in accordance with the Code of Construction Practice (CoCP). No above-ground infrastructure will remain, other than manholes for link boxes. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at the ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
- 135. Overall, the reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.1.2 Landscape Effects of Onshore Export Cable Corridor – Subarea 2 (Skipsea to West Road)

### 23.6.1.2.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

136. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.1.2.2 *Magnitude of Impact – All Scenarios*

137. Construction of the onshore export cable between Skipsea and West Road will lead to disturbance and activity across the area within the Onshore Development Area, including excavation, compounds, lighting, fencing, storage bunds, bailey bridges and access tracks. There will be an increase in activity, noise and vehicle movements, leading to a reduction in tranquillity. Works may extend into hours of darkness in the winter months, when construction lighting may be visible. Overall, there will be a large change in character from open farmland to a construction site along the narrow 100m working width and associated compounds. Trenchless techniques will be used for crossing a number of features, which would increase the width of the construction swathe to 250m locally.
138. Generally, vegetation clearance will be limited as the indicative onshore export cable corridor route has been designed to avoid trees and woodland. However, sections of hedgerows and occasional field trees may need to be removed to allow installation of cables. A small number of trees may be lost along the southern boundary of the subarea, between Catfoss Drain and West Road (A1035).
139. The changes will affect the local landscape along the onshore export cable corridor. Given the flat landscape and the low height of the works, the geographical extent will be quite narrow, up to a maximum of 1km from the Onshore Development Area, but often much less where containment is provided by hedges, trees and built development. The overall duration of the onshore export cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The total duration of active construction works in any one location is likely to be much less than this. Therefore, the duration is considered to be short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore effects of construction are reversible.
140. The impact of the construction works in subarea 2 is predicted to be of large scale, of local geographical extent, and short term and reversible. The magnitude is therefore considered to be low.

### *23.6.1.2.3 Sensitivity of Receptor*

- 141. The landscape of subarea 2 is described in section 23.5.1.3.2.
- 142. The landscape of subarea 2 contains few features that are vulnerable to the proposed temporary works, although hedges, trees and watercourses are more susceptible. The character of the landscape, being flat and with some screening, means that changes will be localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
- 143. The landscape of subarea 2 is not subject to any designation, and does not exhibit characteristics that are likely to be widely valued. The receptor is deemed to be of low value.
- 144. The sensitivity of the receptor is therefore considered to be medium.

### *23.6.1.2.4 Significance of Effect – All Scenarios*

- 145. Overall, it is assessed that the sensitivity of the receptor in subarea 2 is medium and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

### *23.6.1.2.5 Mitigation and Residual Significance of Effect – All Scenarios*

- 146. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. No above-ground infrastructure will remain, other than manholes for link boxes approximately every 750m along the cable route. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
- 147. Overall, the reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.1.3 Landscape Effects of Onshore Export Cable Corridor – Subarea 3 (West Road to the River Hull)

### 23.6.1.3.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

148. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.1.3.2 *Magnitude of Impact – All Scenarios*

149. Construction of the onshore export cable between West Road and the River Hull will lead to disturbance and activity across the area within the Development Boundary, including excavation, compounds, lighting, fencing, storage bunds, bailey bridges and access tracks. There will be an increase in activity, noise and vehicle movements, leading to a reduction in tranquillity. Works may extend into hours of darkness in the winter months, when construction lighting may be visible. Overall, there will be a large change in character from open farmland to a construction site along the narrow 100m working width and associated compounds. Trenchless techniques will be used for crossing a number of features, which would increase the width of the construction swathe to 250m locally.
150. Generally, vegetation clearance will be limited as the indicative onshore cable export corridor route has been designed to avoid trees and woodland as far as possible. However, sections of hedgerows and occasional field trees may need to be removed to allow installation of cables. A small number of trees may be lost along the northern boundary of the subarea, near Sigglesthorne.
151. The changes will affect the local landscape along the onshore export cable corridor. Given the flat landscape and the low height of the works, the geographical extent will be quite narrow, up to a maximum of 1km from the Onshore Development Area, but often much less where containment is provided by hedges, trees and built development. The overall duration of the onshore export cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The total duration of active construction works in any one location is likely to be much less than this. Therefore, the duration is considered to be short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore effects of construction are reversible.
152. The impact of the construction works in subarea 3 is predicted to be of large scale, of local geographical extent, and short term and reversible. The magnitude is therefore considered to be low.

### *23.6.1.3.3 Sensitivity of Receptor*

- 153. The landscape of subarea 3 is described in section 23.5.1.3.3.
- 154. The landscape of subarea 3 contains few features that are vulnerable to the proposed temporary works, although hedges, trees and watercourses are more susceptible. The character of the landscape, being flat and with some screening, means that changes will be localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
- 155. The landscape of subarea 3 is not subject to any designation, and does not exhibit characteristics that are likely to be widely valued. The receptor is deemed to be of low value.
- 156. The sensitivity of the receptor is therefore considered to be medium.

### *23.6.1.3.4 Significance of Effect – All Scenarios*

- 157. Overall, it is assessed that the sensitivity of the receptor in subarea 3 is medium and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

### *23.6.1.3.5 Mitigation and Residual Significance of Effect – All Scenarios*

- 158. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. No above-ground infrastructure will remain, other than manholes for link boxes every 0.75-1.5km along the cable route. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
- 159. Overall, the reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.1.4 Landscape Effects of Onshore Export Cable Corridor - Subarea 4 (River Hull to Onshore Substation Zones)

### 23.6.1.4.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

160. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.1.4.2 *Magnitude of Impact – All Scenarios*

161. Construction of the onshore export cable between the River Hull and the Substation Zones will lead to disturbance and activity across the area within the Onshore Development Area, including excavation, compounds, lighting, fencing, storage bunds, bailey bridges and access tracks. There will be an increase in activity, noise and vehicle movements, leading to a reduction in tranquillity. Works may extend into hours of darkness in the winter months, when construction lighting may be visible. Overall, there will be a large change in character from open farmland to a construction site along the narrow 100m working width and associated compounds. Trenchless techniques will be used for crossing a number of features, which would increase the width of the construction swathe to 250m locally.
162. Generally, vegetation clearance will be limited as the indicative onshore export cable corridor route has been designed to avoid trees and woodland. However, sections of hedgerows and occasional field trees may need to be removed to allow installation of cables.
163. The changes will affect the local landscape along the onshore export cable corridor. Given the slightly undulating nature of the landscape and the low height of the works, the geographical extent will be quite narrow, up to a maximum of 1km from the Onshore Development Area, but often much less where containment is provided by hedges, trees and built development. The overall duration of the onshore export cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The total duration of active construction works in any one location is likely to be much less than this. Therefore, the duration is considered to be short term. On completion of construction, the onshore cable export corridor will be fully reinstated to its previous condition and therefore effects of construction are reversible.
164. The impact of the construction works in subarea 4 is predicted to be of large scale and local geographical extent and will be short term and reversible. The magnitude is therefore considered to be low.

### *23.6.1.4.3 Sensitivity of Receptor*

165. The landscape of subarea 4 is described in section 23.5.1.3.4.
166. The landscape of subarea 4 contains few features that are vulnerable to the proposed temporary works, although hedges, trees and watercourses are more susceptible. The character of the landscape, being slightly undulating and with some screening, means that changes will be localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
167. The landscape of subarea 4 is partially located within the locally designated Yorkshire Wolds ILA, and a number of long-distance walking routes including the Yorkshire Wolds Way cross through it. The receptor is deemed to be of medium value.
168. The sensitivity of the receptor is therefore considered to be medium.

### *23.6.1.4.4 Significance of Effect – All Scenarios*

169. Overall, it is assessed that the sensitivity of the receptor in subarea 4 is medium and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

### *23.6.1.4.5 Mitigation and Residual Significance of Effect – All Scenarios*

170. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP . Hedgerows or trees will not be replanted directly over the buried cables. No above-ground infrastructure will remain, other than manholes for link boxes every 0.75 - 1.5km along the cable route. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
171. The reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.1.5 Landscape Effects of Onshore Substations During Construction – Subarea 5

### 23.6.1.5.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

172. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.1.5.2 *Magnitude of Impact – All Scenarios*

173. Development and associated construction activities in both Substation Zones represents the worst case scenario, affecting larger extents of landscape. There is potential that one Substation Zone will be used by both DBS East and DBS West. This could lead to effects of greater intensity or duration, but across a smaller area.
174. Construction of the onshore substations will lead to disturbance and activity across the areas within the two Substation Zones, including temporary access tracks across fields, two temporary construction compounds, and two construction sites, each with associated fencing, storage bunds, equipment, lighting, signage and other temporary features. The total construction area will amount to approximately 274,416m<sup>2</sup>, which will be split across the two Substation Zones under the assessed worst case. Works may extend into hours of darkness in the winter months, when construction lighting may be visible.
175. Generally, vegetation clearance will be limited as the Substation Zones have been selected to avoid trees and woodland as much as is practicable. However, in both Substation Zones some local features will be affected. In Substation Zone 1 sections of hedgerow and a small group of trees will be removed. In Substation Zone 4, a watercourse or field drain with associated hedge will be removed. Other sections of hedgerows and occasional field trees may need to be removed to allow for construction works and access. Overall, there will be a large change from rural or semi-rural farmland to extensive construction sites.
176. The changes will affect the local landscape within the Substation Zones. Given the slightly undulating nature of the landscape and the height of the works, the geographical extent will be most evident within 2km of the Substation Zones, but often much less where containment is provided by hedges, trees and built development.

177. Construction in Substation Zone 4 will be subject to local screening by the nearby woodland blocks of Bentley Moor Wood, Johnson's Pit and Eleven Acre Plantation. Though Substation Zone 1 is more open in nature, Birkhill Wood and woodland blocks in the vicinity of Model Farm will provide some degree of local screening, as will hedgerows along field boundaries and PRoWs. Views of construction from the A164 and A1079 which pass between the two Substation Zones will generally be glimpsed due to consistent roadside vegetation.
178. Construction works for the onshore substations are expected to last up to 72 months due to the staggering of construction in Substation Zones 1 and 4, though different elements will be carried out at different times within this, and the intensity of works will vary over time. As such, effects will not be evenly spread over the above area for the whole period but will change with construction phasing. Construction effects are partly reversible, in that areas affected by temporary construction compounds and access tracks will be restored to their pre-existing condition as agricultural land. However, the main substation works are non-reversible as the substations will become permanent features.
179. The impact of the construction works in subarea 5 is predicted to be of large scale and of a medium geographical extent. It will be medium term and partly reversible. The magnitude is therefore considered to be medium.

