



# White Cross Offshore Windfarm Environmental Statement

## Chapter 20: Onshore Landscape and Visual Amenity



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- Appendix 20.D: Lighting Impact Assessment

## Glossary of Acronyms

<b>Acronym</b>	<b>Definition</b>
<b>AC</b>	Alternating Current
<b>AfL</b>	Agreement for Lease
<b>AIS</b>	Air Insulated Substation
<b>ALCC</b>	Assessment of Landscape Coastal Characteristics, and Landscape Value, Coast and Estuarine Zone (Taw Estuary)
<b>AOD</b>	Above Ordnance Datum
<b>AONB</b>	Area of Outstanding Natural Beauty
<b>BEIS</b>	Department for Business, Energy and Industrial Strategy
<b>CA</b>	Conservation Area
<b>CEA</b>	Cumulative Effect Assessment
<b>CEZ</b>	Coastal and Estuarine Zone
<b>CLVIA</b>	Cumulative Landscape and Visual Impact Assessment
<b>CRoW</b>	Countryside and Rights of Way
<b>DC</b>	Direct Current
<b>DCA</b>	Devon Character Area
<b>DESNZ</b>	Department for Energy Security and Net Zero
<b>DLCA</b>	Devon Landscape Character Assessment
<b>DLPG</b>	Devon Landscape Policy Group
<b>DSM</b>	Digital Surface Model
<b>DTM</b>	Digital Terrain Model
<b>EEA</b>	European Economic Area
<b>EIA</b>	Environmental Impact Assessment
<b>ES</b>	Environmental Statement
<b>ETG</b>	Expert Topic Group
<b>FEED</b>	Front end engineering and design
<b>FoV</b>	Field of View
<b>GeoIS</b>	Geographical Information System
<b>GIS</b>	Gas Insulated Substation
<b>GLVIA3</b>	Guidelines for Landscape and Visual Impact Assessment, 3 <sup>rd</sup> Edition
<b>ha</b>	Hectare
<b>HDD</b>	Horizontal Directional Drilling
<b>HFoV</b>	Horizontal Field of View
<b>IEMA</b>	Institute of Environmental Management and Assessment
<b>ILP</b>	Institution of Lighting Professionals
<b>IPC</b>	Infrastructure Planning Commission
<b>JLCA</b>	Joint Landscape Character Assessment for North Devon and Torridge District Councils
<b>km</b>	Kilometre

<b>Acronym</b>	<b>Definition</b>
<b>km<sup>2</sup></b>	Square kilometre
<b>LCA</b>	Landscape Character Area
<b>LCT</b>	Landscape Character Type
<b>LDR</b>	Long Distance Recreational Route
<b>LVIA</b>	Landscape and Visual Impact Assessment
<b>m</b>	Metre
<b>MHWS</b>	Mean High Water Springs
<b>MLWS</b>	Mean Low Water Springs
<b>MW</b>	Megawatts
<b>NCA</b>	National Character Area
<b>NCN</b>	National Cycle Network routes
<b>NCR</b>	National Cycle Route
<b>NDCAONB</b>	North Devon Coast Area of Outstanding Natural Beauty
<b>NDC</b>	North Devon Council
<b>NDESCA</b>	North Devon and Exmoor Seascape Character Assessment
<b>NDTLP</b>	North Devon and Torridge Local Plan
<b>NPS</b>	National Policy Statement
<b>NPPF</b>	National Planning Policy Framework
<b>NSIP</b>	Nationally Significant Infrastructure Project
<b>OAL</b>	Open Access Land
<b>OFTO</b>	Offshore Transmission Owner (OFTO)
<b>OLEMP</b>	Outline Landscape and Ecological Mitigation Plan
<b>OS</b>	Ordnance Survey
<b>PDE</b>	Project Design Envelope
<b>PIR</b>	Passive Infrared
<b>PRoW</b>	Public Right of Way
<b>RAF</b>	Royal Air Force
<b>RPG</b>	Registered Park and Garden
<b>SCA</b>	Seascape Character Area
<b>SCT</b>	Seascape Character Type
<b>SNH</b>	Scottish Natural Heritage
<b>SLVIA</b>	Seascape Landscape and Visual Amenity
<b>SSSI</b>	Site of Special Scientific Interest
<b>SWCP</b>	South West Coast Path
<b>TJB</b>	Transition Joint Bay
<b>UK</b>	United Kingdom
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>WCS</b>	Worst Case Scenario

Acronym	Definition
<b>WCOWL</b>	White Cross Offshore Windfarm Limited
<b>WTG</b>	Wind Turbine Generator
<b>ZTV</b>	Zone of Theoretical Visibility

## Glossary of Terminology

Defined Term	Description
<b>Agreement for Lease</b>	An agreement for lease (AfL) is a non-binding agreement between a landlord and prospective tenant to grant and/or to accept a lease in the future. The AfL only gives the option to investigate a site for potential development. There is no obligation on the developer to execute a lease if they do not wish to.
<b>Applicant</b>	White Cross Offshore Windfarm Limited
<b>Commitment</b>	A term used interchangeably with mitigation. Commitments are Embedded Mitigation Measures. Commitments are either Primary (Design) or Tertiary (Inherent) and embedded within the assessment at the relevant point in the EIA (e.g., at Scoping). The purpose of commitments is to reduce and/or eliminate Likely Significant Effects (LSE's), in EIA terms.
<b>Cumulative effects</b>	The effect of the Project taken together with similar effects from a number of different projects, on the same single receptor/resource. Cumulative impacts are those that result from changes caused by other past, present or reasonably foreseeable actions together with the Project.
<b>Department for Energy Security and Net Zero (DESNZ)</b>	Government department that is responsible for business, industrial strategy, science and innovation and energy and climate change policy and consent under Section 36 of the Electricity Act.
<b>Project Design Envelope (PDE)</b>	The PDE is the spatial extent and range of design parameters within which the Onshore Project will be contained, constructed and operated. This includes the offshore export cable, the Transition Joint Bay, the onshore export cable, the White Cross Onshore Substation (and associated landscape planting and drainage), the Grid Connection Point, the temporary construction compounds, jointing bays, link boxes, access roads and haul roads, and the construction footprint relating to all of these.
<b>Development Area</b>	The area comprising the Onshore Development Area and the Offshore Development Area.
<b>Engineer, Procure, Construct and Install</b>	A common form of contracting for offshore construction. The contractor takes responsibility for a wide scope and delivers via own and subcontract resources.
<b>Environmental impact assessment</b>	Assessment of the potential impact of the proposed Project on the physical, biological and human environment during construction, operation and decommissioning.
<b>Export Cable Corridor</b>	The area in which the export cables will be laid, from the Offshore Substation Platform to the Onshore Substation comprising both the Offshore Export Cable Corridor and Onshore Export Cable Corridor.



Defined Term	Description
<b>Front end engineering and design</b>	Front-end engineering and design (FEED) studies address areas of windfarm system design and develop the concept of the windfarm in advance of procurement, contracting and construction.
<b>High Voltage Alternating Current</b>	High voltage alternating current is the bulk transmission of electricity by alternating current (AC), whereby the flow of electric charge periodically reverses direction.
<b>High Voltage Direct Current</b>	High voltage direct current is the bulk transmission of electricity by direct current (DC), whereby the flow of electric charge is in one direction.
<b>In-combination effects</b>	In-combination effects are those effects that may arise from the development proposed in combination with other plans and projects proposed/consented but not yet built and operational.
<b>Inter-array cables</b>	Cables which link the wind turbines to each other and the Offshore Substation Platform.
<b>Jointing bay</b>	Underground structures constructed at regular intervals along the Onshore Export Cable Corridor to join sections of cable and facilitate installation of the cables into the buried ducts.
<b>Landfall to MLWS</b>	Where the offshore export cables come ashore.
<b>Link boxes</b>	Underground chambers or above ground cabinets next to the cable trench housing electrical earthing links.
<b>Mean high water springs</b>	The average tidal height throughout the year of two successive high waters during those periods of 24 hours when the range of the tide is at its greatest.
<b>Mean low water springs</b>	The average tidal height throughout a year of two successive low waters during those periods of 24 hours when the range of the tide is at its greatest.
<b>Mean sea level</b>	The average tidal height over a long period of time.
<b>Mitigation</b>	<p>Mitigation measures have been proposed where the assessment identifies that an aspect of the development is likely to give rise to significant environmental impacts, and discussed with the relevant authorities and stakeholders in order to avoid, prevent or reduce impacts to acceptable levels.</p> <p>For the purposes of the EIA, two types of mitigation are defined:</p> <ul style="list-style-type: none"> <li>• Embedded mitigation: consisting of mitigation measures that are identified and adopted as part of the evolution of the project design, and form part of the project design that is assessed in the EIA</li> <li>• Additional mitigation: consisting of mitigation measures that are identified during the EIA process specifically to reduce or eliminate any predicted significant impacts. Additional mitigation is therefore subsequently adopted by WCOWL as the EIA process progresses.</li> </ul>
<b>Offshore Development Area</b>	The Windfarm Site and Offshore Export Cable Corridor to Landfall to MLWS.

<b>Defined Term</b>	<b>Description</b>
<b>Offshore export cables</b>	The cables which would bring electricity from the Offshore Substation Platform to the Landfall to MLWS.
<b>Offshore Export Cable Corridor</b>	The proposed offshore area in which the export cables will be laid, from the perimeter of the Windfarm Site to Landfall to MLWS.
<b>Offshore infrastructure</b>	All of the offshore infrastructure including wind turbines, Offshore Substation Platform(s) and all cable types.
<b>Offshore Substation Platform(s)</b>	A fixed structure located within the Windfarm Site, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
<b>Offshore Transmission Owner</b>	An OFTO, appointed in UK by Ofgem (Office of Gas and Electricity Markets), has ownership and responsibility for the transmission assets of an offshore windfarm.
<b>Onshore Development Area</b>	The onshore area above MHWS including the underground onshore export cables connecting to the Onshore Substation.
<b>Onshore Export Cables</b>	The cables which bring electricity from Landfall to MLWS to the Onshore Substation.
<b>Onshore Export Cable Corridor</b>	The proposed onshore area in which the export cables will be laid, from Landfall to MLWS to the Onshore Substation.
<b>Onshore infrastructure</b>	The combined name for all infrastructure associated with the Project from Landfall to MLWS to grid connection.
<b>White Cross Offshore Windfarm Ltd</b>	White Cross Offshore Windfarm Ltd is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd
<b>White Cross Onshore Substation</b>	A new substation built specifically for the White Cross project. It is required to ensure electrical power produced by the offshore windfarm is compliant with National Grid electrical requirements at the Grid Connection Point at East Yelland.
<b>Platform link cable</b>	This is an electrical cable which links one or more offshore platforms.
<b>Safety zones</b>	An area around a structure or vessel which should be avoided.
<b>Service operation vessel</b>	A vessel that provides accommodation, workshops and equipment for the transfer of personnel to turbine during OMS. Vessels in service today are typically up to 85m long with accommodation for about 60 people.
<b>Scour protection</b>	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
<b>Transition bay</b>	Underground structures at the Landfall to MLWS that house the joints between the offshore export cables and the onshore export cables.
<b>White Cross Offshore Windfarm</b>	Up to 100MW capacity offshore windfarm including associated onshore and offshore infrastructure.
<b>Windfarm Site</b>	The area within which the wind turbines, Offshore Substation Platform and inter-array cables will be present.

Defined Term	Description
<b>Works completion date</b>	Date at which construction works are deemed to be complete and the windfarm is handed to the operations team. In reality, this may take place over a period of time.

## 20 Onshore Landscape and Visual Amenity

### 20.1 Introduction

1. This chapter of the Environmental Statement (ES) presents the potential impacts on onshore landscape and visual amenity of the Onshore Infrastructure of the White Cross Offshore Windfarm Project (the Onshore Project) on onshore landscape and visual amenity. Specifically, it considers impacts landward of Mean Low Water Springs (MLWS) during its construction, operation and maintenance, and decommissioning phases.
2. The ES has been finalised with due consideration of pre-application consultation to date (see Chapter 7: Consultation) and the ES will accompany the application to North Devon Council (NDC) for planning permission under the Town and Country Planning Act 1990.
3. The components of the White Cross Offshore Windfarm Project seaward of MHWS (‘the Offshore Project’) are subject to a separate application for consent under Section 36 of the Electricity Act 1989, and for Marine Licences under the Marine and Coastal Access Act 2009. These applications are supported by a separate ES covering all potential impacts seaward of MHWS.
4. This assessment has been undertaken with specific reference to the relevant policy, legislation, and guidance, which are summarised in Section 20.2 of this chapter. Further information on the international, national, and local planning policy and legislation relevant to the Onshore Project is provided in Chapter 3: Policy and Legislative **Context**.
5. Details of the methodology used for the Environmental Impact Assessment (EIA) and Cumulative Effect Assessment (CEA), are presented in **Section 20.4** of this chapter and **Chapter 6: EIA Methodology** and **Appendix 20.A: Methodology**.
6. This assessment has been informed by impacts assessed in **Chapter 16: Onshore Ecology and Ornithology** and **Chapter 17: Onshore Archaeology and Cultural Heritage** and impacts assessed in this chapter informs the following linked ES chapters:
  - **Chapter 16: Onshore Ecology and Ornithology**
  - **Chapter 17: Onshore Archaeology and Cultural Heritage**.
7. Inter-relationships with these chapters is further described in **Section 20.13**.

8. Additional information to support the Landscape and Visual Impact Assessment (LVIA) includes a detailed methodology, as presented in **Appendix 20.A: Methodology**; **Appendix 20.B: LVIA Figures and Visualisations**; and **Appendix 20.C: Illustrative Viewpoint Photographs**.
9. This ES chapter:
  - Presents the existing environmental baseline established from desk studies, field work, and consultation
  - Presents the potential environmental effects on onshore landscape and visual amenity arising from the Onshore Project, based on the information gathered and the analysis and assessments undertaken
  - Identifies any assumptions and limitations encountered in compiling the environmental information
  - Highlights any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce, or offset the possible environmental effects identified in the EIA process.

## 20.2 Policy, Legislation and Guidance

10. **Chapter 3: Policy and Legislative Context** describes the wider policy and legislative context for the Onshore Project. The principal policy and legislation used to inform the assessment of potential impacts on onshore landscape and visual amenity for the Onshore Project are outlined in this section.

### 20.2.1 National Planning Policy Framework

11. The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, updated July 2021) is the primary source of national planning guidance in England. Sections relevant to this aspect of the ES are summarised below in **Table 20.1**.

*Table 20.1 Summary of NPPF Policy relevant to Onshore Landscape and Visual Amenity*

Summary	How and where this is considered in the ES
<p><i>"Planning policies and decisions should contribute to and enhance the natural and local environment by:</i></p> <p><i>a) protecting and enhancing valued landscapes, sites of biodiversity or geological</i></p>	<p>The value of the landscape resource is considered in in <b>Section 20.9.1 to 20.9.6</b> of this chapter.</p>

Summary	How and where this is considered in the ES
<p><i>value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)</i></p> <p><i>b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services - including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland</i></p> <p><i>c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate</i></p> <p><i>d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures” NPPF Paragraph 174</i></p>	<p>The mitigation of landscape and visual effects through good design is considered within the LVIA. See <b>Section 20.4.4</b>.</p> <p>Provision for biodiversity and ecological networks is outlined in the OLEMP (<b>Figure 20.13</b>).</p>
<p>“Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.” NPPF Paragraph 175</p>	<p>The LVIA includes consideration of effects on landscape character including landscape designations.</p> <p>Effects on landscape character and landscape designations are assessed in <b>Section 20.9.6</b> of this chapter.</p>
<p><i>“Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks. Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to</i></p>	<p>The LVIA includes consideration of effects on landscape character including landscape designations.</p> <p>Effects on landscape character and landscape designations are assessed in <b>Section 20.9.1 to 20.9.6</b> of this chapter.</p>

Summary	How and where this is considered in the ES
<i>those of a higher quality.” NPPF Paragraph 176</i>	

## 20.2.2 Local Policies

12. This section considers local policies and their relevance to Onshore Landscape and Visual Amenity. A summary of the local policies is provided in **Table 20.2**.