#### *23.6.1.5.3 Sensitivity of Receptor*

180. The landscape subarea 5 is described in section 23.5.2.1.5.
181. The landscape of subarea 5 contains some features that are vulnerable to the proposed temporary works, such as hedges, trees and small watercourses/field drains. The character of the landscape, being slightly undulating and with some screening, means that changes will be relatively localised.
182. The landscape in the east, including Substation Zone 1, is flatter and more open. In the west, including Substation Zone 4, the landscape is more undulating and the Substation Zone is more elevated, though woodlands provide some landscape structure. Due to the more undulating terrain of Substation Zone 4 and the presence of adjacent woodland, it possesses a greater degree of tranquillity and enclosure than Substation Zone 1, which due to its close proximity to the A1079 and the urban edge of Beverley, is more influenced by surrounding development and has a busier, more complex feel.
183. The receptor across both Substation Zones is deemed to be of medium susceptibility to the proposed changes.

184. Substation Zone 4 is located within the Yorkshire Wolds ILA, which is designated for its landscape value and high scenic quality. Whilst the landscape in the eastern half of subarea 5 (including Substation Zone 1) is located outside of the Yorkshire Wolds ILA and is of limited scenic quality, it does possess recreational value represented by a range of PRowS, the Beverley 20 long distance walking route, and the NCN Route 1. Overall, the receptor is deemed to be of medium value.
185. The sensitivity of the receptor across both Substation Zones is therefore considered to be **medium**.

#### *23.6.1.5.4 Significance of Effect – All Scenarios*

186. Overall, it is assessed that the sensitivity of the receptor in subarea 5 is medium, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms. Beyond the immediate geographical extent of the Substation Zones (2km), the impact on the landscape will not be significant.

#### *23.6.1.5.5 Mitigation and Residual Significance of Effect – All Scenarios*

187. On completion of the substations, any construction disturbance will be restored to pre-existing conditions in accordance with the CoCP and landscape screening of the substation structures will be implemented. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent. On completion of all construction works, construction effects on the landscape will be superseded by the operational effects, which are assessed in section 23.6.4.

## 23.6.2 Potential Effects on Visual Amenity During Construction

### 23.6.2.1 Visual Effects of Landfall and Onshore Export Cable Corridor – Subarea 1 (Landfall)

#### 23.6.2.1.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

188. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

#### 23.6.2.1.2 *Magnitude of Impact – All Scenarios*

189. Construction of the landfall and onshore export cable corridor will lead to disturbance and activity as seen by visual receptors. Features including fencing, compounds, equipment, soil storage, bailey bridges and vehicle movements, which are not characteristic of the area, will be prominent within the open landscape from close range views experienced by users of the PRoWs to the north and west of the landfall area, and from the beach at Skipsea Sands.
190. PRoWs are likely to be temporarily stopped up or diverted around the landfall compound areas, and these receptors may therefore have close range views of the works. Closer range views may also be available from properties at the eastern edge of Skipsea, scattered properties such as Hill Farm and The Grange, as well as the various holiday parks adjacent to the landfall area. The degree of visibility will be variable due to boundary trees and vegetation. From more distant receptors, such as people at Ulrome and Atwick, the scale of the effect will be reduced. The geographical extent of the effect is therefore relatively localised due to the combination of flat or gently undulating landform and boundary trees/vegetation and the general absence of vantage points. In views from the beach, the low boulder clay cliffs will likely screen views of the landfall compounds and construction, though works at the inshore and intertidal area may be visible. There will be an increased presence of construction traffic using the local road network.
191. The overall duration of the landfall works will be 42 months, and onshore export cable corridor works will be up to 57 months. Fencing could be in place throughout this term. The work at any one location is likely to be less than this, therefore the duration is of short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore construction effects are reversible.
192. The impact of the landfall and onshore export cable corridor works on views in subarea 1 is predicted to be of large scale and local geographical extent, and will be short term and reversible. The magnitude is therefore considered to be medium.

### *23.6.2.1.3 Sensitivity of Receptor*

193. Visual receptors in subarea 1 are described in section 23.5.2.1.1.
194. Receptors in this area who are considered to be of high susceptibility include local residents in Ulrome, Skipsea, Atwick and nearby farms; recreational users of the beach and users of the PRowS north and west of the landfall. Other high susceptibility visual receptors include visitors to the caravan and holiday parks. Lower susceptibility visual receptors include road users on the B1242 and B1249 and agricultural workers. As a visitor destination with a number of holiday parks and tourist facilities, coastal views from the area are likely to be valued.
195. Recreational and residential visual receptors in subarea 1 are deemed to be of high susceptibility and their views are of medium value. The sensitivity of these receptors is therefore considered to be medium.

### *23.6.2.1.4 Significance of Effect – All Scenarios*

196. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms.

### *23.6.2.1.5 Mitigation and Residual Significance of Effect – All Scenarios*

197. All construction disturbance relating to landfall will be restored to pre-existing conditions. No above-ground infrastructure will remain with the exception of manholes for six link boxes.
198. During construction of the onshore export cable corridor, hedgerows and trees will be avoided where possible. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
199. The reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from medium to low. Therefore, the residual effect is **minor** adverse, which is deemed to be not significant.

## 23.6.2.2 Visual effects of Onshore Export Cable Corridor – Subarea 2 (Skipsea to West Road)

### 23.6.2.2.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

200. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.2.2.2 *Magnitude of Impact – All Scenarios*

201. Construction of the onshore export cable corridor will lead to disturbance and activity as seen by visual receptors. Features including fencing, compounds, equipment, lighting, soil storage, [bailey bridges](#) and vehicle movements will be prominent within the open landscape from close range views such as the PRowS and properties within 1 km of the Onshore Development Area. The ProW between Manor Farm and Seaton will be temporarily diverted around the onshore export cable corridor. There will also be an increased presence of construction traffic using the local road network.
202. From more distant receptors, such as residents in Dunnington and Catfoss, the scale of the effect will be reduced. The geographical extent of the effect is therefore relatively localised and will be contained by intervening vegetation and built development. The overall duration of the onshore export cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The work at any one location is likely to be less than this, therefore the duration is of short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore construction effects are reversible.
203. The impact of the onshore export cable corridor works on views in subarea 2 is predicted to be of medium scale and local geographical extent, and will be short term and reversible. The magnitude is therefore considered to be low.

### 23.6.2.2.3 *Sensitivity of Receptor*

204. Visual receptors in subarea 2 are described in section 23.5.2.1.2.
205. Receptors in this area that are considered to be of high susceptibility include residents in Dunnington, Catfoss and a number of farmsteads, as well as users of the PRowS around Billings Hill and Catfoss. Other visual receptors include road users and agricultural workers, whose susceptibility is judged to be lower. There is little evidence that value is placed on views, although views across open farmland from the remote villages are likely to be valued by local residents.

206. Recreational and residential visual receptors in subarea 2 are deemed to be of high susceptibility and their views are of medium value. The sensitivity of these receptors is therefore considered to be medium.

#### *23.6.2.2.4 Significance of Effect – All Scenarios*

207. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

#### *23.6.2.2.5 Mitigation and Residual Significance of Effect – All Scenarios*

208. During construction hedgerows and trees will be avoided where possible. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. No above-ground infrastructure will remain, other than manholes for link boxes every 0.75 – 1.5km along the cable route. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
209. The reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

#### *23.6.2.3 Visual Effects of Onshore Export Cable Corridor – Subarea 3 (West Road to River Hull)*

##### *23.6.2.3.1 Magnitude of Impact – DBS East or DBS West in Isolation*

210. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

##### *23.6.2.3.2 Magnitude of Impact – All Scenarios*

211. Construction of the onshore export cable corridor will lead to disturbance and activity as seen by visual receptors. Features including fencing, compounds, equipment, lighting, soil storage, bailey bridges and vehicle movements will be prominent within the open landscape from close range views such as the PRowS and properties within 1 km of the Onshore Development Area. There will also be an increased presence of construction traffic using the local road network.

212. Nearby residential receptors, such as those at the small village of Routh, and in scattered housing and farmsteads may have visibility of construction works. From slightly more distant receptors, such as those at Tickton, Long Rishton, Catwick and Sigglesthorne, the scale of the effect will be reduced. The overall duration of the onshore export cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The work at any one location is likely to be less than this, therefore the duration is of short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore construction effects are reversible.
213. The impact of the onshore export cable corridor works on views in subarea 3 is predicted to be of medium scale and local geographical extent, and will be short term and reversible. The magnitude is therefore considered to be low.

#### *23.6.2.3.3 Sensitivity of Receptor*

214. Visual receptors in subarea 3 are described in section 23.5.2.1.3.
215. Receptors in this area that are considered to be of high susceptibility include local residents in Tickton, Routh, Long Rishton, Catwick and Sigglesthorne, as well as scattered residential properties and nearby farms. Recreational users of the River Hull and local PROWs are also of high susceptibility. Other visual receptors include road users and agricultural workers, whose susceptibility is judged to be lower. There is little evidence that value is placed on views, although views across open farmland from the remote villages are likely to be valued by local residents.
216. Residential and recreational visual receptors in subarea 3 are deemed to be of high susceptibility and their views are of medium value. The sensitivity of these receptors is therefore considered to be medium.

#### *23.6.2.3.4 Significance of Effect – All Scenarios*

217. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

## 23.6.2.3.5 *Mitigation and Residual Significance of Effect – All Scenarios*

218. During construction hedgerows and trees will be avoided where possible. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. No above-ground infrastructure will remain, other than manholes for link boxes every 0.75 - 1.5km along the cable route. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
219. The reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.2.4 *Visual effects of Onshore Export Cable Corridor – Subarea 4 (River Hull to the Onshore Substation Zones)*

### 23.6.2.4.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

220. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.2.4.2 *Magnitude of Impact – All Scenarios*

221. Construction of the onshore export cable corridor will lead to disturbance and activity as seen by visual receptors. Features including fencing, compounds, equipment, lighting, soil storage, bailey bridges and vehicle movements will be prominent within the open landscape from close range views such as the PRowS and properties within 1 km of the Onshore Development Area. Several of the PRowS including the Long-Distance Walking Routes will be temporarily stopped up or diverted around the onshore export cable corridor, including Minster Way, Hudson Way/ Wilberforce Way, and Beverley 20. There will also be an increased presence of construction traffic using the local road network.

222. Nearby residential receptors, such as those at Bentley, along the northern and south-western edges of Beverley, at the Walkington Broadgate development, and in scattered housing and farmsteads may have visibility of construction works. From more distant receptors, such as along the eastern boundary of Walkington, the scale of the effect will be reduced. The overall duration of the cable corridor works will be up to 57 months, and fencing could be in place throughout this term. The work at any one location is likely to be less than this, therefore the duration is of short term. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition and therefore construction effects are reversible.
223. The impact of the onshore export cable corridor works on views in subarea 4 is predicted to be of medium scale and local geographical extent, and will be short term and reversible. The magnitude is therefore considered to be low.

#### *23.6.2.4.3 Sensitivity of Receptor*

224. Visual receptors in subarea 4 are described in section 23.5.2.1.4.
225. Receptors in this area that are considered to be of high susceptibility include local residents in Hull Bridge, Beverley, Walkington, Bentley as well as scattered residential properties and nearby farms. Recreational users of the Beverley Westwood, and users of the many long distance walking routes and local PRoWs around Beverley are also of high susceptibility. Other visual receptors include road users and agricultural workers, whose susceptibility is judged to be lower.
226. Views across the gently undulating farmland from PRoWs are likely to be valued for their openness. Tree-lined vistas within Beverley Westwood are also likely to be valued by the local community and recreational users.
227. Residential and recreational visual receptors in subarea 4 are deemed to be of high susceptibility and their views are of medium value. The sensitivity of these receptors is therefore considered to be **medium**.

#### *23.6.2.4.4 Significance of Effect – All Scenarios*

228. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

## 23.6.2.4.5 Mitigation and Residual Significance of Effect – All Scenarios

229. During construction hedgerows and trees will be avoided where possible. On completion of construction, the onshore export cable corridor will be fully reinstated to its previous condition in accordance with the CoCP. No above-ground infrastructure will remain, other than manholes for link boxes every 0.75 - 1.5km along the cable route. Hedgerows or trees will not be replanted directly over the buried cables. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent.
230. The reinstatement of the landscape via a landscape scheme will help reduce the magnitude of impact from low to negligible. Therefore, the residual effect is **negligible** adverse, which is deemed to be not significant.

## 23.6.2.5 Visual Effects of Onshore Substations – Subarea 5 (Substation Zones)

### 23.6.2.5.1 Magnitude of Impact – DBS East or DBS West in Isolation

231. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.2.5.2 Magnitude of Impact – All Scenarios

232. Construction works at the substation sites will result in disturbance and activity as seen by visual receptors. With the exception of woodland to the south-east of Butt Farm, trees and woodland have been excluded from the Onshore Development Area. Therefore, there will be limited loss of visual features in the landscape as the majority of tree cover will be protected from development. However, other construction activity such as the presence of ground clearance, construction compounds, vehicle movements, fencing and lighting at night will be very apparent, particularly at close distances to the Substation Zone boundaries (e.g., within 1km).
233. Given the slightly undulating nature of the landscape and the height of the works, the visual effects will be most evident within 2km of the Substation Zones, but often much less where containment is provided by hedges, trees and built development. For instance, construction in Substation Zone 4 will be subject to local screening by the nearby woodland of Bentley Moor Wood, Johnson's Pit and Eleven Acre Plantation. Though Substation Zone 1 is more open in nature, Birkhill Wood and woodland blocks in the vicinity of Model Farm will also provide some degree of local screening, as will hedgerows along field boundaries and PRowS. Views of construction from the A164 and A1079 which pass between the two Substation Zones will generally be glimpsed due to consistent roadside vegetation.

234. The works for the onshore substations are expected to last up to 72 months due to the staggering of construction of Substation Zones 1 and 4, though different elements will be carried out at different times within this. As such, effects will not be evenly spread over the above area for the whole period but will change with construction phasing. Construction effects are partly reversible, in that areas affected by temporary construction compounds and access tracks will be restored to their pre-existing condition as agricultural land.
235. The impact of the onshore substation works on views in subarea 5 is predicted to be of large scale and of a medium geographical extent. It will be medium term and partly reversible. The magnitude is therefore considered to be medium.

#### *23.6.2.5.3 Sensitivity of Receptor*

236. Visual receptors in subarea 5 are described in section 23.5.2.1.5.
237. Receptors in close proximity to the onshore substation sites include residential receptors at Bentley, Walkington, Beverley, Bramble Hill Farm, Poplar Farm, Model Farm, Jillywood Farm, and Butt Farm, all within approximately 500m of the Substation Zone boundaries. Other nearby residential receptors include those along Long Lane and Victoria Road to the south-east and south-west of Beverley, respectively.
238. Recreational receptors include people walking on PRoWs including long distance walking routes such as Beverley 20, cyclists on NCN Route 1, and users of the golf course to the south. A footpath which runs along the access to Butt Farm passes through Substation Zone 4 and will need to be temporarily diverted during construction works. NCN Route 1 links Cottingham Parks with Beverley, via the Creyke Beck substation and the A1079 overbridge.
239. Other receptors include road users passing on the A1079 and A164, railway passengers, as well as people working in the area; such as on farms, at the Creyke Beck substation, or at the nearby glasshouses. Views of construction works from other roads are likely to be limited by roadside vegetation.
240. Substation Zone 4 is located within the Yorkshire Wolds ILA, which is designated for its landscape value and high scenic quality. Whilst the landscape in the eastern half of subarea 5 (including Substation Zone 1) is located outside of the Yorkshire Wolds ILA and is of limited scenic quality, it does possess recreational value represented by a range of PRoWs, the Beverley 20 long distance walking route, and the NCN Route 1. Overall, views are deemed to be of medium value.

241. Residential and recreational visual receptors in subarea 5 are deemed to be of high susceptibility and their views are of medium value. Transport receptors are considered to be of lower susceptibility to changes in the view. The sensitivity of receptors is therefore considered to be medium.

#### *23.6.2.5.4 Significance of Effect – All Scenarios*

242. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms.

#### *23.6.2.5.5 Mitigation and Residual Significance of Effect – All Scenarios*

243. On completion of the substations, any construction disturbance will be restored to pre-existing conditions in accordance with the CoCP and landscape screening of the substation structures will be implemented. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent. On completion of all construction works, construction effects on the landscape will be superseded by the operational effects, which are assessed in section 23.6.3.1.

## 23.6.3 Potential Effects on Landscape Character During Operation

244. Effects during the operation and maintenance phase are assessed for the permanent above-ground infrastructure at the two Substation Zones. It is not known at this stage which of the two Substation Zones will be used by DBS East and which by DBS West. Development in both zones represents the worst case scenario, however there is potential that Substation Zone 4 will be used by both DBS East and DBS West. This section therefore considers development within each zone in turn. The effects of development within zones are first considered in isolation, then together.

### 23.6.3.1 Landscape Effects of Onshore Substations: Substation Zone 1

#### 23.6.3.1.1 Magnitude of Impact – Development in Substation Zone 1

245. The operational phase will result in the permanent loss of some limited landscape features such as hedgerows and arable farmland within Substation Zone 1, which are noted within the key characteristics of the Sloping Farmland LCT. However, the primary impacts will relate to the ongoing visual presence of the substation within the landscape, which will affect key characteristics such as open views across the landscape, including views of Beverley Minster.
246. The character of the landscape, being flat or slightly undulating with woodland blocks, hedgerows, and frequent buildings means that views of the substation will be relatively localised within subarea 5. As indicated by the ZTV, theoretical visibility of the substation is relatively extensive within 0.5km of Substation Zone 1 across Beverley Parks. Beyond this, woodland blocks and buildings will result in a more irregular pattern of visibility in all directions. As such, effects on landscape character will be relatively localised around Substation Zone 1.
247. Generally, the substation in Substation Zone 1 will be seen in the context of existing electricity infrastructure, development and transport corridors within a settled, modified landscape that is busy and complex in nature. This is reflected in the evaluation of the 'host' 16F Beverley Parks Farmland LCA (Sloping Farmland LCT), which states that *"Landscape character in this area is affected by the urban edge of Hull to the south and Beverley to the north...Based on the number of detractors the landscape character of the area between Beverley and Hull is assessed to be ordinary to poor."*
248. The impact of the onshore substation in Substation Zone 1 on landscape character is predicted to be of large scale locally, and of a small geographical extent. It will be long term and partly reversible. The magnitude is therefore considered to be high within approximately 0.5km of the substation footprint, reducing to medium then low with greater distance.

### *23.6.3.1.2 Sensitivity of Receptor*

- 249. The landscape of subarea 5, within which Substation Zone 1 is located, is described in section 23.5.2.1.5.
- 250. The landscape of subarea 5 contains few features that are vulnerable to the proposed temporary works, although hedges and trees are more susceptible. The character of the landscape, being slightly undulating and with some screening, means that changes will be relatively localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
- 251. Whilst the landscape in the eastern half of subarea 5 (including Substation Zone 1) is located outside of the Yorkshire Wolds ILA and is of limited scenic quality, it does possess recreational value represented by a range of PROWs, the Beverley 20 long distance walking route, and the NCN Route 1. Overall, the receptor is deemed to be of medium value.
- 252. The sensitivity of the receptor is therefore considered to be medium.

### *23.6.3.1.3 Significance of Effect – Development in Substation Zone 1*

- 253. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude of impact is locally high. The effect is of **major** adverse significance within the immediate area of the substation footprint, which is significant in EIA terms. The effect will reduce with distance, falling below the threshold of significance at no more than 1km from the substation footprint. The area where significant effects on landscape character may be expected is approximately defined by the edge of Beverley to the north, Jock's Lodge junction to the west, woodlands around Jillywood Farm to the south, and the woodlands and glasshouses around Long Lane to the east.

### *23.6.3.1.4 Mitigation and Residual Significance of Effect – Development in Substation Zone 1*

- 254. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). The landscape mitigation scheme will be implemented around the substation, including hedgerow and woodland planting. Once matured, this will help to integrate the substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.

255. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan that responds to a substation design. It is expected that landscape screening will not reduce the residual effect at year one following completion. Over time, it will reduce the residual effect as vegetation matures. Landscape mitigation will be designed at ES stage, specifically for the proposed substation, with an aim of reducing the significance of residual effect.

## 23.6.3.2 Landscape Effects of Onshore Substations: Development in Substation Zone 4

### 23.6.3.2.1 Magnitude of Impact – Development in Substation Zone 4

256. The operational phase will result in the permanent loss of some limited landscape features such as hedgerows and arable farmland within Substation Zone 4, which are noted within the key characteristics of the Sloping Farmland LCT. However, the primary impacts will relate to the ongoing visual presence of the substations within the landscape, which will affect key characteristics such as open views across the landscape, including views of Beverley Minster.
257. The character of the landscape, being flat or slightly undulating with woodland blocks, hedgerows, and frequent buildings means that views of the substations will be relatively localised within subarea 5. As indicated by the ZTV, within 1km of Substation Zone 4 theoretical visibility is relatively extensive, though nearby woodland at Bentley Moor Wood, Johnson's Pit, Eleven Acre Plantation, Jillywood and Birkhill Wood will provide some local screening. Beyond 1km, woodland (including at Risby Park) and buildings will result in a more irregular pattern of visibility in all directions. As such, effects on landscape character will be relatively localised to Substation Zone 4.
258. Generally, the substations will be seen in the context of existing electricity infrastructure, development and transport corridors within a settled, modified landscape that is busy and complex in nature. This is reflected in the evaluation of the 'host' 16F Beverley Parks Farmland LCA (Sloping Farmland LCT), which states that "*Landscape character in this area is affected by the urban edge of Hull to the south and Beverley to the north...Based on the number of detractors the landscape character of the area between Beverley and Hull is assessed to be ordinary to poor.*"
259. The impact of the onshore substations in Substation Zone 4 on landscape character is predicted to be of large scale locally, and of a small geographical extent. It will be long term and partly reversible. The magnitude is therefore considered to be high within approximately 0.5km of the substation footprints, reducing to medium then low with greater distance.