*Table 20.2 Local Policies Relevant to Onshore Landscape and Visual Amenity*

Policy Name	Summary	How and where this is considered in the ES
<p><b>North Devon and Torridge Local Plan 2011-2031 (NDTLP)</b></p> <p><b>Policy ST02: Mitigating Climate Change</b></p>	<p>“Development will be expected to make a positive contribution towards the social, economic and environmental sustainability of northern Devon and its communities while minimising its environmental footprint by:</p> <p>(a) reducing greenhouse gas emissions by locating development appropriately and achieving high standards of design.</p> <p>(b) conserving and enhancing the natural, built and historic environment through the prudent use of key resources including land, buildings and energy, whilst protecting and enhancing the area’s biodiversity, geodiversity, landscape, coastline, air, water, archaeology and culture;”</p>	<p>The evolution of the design is set out <b>Chapter 4: Site Selection and Assessment of Alternatives</b> and <b>Chapter 5: Project Description</b>.</p> <p>How the design has evolved in relation to potential landscape and visual impacts is included in <b>Section 20.4.4</b> of this LVIA and in the <b>Substation Design Code (Design and Access Statement: Appendix B)</b></p> <p>The potential impacts of the Onshore Infrastructure on the landscape are considered in <b>Section 20.9.1 to 20.9.6</b> of this chapter.</p>
<p><b>NDTLP Policy ST03: Adapting to Climate Change and Strengthening Resilience</b></p>	<p>“Development should be designed and constructed to take account of the impacts of climate change and minimise the risk to and vulnerability of people, land, infrastructure and property by:</p> <p>(i) conserving and enhancing landscapes and networks of habitats,</p>	<p>The value of the landscape resource is considered in <b>Section 20.9.1 to 20.9.6</b> of this chapter.</p> <p>The mitigation of landscape and effects through good design is</p>



Policy Name	Summary	How and where this is considered in the ES
	<p>including cross boundary green infrastructure links, strengthening the resilience of biodiversity to climate change by facilitating migration of wildlife between habitats and improving their connectivity;</p> <p>(j) protecting and integrating green infrastructure into urban areas, improving access to natural and managed green space; and</p> <p>(k) promoting the potential contribution from ecosystem services that support adaptation to climate change.”</p>	<p>considered within the LVIA. See <b>Section 20.4.4</b>.</p> <p>Provision for biodiversity and ecological networks is outlined in the OLEMP (<b>Figure 20.13</b>).</p>
<p><b>NDTLP Policy ST04: Improving the Quality of Development</b></p>	<p>“Development will achieve high quality inclusive and sustainable design to support the creation of successful, vibrant places. Design will be based on a clear process that analyses and responds to the characteristics of the site, its wider context and the surrounding area taking full account of the principles of design found in policy DM04.”</p>	<p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure and <b>Section 20.10</b> reports the visual effects.</p>
<p><b>NDTLP Policy ST09: Coast and Estuary Strategy</b></p>	<p>“The Coastal and Estuarine Zone is identified on the Policies Map where:</p> <p>(1) The sustainability of coastal communities will be maintained and enhanced with regard to their distinctive cultural heritage, diverse maritime economy, landscape setting and regeneration opportunities. The separate identity of these settlements will be maintained and enhanced...</p> <p>(5) The integrity of the coast and estuary as an important wildlife corridor will be protected and enhanced. The importance of the undeveloped coastal, estuarine and marine environments, including the</p>	<p>The LVIA includes consideration of effects on landscape character including landscape designations such as the North Devon Coast Area of Outstanding Natural Beauty (NDCAONB).</p> <p>Effects on landscape character and landscape designations are assessed in <b>Section 20.9.6</b> of this chapter.</p>



Policy Name	Summary	How and where this is considered in the ES
	<p>North Devon Coast Areas of Outstanding Natural Beauty, will be recognised through supporting designations, plans and policies. The undeveloped character of the Heritage Coasts will be protected...</p> <p>(7) Development within the Undeveloped Coast and estuary will be supported where it does not detract from the unspoilt character, appearance and tranquillity of the area, nor the undeveloped character of the Heritage Coasts, and it is required because it cannot reasonably be located outside the Undeveloped Coast and estuary...</p> <p>(10) Delivery of onshore facilities for operational servicing of offshore renewable energy proposals will be facilitated in existing ports and at existing jetties and wharves where they:</p> <p>(a) do not harm identified environmental and heritage assets; and</p> <p>(b) do not prejudice the current operational effectiveness of the port.”</p>	
<p><b>NDTLP Policy ST14: Enhancing Environmental Assets</b></p>	<p>“The quality of northern Devon’s natural environment will be protected and enhanced by ensuring that development contributes to:</p> <p>(a) providing a net gain in northern Devon’s biodiversity where possible, through positive management of an enhanced and expanded network of designated sites and green infrastructure, including retention and enhancement of critical environmental capital</p>	<p>The LVIA includes consideration of effects on landscape character including landscape designations.</p> <p>Effects on landscape character and landscape designations are assessed in <b>Section 20.9.6</b> of this chapter.</p> <p>The mitigation of landscape and effects through good design is</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>(b) protecting the hierarchy of designated sites in accordance with their status</p> <p>(c) conserving European protected species and the habitats on which they depend</p> <p>(d) conserving northern Devon’s geodiversity and its best and most versatile agricultural land</p> <p>(e) conserving the setting and special character and qualities of the North Devon Coast Areas of Outstanding Natural Beauty whilst fostering the social and economic well being of the area</p> <p>(f) ensuring development conserves and enhances northern Devon’s local distinctiveness including its tranquillity, and the setting and special qualities of Exmoor National Park including its dark night skies</p> <p>(g) protecting and enhancing local landscape and seascape character, taking into account the key characteristics, the historical dimension of the landscape and their sensitivity to change</p> <p>(h) recognising the importance of the undeveloped coastal, estuarine and marine environments through supporting designations, plans and policies that aim to protect and enhance northern Devon’s coastline</p> <p>(i) conserving and enhancing the robustness of northern Devon’s ecosystems and the range of ecosystem services they provide</p>	<p>considered within the LVIA. See <b>Section 20.4.4.</b></p> <p>Provision for biodiversity and ecological networks is outlined in the OLEMP (<b>Figure 20.13</b>).</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>(j) increasing opportunities for access, education and appreciation of all aspects of northern Devon’s environment, for all sections of the community</p> <p>(k) meeting the Nature Improvement Area's strategic objectives</p> <p>(l) improving failing water bodies and preventing deterioration of water quality.”</p>	
<p><b>NDTLP Policy ST15: Conserving Heritage Assets</b></p>	<p>“Great weight will be given to the desirability of preserving and enhancing northern Devon's historic environment by:</p> <p>(a) conserving the historic dimension of the landscape</p> <p>(b) conserving cultural, built, historic and archaeological features of national and local importance and their settings, including those that are not formally designated</p> <p>(c) identifying and protecting locally important buildings that contribute to the area’s local character and identity</p> <p>(d) increasing opportunities for access, education and appreciation of all aspects of northern Devon’s historic environment, for all sections of the community.”</p>	<p><b>Chapter 17: Onshore Archaeology and Cultural Heritage</b> considers the effects of the Onshore Infrastructure on the historic environment and cultural heritage assets.</p> <p>The LVIA considers the historic dimension of the landscape insofar as it contributes to the value of the modern-day landscape, which is considered in <b>Section 20.9.6</b> of this chapter.</p> <p>Cultural heritage receptors may also be considered as visual receptors as places of interest for members of the public, which is considered in the baseline in <b>Section 20.5</b>.</p>
<p><b>NDTLP Policy DM04: Design Principles</b></p>	<p>“(1) Good design seeks to guide overall scale, density, massing, height, landscape, layout, materials, access and appearance of new development. It seeks not just to manage land use but support the creation of successful places and respond to the challenges of climate change. Development proposals need</p>	<p>The evolution of the design is set out <b>Chapter 4: Site Selection and Assessment of Alternatives</b> and <b>Chapter 5: Project Description</b>.</p> <p>How the design has evolved in relation to landscape impacts is</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>to have regard to the following design principles:</p> <p>(a) are appropriate and sympathetic to setting in terms of scale, density, massing, height, layout appearance, fenestration, materials and relationship to buildings and landscape features in the local neighbourhood</p> <p>(b) reinforce the key characteristics and special qualities of the area in which the development is proposed</p> <p>(d) contribute positively to local distinctiveness, historic environment and sense of place</p> <p>(e) create inclusive environments that are legible, connected and facilitate the ease of movement and permeability through the site, allowing everyone to easily understand and find their way around</p> <p>(f) retain and integrate existing landscape features and biodiversity to enhance networks and promote diversity and distinctiveness of the surrounding area</p> <p>(g) provide public and private spaces that are well designed, safe, attractive and complement the built form, designed to minimise anti-social and criminal behaviour</p> <p>(h) provide safe and appropriate highway access and incorporate adequate well-integrated car parking, pedestrian and cycle routes and facilities</p>	<p>included in <b>Section 20.4.4</b> of this LVIA.</p> <p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure.</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>(i) ensure the amenities of existing and future neighbouring occupiers are safeguarded</p> <p>(l) create and sustain an appropriate mix of uses and support local facilities and transport networks</p> <p>(n) provide effective water management including Sustainable Drainage Systems, water efficiency measures and the reuse of rainwater.”</p>	
<p><b>NDTLP Policy DM08A: Landscape and Seascape Character</b></p>	<p>“(1) Development should be of an appropriate scale, mass and design that recognises and respects landscape character of both designated and undesignated landscapes and seascapes; it should avoid adverse landscape and seascape impacts and seek to enhance the landscape and seascape assets wherever possible. Development must take into account and respect the sensitivity and capacity of the landscape/seascape asset, considering cumulative impact and the objective to maintain dark skies and tranquillity in areas that are relatively undisturbed, using guidance from the Joint Landscape and Seascape Character Assessments for North Devon and Torridge.</p> <p>Development within or affecting the setting of the North Devon Coast AONB or affecting the setting of Exmoor National Park</p> <p>(2) Great weight will be given to conserving the landscape and scenic beauty of designated landscapes and their settings. Proposals affecting the North Devon Coast Area of Outstanding Natural Beauty (AONB) or Exmoor National Park or their</p>	<p>How the design has evolved in relation to landscape impacts is included in <b>Section 20.4.4</b> of this LVIA.</p> <p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure.</p> <p>The LVIA includes consideration of effects on landscape character including landscape designations.</p> <p>Effects on landscape character and landscape designations are assessed in <b>Section 20.9.6</b> of this chapter.</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>settings should have regard to their statutory purposes including to ensure that their landscape character and natural beauty are conserved and enhanced. Development should be appropriately located to address the sensitivity and capacity of these designated areas and will not be permitted where it would conflict with the achievement of their statutory purposes.</p> <p>(3) Proposals within or affecting the setting of the AONB should be informed by, and assist in the delivery of, the North Devon Coast Area of Outstanding Natural Beauty Management Plan. Major development within the AONB will be refused subject to the tests of exceptional circumstances and where it can be demonstrated that the development is in the public interest as set out in national policy.</p> <p>Heritage Coast</p> <p>(4) Development within the Heritage Coast should maintain the character and distinctive landscape qualities of the area.”</p>	
<p><b>Braunton Neighbourhood Plan (BNP) NE4: Protecting Devon Banks, Hedgerows and Trees</b></p>	<p>Proposals for development which have an adverse impact on traditional Devon hedges, established hedgerows, banks and treelines should demonstrate that:</p> <p>i) Alternative options are impractical and the proposal is the least damaging option (to the hedgerow/bank, setting in the landscape, biodiversity and habitats)</p> <p>ii) They have taken the most up to date Highways Authority standards</p>	<p>How the design has evolved in relation to landscape impacts is included in <b>Section 20.4.4</b> of this LVIA.</p> <p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure.</p> <p>The LVIA includes consideration of effects on physical landscape</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>and guidance relating to changes to hedgerows</p> <p>iii) Existing trees will be protected from loss for the contribution they make to reducing air pollution, softening the urban aspects of the parish, providing shade in the summer (natural environmental cooling), and biodiversity</p> <p>iv) Where the loss of a tree, trees and/or hedgerows and/or banks is unavoidable proposals should replace these features to an equivalent scale, effect or massing to ensure at a minimum 10% net gain to local biodiversity on site or within close proximity within the parish if onsite mitigation is not feasible. Any proposed hedgerow mitigation or enhancement should be in line with guidance provided by the Devon Hedges Organisation.  <a href="https://devonhedges.org/wp-content/uploads/2015/11/8_Hedge-Creation-1.pdf">https://devonhedges.org/wp-content/uploads/2015/11/8_Hedge-Creation-1.pdf</a></p>	<p>features, including as hedgerows and trees.</p> <p>Effects on physical landscape features are assessed in <b>Section 20.9.1</b> and <b>20.9.2</b> of this chapter.</p>
<p><b>BNP Policy NE6: Protection of Landscape Character</b></p>	<p>The landscape and characteristics of the natural and built environments come together to frame or create views and vistas within Braunton Parish. The landscapes identified within the Parish Character Assessment as being of particular significance will be protected from any adverse impact of new development that would detract from or obstruct them. Details of these significant landscapes can be found in the Appendix Natural Environment section.</p> <p>Development proposals will need to demonstrate that their design, scale, height and mass does not adversely</p>	<p>How the design has evolved in relation to landscape impacts is included in <b>Section 20.4.4</b> of this LVIA.</p> <p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure.</p> <p>The LVIA includes consideration of effects on landscape character including landscape designations.</p> <p>Effects on landscape character and landscape designations are</p>

Policy Name	Summary	How and where this is considered in the ES
	<p>impact these landscapes, and positively enhances them where possible.</p>	<p>assessed in <b>Section 20.9.6</b> of this chapter.</p> <p><b>Section 20.4.4</b> of this LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure and <b>Section 20.10</b> assesses visual impacts, which includes consideration of the views and visual amenity within the BNP area.</p> <p>The mitigation of landscape and visual effects through good design is considered within the LVIA. See <b>Section 20.4.4</b>.</p>

### 20.2.3 National Policy Statement

13. The assessment of potential impacts upon landscape and visual amenity has been made with specific reference to the relevant National Policy Statement (NPS). NPSs are statutory documents which set out the government's policy on specific types of Nationally Significant Infrastructure Projects (NSIPs) and are published in accordance with the Planning Act 2008.
14. Although the Offshore Project is not an NSIP, it is recognised that due to its size of up to 100MW and its location in English waters, certain NPS are considered relevant to the Offshore Project. Therefore, to align with the approach to the assessment of the Offshore Project, certain NPS are will also be considered as part of the Onshore Project.
15. Those relevant to onshore landscape and visual amenity are set out within the overarching NPS for Energy (EN-1), NPS for Renewable Energy Infrastructure (EN-3) and NPS for Electricity Networks Infrastructure (EN-5), which are summarised in **Table 20.3**.
16. It is noted that the NPS for Energy (EN-1), the NPS for Renewable Energy Infrastructure (EN-3) and the NPS for Electricity Networks Infrastructure (EN-5) are in the process of being revised. Draft versions were published for consultation in



September 2021 (Department for Business Energy and Industrial Strategy (BEIS), (2021a), BEIS, (2021b) and BEIS (2021c) respectively). A review of these draft versions has been undertaken in the context of this ES chapter.

17. **Table 20.3** includes a section for the draft version of NPS (EN-1, EN-3, and EN-5) in which relevant additional NPS requirements not presented within the current NPS (EN-1, EN-3, and EN-5) have been included. A reference to the requirement's location within the draft NPS and to where within this ES chapter or wider ES it has been addressed has also been provided.
18. Minor wording changes within the draft version which do not materially influence the NPS (EN-1, EN-3, EN-5) requirements have not been reflected in **Table 20.3**.