## 23.6.3.2.2 *Sensitivity of Receptor*

260. The landscape subarea 5, within which Substation Zone 4 is located, is described in section 23.5.2.1.5.
261. The landscape of subarea 5 contains few features that are vulnerable to the proposed temporary works, although hedges and trees are more susceptible. The character of the landscape, being slightly undulating and with some screening, means that changes will be relatively localised. The receptor is deemed to be of medium susceptibility to the proposed changes.
262. Substation Zone 4 is located at the eastern edge of the Yorkshire Wolds ILA, which is designated for its landscape value and high scenic quality. Despite the close proximity of Substation Zone 4 to Substation Zone 1, it possesses a greater degree of tranquillity and enclosure, due to its slightly higher elevation, undulating terrain, surrounding woodland and increased distance from the A1079 and adjacent development (including Dogger Bank A & B offshore wind farm converter station). Overall, the landscape resource is deemed to be of medium value.
263. The sensitivity of the receptor is therefore considered to be medium.

## 23.6.3.2.3 *Significance of Effect – Development in Substation Zone 4*

264. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is locally high. The effect is of **major** adverse significance within the immediate area of the substation footprints, which is significant in EIA terms. The effect will reduce with distance, falling below the threshold of significance at no more than 1km from the substation footprints. The area where significant effects on landscape character may be expected is approximately defined by Bentley village to the south, Jock's Lodge junction to the east, the rising ground north of the A1079 to the north, and the rising ground around Bentley Parks to the west.

## 23.6.3.2.4 *Mitigation and Residual Significance of Effect – Development in Substation Zone 4*

265. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent. The landscape mitigation scheme will be implemented around the substations, including hedgerow and woodland planting. Once matured, this will help to integrate the substations into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.

266. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan that responds to a substation design. It is expected that landscape screening will not reduce the residual effect at year one. However, over time it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed at ES stage, specifically for the proposed substations, with an aim of reducing the significance of residual effect.

### 23.6.3.3 Landscape Effects of Onshore Substations: Development in Substation Zones 1 and 4

#### 23.6.3.3.1 *Magnitude of Impact – Development in Substation Zones 1 and 4*

267. The influence of each of the onshore substations on the landscape is described above. A similar pattern applies to theoretical visibility of both substations, which gets more pocketed with increasing distance. Combined visibility will be greatest within 1km of the Substation Zones in the vicinity of the A1079/A164 corridor, though the degree of intervisibility will vary. Combined visibility from many areas will be very marginal due to intervening tree cover. While both substations will be visible from more distant locations, the influence on character will be lesser due to viewing distance and the likelihood that existing electricity infrastructure and other development will be visible.
268. The substations in Substation Zone 4 has a more elevated location within the landscape, but benefits from some existing woodland screening. The substation in Substation Zone 1 is in a more low-lying area, but with more open surroundings. The two substations are judged to have a similar extent of influence on the landscape.
269. The impact of onshore substations in Substation Zones 1 and 4 on landscape character is predicted to be of large scale locally, and of a small geographical extent. It will be long term and partly reversible. The magnitude is therefore considered to be high within approximately 0.5km of the substation footprints, including the area around the A1079/A164 junction. The magnitude will reduce to medium then low with greater distance.

#### 23.6.3.3.2 *Sensitivity of Receptor*

270. The sensitivity of the receptor is considered to be medium as noted above.

### *23.6.3.3.3 Significance of Effect – Development in Substation Zones 1 and 4*

271. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is locally high. The effect is of **major** adverse significance within the immediate area of the substation footprints, which is significant in EIA terms. The effect will reduce with distance, falling below the threshold of significance at no more than 1km from the substation footprints.

### *23.6.3.3.4 Mitigation and Residual Significance of Effect – Development in Substation Zones 1 and 4*

272. An outline landscape scheme will be developed at ES stage to secure the restoration and, where possible, enhancement of the landscape post-construction (see section 23.8.1). A more detailed landscape scheme will be developed post-consent. The landscape mitigation scheme will be implemented around the substations, including hedgerow and woodland planting. Once matured, this will help to integrate the substations into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
273. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of a detailed mitigation plan. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically for the Substation Zone with an aim of reducing the significance of residual effect.

## 23.6.4 Potential Effects on Visual Amenity During Operation

274. Effects during the operation and maintenance phase are assessed for the permanent above-ground infrastructure at the two Substation Zones. The assessment focuses on the representative viewpoints identified in **Table 23-20**.
275. Visualisations are presented for Viewpoints 1-6, showing an outline model representing the worst case scenario as defined in **Table 23-2**. The outline model is based on a mix of parameters in order to show worst case, and so illustrates a maximum 'volume', that would not be exceeded under any scenario. This volume is based on the maximum footprint of the HVAC substation, combined with the maximum height of the HVDC footprint (up to 27m). The final design is likely to be much smaller than the outline model shown, but this detail is not known at PEIR stage.
276. Visualisations are shown in **Figures 23-8 to 23-13**. Visualisations have not been developed at PEIR for the more distant Viewpoints 7-10, as agreed with the ETG (see **Table 23-1**).

### 23.6.4.1 Visual Effects of Onshore Substations – Viewpoint 1: Shepherd Lane (Substation Zone 1)

#### 23.6.4.1.1 Magnitude of Impact – DBS East or DBS West in Isolation

277. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

#### 23.6.4.1.2 Magnitude of Impact – All Scenarios

278. The onshore substation will be seen from a distance of 0.5km in views to the south. The onshore substation will be seen above the skyline and will occupy a large horizontal extent of the view. Lower elements of the substation will be partially screened by intervening boundary trees and hedgerows in the middle distance, though some direct views of ground level structures and operations will likely be available. The onshore substation will be seen in front of a transmission overhead line in the distance and in the context of existing electricity infrastructure and the urban edge of Beverley. Higher elements of the onshore substation in Substation Zone 4 may be partially visible in successive views to the south-west.

279. The ZTV indicates that similar views will be available along Shepherd Lane and the A164, and from PRowWs that traverse the agricultural land to the north-east of the viewpoint (including the Beverley 20 walking route and NCN 1). Actual visibility across this area will be highly variable due to roadside vegetation and boundary trees/hedgerows. Built form in Beverley will contain longer distance views to the north.
280. The impact of the onshore substation on this viewpoint is predicted to be of medium scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be medium.

#### *23.6.4.1.3 Sensitivity of Receptor*

281. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced from visual receptors at the southern edge of Beverley, including residential receptors, recreational receptors on PRowWs (including the Beverley 20 and NCN 1) and road users on Shepherd Lane and the A164.
282. Residential receptors and recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. Road users are considered to be of lower susceptibility.
283. The viewpoint is not located within a designated landscape and it is not a recognised stopping point or promoted view. The viewpoint is influenced by surrounding development including overhead lines and Dogger Bank A & B offshore wind farm converter station to the south. The value of the view is considered to be medium.
284. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be medium.

#### *23.6.4.1.4 Significance of Effect – All Scenarios*

285. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms.

## *23.6.4.1.5 Mitigation and Residual Significance of Effect – All Scenarios*

286. The detail design of the onshore substation will aim to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substation. This will include landscape screening of the substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
287. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

## *23.6.4.2 Visual Effects of Onshore Substations – Viewpoint 2: Beverley 20 near Jillywood Farm (Substation Zone 1)*

### *23.6.4.2.1 Magnitude of Impact – DBS East or DBS West in Isolation*

288. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### *23.6.4.2.2 Magnitude of Impact – All Scenarios*

289. The onshore substation will be seen from a distance of 0.4km in views to the north-east. The onshore substation will be seen above the skyline and will occupy a large horizontal extent of the view. Lower elements of the substation will be partially screened by intervening boundary trees and hedgerows, though some glimpsed views of ground level structures and operations will likely be visible. The onshore substation will be seen behind the large steel pylon of a transmission overhead line and the tree lined A1079. The substation in Substation Zone 4 will be partially visible in successive views to the north-west behind Bentley Moor Wood.

290. The ZTV indicates that similar views will be available along the Beverley 20 (as indicated on OS mapping (Ordnance Survey (2015))), between the A1079 and A164, and from PRowS and properties west of Birkhill Wood. Actual visibility across this area will be highly variable due to roadside vegetation, boundary trees/hedgerows and viewing distance. Built form in Cottingham will contain longer distance views to the south. Views from the A1079 will be partial and glimpsed due to roadside vegetation.
291. The impact of the onshore substation on this viewpoint is predicted to be of medium scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be medium.

#### *23.6.4.2.3 Sensitivity of Receptor*

292. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on the PRow west of the A1079 (forming a section of the Beverley 20), and by residential receptors at isolated nearby properties including Jillywood Farm to the south.
293. Recreational and residential receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.
294. The viewpoint is not located within a designated landscape and it is not a recognised stopping point or promoted view, though it is located on the Beverley 20 walking route. The viewpoint possesses some rural qualities due to surrounding arable fields and woodland, and Beverley Minster forms a notable, distant feature on the skyline. However, the viewpoint is also influenced by surrounding development including a transmission overhead line in the foreground and the busy transport corridors of the A1079 and A164. The value of the view is considered to be low.
295. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be medium.

#### *23.6.4.2.4 Significance of Effect – All Scenarios*

296. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms.

## *23.6.4.2.5 Mitigation and Residual Significance of Effect – All Scenarios*

297. The onshore substation will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the substation. This will include landscape screening of the onshore substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
298. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

## *23.6.4.3 Visual Effects of Onshore Substations – Viewpoint 3: Beverley Parks Orchard, Old Hall (Substation Zone 1)*

### *23.6.4.3.1 Magnitude of Impact – DBS East or DBS West in Isolation*

299. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### *23.6.4.3.2 Magnitude of Impact – All Scenarios*

300. The onshore substation will be seen from a distance of 0.6km in views to the west. The onshore substation will be seen above the skyline and will occupy a small horizontal extent of the view. Only higher elements of the onshore substation will be visible due to intervening boundary trees and hedgerows in the foreground, which will obstruct views of ground level structures and operations. The onshore substation will be seen in front of a distant transmission overhead line on the skyline and in the context of more proximate development, including Model Farm and adjacent overhead lines.
301. The ZTV indicates that similar views will be available from much of the surrounding area including along the local section of the Beverley 20 (as illustrated on OS mapping (Ordnance Survey, 2015), and Long Lane to the east. However, actual visibility across this area will be highly variable due to roadside vegetation, boundary trees/hedgerows and viewing distance. Built form in Woodmansey will contain longer distance views to the east.