*Table 20.3 Summary of NPS EN-1, and EN-3 provisions relevant to Onshore Landscape and Visual Amenity*

<b>Summary</b>	<b>How and where this is considered in the ES</b>
<b>NPS EN-1 National Policy Statement for Energy</b>	
<p><i>"when considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)."</i> – <b>EN-1 Paragraph 4.2.5</b></p>	<p>Cumulative landscape and visual effects of the onshore infrastructure considered in <b>Section 20.11</b>.</p>
<p><i>"In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case."</i> – <b>EN-1 Paragraph 4.2.7</b></p>	<p><b>Chapter 5: Project Description</b>, sets out the details of the Onshore Project and which areas are and are not settled in precise detail.</p>
<p><i>"Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed"</i> <b>EN-1 Paragraph 4.2.8</b></p>	<p><b>Section 20.4.3</b> sets out the maximum design parameters (the 'Worst Case Scenario' (Worst Case Scenario) that have been defined to ensure that the worst-case landscape and visual effects are assessed.</p>

Summary	How and where this is considered in the ES
<p><i>"The visual appearance of a building is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important. Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area."</i> – <b>EN-1 Paragraph 4.5.1</b></p>	<p><b>Chapter 5: Project Description</b> sets out how the Onshore Project responds to these criteria.</p> <p><b>Section 20.4.4</b> of this LVIA sets out the embedded mitigation that is included for the Onshore Infrastructure and <b>Section 20.10</b> assesses visual impacts.</p>
<p><i>"applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy."</i> – <b>EN-1 Paragraph 4.5.4</b></p>	<p>The evolution of the design is set out <b>Chapter 4: Site Selection and Assessment of Alternatives</b> and <b>Chapter 5: Project Description</b>.</p> <p>How the design has evolved in relation to landscape impacts is included in <b>Section 20.9.1</b> of this chapter.</p> <p>The duration of LVIA effects is explained in <b>Section 20.4</b>.</p>
<p><i>"The landscape and visual effects of energy projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. In this context, references to landscape should be taken as covering seascape and townscape where appropriate."</i> <b>EN-1 Paragraph 5.9.1</b></p>	<p>The varied nature of landscape and visual receptors is explained in <b>Section 20.4</b>, and in the baseline in <b>Section 20.5</b>.</p>
<p><i><b>NPS EN-1 at Paragraph 5.9.12 advises that the "duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have</b></i></p>	<p>The effect on the NDCAONB is assessed in <b>Section 20.9.6</b>.</p>

Summary	How and where this is considered in the ES
<p><i>impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.” ... and paragraph 5.9.13 advises that “The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent”.</i></p>	
<p><i>“The applicant should carry out a landscape and visual assessment and report it in the ES. (See Section 4.2) A number of guides have been produced to assist in addressing landscape issues<sup>125</sup>. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant’s assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales...<sup>125</sup> Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition): Guidelines for Landscape and Visual Impact Assessment; and Land Use Consultants (2002): Landscape Character Assessment – Guidance for England and Scotland: Countryside Council for Wales/Cadw (2007) Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process.”EN-1 Paragraph 5.9.5</i></p>	<p>Since NPS EN-1 was published the Guidelines for Landscape and Visual Impact Assessment’ (GLVIA) (2002, 2nd edition) has been superseded by GLVIA Version 3. Reference is made to the updated GLVIA Version 3 and Landscape Character Assessment – Guidance for England and Scotland in <b>Section 20.4</b>, along with more recent reference documents, relevant to LVIA.</p> <p>Published landscape character assessments and associated studies for the study area are referred to in <b>Section 20.4.5</b> of this chapter.</p>
<p><i>“The assessment should include the visibility and conspicuousness of the project during its construction and operation and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.”EN-1 Paragraph 5.9.6</i></p>	<p>The visual effects resulting from the Onshore Infrastructure during construction and operation are assessed in the LVIA in <b>Section 20.10</b>.</p>
<p><i>“Landscape effects depend on the existing character of the local landscape, its current quality how highly it is valued and its capacity to accommodate change. All of these factors need</i></p>	<p>The quality, value and capacity of the landscape to accommodate change are considerations of the landscape assessment set out in <b>Section 20.9.1</b></p>

Summary	How and where this is considered in the ES
<p><i>to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.</i> <b>EN-1 Paragraph 5.9.8</b></p>	<p>to <b>20.11.3</b> where they inform the assessment of effects of the Onshore Infrastructure on the landscape.</p> <p>The design of the Onshore Infrastructure has considered and addressed the potential effects on landscape in order to minimise potentially significant effects through mitigation. See <b>Section 20.4.4</b> of this chapter.</p>
<p><i>"Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development."</i> <b>EN-1 Paragraph 5.9.14</b></p>	<p>The value of the local landscape is a consideration within the LVIA. See <b>Section 20.9.1 to 20.9.6</b>.</p>
<p><i>"The IPC [now the Planning Inspectorate and the Secretary of State] should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation."</i> <b>EN-1 Paragraph 5.9.17</b></p>	<p><b>Chapter 4: Site Selection and Assessment of Alternatives</b> sets out the iterative process that has influenced the design of the Onshore Infrastructure. The mitigation of landscape effects set out in <b>Section 20.4.4</b> has been considered in the LVIA, to minimise 'harm to the landscape' where possible.</p>
<p><i>"The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast."</i> <b>EN-1 Paragraph 5.9.17</b></p>	<p>The visual effects resulting from the Onshore Infrastructure during construction and operation are assessed in the LVIA in <b>Section 20.10</b>.</p>
<p><i>"Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a</i></p>	<p>The balance between mitigation of visual and landscape effects and significant operational constraints / reduction in</p>

Summary	How and where this is considered in the ES
<p><i>significant operational constraint and reduction in function – for example, the electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.</i> <b>EN-1 Paragraph 5.9.21</b></p>	<p>function is considered in <b>Section 20.4.4</b></p>
<p><i>"Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration."</i> <b>EN-1 Paragraph 5.9.22</b></p>	<p>As described in <b>Chapter 5: Project Description</b>, the refinement of the Onshore Infrastructure has been carefully considered alongside the potential for landscape and visual effects and mitigation. See also <b>Section 20.4.4</b>.</p>
<p><b>NPS EN-3 National Policy Statement for Renewable Energy Infrastructure</b></p>	
<p><i>"Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology."</i> <b>EN-3 Paragraph 2.4.2</b></p>	<p>The mitigation of landscape and visual effects through good design is considered within the LVIA. See <b>Section 20.4.4</b>.</p>
<p><i>"Owing to the complex nature of offshore wind farm development, many of the details of a proposed scheme may be unknown to the applicant at the time of the application to the IPC, possibly including...</i></p> <ul style="list-style-type: none"> <li>• <i>cable type and cable route; and</i></li> <li>• <i>exact locations of offshore and/or onshore substations.</i></li> </ul> <p><i>Where some details have not been included in the application to the IPC, the applicant should explain which elements of the scheme have yet to be finalised, and the reasons. Therefore, some flexibility may be required in the consent. Where this is sought and the precise details are not known, then the applicant should assess the effects the project could have (as set out in <b>EN-1 paragraph 4.2.8</b>) to ensure that the project as</i></p>	<p><b>Section 20.4.3</b> sets out the parameters that have been defined to ensure that the worst-case landscape and visual effects are assessed.</p>



Summary	How and where this is considered in the ES
<p><i>it may be constructed has been properly assessed (the Rochdale Envelope). In this way the maximum adverse case scenario will be assessed and the IPC should allow for this uncertainty in its consideration of the application and consent."</i></p> <p><b>EN-3 Paragraph 2.6.42 and 2.6.43</b></p>	
<p><b>NPS EN-5 National Policy Statement for Electricity Networks Infrastructure</b></p>	
<p><i>"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."</i></p> <p><b>EN-5 Paragraph 2.11.5</b></p>	<p>Once installed, during its operational phase, the proposed Onshore Export Cable Corridor is to be underground. The LVIA has considered the effects of the Onshore Export Cable Corridor and Onshore Substation in <b>Sections 20.7</b> and <b>20.8</b>.</p>
<p><i>"Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure."</i></p> <p><b>EN-5 Paragraph 2.11.5</b></p>	<p>Reconfiguration of the existing electricity network infrastructure is considered, where relevant, in <b>Sections 20.7</b> and <b>20.8</b>.</p>
<p><b>NPS EN-1 (Draft)</b></p>	
<p><i>"the Secretary of State should be satisfied that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process."</i></p> <p><b>EN-1 Draft Paragraph 4.6.3</b></p>	<p><b>Chapter 4: Site Selection and Assessment of Alternatives</b> and <b>Chapter 5: Project Description</b>, sets out how the Onshore Infrastructure has considered and balanced these criteria.</p> <p><b>Section 20.4.4</b> of this chapter sets out the embedded mitigation that is included for the Onshore Infrastructure and <b>Section 20.10</b> assesses visual impacts.</p>

Summary	How and where this is considered in the ES
<p><i>"For the Secretary of State to consider the proposal for a project, applicants should be able to demonstrate in their application documents, how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process. The Secretary of State will consider such impacts under the relevant policies in this NPS. Assessment of impacts must be for the stated design life of the scheme rather than a shorter time period."</i><b>EN-1 Draft Paragraph 4.6.4</b></p>	<p>The evolution of the design is set out <b>Chapter 4: Site Selection and Assessment of Alternatives</b> and <b>Chapter 5: Project Description</b>.</p> <p>How the design has evolved in relation to potential landscape and visual impacts is included in <b>Section 20.4.4</b> of this LVIA.</p> <p>The duration of LVIA effects is explained in <b>Section 20.4</b>.</p>
<p><i>"The applicant should carry out a landscape and visual assessment and report it in the ES (see Section 4.2). A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales. For seascapes, applicants should consult the Seascape Character Assessment and the Marine Plan Seascape Character Assessments, and any successors to them."</i><b>EN-1 Draft Paragraph 5.10.5</b></p>	<p>Published landscape and seascape character assessments and associated studies for the study area are referred to in <b>Sections 20.4.5</b> and <b>Section 20.5</b>.</p>
<p><i>"The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and</i></p>	<p>The LVIA assesses effects at each of these development stages as highlighted in <b>Section 20.7</b> and <b>Section 20.8</b>.</p>

Summary	How and where this is considered in the ES
<p>landscape character.” <b>EN-1 Draft Paragraph 5.10.6</b></p>	
<p>“The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views, will be minimised.” <b>EN-1 Draft Paragraph 5.10.8</b></p>	<p>The mitigation of landscape and visual effects through good design is considered within the LVIA. See <b>Section 20.4.4.</b></p>
<p>“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.” <b>EN-1 Draft Paragraph 5.10.8</b></p>	<p>The Outline Landscape and Ecological Management Plan (OLEMP) (<b>Figure 20.13</b>) provides longer term outline landscape and habitat management of the Onshore Substation.</p>
<p><b>NPS EN-5 (Draft)</b></p>	
<p>“New substations, sealing end compounds, and other above-ground installations that serve as connection, switching, and voltage transformation points on the electricity network may also give rise to adverse landscape and visual impacts. Nonetheless, government does not believe that the development of these installations is incompatible in principle with developers’ statutory duty under Schedule 9 of the Electricity Act 1989.” <b>EN-5 Draft Paragraph 2.11.3</b></p>	<p>Once installed, during its operational phase, the proposed Onshore Export Cable Corridor is to be underground. The LVIA has considered the effects of the Onshore Export Cable Corridor and Onshore Substation in <b>Sections 20.7</b> and <b>20.8.</b></p>
<p>“Cumulative adverse landscape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, wind farms, and/or other new sources of generation.” <b>EN-5 Draft Paragraph 2.11.4</b></p>	<p>Cumulative landscape and visual effects of the Onshore Infrastructure are considered in <b>Section 20.11.</b></p>
<p>“Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure.” <b>EN-5 Draft Paragraph 2.11.5</b></p>	<p>Once installed, during its operational phase, the proposed Onshore Export Cable Corridor is to be underground. The LVIA has considered the effects of the Onshore Export Cable Corridor and Onshore Substation in <b>Sections 20.7</b> and <b>20.8.</b></p>
<p>“Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it</p>	<p><b>Section 20.4.4</b> of the LVIA sets out the embedded mitigation that is included for</p>



Summary	How and where this is considered in the ES
<p><i>may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for the infrastructure. However, in nationally designated landscapes (for instance, National Parks and Areas of Outstanding Natural Beauty) even residual impacts may well make an overhead line proposal unacceptable in planning terms.”</i><b>EN-5 Draft Paragraph 2.11.6</b></p>	<p>the Onshore Infrastructure and <b>Section 20.10</b> reports the visual impacts.</p>

## 20.2.4 Legislation

19. Due to the potential impact of the Onshore Infrastructure on an Area of Outstanding Natural Beauty (AONB) the overarching legislation associated with that designation is included in **Table 20.4**.

*Table 20.4 Summary of Legislation Relevant to Onshore Landscape and Visual Amenity*

Summary	How and where this is considered in the ES
<b>National Parks and Access to the Countryside Act 1949</b>	
<p>Provided the framework for the establishment of National Parks and AONBs and sets out their purpose of conserving and enhancing natural beauty, wildlife and cultural heritage of National Parks and of promoting opportunities for the understanding and enjoyment of the special qualities of those Parks by the public.</p>	<p>The effect on the North Devon Coast Area of Outstanding Natural Beauty (NDCAONB) is assessed in <b>Section 20.9.6</b>.</p>
<b>Countryside and Rights of Way Act 2000 (CRoW)</b>	
<p>Introduces provisions to help secure the better management and protection of AONBs. It requires the preparation and publication of a management plan for every AONB. It also places a duty on ‘relevant authorities’ when exercising or performing any function in relation to, or so as to affect, land in an AONB, to have regard to the purpose of conserving and enhancing the natural beauty of the AONB.</p>	<p>The effect on the North Devon Coast Area of Outstanding Natural Beauty (NDCAONB), with reference to the current Management Plan, is assessed in <b>Section 20.9.6</b>.</p>

## 20.3 Guidance

20. In demonstrating adherence to industry good practice, this chapter has been compiled in accordance with the following relevant standards and guidance:
- Landscape Institute and IEMA (2013) – Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA3)
  - Natural England (2014). An Approach to Landscape Character Assessment
  - Planning Inspectorate (2018) Advice Note Nine: Rochdale Envelope
  - Planning Inspectorate (2019). Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects – Version 2
  - NatureScot (2021). Assessing the Cumulative Impact of Onshore Wind Energy Developments
  - Landscape Institute (2019). Visual Representation of Development Proposals.
21. Although some of this guidance is from publications by bodies located in other UK nations it is commonly drawn on for work carried out in England where no equivalent guidance exists.
22. The preparation of visual representations accords with the Landscape Institute (2019) Visual Representation of Development Proposals, which has been agreed with stakeholders as part of the LVIA Expert Topic Group (ETG) consultation on 2<sup>nd</sup> November 2022.

## 20.4 Assessment Methodology

23. The full assessment methodology is provided in **Appendix 20.A: Methodology**.

### 20.4.1 Study Area

24. Details of the location of the Onshore Infrastructure are set out within **Chapter 5: Project Description**.
25. The LVIA study area is defined by professional judgement as a limit beyond which it would be unlikely for significant effects to arise on onshore landscape and visual amenity from all the Onshore Infrastructure (i.e., Landfall to MLWS, Onshore Export Cable, and Onshore Substation) on the location of any receptors that may be impacted. The extent of the LVIA study area is informed by professional judgement, knowledge of similar projects, an understanding of the landscape character/topography and visibility within the local landscape and understanding of the proposed onshore infrastructure.