302. The impact of the onshore substation on this viewpoint is predicted to be of small scale and of a medium geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be low.

### 23.6.4.3.3 *Sensitivity of Receptor*

303. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on a PRow that provides access to Beverley Parks Local Nature Reserve (forming a section of the Beverley 20 as illustrated on OS mapping (Ordnance Survey, 2015), and by residential receptors at isolated nearby properties including Old Hall and Model Farm.
304. Recreational and residential receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.
305. The viewpoint is not located within a designated landscape and it is not a recognised stopping point or promoted view. The viewpoint possesses some rural qualities due to surrounding arable fields and woodland. However, the viewpoint is also influenced by surrounding development including an adjacent wood pole overhead line, and a transmission overhead line on the skyline to the west. The viewpoint is located on the Beverley 20 walking route (as illustrated on OS mapping (Ordnance Survey, (2015). The value of the view is considered to be low.
306. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be medium.

### 23.6.4.3.4 *Significance of Effect – All Scenarios*

307. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

### 23.6.4.3.5 *Mitigation and Residual Significance of Effect – All Scenarios*

308. The onshore substation will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substation. This will include landscape screening of the substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.

309. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

#### 23.6.4.4 Visual Effects of Onshore Substations – Viewpoint 4: Butt Farm (Substation Zone 4)

##### 23.6.4.4.1 Magnitude of Impact – DBS East or DBS West in Isolation

310. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

##### 23.6.4.4.2 Magnitude of Impact – All Scenarios

311. The onshore substation in Substation Zone 4 will be seen from a distance of 0.3km in views to the south-west. The onshore substation will be seen above the skyline and will occupy a large horizontal extent of the view. Some lower elements of the onshore substation will be screened by intervening boundary trees and hedgerows though it is likely some direct views of ground level structures and operations will be visible. The onshore substation will be seen behind a wood pole overhead line in the foreground and in the context of more proximate development, including an adjacent transmission overhead line and the A1079. There will be no intervisibility with the substation in Substation Zone 1 due to roadside trees.
312. The ZTV indicates that similar views will be available from the PRoW as users travel west to join the Beverley 20 and from the A1079. However, actual visibility will be highly variable due to roadside vegetation, boundary trees/hedgerows and viewing distance. Buildings in Beverley will limit longer distance views to the north.
313. The impact of the onshore substation on this viewpoint is predicted to be of large scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be high.

##### 23.6.4.4.3 Sensitivity of Receptor

314. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on the PRoW/access track to Butt Farm, and visitors to Butt Farm Caravan and Camping Site. The viewpoint also represents views experienced by residential receptors at Butt Farm.

- 315. Recreational and residential receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.
- 316. The viewpoint is located at the eastern edge of the Yorkshire Wolds ILA. The viewpoint possesses some rural qualities due to surrounding arable fields, woodland and the farmhouse of Butt Farm. However, the viewpoint is also influenced by surrounding development including a nearby wood pole overhead line, a more distant transmission overhead line on the skyline to the south-west, and traffic noise from the adjacent A1079. The value of the view is considered to be medium.
- 317. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be high.

#### *23.6.4.4.4 Significance of Effect – All Scenarios*

- 318. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is high. The effect is of **major** adverse significance, which is significant in EIA terms.

#### *23.6.4.4.5 Mitigation and Residual Significance of Effect – All Scenarios*

- 319. The onshore substation will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substation. This will include landscape screening of the onshore substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
- 320. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

## 23.6.4.5 Visual Effects of Onshore Substations – Viewpoint 5: Coppleflat Lane, Bentley (Substation Zone 4)

### 23.6.4.5.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

321. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.4.5.2 *Magnitude of Impact – All Scenarios*

322. The onshore substation in Substation Zone 4 will be seen from a distance of 0.4km in views to the north-west. The onshore substation will be seen above the skyline and will occupy a large horizontal extent of the view between Bentley Moor Wood and Johnson's Pit. Some lower elements of the onshore substation will be screened by intervening field trees, hedgerows and Bentley Moor Wood, though extensive direct views of ground level structures and operations will be available. The onshore substation will be seen in front of a transmission overhead line in the distance and in the context of surrounding development, including the busy A164. There will be negligible intervisibility with the substation in Substation Zone 1 due to roadside trees.
323. The ZTV indicates that similar views will be available from the Beverley 20 walking route to the east and west and across the farmland of Platwoods Fields to the south. Theoretical visibility is also indicated along the A164, north of Wood Hall Farm. However, actual visibility will be highly variable due to roadside vegetation, boundary trees/hedgerows and viewing distance. Elevated landform and woodland will contain longer distance views to the south from Skidby and Cottingham.
324. The impact of the onshore substation on this viewpoint is predicted to be of large scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be high.

### 23.6.4.5.3 *Sensitivity of Receptor*

325. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on Coppleflat Lane (forming a section of the Beverley 20), and residential receptors at the northern edge of Bentley, a short distance to the west. The viewpoint also represents views experienced by road users on Coppleflat Lane and the adjacent A164.
326. Recreational and residential receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. Road users are considered to be of lower susceptibility to changes in the view.

327. The viewpoint is located at the eastern edge of the Yorkshire Wolds ILA and on the Beverley 20 walking route. The viewpoint possesses some rural qualities due to surrounding arable fields and woodland. However, the viewpoint is heavily influenced by surrounding development including a transmission overhead line on the skyline to the north-west, and most notably, the transport infrastructure of the adjacent A164. The value of the view is considered to be medium.
328. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors (local residents) at this viewpoint is judged to be high.

#### *23.6.4.5.4 Significance of Effect – All Scenarios*

329. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is high. The effect is of **major** adverse significance, which is significant in EIA terms.

#### *23.6.4.5.5 Mitigation and Residual Significance of Effect – All Scenarios*

330. The detail design of the onshore substation will aim to reduce the overall height and massing of associated structures and other elements as far as possible, with particular reference to views experienced by local residents. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substation. This will include landscape screening of the onshore substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
331. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

## 23.6.4.6 Visual Effects of Onshore Substations – Viewpoint 6: Beverley 20 near Broadgate (Substation Zone 4)

### 23.6.4.6.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

332. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.4.6.2 *Magnitude of Impact – All Scenarios*

333. The onshore substation will be seen from a distance of 0.6km in views to the south-east. The onshore substation will be seen above the skyline and will occupy a large horizontal extent of the view between Bentley Moor Wood and Johnson's Pit. Some lower elements of the onshore substation will be screened by intervening field trees, hedgerows and woodland at Johnson's Pit though glimpsed views of ground level structures and operations will likely be available. The onshore substation will be seen behind a wood pole overhead line in the foreground and in the context of surrounding development, including a transmission overhead line to the east and the busy transport corridor of the A1079. There will be negligible intervisibility with the onshore substation in Substation Zone 1 due to intervening woodland.
334. The ZTV indicates that similar views will be available from along the Beverley 20 between Johnson's Pit and Broadgate Farm and across the arable fields in the surrounding area. However, actual visibility will be highly variable due to boundary trees/hedgerows and viewing distance. Residents at the southern edge of Broadgate and the eastern edge of Walkington may experience more distant, glimpsed views of the onshore substation. Views from the A1079 will be oblique and glimpsed due to roadside vegetation.
335. The impact of the onshore substation on this viewpoint is predicted to be of medium scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be medium.

### 23.6.4.6.3 *Sensitivity of Receptor*

336. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on the Beverley 20 walking route near Broadgate.
337. Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.

338. The viewpoint is located near the eastern edge of the Yorkshire Wolds ILA and on the Beverley 20 walking route. The viewpoint possesses some rural qualities due to surrounding arable fields and woodland. However, the viewpoint is also influenced by surrounding development including a transmission overhead line on the skyline to the east, and a wood pole overhead line in the foreground. Built development is also apparent adjacent to the A1079 transport corridor, including the Dogger Bank A & B offshore wind farm converter station in the distance. The value of the view is considered to be medium.
339. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be high.

#### *23.6.4.6.4 Significance of Effect – All Scenarios*

340. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is medium. The effect is of **moderate** adverse significance, which is significant in EIA terms.

#### *23.6.4.6.5 Mitigation and Residual Significance of Effect – All Scenarios*

341. The onshore substation will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substation. This will include landscape screening of the onshore substation such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
342. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help screen the proposed substation in views from nearby sensitive receptors, with an aim of reducing the significance of residual effect.

## 23.6.4.7 Visual Effects of Onshore Substations – Viewpoint 7: Walkington (Substation Zones 1 and 4)

### 23.6.4.7.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

343. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.4.7.2 *Magnitude of Impact – All Scenarios*

344. The onshore substation will be seen from a distance of 1.3km in views to the south-east. The onshore substation in Substation Zone 4 will be seen above the vegetated skyline but will be largely screened by intervening hedgerows and trees, with the uppermost extents of the onshore substation visible at distance. In addition, Substation Zone 1 will be visible in the distance to the south-east, although would be largely screened by the onshore substation in Substation Zone 4 and vegetation. Ground level structures and operations in both Substation Zones will not be visible. Both substations will be seen in the context of steel lattice pylons and overhead lines in the distance.
345. The ZTV indicates that similar views will be available from along the Beverley 20 between Walkington and Moor Lane, and across the arable fields in the surrounding area. However, actual visibility will be highly variable due to boundary trees/hedgerows. Residents at the eastern edge of Walkington may experience more distant, glimpsed views of both onshore substations.
346. The impact of the onshore substations on this viewpoint is predicted to be of small scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be low.

### 23.6.4.7.3 *Sensitivity of Receptor*

347. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on the Beverley 20 walking route at the edge of Walkington.
348. Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.
349. The viewpoint is located within the Yorkshire Wolds ILA and on the Beverley 20 walking route. The viewpoint possesses some rural qualities due to surrounding arable fields and woodland. However, the viewpoint is also influenced by existing development including a transmission overhead line on the skyline to the north-east, and palisade fencing along the eastern and southern settlement edge of Walkington. Built development is also apparent adjacent to the B1230. The value of the view is considered to be medium.

350. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be high.

#### *23.6.4.7.4 Significance of Effect – All Scenarios*

351. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

#### *23.6.4.7.5 Mitigation and Residual Significance of Effect – All Scenarios*

352. The onshore substations will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substations. This will include landscape screening of the onshore substations such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substations into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
353. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan will be provided at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help reduce the impact of the proposed substation in these views, with an aim of reducing the significance of residual effect.

#### *23.6.4.8 Visual Effects of Onshore Substations – Viewpoint 8: Beverley 20 Footpath, Risby (Substation Zones 1 and 4)*

##### *23.6.4.8.1 Magnitude of Impact – DBS East or DBS West in Isolation*

354. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

## 23.6.4.8.2 *Magnitude of Impact – All Scenarios*

355. The onshore substation in Substation Zone 1 will be seen from a distance of 2.7km in views to the north-east, where it will appear to sit just above the skyline. This onshore substation would be largely screened by intervening hedgerows and trees. It is noted that the onshore substation in Substation Zone 1 would be visible directly in front of Beverley Minster in views from this viewpoint and would partially block the notable skyline feature of Beverley Minster. The onshore substation in Substation Zone 1 will be seen in the context of steel lattice pylons and overhead line in the foreground of the onshore substation. Ground level structures and operations will not be visible. There will be negligible intervisibility with the onshore substation in Substation Zone 4 due to intervening woodland.
356. The ZTV indicates that similar views will be available from along the Beverley 20 between Skidby and Risby, and across the arable fields in the surrounding area. However, actual visibility will be highly variable due to boundary trees/hedgerows.
357. The impact of the onshore substation on this viewpoint is predicted to be of small scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be low.

## 23.6.4.8.3 *Sensitivity of Receptor*

358. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors on the Beverley 20 walking route near Risby.
359. Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view.
360. The viewpoint is located within the Yorkshire Wolds ILA and on the Beverley 20 walking route. The viewpoint possesses strong rural qualities due to the surrounding arable fields and woodland, and general lack of built development. The viewpoint is influenced by overhead lines on the skyline to the south-east of the viewpoint, but offers a panoramic outlook from higher ground, across the landscape to the east. The value of the view is considered to be medium.
361. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be high.

#### *23.6.4.8.4 Significance of Effect – All Scenarios*

362. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

#### *23.6.4.8.5 Mitigation and Residual Significance of Effect – All Scenarios*

363. The onshore substations will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substations. This will include landscape screening of the onshore substations such as hedgerow and woodland planting. Once matured, this will help to integrate the onshore substations into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
364. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help reduce the impact of the proposed substations in these views, with an aim of reducing the significance of residual effect.

## 23.6.4.9 Visual effects of Onshore Substations – Viewpoint 9: Woodmansey (Substation Zones 1 and 4)

### 23.6.4.9.1 *Magnitude of Impact – DBS East or DBS West in Isolation*

365. The magnitude of impact for either Project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

### 23.6.4.9.2 *Magnitude of Impact – All Scenarios*

366. The onshore substation in Substation Zone 1 will be seen from a distance of 2.3km in views to the south-west, where it will appear to sit just above the skyline. This substation would be largely screened by intervening hedgerows and trees. The onshore substation in Substation Zone 1 will be seen in the context of steel lattice pylons and overhead line in the distance. Ground level structures and operations will not be visible. There will be negligible intervisibility with the onshore substation in Substation Zone 4 due to intervening woodland.
367. The ZTV indicates that similar views will be available from along Hull Road, between the viewpoint and Dunswell. However, actual visibility will be highly variable due to intervening built development and vegetation.
368. The impact of the onshore substations on this viewpoint is predicted to be of small scale and of a small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be low.

### 23.6.4.9.3 *Sensitivity of Receptor*

369. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by residential receptors at Woodmansey and road users travelling along Hull Road.
370. Residential receptors and recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. Road users are considered to be of lower susceptibility.
371. The viewpoint possesses limited rural qualities due to the presence of a construction site in the foreground of the view, and other built development within Woodmansey. The viewpoint is also influenced by several transmission overhead lines on the skyline to the west and south-west of the viewpoint. The value of the view is considered to be low.
372. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be medium.

#### *23.6.4.9.4 Significance of Effect – All Scenarios*

373. Overall, it is assessed that the sensitivity of the receptor is medium, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

#### *23.6.4.9.5 Mitigation and Residual Significance of Effect – All Scenarios*

374. The onshore substations will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substations. This will include landscape screening of the onshore substations such as hedgerow and woodland planting. Once matured, this will help to integrate the substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
375. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it may reduce the residual effect as vegetation matures. Landscape mitigation will be designed specifically to help reduce the impact of the proposed substation in these views, with an aim of reducing the significance of residual effect.

#### *23.6.4.10 Visual effects of Onshore Substations – Viewpoint 10: Beverley Minster Tower (Substation Zones 1 and 4)*

##### *23.6.4.10.1 Magnitude of Impact – DBS East or DBS West in Isolation*

376. The magnitude of impact for either project in isolation will not be greater than the magnitude of impact for the worst case scenario, and effects in isolation are not considered further.

## 23.6.4.10.2 Magnitude of Impact – All Scenarios

377. The onshore substation in Substation Zone 1 will be seen from a distance of 2.2km in views to the south and the onshore substation in Substation Zone 4 at a distance of 2.9km to the south-west. Due to the elevated location of the viewpoint, both onshore substations in Substation Zones 1 and 4 will be visible in the lower lying agricultural landscape to the south and south-west. The onshore substation in Substation Zone 1 will be most visible, with limited screening. However, given the intervening distance and presence of intervening vegetation, the onshore substation in Substation Zone 4 will be partially screened at the lower level. In both cases, the onshore substations will appear to sit below the horizon and will be seen in the context of steel lattice pylons and overhead line in the distance.
378. The ZTV indicates that there will be no theoretical visibility from locations around Beverley Minster or within the settlement of Beverley. Intervening built development will screen views of the onshore substations from within Beverley. The elevated nature of Beverley Minster Tower offers very localised visibility of the onshore substations.
379. The impact of the onshore substations on this viewpoint is predicted to be of small scale and of a very small geographical extent. The impact will be long term and reversible. The magnitude is therefore considered to be low.

## 23.6.4.10.3 Sensitivity of Receptor

380. The viewpoint is described in **Table 23-20**. The viewpoint represents views experienced by recreational receptors visiting Beverley Minster. 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).
381. Recreational receptors visiting the Beverley Minster Tower will have their attention focused on their surroundings and are considered to be of high susceptibility to changes in the view.
382. 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 value of the view is considered to be high.
383. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be high.

## 23.6.4.10.4 Significance of Effect – All Scenarios

384. Overall, it is assessed that the sensitivity of the receptor is high, and the magnitude is low. The effect is of **minor** adverse significance, which is not significant in EIA terms.

## 23.6.4.10.5 Mitigation and Residual Significance of Effect – All Scenarios

385. The onshore substations will be designed to reduce the overall height and massing of associated structures and other elements as far as possible. Landscape proposals will include measures for the enhancement of the landscape during the operational phase of the onshore substations. This will include landscape screening of the onshore substations such as hedgerow and woodland planting. Once matured, this will help to integrate the substation into the existing landscape of arable fields and boundary trees/hedgerows. Further detail on the principles of mitigation are set out in section 23.8.2.
386. While landscape screening will reduce the magnitude of impact, the residual significance of effect can only be determined following the provision of an outline mitigation plan at ES stage. It is expected that landscape screening will not reduce the residual effect at year one, however over time, it will reduce the residual effect as vegetation matures. Due to the elevated nature of Beverley Minster tower, landscape screening is unlikely to completely screen views, however it will help to better integrate the substations into the landscape. Landscape mitigation will be designed specifically to help reduce the impact of the proposed substations in these views, in order to reduce the significance of residual effect.

## 23.6.5 Potential Effects During Decommissioning

387. The detail and scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. A Decommissioning Plan would be provided. As such, impacts during the decommissioning stage are assumed to be the same as those identified during the construction stage.

## 23.7 Preliminary Assessment of Cumulative Effects

388. As detailed in section 23.4.4, this section presents a preliminary assessment of cumulative effects in relation to the Landscape and Visual Impact Assessment. The final CEA will be undertaken within the ES chapter.

### 23.7.1 Initial Screening for Cumulative Effects

389. **Table 23-21** below details the potential cumulative effects that may occur between the Projects and other plans, projects and activities. Only potential impacts assessed in section 23.6 where the potential for cumulative effects has been identified (minor, moderate or major) will be taken forward to the final CEA (i.e. those assessed as 'no impact' are not taken forward as there is no potential for them to contribute to a cumulative impact).

Table 23-21 Potential Cumulative Effects

| Impact                                             | Potential for Cumulative Effects | Data Confidence | Rationale                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------|----------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction</b>                                |                                  |                 |                                                                                                                                                                                                                                                                                                                                                                                   |
| Landscape Effects of Onshore Export Cable Corridor | No                               | N/A             | Construction works on the onshore export cable corridor will be short term and temporary. Significant cumulative effects would only occur if developments fall within the same area and the same temporal extent, and as such are judged to be unlikely.                                                                                                                          |
| Visual effects of Onshore Export Cable Corridor    | No                               | N/A             | Construction works on the onshore export cable corridor will be short term and temporary, and generally limited to ground level activity. Therefore it is unlikely that construction works will be widely visible. Significant cumulative effects would only occur if developments fall within the same area and the same temporal extent, and as such are judged to be unlikely. |
| Landscape Effects of Onshore Substations           | Yes                              | High            | Cumulative landscape effects could occur if other developments are constructed concurrently with the construction phase of the onshore substations.                                                                                                                                                                                                                               |
| Visual effects of Onshore Substations              | Yes                              | High            | Cumulative visual effects could occur if other developments are constructed concurrently with the construction phase of the onshore substations.                                                                                                                                                                                                                                  |

| Impact                                   | Potential for Cumulative Effects | Data Confidence | Rationale                                                                                                                                                                        |
|------------------------------------------|----------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operation &amp; Maintenance</b>       |                                  |                 |                                                                                                                                                                                  |
| Landscape Effects of Onshore Substations | Yes                              | High            | Any other projects that alter the landscape character within the landscape and visual study area for the onshore substations may have cumulative landscape effects at operation. |
| Visual Effects of Onshore Substations    | Yes                              | High            | Any other projects that are visible within the landscape and visual study area for the onshore substations may have cumulative visual effects at operation.                      |

## 23.7.2 Plans/Projects Considered for Cumulative Impacts

390. A high-level list of plans/projects that may result in cumulative effects with the Projects is detailed in **Table 23-22**. For the LVIA, a search distance of 5km from the onshore Substation Zones has been used to determine the initial list of projects considered for the CEA.
391. Plans / projects have been assigned a tier level between 1 and 7, based on the most recent guidance (see **Chapter 6 EIA Methodology**). For the final CEA at ES, this high-level list will be reviewed and screened to ensure all relevant plans / projects are considered in the final assessment. All listed plans / projects will be re-examined at ES to ensure each assigned tier remains accurate at the time of writing.