26. The study area for the LVIA of the Landfall to MLWS and Onshore Export Cable Corridor extends to cover a 1km buffer (**Figure 20.1**). The Onshore Export Cable Corridor width is 30m, which would be located within the Onshore Development Area. The Onshore Export Cable Corridor widens in places due to access, trenchless crossings, and at Landfall to MLWS, and therefore the study area is wider in those areas.
27. The study area for the LVIA of the Onshore Substation extends to a radius of 3km (**Figure 20.1**). This radius has been informed by the Zone of Theoretical Visibility (ZTV) (**Figure 20.7** and **Figure 20.8**).
28. Together, these composite study areas form the LVIA study area for the Onshore Infrastructure.

## 20.4.2 Approach to Assessment

29. The assessment methodology for LVIA differs with that presented in in **Chapter 6: EIA Methodology**.
30. The LVIA has been undertaken in accordance with the Landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> Edition (GLVIA3) and other best practice guidance. An overview of the LVIA process is provided here.
31. The LVIA predicts, describes, and assesses the likely significant effects that the Onshore Infrastructure will have on the landscape and visual resource, and covers the following types of effect which may arise during construction, decommissioning, or operation of the Onshore Infrastructure.
32. Landscape effects potentially arise from the introduction of new onshore components and features which may be visible and may therefore affect the perceived character of the landscape. This may also include effects on designated landscapes.
33. GLVIA 3, paragraph 5.4, advises that Landscape Character Assessment should be regarded as the main source for baseline studies and identifies the following factors which combine to create areas of distinct landscape character "*the elements that make up the landscape in the study area including:*
  - physical influences – geology, soils, landform, drainage and water bodies

- the aesthetic and perceptual aspects of the landscape – such as, its scale, complexity, openness, tranquillity or wilderness
  - landcover, including different types of vegetation and patterns and types of tree cover
  - the influence of human activity, including land use and management, the character of settlements and buildings, and pattern and type of fields and enclosure.”
34. The overall character of the landscape in the study area, including any distinctive Landscape Character Types or Areas that can be identified, and the particular combinations of elements and aesthetic and perceptual aspects that make each distinctive, usually by identification as key characteristics of the landscape.”
35. Visual effects potentially arise from the introduction of the Onshore Infrastructure in views and the resultant effects on visual amenity experienced by people from representative viewpoints and principal visual receptors, for example groups of people, such as within settlements, using transport routes or recreational trails.
36. In addition to the above, cumulative effects may arise where the study areas for two or more projects overlap so that they are experienced at a proximity where they may have a greater incremental effect, or where projects may combine to have a sequential effect. The LVIA assesses the cumulative effects that would arise through the development of the Onshore Infrastructure.
37. Field survey work was undertaken during periods of clear visibility in September 2022 and March 2023. This has allowed the landscape character and the visual amenity of the study area to be experienced in a range of different conditions and seasonal variation. Field surveys were carried out throughout the LVIA study area from publicly accessible locations.
38. For the Onshore Substation, the focus is on the areas shown on the ZTVs to have theoretical visibility (**Figure 20.7** and **Figure 20.8**).
39. For the proposed Onshore Infrastructure, the focus of the field survey is on the landscape, which is physically impacted, although visibility of these elements is also considered in the 1km Onshore Export Cable Corridor study area as part of the wider field survey analysis and is supported through the use of Illustrative Viewpoint Photographs (**Appendix 20.C: Illustrative Viewpoint Photographs**). The field survey allows the assessor to judge the likely scale, distance, extent, and prominence of the Onshore Infrastructure directly.

40. The landscape of the area surrounding the proposed Onshore Infrastructure has been assessed for any particular features that contribute to landscape character or that are important to the wider landscape setting. The field surveys provided an experience of the character areas of the LVIA study area and verification of how these areas might be impacted by the Onshore Infrastructure.
41. The visual amenity of the LVIA study area was surveyed from receptors representative of the range of views and viewer types likely to experience the Onshore Infrastructure. Views from a variety of distances, aspects, elevations, and extents are included.
42. The LVIA is undertaken using the following steps:
  - The features of the Onshore Infrastructure that may result in landscape and visual effects are described
  - The overall scope of the assessment is defined, including the study area and range of possible landscape and visual effects
  - The landscape baseline is established using landscape character assessment and the zone of theoretical visibility (ZTV) maps, to identify landscape receptors that may be impacted and their key characteristics and value
  - The visual baseline is established by identifying the extent of possible visibility, identifying the people who may be impacted, identifying visual receptors, and selecting viewpoints
  - A preliminary assessment is undertaken of landscape and visual receptors using ZTV analysis, to identify which landscape and visual receptors are unlikely to be significantly effected and those that are more likely to be significantly effected, which require to be assessed in more detail
  - Interactions are identified between the Onshore Infrastructure and landscape and visual receptors, to predict potentially significant effects arising and measures are proposed to mitigate effects
  - An assessment of the susceptibility of landscape and visual receptors to specific change and the value attached to landscape receptors and views is undertaken, combining these judgements to assess the sensitivity of the landscape and visual receptor to the Onshore Infrastructure
  - An assessment of the size/ scale of landscape effect, the degree to which landscape elements are altered and the extent to which the effects change the key characteristics of the landscape is undertaken, combining these judgements to assess the magnitude of impact on the landscape receptor
  - An assessment of the size/ scale of visual effect, the extent to which the change would affect views, whether this is unique or representative of a wider area, and

- the position of the Onshore Infrastructure in relation to the principal orientation of the view and activity of the receptor. These judgements are combined to assess the magnitude of impact on the visual receptor
- The assessments of sensitivity to change and magnitude of impact are combined to assess the significance of seascape, landscape, and visual effects.
43. GLVIA3 sets out an approach to the assessment of magnitude of impact in which three separate considerations are combined within the magnitude of impact rating. These are the size or scale of the impact, its geographical extent and its duration and reversibility. Notably, GLVIA3 is not a prescriptive methodology but guidance. The guidance suggests that this approach is to be applied in respect of both landscape and visual receptors. It is considered that the process of combining all three considerations in one rating can distort the aim of identifying likely significant effects of development. For example, a high magnitude of impact, based on size or scale, may be reduced to a lower rating if it occurred in a localised geographical area and for a short duration. This might mean that a potentially significant effect will be overlooked if effects are diluted down due to their limited geographical extents and/ or duration or reversibility.
44. As advocated by GLVIA3 the assessment has used professional judgement in defining the methodology for the LVIA. The consideration of the size or scale of the impact, its geographical extent and its duration and reversibility has therefore been undertaken separately. Duration and reversibility are stated separately in relation to the assessed effects (i.e., as short/medium/long-term, and temporary/permanent) and are considered as part of drawing conclusions about likely significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.
45. The assessment methodology utilises six scales of magnitude of impact – high, medium-high, medium, medium-low, low and negligible/none, which are preferred to the 'maximum of five categories' suggested in GLVIA3 as a means of clearly defining and summarising magnitude of impact judgements.

### 20.4.3 Worst-Case Scenario

46. In accordance with the assessment approach to the 'Rochdale Envelope' set out in **Chapter 6: EIA Methodology**, the impact assessment for LVIA has been undertaken based on a realistic worst-case scenario (Worst Case Scenario) of predicted impacts. The Project Design Envelope for the Onshore Infrastructure is detailed in **Chapter 5: Project Description**.

47. As described above, and in **Table 20.5**, the realistic Worst Case Scenario for Onshore Landscape and Visual Amenity is an enclosed AIS, with maximum building heights and external equipment height of 10m, within a platform of 5,400m<sup>2</sup>. For context, an enclosed GIS option, within a GIS building footprint would be more likely to be around 4,750m<sup>2</sup>; in other words, approximately two-thirds of the size, with a maximum building height of 8m and external equipment height of 9m.
48. **Table 20.5** presents the realistic worst-case scenario elements considered for the assessment of onshore landscape and visual amenity.

*Table 20.5 Definition of realistic worst-case scenario details relevant to the LVIA*

Impact	Realistic worst-case scenario	Rationale
<b>Construction</b>		
<b>Landfall to MLWS</b>  <b>Landscape and visual effects</b>	<p>Landfall to MLWS trenching (temporary works) within intertidal area, over a length of approximately 270m, with a trench width of 0.5m.</p> <p>Trenchless technique (e.g., HDD) from intertidal works on Saunton Sands Landfall to MLWS to the temporary works area.</p> <p>Trenchless technique temporary works compound area 4,500m<sup>2</sup> within Saunton Sands car park.</p> <p>Up to 1 Transition Joint Bays (TJBs) of dimensions 20m x 8m and 2m height (Worst Case Scenario 2 x 66kV option).</p>	<p>The Worst Case Scenario includes the maximum dimensions and number of construction compounds and therefore, the greatest area of land disturbance and visible construction activity.</p>
<b>Onshore Export Cable Corridor</b>  <b>Landscape and Visual Effects</b>	<p>The Worst Case Scenario Onshore Development Area is generally 50m in width to the west of American Road and 60m in width to the east of American Road, albeit that the corridor widens and narrows at certain sections, for example Landfall to MLWS, trenchless technique locations, and at the Onshore Substation. It is</p>	<p>The Worst Case Scenario includes the maximum width and, therefore, the greatest area of disturbance and visible construction activity. The assessment considers the potential that the cable route could be located anywhere in the Onshore</p>



Impact	Realistic worst-case scenario	Rationale
	<p>approximately 6km in length. The actual construction corridor within the Onshore Export Cable Corridor would be 30m in width to allow for micro-siting and consists of 2 trenches, each 3m wide and of variable depth along with haul road and stockpiling areas associated with cable construction.</p>	<p>Export Cable Corridor with effects considered in relation to potential maximum hedgerow and tree losses to ensure the worst case is being considered.</p>
<p><b>Onshore Export Cable Corridor Construction Compounds</b></p> <p><b>Landscape and Visual Effects</b></p>	<p>The main Onshore Export Cable Corridor construction compound at Saunton Road (B3231) (see <b>Figure 20.2</b>)) requires an area of 2,500m<sup>2</sup>. Access to the main Onshore Export Cable Corridor compound would require removal of 160 linear metres of hedgerow at Saunton Road.</p> <p>There will be 3 secondary compounds: one at the crossing of American Road / Sandy Lane, one on the north side of Taw Estuary, and one on the south side of Taw Estuary. Secondary compounds require an area of 1,200m<sup>2</sup>.</p> <p>Trenchless technique crossings will be required in select locations along the route, see <b>Chapter 5: Project Description</b> for further detail. Each trenchless technique compound would likely include a drill rig, electrical generator, water tanker and a mud recycling unit</p>	<p>The Worst Case Scenario includes the maximum dimensions and number of construction compounds and therefore, the greatest area of land disturbance and visible construction activity.</p>
<p><b>Onshore Substation Construction access and compounds</b></p> <p><b>Landscape and Visual Effects</b></p>	<p>100m x 50m Onshore Substation temporary construction compound with an area of 5,000m<sup>2</sup>.</p> <p>250m length of access road, 7.5m in width, part of which will become the permanent access to the Onshore Substation.</p>	<p>The Worst Case Scenario includes the maximum area and number of construction compounds and therefore, the greatest area of land disturbance and visible construction activity.</p>
<p><b>Onshore Substation</b></p>	<p>Onshore Substation with a 50m x 106m operational compound</p>	<p>The Worst Case Scenario is based on the GIS Onshore</p>



Impact	Realistic worst-case scenario	Rationale
<b>Landscape and Visual Effects</b>	<p>footprint, total 5,300m<sup>2</sup>. Approximately 8,960 m<sup>3</sup> of fill material is required to raise to finished floor level.</p> <p>The finished floor level will be raised 1.4m above the existing ground level.</p>	<p>Substation within the larger footprint of the AIS option as the construction of large, enclosed buildings represents the greatest visible construction activity.</p>
<b>Construction Period</b>	<p>Assumed working hours 0700-1900 Monday to Friday and 0700-1300 Saturday</p> <p>The total construction period would be approximately 28 months; 18 months for the Onshore Export Cable Corridor installation, and 16 months for the Onshore Substation construction.</p>	<p>Construction lighting will be required during working hours in the hours of darkness, the lights of construction vehicles will also add to the levels of lighting and a lower level of lighting will remain overnight for security purposes.</p>
<b>Operation</b>		
<b>Onshore Export Cable Corridor and Landfall to MLWS Landscape and visual effects</b>	<p>30 link boxes are required along the Onshore Export Cable Corridor, each with indicative dimensions of 3m x 3m. Link boxes will include a manhole at ground level for access.</p>	<p>The Worst Case Scenario includes the maximum amount of visible above ground Onshore Export Cable Corridor infrastructure.</p>
<b>Onshore Substation Landscape and visual effects</b>	<p>Maximum area of operational Onshore Substation platform – 5,300m<sup>2</sup> on a platform of 50m x 106m.</p> <p>Buildings and external equipment would be a maximum of 10m in height above the finished floor level of 6.73m AOD.</p> <p>Control building (possibly several adjacent containerised buildings): Storage/Amenity building: Maximum external equipment height 10m from finished floor level.</p>	<p>The final location of the buildings and infrastructure of the Onshore Substation is not known at this stage.</p> <p>The Worst Case Scenario Onshore Substation is a GIS option within an AIS platform. This results in an overestimation of the footprint of the block model in parts of the Onshore Substation maximum parameter but represents the worst case LVIA Rochdale Envelope in terms of assessment. The Rochdale Envelope is</p>

Impact	Realistic worst-case scenario	Rationale
		shown on the visualisations, in addition to the Worst Case Scenario Onshore Substation parameter model in <b>Figure 20.14</b> to <b>Figure 20.24</b> . The substation would not be manned but would require periodic maintenance visits during the operational phase.
<b>Decommissioning</b>		
<b>Onshore Export Cable Corridor and Landfall to MLWS Landscape and visual effects</b>	The decommissioning policy for the Onshore Project infrastructure is not yet defined however it is anticipated that some infrastructure would be removed, reused, or recycled; other infrastructure could be left in situ.	The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time.
<b>Onshore Substation Landscape and Visual Effects</b>	<p>The following infrastructure is likely be removed, reused, or recycled where practicable:</p> <ul style="list-style-type: none"> <li>• Onshore substation</li> <li>• Export Cables</li> </ul> <p>The following infrastructure is likely to be decommissioned and could be left in situ depending on available information at the time of decommissioning:</p> <ul style="list-style-type: none"> <li>• Transition joint bays</li> <li>• Cable joint bays</li> <li>• Cable ducting</li> </ul>	<p>Decommissioning arrangements will be detailed in a Decommissioning Plan, which will be drawn up and agreed with the relevant consenting body/stakeholder prior to decommissioning.</p> <p>For the purposes of the worst-case scenario, it is anticipated that the impacts will be comparable to or less than those identified for the construction phase.</p>

#### 20.4.4 Summary of Mitigation

49. This section outlines the embedded mitigation relevant to the LVIA, which has been incorporated into the design of the Onshore Project. Further information is detailed in **Chapter 4: Site Selection and Assessment of Alternatives**.

50. Mitigation measures seek to avoid, reduce, or offset temporary and permanent environmental effects, including those related to the landscape and visual resource. Mitigation measures relating to potential landscape and visual effects typically use landscape elements such as woodland planting and earthworks to reduce the effects by integrating the development into its landscape context and / or providing screening. Landscape and visual effects change over time as mitigation, such as planting and restoration of habitat types, establish and mature.

#### 20.4.4.1 Embedded mitigation

51. The embedded mitigation measures are those defined in the IEMA guidance as either primary or tertiary mitigation. Those measures relevant to onshore landscape and visual amenity are summarised in **Table 20.6**.

52. As these measures have been embedded the assessment of effects is undertaken on the basis that these forms of mitigation will definitely be delivered. Therefore, any effects that might have arisen without these forms of mitigation do not need to be identified as 'potential effects', as there should be no potential for them to arise.