Table 23-22 High-Level List of Plans/Projects Screened For Further Assessment in the Final CEA

| Tier | Plan / Project                                                                         | Distance to Onshore Development Area (km)                                                         |
|------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 2    | Dogger Bank A & B Offshore Wind Farm                                                   | Crosses onshore export cable corridor, converter station is within 1km of Substation Zone 1       |
| 3    | A164 and Jock Lodge Junction Improvement Scheme                                        | Crosses onshore export cable corridor, within 1km of both Substation Zones                        |
| 3    | Solar Farm – Land south of Creyke Beck Substation, 4875 Park Lane, Cottingham          | Within Onshore Development Area, within 1km of both Substation Zones                              |
| 3    | Solar Farm – Land east and west of West of Tickton Bridge Plantation, Main Road, Routh | Adjacent to the Onshore Development Area                                                          |
| 4    | Hornsea Project Four Offshore Wind Farm                                                | Adjacent to onshore export cable corridor, proposed substation is within 2km of Substation Zone 1 |
| 4    | Scotland England Green Link 2                                                          | 3.5                                                                                               |
| 4    | Solar Farm – Land north east and west of Carr Plantation, Ferry Road, Wawne            | 1.5                                                                                               |
| 4    | Household Recycling Centre – Land north west of Ings Road Picnic Site, Molescroft      | Within Onshore Development Area                                                                   |
| 6    | Solar Farm – Robson & Co, White Hall, Shepard Lane, Woodmansey                         | Within Onshore Development Area                                                                   |
| 7    | New National Grid Substation (Birkill Wood)                                            | Within Onshore Development Area, within 1km of both Substation Zones                              |
| 7    | North Humber to High Marnham                                                           | Within Onshore Development Area, within 1km of both Substation Zones                              |
| 7    | Creyke Beck Substation Extension                                                       | Within Onshore Development Area, within 1km of both Substation Zones                              |

## 23.8 Development of Mitigation

392. This section provides an outline of the approach to be taken to mitigating the assessed effects of the Projects on landscape and visual receptors. The PEIR is based on assumptions, particularly in regards to the onshore substations. The ES will include more detail on mitigation, which will be developed in response to the assessed effects of more detailed proposals. The ES will be accompanied by an outline LEMP which will set out the basis for landscape and ecological mitigation to be applied. The final LEMP will be approved by the local authority in accordance with requirements to be attached to the DCO.

### 23.8.1 Construction

393. Construction work will be controlled by a Code of Construction Practice, that will set out methods for the works designed to mitigate effects on landscape and visual receptors.
394. During construction, trees, hedgerows and other vegetation will be retained where possible. It is expected that vegetation removal to enable construction will be limited as far as practical. Retained trees and other vegetation will be protected during the works in accordance with British Standard BS 5837:2012.
395. On completion of construction, the landfall area and onshore export cable corridor will be reinstated to its previous condition (e.g. agricultural use) as far as reasonably practical. Soil handling and management will be undertaken in accordance with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), and a Soil Management Plan will be prepared.

### 23.8.2 Operation

396. Replacement planting will take place following completion of construction along the onshore export cable corridor. Hedgerows and trees will be replaced in areas from which they were removed. Trees cannot be planted directly over installed cables, but replacement trees will be planted nearby. Replacement will take place as soon as is practicable after installation of the cables. Trees and hedges which are removed will be replaced with locally native species reflecting the species of those removed. Where appropriate, the replacement works will seek to deliver landscape and/or biodiversity enhancements.

397. At ES stage, an outline landscape mitigation plan will be produced for each onshore substation, as part of the outline LEMP. Post-consent, detailed landscape mitigation plans will be developed, reflecting the form and scale of the proposals, and the assessed landscape and visual effects. It is anticipated that this will include woodland and hedgerow planting to screen key views, and to help to integrate the new development into the landscape. Species selected will be appropriate to the local environment and of local provenance. Species will be planted in an organic layout which seeks to mimic the canopy layers found in the wider countryside.
398. The intention will be to help to integrate the substations into the existing landscape of arable fields, woodlands, boundary trees and hedgerows. Where appropriate, the mitigation scheme will seek to deliver landscape and /or biodiversity enhancements.
399. No detailed mitigation proposals have been developed at PEIR stage, due to the parameter-based nature of the LVIA. The following high-level principles have been developed for each of the Substation Zones, that will guide development of the landscape mitigation plan for each.

#### 23.8.2.1 Mitigation Principles for Substation Zone 1

- Seek to provide screening along the northern and eastern boundaries, where the closest visual receptors are located;
- Introduce new landscape structure planting around the substation, integrating with and enhancing remnant hedgerows within the Substation Zone;
- Provide new woodland areas within the Substation Zone, which is otherwise lacking in tree cover; and
- Seek to provide biodiversity connections or green corridors linking to the established woodland and wildlife site at Beverley Parks to the west.

#### 23.8.2.2 Mitigation Principles for Substation Zone 4

- Seek to provide screening along the northern and southern boundaries, where the closest visual receptors are located;
- Integrate new landscape structure planting with existing woodland plantations at Johnson's Pit and Bentley Moor Wood, to utilise existing screening;
- Consider wider views of the onshore substation and the potential appearance of mitigation planting on the skyline in these views; and
- Seek to provide biodiversity connections or green corridors between these existing woodlands and remnant hedgerows within the Substation Zone.

400. The assessment of residual effects will be assessed within the ES, following the preparation of an outline mitigation scheme. However, it is expected that the residual effects would reduce following successful implementation of the mitigation scheme, once proposed planting and vegetation matures.

## 23.9 Potential Monitoring Requirements

401. Monitoring requirements will be described in the In-Principal Monitoring Plan (IPMP) submitted alongside the DCO application and further developed and agreed with stakeholders prior to construction based on the IPMP and taking account of the final detailed design of the Projects. This will form part of the outline LEMP.
402. Monitoring will be required to ensure the success of landscape restoration and mitigation planting proposals. The detail of proposed monitoring will be set out in an outline LEMP, that will be developed and submitted alongside the Environmental Statement.

## 23.10 Interactions

403. The effects identified and assessed in this chapter have the potential to interact with each other. The areas of potential interaction between effects are presented in **Table 23-23**. This provides a screening tool for which effects have the potential to interact. **Table 23-24** provides an assessment for each receptor (or receptor group) as related to these impacts.
404. Within **Table 23-24** the effects are assessed relative to each development phase to see if multiple effects could increase the significance of the effect upon a receptor. Following this a lifetime assessment is undertaken which considers the potential for effect to affect receptors across all development phases.

Table 23-23 Interactions Between Impacts - Screening

| Potential Interactions between Impacts                          |                                                                 |                                                              |                                          |                                       |
|-----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------|---------------------------------------|
| Construction / Decommissioning                                  |                                                                 |                                                              |                                          |                                       |
|                                                                 | Landscape Effects of Landfall and Onshore Export Cable Corridor | Visual Effects of Landfall and Onshore Export Cable Corridor | Landscape Effects of Onshore Substations | Visual Effects of Onshore Substations |
| Landscape Effects of Landfall and Onshore Export Cable Corridor | No                                                              | Yes                                                          | Yes                                      | Yes                                   |
| Visual Effects of Landfall and Onshore Export Cable Corridor    | Yes                                                             | No                                                           | Yes                                      | Yes                                   |
| Landscape Effects of Onshore Substations                        | Yes                                                             | Yes                                                          | No                                       | Yes                                   |
| Visual Effects of Onshore Substations                           | Yes                                                             | Yes                                                          | Yes                                      | No                                    |

| Potential Interactions between Impacts            |                                                   |                                                |                                                   |                                                |
|---------------------------------------------------|---------------------------------------------------|------------------------------------------------|---------------------------------------------------|------------------------------------------------|
| Operation                                         |                                                   |                                                |                                                   |                                                |
|                                                   | Landscape Effects of Onshore Substations (Zone 1) | Visual Effects of Onshore Substations (Zone 1) | Landscape Effects of Onshore Substations (Zone 4) | Visual Effects of Onshore Substations (Zone 4) |
| Landscape Effects of Onshore Substations (Zone 1) | No                                                | Yes                                            | Yes                                               | Yes                                            |
| Visual Effects of Onshore Substations (Zone 1)    | Yes                                               | No                                             | Yes                                               | Yes                                            |
| Landscape Effects of Onshore Substations (Zone 4) | Yes                                               | Yes                                            | No                                                | Yes                                            |
| Visual Effects of Onshore Substations (Zone 4)    | Yes                                               | Yes                                            | Yes                                               | No                                             |

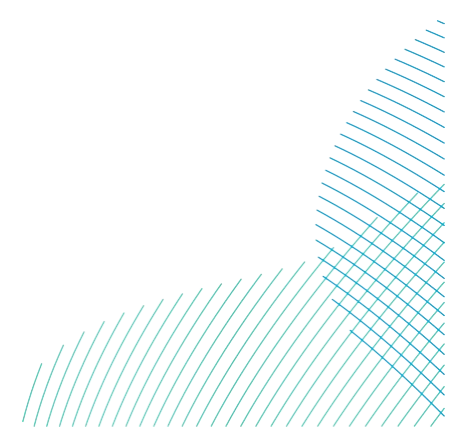


Table 23-24 Interaction Between Impacts - Phase and Lifetime Assessment

| Receptor                             | Highest Significance Level |                 |                 |                                              |                                              |
|--------------------------------------|----------------------------|-----------------|-----------------|----------------------------------------------|----------------------------------------------|
|                                      | Construction               | Operation       | Decommissioning | Phase Assessment                             | Lifetime Assessment                          |
| <b>Onshore Export Cable Corridor</b> |                            |                 |                 |                                              |                                              |
| Landscape Character                  | Minor                      | No effect       | Minor           | No greater than individually assessed impact | No greater than individually assessed impact |
| Visual Receptors                     | Moderate                   | No effect       | Moderate        | No greater than individually assessed impact | No greater than individually assessed impact |
| <b>Onshore Substations</b>           |                            |                 |                 |                                              |                                              |
| Landscape Character                  | Moderate                   | Major (locally) | Moderate        | No greater than individually assessed impact | No greater than individually assessed impact |
| Visual Receptors                     | Moderate                   | Major (locally) | Moderate        | No greater than individually assessed impact | No greater than individually assessed impact |

## 23.11 Inter-relationships

405. For the LVIA potential inter-relationships between other topics assessed within this PEIR include Land Use and Agriculture, Onshore Ecology and Tourism and Recreation. A summary of the potential inter-relationships between these topics is provided in **Table 23-25**.