*Table 20.6 Embedded mitigation measures relevant to the LVIA*

<b>Component/Activity</b>		<b>Mitigation embedded into the design of the Onshore Infrastructure</b>
<b>General</b>		
<b>Onshore Export Cable Corridor</b>		Onshore Project decision to underground the Onshore Export Cable Corridor will notably reduce potential landscape and visual effects. Use of trenchless technique and careful routing of the Onshore Export Cable Corridor will minimise loss of trees, hedgerows, and other landscape elements.
<b>Onshore Substation</b>		Siting and location of Onshore Infrastructure and design of mitigation planting assists in reducing potential landscape and visual effects.
<b>Construction</b>		
<b>Onshore Export Cable Corridor</b>		Micro-siting of the Onshore Export Cable Corridor to avoid loss of trees and hedgerows where practical.
<b>Construction compounds</b>		Detailed location and layout of sites to avoid loss of trees and hedgerows where practical.
<b>Onshore Export Cable Corridor</b>		Replacement planting of all removed hedgerows in-situ. Planting to be implemented at the end of the construction period.

<b>Component/Activity Mitigation embedded into the design of the Onshore Infrastructure</b>	
<b>Onshore Substation</b>	Implementation of mitigation planting around Onshore Substation including woodland planting, for screening, hedgerows and scrub for landscape and ecological connectivity. Planting to be implemented at the end of the construction period.
<b>Operation</b>	
<b>Onshore Export Cable Corridor</b>	Ongoing management of plant establishment to ensure mitigation potential realised.
<b>Onshore Substation</b>	Ongoing management of plant establishment to ensure mitigation potential realised. Complimentary building materials, form, colour, and finish for the substation that are consistent with large scale buildings in close proximity.
<b>Decommissioning</b>	
<b>Onshore Substation</b>	Protection of landscape elements during decommissioning of Onshore Substation to avoid loss to trees, hedgerows, and other landscape elements.

#### 20.4.4.1.1 Site selection

53. Embedded mitigation in respect of the Onshore Infrastructure has involved the sensitive siting of the Onshore Infrastructure during the search area selection process, to avoid / reduce likely significant impacts. Readers should refer to **Chapter 4: Site Selection and Assessment of Alternatives**.
54. The search area selection process considered constraints relating to physical landscape elements, such as woodlands, trees and hedgerows, landscape character, visual amenity, and other environmental and technical constraints. The sensitivity of the surrounding landscape and of residents, road-users, and recreational users of the landscape and path network, was also a consideration. The capacity of the landscape to accommodate the Onshore Infrastructure is assessed in relation to the natural screening afforded by landform, and / or vegetation and the degree to which other surrounding infrastructure and buildings influence visual screening.
55. The Onshore Substation is sited in the settled and developed coastal margins, to the south of the River Taw. Immediately to the north is the site of the former Yelland Power Station, which is now under construction as a new mixed-use residential development. Immediately to the east is the Sandbanks Business Park / Yelland

Terminal. To the south are parts of Yelland settlement and the B3233. To the west and north-west are a parallel set of overhead power lines and towers, and the existing East Yelland Substation, respectively. The close proximity of existing electricity overhead lines to the Onshore Substation and the relatively close proximity of existing electrical infrastructure at the East Yelland substation provides a context of electrical infrastructure within the local vicinity. The Onshore Substation is located immediately adjacent to the existing Sandbanks Business Park / Yelland Terminal, which contains varied built forms and massing, from larger two-storey industrial units with a metal clad finish, to single storey red-brick buildings, with associated industrial forms including large storage tanks, pipe work and metal lattice structures, tall lighting columns, and security fencing. The influence of these baseline energy developments was considered in the search area selection and therefore locating in these areas is also considered to be a form of embedded mitigation.

56. The Onshore Substation has been situated as far north as possible within the site, away from the closest residential receptors. The alignment of the Onshore Substation is broadly east-west, which would tend to minimise the extent of the built form in views from the east and west, including from the Tarka Trail / NCR 3, local public rights of way (PRoW) and in distant views from the NDCAONB and North Devon Heritage Coast.

#### 20.4.4.1.2 Construction phase mitigation

57. Mitigation opportunities during the construction phase of works include the avoidance of landscape elements within the Onshore Export Cable Corridor. Other mitigation opportunities will primarily relate to the restrictions imposed on the working areas and measures identified in the Construction Environmental Management Plan (CEMP), an outline version of which is provided in **Chapter 5: Project Description**.
58. An OLEMP is provided in **Figure 20.13** and sets out the principles and key landscape and ecology elements for the Onshore Infrastructure. The OLEMP and CEMP seek to stipulate measures to avoid, reduce or offset environmental effects of the construction works, including those related to onshore landscape and visual amenity.
59. Sensitive siting of construction compound areas away from more visible and larger numbers of receptors, will also be important to reduce the impact on the immediate views. It should be noted that multiple construction compounds, trenchless

technique compounds, Onshore Export Cable Corridor routes and access routes have been refined in line with the approach already taken in site selection in order to reduce the potential effects on the landscape and visual resource of the area.

#### 20.4.4.1.3 Operation and maintenance phase mitigation – Onshore Substation

60. The position of the Onshore Substation site takes advantage of existing vegetation to the north, south, and west, and buildings to the east to provide varying degrees of screening to receptors in the Study Area from the outset.
61. Landscape mitigation principles have been developed for the Onshore Substation to further mitigate landscape and visual. These mitigation principles include proposed woodland, scrub, and hedgerow planting areas for ecological mitigation. The proposed landscape mitigation is presented in **Figure 20.13** and is also shown at the predicted height after 15 years' establishment on the LVIA visualisations (**Figure 20.14** to **Figure 20.24**). The mitigation strategy and approach includes the following key aspects:
  - Proposed mixed deciduous woodland to the west and south of the onshore substation to help mitigate visual effects including from sections of the Tarka Trail / NCR 3, SWCP, the B3233, and from settlement at Instow Town and Instow
  - Increased connectivity with existing hedgerows and woodlands particularly with the woodland to the north of the Onshore Substation site
  - Complimentary building materials, form, colour, and finish for the substation that are consistent with large scale buildings in close proximity. A **Substation Design Code (Design and Access Statement: Appendix B)** has also been prepared to provide further details on the design and appearance of the Onshore Substation, including its architectural form, orientation, façade design, materials, and colours. The Design Code seeks to minimise potentially adverse impacts, as well as creating development which is sympathetic to its local context.
  - Restoration of all temporary works and construction areas in relation to re-establishment of ground cover, where practicable.
62. The proposed woodland would be located around the Onshore Substation enclosing the infrastructure apart from the access and cable ingress points. Native hedgerows and scrub vegetation would be located along the Onshore Export Cable Corridor around the Onshore Substation to increase connectivity between the woodland blocks and to the existing woodland and hedgerows.
63. The indicative mitigation woodland planting would be designed to comprise a mix of faster growing 'nurse' species and slower growing 'core' species. Nurse species,

such as alder and pine would grow quicker so that after 15 years they would be approximately 7.5m in height. They would provide shelter to bring on core, canopy species, such as oak. Whilst the nurse species would be sufficiently fast growing to provide substantial screening of the onshore substation after 15 years, the core species would outlive the nurse species and provide a preferred native woodland with a more robust structure closer in character to other nearby woodlands.

#### 20.4.4.1.4 Landfall to MLWS and Onshore Export Cable Corridor Mitigation

64. The routing of the Landfall to MLWS and Onshore Export Cable Corridor has been based on the following criteria and the Onshore Export Cable route will be refined taking into account these criteria where possible:
- Achievement of the best environmental fit of the Onshore Export Cable Corridor where practicable, particularly in relation to reducing hedgerow and tree loss along the cable route
  - Reinstatement of removed sections of hedgerows, or suitable replacement hedgerows provided for displaced or severed sections of hedgerows where practical
  - Sensitively siting construction compound and trenchless technique compounds such that these are carefully selected taking into account landscape and visual receptors to reduce impacts during the construction period where practicable
  - Restoration of all temporary works and construction areas in relation to re-establishment of ground cover, allowing for natural regeneration or use of appropriate seed mixes of local provenance so that the route of the Onshore Export Cable Corridor does not stand out in future
  - Protection of all retained trees during the construction phase where practicable
  - Footpaths, bridleways, or cycleways that are temporarily disrupted by the proposed Onshore Export Cable Corridor will be temporarily diverted and then reinstated.
65. Following the installation of the onshore cables, during the operation and maintenance phase, these components of the Onshore Infrastructure would be underground. Disturbed landcover and habitats would be reinstated. The overall aim of the reinstatement would be the re-establishment of existing ground cover or returning the disturbed ground to its original use.

## 20.4.5 Baseline Data Sources

### 20.4.5.1 Desktop Study

66. A desk study was undertaken to obtain information on onshore landscape and visual amenity. Data were acquired within the study area through a detailed desktop review of existing studies and datasets. Agreement was reached with all consultees that the data collected, and the sources used to define the baseline characterisation for LVIA are suitable for the purpose of the EIA (ETG LVIA meeting, 2<sup>nd</sup> November 2022).
67. The sources of information presented in **Table 20.7** were consulted to inform the LVIA.

*Table 20.7 Data sources used to inform the LVIA*

Source	Summary
<b>Devon County Council</b>	Devon Landscape Character Areas ( <a href="https://www.devon.gov.uk/planning/planning-policies/landscape/devons-landscape-character-assessment/">https://www.devon.gov.uk/planning/planning-policies/landscape/devons-landscape-character-assessment/</a> )
<b>English Heritage</b>	Any specific visitor attractions / tourist destinations.  ( <a href="https://www.english-heritage.org.uk/visit/places/#?page=1&amp;place=&amp;mp=false&amp;fe=false">https://www.english-heritage.org.uk/visit/places/#?page=1&amp;place=&amp;mp=false&amp;fe=false</a> )
<b>Google Earth Pro</b>	Aerial photography.
<b>National Trust</b>	Any specific visitor attractions / tourist destinations.  ( <a href="https://www.nationaltrust.org.uk/days-out">https://www.nationaltrust.org.uk/days-out</a> )
<b>Natural England</b>	National Character Areas (NCAs).  ( <a href="http://www.gov.uk">National Character Area profiles - GOV.UK (www.gov.uk)</a> )
<b>Natural England</b>	GeoIS datasets for:  National Parks ( <a href="https://data.gov.uk/dataset/334e1b27-e193-4ef5-b14e-696b58bb7e95/national-parks-england">https://data.gov.uk/dataset/334e1b27-e193-4ef5-b14e-696b58bb7e95/national-parks-england</a> ).  Areas of Outstanding Natural Beauty (AONB) ( <a href="https://data.gov.uk/dataset/8e3ae3b9-a827-47f1-b025-f08527a4e84e/areas-of-outstanding-natural-beauty-england">https://data.gov.uk/dataset/8e3ae3b9-a827-47f1-b025-f08527a4e84e/areas-of-outstanding-natural-beauty-england</a> )



Source	Summary
	<p>County Parks (<a href="https://data.gov.uk/dataset/e729abb9-aa6c-42c5-baec-b6673e2b3a62/country-parks-england">https://data.gov.uk/dataset/e729abb9-aa6c-42c5-baec-b6673e2b3a62/country-parks-england</a>).</p> <p>Open Access Land (<a href="https://data.gov.uk/dataset/05fa192a-06ba-4b2b-b98c-5b6bec5ff638/crow-act-2000-access-layer">https://data.gov.uk/dataset/05fa192a-06ba-4b2b-b98c-5b6bec5ff638/crow-act-2000-access-layer</a>).</p> <p>Heritage Coasts (<a href="https://data.gov.uk/dataset/79b3515f-b00e-419a-9c7e-1d3163555886/heritage-coasts">https://data.gov.uk/dataset/79b3515f-b00e-419a-9c7e-1d3163555886/heritage-coasts</a>)</p>
<b>North Devon and Torridge Local Councils</b>	<p>North Devon and Torridge Local Plan 2011-2031.</p> <p>(<a href="https://consult.torridge.gov.uk/portal/planning/localplan/adoption/">https://consult.torridge.gov.uk/portal/planning/localplan/adoption/</a>)</p>
<b>North Devon and Torridge Local Councils</b>	<p>A Joint Landscape Character Assessment (LCA) adopted by Torridge Local Council and North Devon Council.</p> <p>(<a href="https://www.torridge.gov.uk/article/11273/Joint-Landscape-Character-Assessment-for-North-Devon-and-Torridge-Locals">https://www.torridge.gov.uk/article/11273/Joint-Landscape-Character-Assessment-for-North-Devon-and-Torridge-Locals</a> )</p> <p>Assessment of Landscape Coastal Characteristics, and Landscape Value, Coast and Estuarine Zone (Taw Estuary); Policy ST09.</p> <p>(<a href="https://www.northdevon.gov.uk/media/381068/complete-estuary-study.pdf">https://www.northdevon.gov.uk/media/381068/complete-estuary-study.pdf</a>)</p>
<b>North Devon and Torridge Local Council</b>	<p>North Devon and Exmoor Seascape Character Assessment adopted by Torridge Local Council.</p> <p>(<a href="https://www.torridge.gov.uk/article/16137/North-Devon-and-Exmoor-Seascape-Character-Assessment">https://www.torridge.gov.uk/article/16137/North-Devon-and-Exmoor-Seascape-Character-Assessment</a>)</p>
<b>Optimised Environments Ltd internal dataset</b>	<p>Public Rights of Way sourced from <a href="http://www.rowmaps.com/">http://www.rowmaps.com/</a></p>
<b>Ordnance Survey (OS)</b>	<p>OS 1:50,000, 1:25,000</p>
<b>Ordnance Survey (OS) Open Data</b>	<p>National landscape planning designations.</p> <p>Settlements, roads, railways, and public rights of way; and National Trails.</p>
<b>Sustrans</b>	<p>National Cycle Network (GeoIS dataset) (available online: <a href="https://www.sustrans.org.uk/">https://www.sustrans.org.uk/</a>)</p>

### 20.4.5.2 Site Specific Survey

68. To inform the EIA, site-specific surveys were undertaken, as agreed with the statutory consultees. A summary of surveys is outlined in **Table 20.8**.

*Table 20.8 Summary of site-specific survey data*

Survey name and year	Summary
<b>Onshore Substation site selection, September 2022.</b>	Preliminary landscape and visual surveys to provide technical input into the site selection options for the Onshore Substation.
<b>LVIA, February 2023.</b>	Landscape, and visual assessment surveys primarily within the study areas of the Onshore Export Cable Corridor and Onshore Substation, to undertake viewpoint photography and collect baseline data on seascape character, landscape character and visual amenity associated with views of the Onshore Infrastructure and in accordance with methodology such as in GLVIA3 (Landscape Institute and IEMA, 2013) and TGN 06/19 (Landscape Institute, 2019).

### 20.4.6 Data Limitations

69. There are some data limitations relating to this LVIA, however these do not affect the robustness of this assessment as the gaps are limited and do not affect the assessments of likely significance assessed for relevant receptors.
70. There are limitations in the production of photomontage and visualisations and ZTVs as assessment tools, and limitations in the accuracy of digital terrain model (DTM) data, which are described in **Sections 20.6** and **20.7**. The use of detailed terrain models (DTM) (OS Terrain 5), production of visualisations to recognised standard and field survey assessment of impacts minimises these limitations.
71. In relation to fieldwork, it is not possible or practical to visit every part of the study area when undertaking an LVIA and, therefore, some aspects of the assessment are based on desk-based study and professional experience. Some data limitations are a consequence of the timing of site photography and weather conditions. However, limitations have been minimised through the timing of photographic surveys when the deciduous trees were not in leaf and visibility was sufficient to accurately represent the Onshore Substation in visualisations.

72. As described in full in **Section 20.3**, there are limitations with regards projects included in the cumulative assessment, particularly those at Scoping stage, in terms of the degree to which they are well-defined or of sufficient detail to the point that they can be assessed, and how likely the projects are to be taken forward as currently defined.