Table 23-25 LVIA Inter-relationships

| Topic and Description      | Related Chapter                                       | Where Addressed in this Chapter                                                                                          | Rationale                                                                                                                                                                                              |
|----------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction</b>        |                                                       |                                                                                                                          |                                                                                                                                                                                                        |
| Land Use and Agriculture   | <b>Chapter 21 Land Use</b>                            | Refer to landscape and visual receptors assessment in section 23.6.                                                      | Both chapters consider the effects of the loss of farmland (as a landscape element or an agricultural asset).                                                                                          |
| Onshore Ecology            | <b>Chapter 18 Terrestrial Ecology and Ornithology</b> | Refer to landscape and visual receptors assessment in section 23.6 and summary of mitigation as set out in section 23.8. | Both chapters consider the effects of vegetation loss, including hedgerows and trees (as a landscape element or an ecological asset). Both chapters consider the mitigation of hedgerow and tree loss. |
| Tourism and recreation     | <b>Chapter 29 Tourism and Recreation</b>              | Refer to visual receptors in section 23.6.2.                                                                             | Both chapters consider effects on recreational receptors.                                                                                                                                              |
| <b>Operation</b>           |                                                       |                                                                                                                          |                                                                                                                                                                                                        |
| Tourism and recreation     | <b>Chapter 29 Tourism and Recreation</b>              | Refer to visual receptors in section 23.6.                                                                               | Both chapters consider effects on recreational receptors.                                                                                                                                              |
| <b>Decommissioning</b>     |                                                       |                                                                                                                          |                                                                                                                                                                                                        |
| As per construction phase. |                                                       |                                                                                                                          |                                                                                                                                                                                                        |

## 23.12 Summary

406. This chapter has provided a characterisation of the existing environment for the LVIA based on both existing data and site specific survey, which has established that there will be some potential impacts on landscape and visual receptors.

### 23.12.1 Construction Phase

407. During the construction phase, there will be no significant effects on landscape character in the landfall area or along the onshore export cable corridor. This is due to the very localised direct landscape effects of the onshore cable corridor as well as embedded mitigation measures to minimise disruption to the landscape during construction. The flat nature of the landscape and woodland and hedgerow cover limits the potential for wider effects on landscape character.
408. Moderate (significant) landscape effects are predicted during the construction phase of the onshore substations due to the loss of landscape features and the change in character from open arable fields to a construction site. However, beyond the immediate geographical extent of the onshore Substation Zones (approximately 0.5km), the impact on the landscape will not be significant.
409. Moderate (significant) visual effects of the construction phase are limited to the landfall area and onshore Substation Zones. The residual level of effect on the landfall area will reduce to minor (not significant) following the restoration of the landscape and the minimal permanent above ground infrastructure present (manhole covers for six link boxes). The residual level of effect on the onshore Substation Zones will be superseded by the operational effects.

## 23.12.2 Operational Phase

410. Landscape and visual effects associated with the operational phase of the landfall and onshore export cable corridor were scoped out of the assessment on the grounds that following installation and restoration of ground, underground cables which are part of the onshore infrastructure would not significantly impact landscape or visual receptors.
411. Significant effects on landscape character (moderate and major) are predicted during the operational phase of the onshore substations due to the loss of landscape features and the change in character from open arable fields to a substation. These effects will be localised, and will reduce with distance, falling below the threshold of significance at no more than 1km from the onshore substation footprints.
412. A landscape mitigation scheme will be implemented around the substation, as noted in section 23.8.2. This will aim to reduce the level of effect further. The level of residual effect will be confirmed in the ES.
413. In terms of visual effects of the operational substations, significant visual effects are predicted for sensitive receptors at the following viewpoints, during the operational phase:
  - VP1: Shepherd Lane (moderate);
  - VP2: Beverley 20 near Jillywood Farm (moderate);
  - VP4: Butt Farm (major);
  - VP5: Copleflat Lane, Bentley (major); and
  - VP6: Beverley 20 near Broadgate (moderate).
414. All of these viewpoints represent higher sensitivity residential or recreational receptors and are contained within 1km of the proposed substations. A landscape mitigation scheme will be implemented around the substation, as noted in section 23.8.2. The level of residual effect will be confirmed in the ES.
415. **Table 23-26** provides a summary of the LVIA findings, with significant effects highlighted in bold.

Table 23-26 Summary of Potential Likely Significant Effects on Landscape and Visual Receptors

| Potential Impact                                                | Receptor                                               | Sensitivity | Magnitude of Impact | Pre-mitigation Effect                                                                                                                                            | Mitigation Measures Proposed | Residual Effect                 |
|-----------------------------------------------------------------|--------------------------------------------------------|-------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|
| <b>Construction</b>                                             |                                                        |             |                     |                                                                                                                                                                  |                              |                                 |
| Landscape Effects of Landfall and Onshore Export Cable Corridor | Subarea 1 (Landfall)                                   | Medium      | Low                 | Minor<br>(Not significant)                                                                                                                                       | See section 23.8.1           | Negligible<br>(Not significant) |
| Landscape Effects of Onshore Export Cable Corridor              | Subarea 2 (Skipsea to West Road)                       | Medium      | Low                 | Minor<br>(Not significant)                                                                                                                                       | See section 23.8.1           | Negligible<br>(Not significant) |
| Landscape Effects of Onshore Export Cable Corridor              | Subarea 3 (West Road to the River Hull)                | Medium      | Low                 | Minor<br>(Not significant)                                                                                                                                       | See section 23.8.1           | Negligible<br>(Not significant) |
| Landscape Effects of Onshore Export Cable Corridor              | Subarea 4 (River Hull to Onshore Substation Zones)     | Medium      | Low                 | Minor<br>(Not significant)                                                                                                                                       | See section 23.8.1           | Negligible<br>(Not significant) |
| Landscape Effects of Onshore Substations                        | Subarea 5 (Onshore Substation Zones)                   | Medium      | Medium              | <b>Moderate, locally (Significant)</b><br>Beyond the immediate geographical extent of the Substation Zones, the impact on the landscape will not be significant. | See section 23.8.2           | See operational effects         |
| Visual Effects of Landfall and Onshore Export Cable Corridor    | Subarea 1 (Landfall)                                   | Medium      | Medium              | <b>Moderate (Significant)</b>                                                                                                                                    | See section 23.8.1           | Minor (Not Significant)         |
| Visual effects of Onshore Export Cable Corridor                 | Subarea 2 (Skipsea to West Road)                       | Medium      | Low                 | Minor (Not Significant)                                                                                                                                          | See section 23.8.1           | Negligible (Not Significant)    |
| Visual effects of Onshore Export Cable Corridor                 | Subarea 3 (West Road to River Hull)                    | Medium      | Low                 | Minor (Not Significant)                                                                                                                                          | See section 23.8.1           | Negligible (Not Significant)    |
| Visual effects of Onshore Export Cable Corridor                 | Subarea 4 (River Hull to the Onshore Substation Zones) | Medium      | Low                 | Minor (Not Significant)                                                                                                                                          | See section 23.8.1           | Negligible (Not Significant)    |

| Potential Impact                         | Receptor                                                         | Sensitivity | Magnitude of Impact                                                                                         | Pre-mitigation Effect                                                                                                                                                | Mitigation Measures Proposed | Residual Effect          |
|------------------------------------------|------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------|
| Visual effects of Onshore Substations    | Subarea 5 (Onshore Substation Zones)                             | Medium      | Medium                                                                                                      | <b>Moderate (Significant)</b>                                                                                                                                        | See section 23.8.2           | See operational effects. |
| <b>Operation</b>                         |                                                                  |             |                                                                                                             |                                                                                                                                                                      |                              |                          |
| Landscape Effects of Onshore Substations | Substation Zone 1                                                | Medium      | High (within approx. 0.5km of the substation footprint. Reducing to medium then low with greater distance)  | <b>Major (Significant)</b><br>The effect will reduce with distance , falling below the threshold of significance at no more than 1km from the substation footprint.  | See section 23.8.2           | To be confirmed in ES    |
| Landscape Effects of Onshore Substations | Substation Zone 4                                                | Medium      | High (within approx. 0.5km of the substation footprint. Reducing to medium then low with greater distance)  | <b>Major (Significant)</b><br>The effect will reduce with distance , falling below the threshold of significance at no more than 1km from the substation footprint.  | See section 23.8.2           | To be confirmed in ES    |
| Landscape Effects of Onshore Substations | Substation Zones 1 and 4                                         | Medium      | High (within approx. 0.5km of the substation footprints. Reducing to medium then low with greater distance) | <b>Major (Significant)</b><br>The effect will reduce with distance , falling below the threshold of significance at no more than 1km from the substation footprints. | See section 23.8.2           | To be confirmed in ES    |
| Visual Effects of Onshore Substations    | Viewpoint 1: Shepherd Lane (Substation Zone 1)                   | Medium      | Medium                                                                                                      | <b>Moderate (Significant)</b>                                                                                                                                        | See section 23.8.2           | To be confirmed in ES    |
| Visual Effects of Onshore Substations    | Viewpoint 2: Beverley 20 near Jillywood Farm (Substation Zone 1) | Medium      | Medium                                                                                                      | <b>Moderate (Significant)</b>                                                                                                                                        | See section 23.8.2           | To be confirmed in ES    |

| Potential Impact                                                                                                        | Receptor                                                            | Sensitivity | Magnitude of Impact | Pre-mitigation Effect         | Mitigation Measures Proposed | Residual Effect       |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------|---------------------|-------------------------------|------------------------------|-----------------------|
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 3: Beverley Parks Orchard, Old Hall (Substation Zone 1)   | Medium      | Low                 | Minor (Not Significant)       | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 4: Butt Farm (Substation Zone 4)                          | High        | High                | <b>Major (Significant)</b>    | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 5: Copleflat Lane, Bentley (Substation Zone 4)            | High        | High                | <b>Major (Significant)</b>    | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 6: Beverley 20 near Broadgate (Substation Zone 4)         | High        | Medium              | <b>Moderate (Significant)</b> | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 7: Walkington (Substation Zones 1 and 4)                  | High        | Low                 | Minor (Not Significant)       | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 8: Beverley 20 Footpath, Risby (Substation Zones 1 and 4) | High        | Low                 | Minor (Not Significant)       | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 9: Woodmansey (Substation Zones 1 and 4)                  | Medium      | Low                 | Minor (Not Significant)       | See section 23.8.2           | To be confirmed in ES |
| Visual Effects of Onshore Substations                                                                                   | Viewpoint 10: Beverley Minster Tower (Substation Zones 1 and 4)     | High        | Low                 | Minor (Not Significant)       | See section 23.8.2           | To be confirmed in ES |
| <b>Decommissioning</b>                                                                                                  |                                                                     |             |                     |                               |                              |                       |
| Impacts associated with the decommissioning phase would be no greater than those identified for the construction phase. |                                                                     |             |                     |                               |                              |                       |

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