### 20.4.7 Scope

73. Upon consideration of the baseline environment, the Onshore Project description outlined in **Chapter 5: Project Description**, and Scoping Opinion (Case reference: EIA/2022/00002), potential impacts upon onshore landscape and visual amenity have been scoped in or out. These impacts are outlined, together with a justification for why they are or are not considered further, in **Table 20.9** and **Table 20.10** respectively.

*Table 20.9 Summary of impacts scoped in relating to Onshore Landscape and Visual Amenity*

Potential Impact	Justification
<b>Construction</b>	
<b>Impacts on physical landscape features resulting from the Landfall to MLWS, Onshore Export Cable Corridor, and Onshore Substation.</b>	There is the potential for physical impacts on the physical landscape features resulting from the presence of temporary construction compounds, access roads, plant, materials, spoil heaps, excavation and land restoration associated with the construction activities of the Onshore Infrastructure, and Onshore Substation.
<b>Impacts on landscape character and landscape planning designations.</b>	There is the potential for impacts on landscape character and landscape designations resulting from the presence of temporary construction compounds, access roads, plant, materials, spoil heaps, excavation and land restoration associated with the construction activity of the Landfall to MLWS, Onshore Export Cable Corridor, and the Onshore Substation.
<b>Impacts on views and visual amenity, assessed from illustrative and representative viewpoint locations.</b>	There is the potential for impacts on views and visual amenity resulting from the presence of temporary construction compounds, access roads, plant, materials, spoil heaps, excavation and land restoration associated with the construction activity

Potential Impact	Justification
	of the Landfall to MLWS, Onshore Export Cable Corridor, and the Onshore Substation.
Operation	
<b>Impacts on landscape character and landscape planning designations.</b>	There is the potential for impacts on landscape character and landscape planning designations resulting from the operation of the Onshore Substation.
<b>Impacts on views and visual amenity assessed from representative viewpoint locations.</b>	There is the potential for impacts on the views and visual amenity of receptors resulting from the operation of the Onshore Substation.
Decommissioning	
<b>Impacts on landscape character, landscape planning designations, and on views and visual amenity from the decommissioning of the Onshore Substation and components of the Onshore Infrastructure.</b>	<p>There is the potential for physical effects and effects on landscape character and visual amenity resulting from the removal of cabling, dismantling and removal of electrical equipment from within the Onshore Export Cable Corridor and Onshore Substation and minor services equipment, and the physical effects and effects on landscape character and visual amenity as a result of the restoration of the Onshore Substation site.</p> <p>The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time.</p> <p>Decommissioning arrangements will be detailed in a Decommissioning Plan, which will be drawn up and agreed with the relevant consenting body/stakeholder prior to decommissioning.</p> <p>For the purposes of the worst-case scenario, it is anticipated that the impacts will be comparable to or less than those identified for the construction phase.</p>

*Table 20.10 Summary of impacts scoped out relating to Onshore Landscape and Visual Amenity*

<b>Potential Impact Construction</b>	<b>Justification</b>
<b>Landscape and visual impacts resulting from construction traffic.</b>	It is anticipated that construction traffic would be comparable with traffic flows that form part of the baseline environment and significant landscape and visual effects are unlikely to occur.
<b>Night time impacts</b>	It is considered that night time impacts during construction would be limited owing to the short duration of the works and context of the largely settled landscape of the LVIA study area.
<b>Operation</b>	
<b>Impacts on landscape and visual receptors from Landfall to MLWS and the Onshore Export Cable Corridor during operation,</b>	Once operational, the only evidence of activity at Landfall to MLWS and Onshore Export Cable Corridor would be restored land. Residual effects associated with vegetation loss and the mitigation through replanting have been considered in the assessment of effects on the physical landscape during the construction phase.
<b>Night-time landscape and visual impacts.</b>	<p>The final design of the lighting for the Onshore Substation will be completed as part of the detailed design for the substation, therefore at this stage the full details will not be known. However, the following guidance will be followed in the design of the lighting, with the final design of all exterior lighting completed in accordance with the Institution of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light.</p> <p>Internal lighting will be designed to allow safe movement of personnel and safe operation of equipment, where practicable all of the lights will be LED type with the lighting levels in accordance with British Standard EN12464-1:2021. They will be operated by wall switches positioned adjacent to doorways, including outside at the entrance to rooms and/or at more than one doorway if</p>

Potential Impact	Justification
	<p>appropriate, and will incorporate a 4-hour timer manual override switch. All emergency lighting will be designed in accordance with British Standard EN5266-1:2016.</p> <p>Exterior lighting, including perimeter and site lighting, will be required to allow safe access and emergency egress for personnel (including from buildings) and safe operation of equipment during the winter months. A lower level of lighting will also be required to remain overnight for security purposes.</p> <ul style="list-style-type: none"> <li>• Maintained average illuminance 6.0 lux at ground level</li> <li>• Minimum maintained point illuminance 2.5 lux at ground level</li> </ul> <p>For the perimeter lighting the luminaires shall, where practicable, be LED type with directable light output to minimise light pollution. Exterior site lighting to buildings shall incorporate IP65 wall mounted LED luminaires which will be controlled via integral PIR motion detectors.</p> <p>In summary, while there would be lighting associated with the Onshore Substation during the operational phase, this would be limited in extent and usage, and typically of a low intensity, and appreciated within a context that includes lighting within settlement nearby, and in adjacent buildings, such that it would not give rise to any likely significant effects. <b>Appendix 20.D: Lighting Impact Assessment</b> sets out an assessment of the existing lighting conditions and defines the requirement for, and limitations on, proposed exterior lighting associated with the proposed development.</p>
<p><b>Residential visual amenity</b></p>	<p>The potential for impacts on views and visual amenity on residential receptors at the Landfall to MLWS, Onshore Export Cable Corridor, and Onshore Substation would not be overbearing or overwhelming as a result of distance, and scale of change (and in some cases the duration of the changes)</p>

Potential Impact	Justification
	<p>arising from these components of the Onshore Infrastructure.</p>
Decommissioning	
<p><b>Impacts on landscape and visual receptors resulting from the decommissioning of the Onshore Export Cable Corridor and Landfall to MLWS.</b></p>	<p>Decommissioning of the Onshore Export Cable Corridor and Landfall to MLWS would have a lesser effect, as the ducts would be left in situ underground, while only the cables would be removed, such that the trenches would not be re-opened and therefore significant landscape and visual impacts are unlikely to occur.</p> <p>The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time.</p> <p>Decommissioning arrangements will be detailed in a Decommissioning Plan, which will be drawn up and agreed with the relevant consenting body/stakeholder prior to decommissioning.</p> <p>For the purposes of the worst-case scenario, it is anticipated that the impacts will be comparable to or less than those identified for the construction phase.</p>
Transboundary Impacts	
<p><b>The Scoping Report identified that there was no potential for significant transboundary effects regarding Onshore Landscape and Visual Amenity from the Project upon the interests of other EEA States and this is not discussed further.</b></p>	

### 20.4.8 Consultation

74. Consultation has been a key part of the development of the Onshore Infrastructure. Consultation regarding onshore landscape and visual amenity has been conducted throughout the EIA. An overview of the Onshore Project consultation process is presented within **Chapter 7: Consultation**.
75. A summary of the key issues raised during consultation specific to LVIA is outlined below in **Table 20.11**, together with how these issues have been considered in the production of this ES.

*Table 20.11 Consultation responses*

<b>Consultee</b>	<b>Date, Document, Forum</b>	<b>Comment</b>	<b>Where addressed in the ES</b>
<p><b>Natural England</b></p>	<p>17th March 2022, Scoping Consultation (Ref 384007)</p>	<p>“The ES should fully consider the implications of the whole development proposal. This should include an assessment of all supporting infrastructure.</p> <p>An impact assessment should identify, describe, and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment (subject to available information):</p> <ul style="list-style-type: none"> <li>• existing completed projects</li> <li>• approved but uncompleted projects</li> <li>• ongoing activities</li> <li>• plans or projects for which an application has been made and which are under consideration by the consenting authorities</li> <li>• plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the</li> </ul> <p>development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.</p> <p>There are two additional projects that Natural England is aware of and consider should be included in the</p>	<p>Cumulative effects with nearby infrastructure are included in the assessment in <b>Section 20.11</b> where there is the potential for a significant effect to arise.</p> <p>A whole Project assessment is contained in <b>Section 20.11</b>.</p>



Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		scoping report for cumulative and in-combination effects: <ul style="list-style-type: none"> <li>• The X-links interconnector project with Landfall to MLWS at Cornborough</li> <li>• Mixed use / Residential development at Yelland Quay which is currently at appeal”</li> </ul>	
<b>Natural England</b>	17th March 2022, Scoping Consultation (Ref 384007)	<p>“Landscape</p> <p>Nationally Designated Landscapes</p> <p>The development site is within or may impact on the North Devon Area of Outstanding Natural Beauty. The NPPF (paragraph 176) provides the highest level of planning protection for these nationally designated landscapes.</p> <p>Public bodies have a duty to have regard to the statutory purposes of designation in carrying out their functions (under (section 11 A (2) of the National Parks and Access to the Countryside Act 1949 for National Parks and S85 of the Countryside and Rights of Way Act, 2000 for AONBs). Planning Practice Guidance confirms that this duty also applies to proposals outside the designated area but impacting on its natural beauty.</p> <p>Consideration should be given to the direct and indirect effects on this designated landscape and in particular the effect upon its purpose for designation. The management plan for the designated landscape may also have</p>	<p>Cumulative effects with nearby infrastructure are included in the assessment in <b>Section 20.11</b> where there is the potential for a significant effect to arise.</p> <p>National Character Area profiles, and local landscape character assessment, are considered in the baseline, set out in <b>Section 20.5</b>, and where relevant assessed in <b>Section 20.9.6</b>.</p> <p>The potential for the Onshore Infrastructure to affect the Special Qualities of the NDCAONB, and</p>

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		<p>relevant information that should be considered in the EIA.</p> <p>The development site is within the North Devon Heritage Coast. Heritage Coasts are protected under paragraph 178 of the NPPF. The ES should set out the impacts on the Heritage Coast and opportunities for enhancement.</p> <p>Landscape and visual impacts</p> <p>The environmental assessment should refer to the relevant National Character Areas. Character area profiles set out descriptions of each landscape area and statements of environmental opportunity.</p> <p>The ES should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by</p> <p>the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing, and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character.</p> <p>A landscape and visual impact assessment should also be carried out for the proposed development and surrounding area. Natural England recommends use of the</p>	<p>Heritage Coasts, has been considered in <b>Section 20.9.6.</b></p> <p>National Character Area profiles, and local landscape character assessment, are considered in the baseline, set out in <b>Section 20.5</b>, and where relevant assessed in <b>Section 20.9.6.</b></p> <p>In respect of the National Design Guide and National Model Design Code, the mitigation of landscape and effects through good design is considered within the LVIA. See <b>Section 20.4.4.</b></p> <p>Viewpoints have been agreed in ETG consultation on 02/11/22.</p> <p>Following ETG consultation on 02/11/22, it was</p>

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		<p>methodology set out in Guidelines for Landscape and Visual Impact Assessment 2013 ((3rd edition) produced by the Landscape Institute and the Institute of Environmental Assessment and Management. For National Parks and AONBs, we advise that the assessment also includes effects on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the particular landscape and related characteristics which underpin the natural beauty of the area and its designation status.</p> <p>The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. This should include an assessment of the impacts of other proposals currently at scoping stage.</p> <p>To ensure high quality development that responds to and enhances local landscape character and distinctiveness, the siting and design of the proposed development should reflect local characteristics and, wherever possible, use local materials. Account should be taken of local design policies, design codes and guides as well as guidance in the National Design Guide and National Model Design Code. The ES should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure. It should also set out detail of layout alternatives, where appropriate, with</p>	<p>agreed that effects from traffic on landscape and visual receptors was to be scoped out of the LVIA.</p> <p>The LVIA has been prepared in accordance with good practice guidance set out in <b>Section 20.3.</b></p>

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		<p>a justification of the selected option in terms of landscape impact and benefit.</p> <p>Natural England’s advice is that early engagement is sought with the North Devon AONB regarding viewpoints and visual representations.</p> <p>We consider that all aspects of the cable route should be scoped in to the LVIA – there will be increased traffic movements along the small lanes in the AONB, hall roads along the cable route, trenchless technique compounds, construction compounds all with the associated noise and lighting.”</p>	
<b>Natural England</b>	17th March 2022, Scoping Consultation (Ref 384007)	<p>“Connecting People with nature</p> <p>The ES should consider the potential impacts on the South West Coast Path National Trail and the Tarka Trail. They should also be considered as visual receptors in the LVIA.</p> <p>The National Trails website <a href="http://www.nationaltrail.co.uk">www.nationaltrail.co.uk</a> provides further information.</p> <p>The ES should consider potential impacts on access land, common land, public rights of way and, where appropriate, the England Coast Path and coastal access routes and coastal margin in the vicinity of the development, in line with NPPF paragraph 100. It should assess the scope to mitigate for any adverse impacts.”</p>	<p>Potential impacts on the SWCP and Tarka Trail, open access land PRoW have been considered in the baseline <b>Section 20.5</b> and assessed where relevant from representative viewpoints in <b>Section 20.10.</b></p>

<b>Consultee</b>	<b>Date, Document, Forum</b>	<b>Comment</b>	<b>Where addressed in the ES</b>
<b>Historic England</b>	18th March 2022, Scoping Consultation (Ref PA01170209)	"3.10 Onshore Landscape and Visual Amenity Study Area – we are aware that the LVIA will be focussed on the preferred Landfall to MLWS and onshore export cable corridor and that attention is given to designated heritage assets, such as Registered Parks and Gardens. We therefore consider it important that clarity is provided in any ES produced about that assessment of setting of heritage assets and where such information is presented within any Onshore Archaeology and Cultural Heritage chapter, Onshore Landscape and Visual Amenity chapter and/or other Onshore Inter-Relationships, as described in Section 3.11."	Potential impacts on Registered Parks and Gardens, as far as they relate to LVIA, have been considered in <b>Section 20.5</b> .  <b>Chapter 17: Onshore Archaeology and Cultural Heritage</b> contains detailed assessment of impacts on these receptors.
<b>North Devon District Council</b>	5 <sup>th</sup> April 2022, Pre Application Enquiry Response (Ref ENQ/0150/2022)	"Section 3.10: Onshore Landscape and Visual EIA should also be informed by the North Devon Council's Assessment of Landscape Coastal Amenity Characteristics, and Landscape Value Coast and Estuarine Zone (Taw Estuary) Policy ST09 (October 2016)  <a href="https://www.northdevon.gov.uk/media/381068/completeestuary-study.pdf">https://www.northdevon.gov.uk/media/381068/completeestuary-study.pdf</a> "	Local landscape character assessment is considered in the baseline, set out in <b>Section 20.5</b> , and where relevant assessed in <b>Section 20.9</b> .
<b>Torrige District Council</b>	18 <sup>th</sup> March 2022, Consultation request, (Ref GE/0229/2022)	"It is of the understanding that no direct operational development will occur within Torrige District nonetheless, the proposed development will result in harm to the landscape and seascape along the North Devon and Coast AONB. It is noted that the Scoping Report identifies the landscape and visual receptors of relevance for both	The potential for the Onshore Infrastructure to affect the Special Qualities of the NDCAONB and its setting, and Heritage Coasts, is considered in

<b>Consultee</b>	<b>Date, Document, Forum</b>	<b>Comment</b>	<b>Where addressed in the ES</b>
		<p>onshore and offshore and has acknowledged the onshore landscape designations and listed the Landscape and Seascape Character assessment materials. It is recommended to engage and seeks consultation with the North Devon and Coast AONB. The key policies considerations within the North Devon and Torridge Local Plans are reference within Table 4.3 of the Scoping Report however, there is an absence of the following relevant landscape Policy DM08A.”</p>	<p>the baseline, set out in <b>Section 20.5</b>, and where relevant assessed in <b>Section 20.9</b>.</p> <p>National Character Area profiles, and local landscape character assessment, are considered in the baseline, set out in <b>Section 20.5</b>, and where relevant assessed in <b>Section 20.9</b>.</p>
<p><b>LVIA Expert Topic Group (ETG) Consultation meeting:</b></p> <p><b>Natural England, North Devon District Council, North Devon Coast AONB, Historic England</b></p>	<p>2<sup>nd</sup> November 2022, remote via Microsoft Teams.</p>	<p>Natural England requested an assessment of the Special Qualities of the NDCAONB.</p> <p>Natural England requested that the focus of the LVIA should be on the local-level landscape character assessment and not National Character Areas.</p> <p>In relation to Onshore Landscape and Visual Amenity, consultees requested further viewpoints from Northam Burrows Country Park, from Broad Sands car park, from Crow Point, from Grey Sands Hill, and from Flagpole Dune in Braunton Burrows.</p> <p>North Devon AONB requested that the East Yelland Quay consented scheme is included in the cumulative</p>	<p>An assessment of the Special Qualities of the NDCAONB is set out in <b>Section 20.9</b>.</p> <p>The assessment of landscape character in <b>Section 20.9</b> is based on relevant local-level landscape character assessment, as set out in <b>Section 20.5.1.2</b>.</p> <p>Additional viewpoints have</p>

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		impact assessment for Onshore Landscape and Visual Amenity.	<p>been included in the LVIA from the locations suggested by consultees and are assessed in <b>Section 20.10.4.</b></p> <p>The cumulative assessment is set out in <b>Section 20.11,</b> and includes the East Yelland Quay consented (under-construction) scheme.</p>
<b>North Devon Council</b>	Pre application consultation via Microsoft Teams	The viewpoints used for the visualisations were agreed with NDC as part of the pre application consultation process. Which visualisations should be further developed as photo-realistic images for the planning application were also agreed.	Viewpoint visualisations are set out in <b>Section 20.7.</b>

## 20.5 Existing Environment

76. This section describes the existing environment in relation to onshore landscape and visual amenity associated with the study area. It has been informed by a review of the sources listed in **Section 20.4.5.**

### 20.5.1 Current Baseline

77. The LVIA identifies aspects of the landscape and visual resource that may be significantly by the Onshore Infrastructure and provides a description of the existing landscape and visual conditions, which is referred to as the landscape and visual baseline. When reviewed alongside the description of the Onshore Infrastructure



provided in **Chapter 5: Project Description**, the established baseline will form the basis for the identification and description of landscape and visual effects.

78. The baseline description of the landscape and visual resource that may be impacted is primarily determined by the physical footprint of the Onshore Infrastructure and the extent to which the Onshore Substation will be visible, which is illustrated in the ZTVs (**Figure 20.7** and **Figure 20.8**).
79. The baseline also describes current pressures that may cause change in the landscape in the future, and which need to be considered cumulatively with the Onshore Infrastructure, in particular drawing on information for other developments that are not yet present in the landscape but are at other stages in the planning process.
80. Where relevant, a preliminary assessment has identified those landscape and visual receptors that may have the potential to experience significant effects, which require to be assessed in full; set out for landscape receptors in **Section 20.9.1** to **20.9.6** and for visual receptors in **Section 20.10**. The Existing Environment (**Section 20.5**) therefore provides a baseline overview, and a detailed baseline description is provided separately within the assessment section for each receptor that may be significantly affected.

#### 20.5.1.1 Landscape Baseline Overview

81. The Onshore Infrastructure is located entirely within the administrative boundary of NDC, in Devon; from the Landfall to MLWS at Saunton Sands at its northernmost point, across the Onshore Export Cable Corridor, to the Onshore Substation to the north-west of Yelland at the southernmost point of the Onshore Infrastructure (**Figure 20.1**).
82. This part of North Devon has a distinct coastal landscape, broadly characterised by the coastal towns which span its coastline as well as its beaches, dunes, and inland estuary waterways of the River Taw and River Torridge.
83. Inland from the coastline of Bideford Bay, the landscape of the study area is strongly influenced by the Taw-Torridge Estuary, which is fringed with areas of saltmarsh, sandspits, lagoons, and reclaimed marshland, and by the extensive hummocky sand dune systems of Braunton and Northam Burrows. Occasionally, parts of the Braunton Burrows dune system are temporarily restricted due to military operations.

84. To the east of the beach and coastal landscape at Saunton Sands and Braunton Burrows dune systems, and north of the Taw-Torridge estuary, the landscape is predominantly under use as arable farmland.
85. The inland farmed landscape has a strong pattern of rectilinear field boundaries, some historically significant (Braunton Great Field, medieval open strip field system), enclosed by hedgerows, with some low scrub cover on field margins. As a result, there is a sense of exposure and space, with opportunities for wide-ranging and long views. There are few roads and sparse settlement which contributes to perceptual qualities of tranquillity and naturalness. The River Taw lies to the south, with the wide shallow mudflats, sand spits, and marshes separating the landscape to the north from that of the south.
86. Settlement and resorts are concentrated around the coastline, along main coastal roads, and within lower-lying coastal plain and estuary landscapes further inland.
87. The landscape to the south of the estuary has a busy and active feel. The Onshore Substation site lies within the settled and developed coastal margins, to the south of the River Taw, partly on brownfield land and partly on agricultural land. Immediately to the north of the Onshore Substation is the site of the former Yelland Power Station, which is now under construction as a new mixed-use residential development. Immediately to the east is the Sandbanks Business Park / Yelland Terminal. To the south are parts of Yelland settlement and the B3233. To the west and north-west are a parallel set of overhead power lines and towers, and the existing East Yelland Substation, respectively.
88. The close proximity of existing electricity overhead lines to the Onshore Substation and the relatively close proximity of existing electrical infrastructure at the East Yelland substation provides a context of electrical infrastructure within the local vicinity. The Onshore Substation is located immediately adjacent to the existing Sandbanks Business Park / Yelland Terminal, which contains varied built forms and massing, from larger two-storey industrial units with a metal clad finish, to single storey red-brick buildings, with associated industrial forms including large cylindrical storage tanks, pipe work and metal lattice structures, tall lighting columns, and security fencing.

## 20.5.1.2 Landscape Character

### 20.5.1.2.1 National Character Assessments

89. The English landscape is classified at the national level by Natural England's National Character Areas (NCAs). The NCAs are defined at a broad landscape scale, each with descriptive character profiles.
90. The proposed Onshore Infrastructure and the associated LVIA study area lie within the following NCAs, shown on **Figure 20.3**:
- NCA 145: Exmoor
  - NCA 149: The Culm.
91. Although helpful to an understanding of the broad landscape context, because the NCAs are a national level of characterisation, they are not considered sufficient in detail to determine the potential effects at an individual project level, therefore, are not assessed further. However, further, more detailed, landscape character assessments have been carried out at the County and Local level, described below.

### 20.5.1.2.2 District Character Assessments

#### 20.5.1.2.2.1 Devon Landscape Character Assessment (DLCA)

92. The Devon Landscape Character Assessment (DLCA) is an online resource created by Devon County Council. At the county level, the DLCA defines 68 Devon Character Areas (DCAs) across the County, which are described as unique, geographically specific areas of landscape. DCAs are broad-scale, and comprise a number of more detailed, local-level descriptions of landscape, those which are situated within the Study Area. The location of DCAs within the study area is shown on **Figure 20.3**, with the Onshore Infrastructure falling almost entirely within the Taw-Torridge Estuary DCA, with small extents of the access tracks falling within DCA 32 (High Culm Ridges) and DCA 43 (North Devon Coastal Downs).
93. The Taw-Torridge Estuary DCA is described as "the estuary of the Taw and Torridge Rivers, and a small margin of land on either side. Northam Burrows and the dune system at Braunton Burrows are also included in the area. This area is distinctive for its flat topography and the dominance of the sea and estuary."
94. The DLCA provides guidelines to protect, manage, and plan the landscape of the Taw-Torridge DCA, of which the following are relevant to the study area for the Onshore Infrastructure:

- “Protect the open character of the estuary and views from and to surrounding landscapes
- Protect the open and undeveloped character of Braunton Great Field, ensuring that any limited new development in the area respects the scale and historic character of the landscape.
- Protect and restore where appropriate historic features such as quays, bridges and agricultural structures (including those of Braunton Marsh and Braunton Great Field); provide sensitive interpretation where appropriate to increase the public’s awareness of these features.
- Protect the area’s distinctive seascapes and open views across Bideford Bay.
- Plan for...incorporating new development into the landscape setting of the estuary with great care; providing green infrastructure links to routes such as the Tarka Trail and South West Coast Path; and ensuring that any new development – particularly within or adjacent to the AONB – is sensitive in terms of its design and scale.”

#### 20.5.1.2.2.2 Joint Landscape Character Assessment for North Devon & Torridge (JLCA)

95. Part of the DLCA, the JLCA was prepared by Land Use Consultants for North Devon and Torridge District Councils, Devon County Council and Natural England, adopted by North Devon Council in 2011. The JLCA subdivides the DCAs into Devon Landscape Character Types (LCTs), found throughout the district. A revised summary list and key characteristics of the LCTs, including seascape, was created as part of the ‘Devon Menu of Landscape Character Types’ (Devon County Council and DLPG) in 2017, which form the basis of this LVIA.
96. The location of LCTs within the study area is shown on **Figure 20.3**.

#### 20.5.1.2.2.3 North Devon and Exmoor Seascape Character Assessment, (NDESCA)

97. Seascape has been characterised by the National Trust, North Devon Coast AONB, Exmoor, Exmoor National Park Authority, North Devon Council, Torridge Local Council and Natural England (2015) ‘North Devon and Exmoor Seascape Character Assessment’, (NDESCA) which defines Seascape Character Areas (SCAs), and more detailed Seascape Character Types (SCTs), at a local level.
98. The NDESCA notes (paras 2.7 – 2.14) that the spatial classification of seascape character, landwards of the Low Water Mark, includes the same boundaries as the JLCA LCTs. The two assessments are, therefore, to be used together to provide a fully integrated resource on landscape and seascape character. The LVIA, while

primarily based on the JLCA, is also informed by the NDESCA study. For completeness, the location of SCTs within the study area is shown on **Figure 20.4**.

#### 20.5.1.2.2.4 Assessment of Landscape Coastal Characteristics, and Landscape Value, Coast and Estuarine Zone (Taw Estuary) (ALCC)

99. The adopted North Devon and Torridge Local Plan 2011-2031 (NDTLP) includes Policy ST09: Coast and Estuary Strategy, which applies to the Coastal and Estuarine Zone (CEZ) identified on the Policies Map.

100. The purpose of the ALCC is described as twofold:

- 'To assess the character of the proposed Coastal and Estuarine Zone (CEZ) and to identify where the landscape can be described as coastal in character and which areas can be defined as undeveloped coast; and
- To assess which areas of the proposed CEZ in the area of the Taw Estuary can be defined as valued landscapes.'

101. The study subdivides the CEZ into 19 landscape units 'landscape zones', so that a finer grained assessment could be carried out in relation to the characteristics of the undeveloped coast. Parts of the Onshore Infrastructure lie within Zone R: Yelland Marshes, shown on **Figure 20.4**.

102. The ALCC identifies the following 'Representative Characteristics and Qualities' of Zone R:

- "Low lying topography, close to sea level and backed by rising land to the south
- Tidal grazing marsh and rough grassland. Field boundaries drains and hedges. Colonies of seabirds evident on the shore and on the fields inland. The zone skirts around the edge of Isley Marsh reserve and includes Home Farm Marsh reserve
- Evidence of maritime trade and industry at Yelland Quay; South West Coast Path recreational route runs through this zone."

103. The 'Condition' of Zone R is described as;

- "Farmland and field boundaries in moderate condition. Evidence of rough grassland colonisation of pasture and some over grazing. In comparison, Home Farm Marsh in good condition, managed for wildlife. Some hedges have gaps and have grown out, providing poor stock control.

- Public rights of way network moderately well maintained. Disused and modern industrial development at Yelland Quay and isolated farmsteads detract from scenic qualities.”

104. The ‘Characteristics of Undeveloped Coast’ within Zone R are described as;

- “Direct maritime influences prominent in the zone – pervading influence of the estuary, sounds of sea birds, smells of the estuary. The northern part of the zone is at the top of the tidal limit of the estuary.
- Zone generally perceived as undeveloped. Overall sense of remoteness influenced by surrounding housing and intrusion of modern industrial development at Yelland Quay and Lower Yelland Farm.
- The zone forms part of the setting of the estuary and is within the landward extent of views out from the estuary and the South West Coast Path.
- Most of the zone can be categorised as undeveloped coast.”

105. In summary, the LVIA is based on the North Devon & Torridge Local Councils, Devon County Council and Natural England (2010). Joint Landscape Character Assessment for North Devon & Torridge (JLCA). Prepared by Land Use Consultants, which covers the study area for Landfall to MLWS, Onshore Export Cable Corridor, and Onshore Substation. Where relevant, reference is also made to the assessments which cover the seascape and estuarine landscape. Baseline descriptions of the relevant LCTs are provided alongside the assessment of effects on landscape character in **Section 20.9**.

### 20.5.1.3 Landscape Planning Designations and Defined Areas

106. A landscape designation is an area of landscape identified as being of importance at international, national, or local level, either defined by statute or identified in development plans or other documents. The landscapes are designated in relation to their special qualities or features which warrant special consideration through the planning system.

107. There are three ways in which such designations are relevant to the LVIA:

- The presence of a designation can provide an indication of a recognised value that may increase the sensitivity of a landscape character receptor, viewpoint, or visual receptor, and may therefore affect the significance of the effect on that receptor

- The presence of a relevant designation can lead to the selection of a representative viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area
- Designated areas may be included as landscape character receptors so that the effects of the proposed Onshore Infrastructure on the landscapes that have been accorded particular value can be specifically assessed.

108. In relation to the proposed Onshore Infrastructure, landscape planning designations and defined areas within the LVIA study area include:

- Areas of Outstanding Natural Beauty: NDCAONB
- Registered Parks and Gardens (RPGs) - Tapeley Park (Grade II\*) and Saunton Court (Grade II)
- Heritage Coast: North Devon Heritage Coast.

109. Landscape planning designations and defined areas are mapped on **Figure 20.5**.

#### 20.5.1.3.1 North Devon Coast Area of Outstanding Natural Beauty (NDCAONB)

110. The NDCAONB covers over 171km<sup>2</sup> in total. The NDCAONB mainly covers the coastal landscape, from Coombe Martin in the north as far as the Hartland Peninsula and Welcombe to the south. The dune system at Braunton Burrows is highly valued for its diversity of wildlife and earned the international status of a UNESCO World Biosphere in 2002. Braunton Burrows is identified as the 'Core Area' of the Biosphere Reserve, with the wider landscape comprising part of the 'Buffer Zone' and 'Transition Zone'. The NDCAONB is mapped within the LVIA Study Area on **Figure 20.5**.

111. The North Devon AONB Partnership (2019) North Devon Coast AONB Management Plan 2019-2024 'Statement of Significance' summarises the NDCAONB in the following terms:

112. "The North Devon coast has a wide diversity of scenery including some of the finest cliff scenery in the country, the primary reason for its designation. Tall, rugged cliffs and wave-cut platforms contrast with wide, sandy bays and sand dunes. In the north, steeply dipping rocks form hogsback cliffs at varied heights in a natural continuation of Exmoor's coastline. To the south, facing the full force of the Atlantic, sheer crags and razor-like reefs present the coast at its most rugged and beautiful. The AONB reaches inland to the Hartland plateau, scored by deep valleys, which reach the coast as steep hanging gaps in the cliffs, often with spectacular waterfalls.



113. In contrast, the broad sweep of Bideford and Barnstaple Bay is a mixture of low cliffs, long sandy beaches and the dunes at Braunton Burrows. Inland a pastoral landscape of hedged fields complements the steep-sided wooded combes and valleys where villages shelter from the Atlantic winds. Whilst skirting larger settlements such as Ilfracombe and Westward Ho!, the AONB boundary takes in bustling seaside resorts such as Woolacombe and Croyde and picturesque fishing villages such as Clovelly and Bucks Mills along this spectacular coast.”
114. The ‘Special Qualities’ of the NDCAONB have been defined in the North Devon Coast AONB Management Plan 2019-2024 area as follows (numbers provided for reference in this LVIA):
1. Distinctive Coastal Scenery
  2. A Landscape and Seascape of High Visual Quality
  3. A Significant Wildlife Resource
  4. A Varied Geology
  5. A Remarkable Heritage.
115. Special Qualities that are considered relevant to seascape/landscape character and visual amenity that are scoped in to this LVIA as having potential to be impacted by the Onshore Infrastructure are described in **Table 20.12**. Relevant parts of these descriptions to the LVIA are highlighted in bold, below.

*Table 20.12 NDCAONB Special Qualities Relevant to Landscape Character and Visual Amenity*

Special Quality	Description (North Devon Coast AONB Management Plan 2019-2024)
<b>Special Quality 1: Distinctive Coastal Scenery</b>	<p>Walking along the South West Coast Path across the open, windswept clifftops, and gazing westward across the seemingly infinite expanse of ocean, there is a sense of timelessness and of raw nature devoid of human influence. The feeling is sharpened when Atlantic storm waves crash against the twisted strata of exposed rocky cliffs, sending thunderous sprays of surf into the air. Dropping down into a coastal combe from the cliffs or farmland, a strong sense of refuge and shelter prevails, made more striking by the presence of enclosing woodland in the combes.</p> <p>Where stretches of coastline are distant from the coast road, a sense of tranquillity and remoteness is strong. In Braunton Burrows,</p>

Special Quality	Description (North Devon Coast AONB Management Plan 2019-2024)
	the vast sand-dune system, infinite sky and an expansive sandy beach are bordered by tranquil grazing marshes. Likewise, the Hartland Coast possesses a sense of wilderness, but this is a fragile quality, which can dissolve with the sight of a wind turbine or mast on a skyline, or a car parked in an open combe. Coastal landforms provide classic examples of erosion and deposition, as well as rare and characteristic landscape features.
<b>Special Quality 2: A Landscape and Seascape of High Visual Quality</b>	Panoramic views from elevated areas across rolling countryside are an important feature of the AONB. Within the combes, framed sea views are characteristic, and coastal vistas across to Lundy are wide and empty. Further north the view is framed by intimate distant views of the Welsh coast. <b>Inland, the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views. The coast path provides long views along the coast across the estuary and inland to the undeveloped skyline and downland.</b>

116. Special Qualities that are scoped out of the LVIA include 3. A Significant Wildlife Resource, as this is not a landscape and visual matter.: The effect of the Onshore Infrastructure on ecological assets and wildlife resource is considered in **Chapter 16: Onshore Ecology and Ornithology**.
117. Special Quality 4: A Varied Geology relates to the quality and special character of geological features within the NDCAONB, including its "*Coastal landforms provide classic examples of coastal erosion and deposition as well as rare and unique landscape features. These include the ... mobile sand dune system at Braunton Burrows*". Special Quality 5: A Remarkable Heritage relates to time-depth within the landscape, and how this is interpreted through extant features, including "*The legacy of a long history of human habitation in the area is woven into the landscape, with some threads tracing back to pre-historic times... The most extensive historic landscape features are the enclosed fields defined by ancient hedge-banks.*" The Landfall to MLWS and the northernmost part of the Onshore Export Cable Corridor lie within the NDCAONB, within Saunton Sands and the northern fringes of Braunton Burrows, and are the only aspects of the Onshore Infrastructure with the potential to result in physical impacts within the NDCAONB.
118. At the Landfall to MLWS there would be temporary disruption to the beach area as a result of a short section of open trench in the intertidal area and trenchless

technique activities; however, the key characteristics of the wider landscape in the area would remain intact with only a very localised level of disruption. From the temporary construction compound at the existing Saunton Sands Beach car park, the Onshore Export Cable Corridor would then be routed underground eastwards as far as the undesignated farmland to the east of Braunton Burrows. It is considered that whilst there would be some impact on the physical features of the NDCAONB at Landfall to MLWS, they would only experience low level of change and / or effects experienced over limited geographic extents. This conclusion is supported by the assessment of physical landscape features in **Section 20.9**. As a result, it is considered that the Landfall to MLWS and Onshore Export Cable Corridor defining element or characteristic within the context of the baseline landscape and would not result in significant effects on either Special Quality 4: A Varied Geology, or Special Quality 5: A Remarkable Heritage. Therefore, further assessment of effects on these special qualities is scoped out of this LVIA. Effects on heritage features are contained in **Chapter 17: Onshore Archaeology and Cultural Heritage**.

119. The Special Qualities are further illustrated by 16 photographs within the Management Plan which illustrate the landscape features of the designated area with descriptive text, for completeness the descriptions of these views are included below:

1. *"Diversity of scenery contained within a small area, including some of the finest cliff scenery in the country (as mentioned at designation)*
2. *Panoramic seascape, with seaward views to Lundy within the Atlantic Ocean, across the Bristol Channel to Wales and along the coastline. Views are of a landscape and seascape devoid of human influence*
3. *Narrow framed views of the sea from coastal mouths of steep-sided combs*
4. *Panoramic views across a rolling landscape of pastoral farmland, wooded combs and valleys from elevated inland areas*
5. *Wild coastal scenery. In the north, hogsback cliffs of varying heights; in the south high, rugged cliffs, dramatic rock formations, exposed headlands, wavecut platforms and rocky coves*
6. *A vast sand dune system at Braunton Burrows of exposed wild character, with high nature-conservation interest of international importance, and the pebble ridge at Westward Ho!*
7. *Long, broad sandy beaches backed by extensive dune systems*

8. *A strong sense of tranquillity and remoteness where the coast road is located away from the coastline*
9. *Rare and fragile quality of wilderness in Braunton Burrows and on the Hartland coast*
10. *Historic landscape pattern of hedge-banks, farmsteads, hamlets, villages and lanes*
11. *Historic coastal quays and fishing villages, coastal promontory sites for strategic defences and lighthouses*
12. *Deep combes and cliffs cloaked in ancient woodland along the Bideford Bay coast*
13. *Small pockets of remnant lowland coastal heathlands around Morte Point and Hartland Quay*
14. *Tourist-orientated settlements in sheltered seaside locations*
15. *Secluded, secretive and tranquil steep sided valleys that dissect the high downland and coastal plateau*
16. *Dark night skies, particularly in the Hartland Peninsula.”*

#### 20.5.1.3.2 Heritage Coast

120. There are two areas of Heritage Coast within the LVIA study area, as shown on **Figure 20.5**.
121. Heritage Coasts are defined to protect and conserve the best stretches of undeveloped coast; however, there are no statutory requirements or powers associated with the Heritage Coast definition. The North Devon Heritage Coast boundary includes parts of the inshore waters at Bideford Bay, to the north of the Taw-Torridge Estuary. The boundary includes parts of the NDCAONB across Saunton Sands beach, Braunton Burrows, and Saunton Down to the north, and extends beyond these areas to include Braunton Marshes to the east.
122. The effects of the Onshore Infrastructure on Heritage Coasts are considered in the assessment of landscape receptors set out in this LVIA (**Section 20.9**).

#### 20.5.1.3.3 Registered Parks and Gardens

123. RPGs are a non-statutory designation, maintained by Historic England.

124. There are two RPGs within the study area, Tapeley Park (Grade II\*) and Saunton Court (Grade II), shown on **Figure 20.5**.
125. Tapeley Park RPG lies within the Onshore Substation Study Area, however, no part of the Tapeley Park RPG falls within the ZTV of the Onshore Substation (**Figure 20.7** and **Figure 20.8**). Consequently, there is no potential for the perceived landscape characteristics of this RPG (including its gardens and parkland, range of habitats, historical / archaeological assets) to be impacted by the Onshore Infrastructure and it is not assessed further.
126. Saunton Court is located within the Onshore Export Cable Corridor and Landfall to MLWS 1km Study Area, in a valley to the north of Saunton, which runs north-west to south-east, the gradient decreasing towards its southern boundary. The official list entry notes “*There are views from the upper parts of the site around the house and on the terraces south to the sand dunes of Braunton Burrows and to the sea.*” Woodland along the southern boundary of the RPG and around Saunton Golf Course would likely screen the closest construction activities associated with the Onshore Export Cable Corridor, which generally be traffic movements around the golf course, since the cable itself would be routed using trenchless technology. The closest above-ground activities would be the construction compound at Saunton Sands beach car park and Landfall to MLWS to the west, which would potentially be visible at a range of approximately 0.9km, within the views identified in the list entry. Owing to the separating distances involved, and context of activity and movement of traffic around the beach car park these installation activities would have limited influence. Installation of the Onshore Export Cable Corridor to the east, within the agricultural landscape of Braunton Marshes, within which the movement of large agricultural machinery and seasonal change to crops and ground cover would be common, and therefore have similar limited influence on outward views from this RPG. On this basis, no significant effects would occur to the RPG, and it is not assessed further.

#### 20.5.1.4 Visual Baseline Overview

##### 20.5.1.4.1 Settlement

127. Settlement pattern within the study area is one of small and large villages concentrated along the coast and on main roads. Across the wider rural and coastal landscape, the settlement pattern is generally dispersed with farmsteads and scattered individual or small clusters of residential properties strung out along the

minor road network. The location and pattern of settlement across the study area is shown on **Figure 20.6**.

128. The following settlements lie either wholly, or partly within approximately 1km of the Landfall to MLWS, Onshore Export Cable Corridor, and Onshore Substation, within the LVIA study area:

- Saunton
- Braunton
- Appledore
- Yelland
- Instow
- Instow Town.

129. Between 2km and 3km of the Onshore Substation are Bickleton and parts of Fremington.

#### 20.5.1.4.2 Leisure and Recreation

130. Within the study area, there are several PRoW, long-distance recreational routes (LDRs), National Cycle Network routes (NCN), Open Access Land (OAL), and Country Parks, which provide access to the countryside and coastlines. The location of these areas which may attract visual receptors is shown on **Figure 20.6**.

131. Sections of two LDRs lie within the study area, the SWCP (also England Coast Path) and Tarka Trail. These routes largely follow the same alignment; however, there are short sections where these LDRs diverge, to the north of Yelland and Instow. At these locations, the SWCP follows the coastal edge, while the Tarka Trail follows a disused railway line, slightly inland of the coast.

132. There are sections of two NCN routes (NCRs) within the study area; NCR 3 and NCR 27. NCR 3 is a 328-mile cycle route connects Land's End in Cornwall to Bristol, via parts of Cornwall, Devon, and Somerset. NCR 3 passes through the study area to the south of the River Taw, between Barnstaple and Instow, where it follows the route of a disused railway, on the same alignment as part of the Tarka Trail LDR. A short section of NCR 27 lies within the study area between Braunton and Chivenor within 1km of the Onshore Export Cable Corridor access, along the existing toll road to Broad Sands.

133. Small areas of OAL are located to the south of the River Taw, providing access to dunes near Instow Sands. Northam Burrows is classified as OAL and is also a

Country Park, providing public access to the coast at the mouth of the Taw-Torridge Estuary.

134. Other opportunities for leisure and recreation in the LVIA study area occur on the coast between Saunton and Crow Point, and along parts of the Taw-Torridge Estuary, and their coastal hinterlands. Visitor locations notable as places of interest for visitors present within the Onshore Substation and Onshore Export Cable Corridor study areas, include:
- Beaches at Saunton Sands to Crow Point, Instow Sands, West Appledore, and Grey Sands Hill
  - Temporary holiday accommodation at Saunton Beach Cabins
  - Saunton Golf Course (Braunton Burrows)
  - Braunton Burrows dune system, a UNESCO Biosphere Reserve
  - Braunton Great Field, remnant medieval open strip field system
  - Extensive Site of Special Scientific Interest (SSSI) which covers much of the Taw-Torridge Estuary, Braunton Burrows and Northam Burrows.
135. Principal visual receptors associated with offshore leisure facilities, such as sailing routes from Instow and Appledore, are not considered in the LVIA owing to the intervening distance and limited theoretical visibility of the Onshore Infrastructure from these locations (shown on **Figure 20.11**).

#### 20.5.1.4.3 Transport Routes

136. A short section of the A386 enters the Onshore Substation study area to the south-west, connecting Appledore to the A39 and Bideford to the south. The B3233 crosses the study area for the Onshore Substation and Onshore Export Cable Corridor, to the south of the River Taw. The B3231 crosses the study area for the Onshore Export Cable Corridor from Braunton to Croyde, to the north of the River Taw.
137. There are few minor roads within the Onshore Export Cable Corridor to the north of the River Taw. There are, also, popular parking areas at Broad Sands (accessible via private toll road), Sandy Lane, and Saunton Sands Beach car park. To the south of the River Taw and west of the River Torridge there is a loose network of minor roads, providing vehicular access between settlements and to the surrounding rural landscape.



### 20.5.1.5 Representative Viewpoints

#### 20.5.1.5.1 Landfall to MLWS and Onshore Export Cable Corridor

138. As the cables are proposed to be buried there would be little or no visual effects resulting from the Onshore Export Cable Corridor once operational. In addition, the relatively discreet nature of the construction and decommissioning activities relating to the Onshore Export Cable Corridor means that only the views of close range receptors would be impacted. To aid an understanding of the impacts during construction and decommissioning, Illustrative Viewpoint Photographs referred to in the assessment of the Landfall to MLWS and Onshore Export Cable Corridor are provided in **Appendix 20.C: Illustrative Viewpoint Photographs**.

#### 20.5.1.5.2 Onshore Substation

139. The built infrastructure proposed for the Onshore Substation has a greater extent of visibility and therefore visual receptors over a wider area would potentially be impacted. Visual effects would also occur during operation and maintenance, as well as construction and decommissioning.

140. The viewpoints identified for assessment of the Onshore Substation have been selected to cover a variety of landscape character areas; roads; recreational routes; points from different directions and distances; and to inform the definition of the likely extent of significant visual effects from the identified principal visual receptors. 11 viewpoints were selected and agreed with statutory consultees at ETG on 2<sup>nd</sup> November 2022.

141. Representative viewpoints proposed for the visual assessment of the Onshore Substation are described in Table 20.13 and mapped on Figure 20.7 and Figure 20.8. The precise viewpoint locations have been finalised based on site survey and potential visibility of the Onshore Substation.

*Table 20.13 Onshore Substation Representative Viewpoints*

ID	Name	OS Grid Reference		Receptor Types
		Easting	Northing	
1	Tarka Trail / NCR 3, near Instow Barton Marsh	247753	131783	Walkers / cyclists, within LCT 4a: Estuaries.

ID	Name	OS Grid Reference		Receptor Types
		Easting	Northing	
2	Tarka Trail / NCR 3, near Yelland Quay	248413	132335	Walkers / cyclists, within LCT 4a: Estuaries.
3	Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland	248667	132380	Walkers / cyclists, within LCT 4a: Estuaries.
4	B3233, east of Instow	247935	131250	Road users, settlement, within LCT 3a: Upper farmed and wooded valley slopes.
5	PRoW (Instow Footpath, No. 16), north of properties on B3233	247913	131629	Walkers on the local PRoW network. within LCT 3a: Upper farmed and wooded valley slopes on the boundary with LCT 4a.
6	Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)	248866	131027	Road users, walkers, within LCT 3a: Upper farmed and wooded valley slopes.
7	Northam Burrows Country Park, on SWCP	244924	131213	Visitors to the Country Park, walkers on SWCP, within LCT 4f: Dunes and NDCAONB.
8	Grey Sand Hill (Northam Burrows Country Park), on SWCP	245329	131449	Visitors to the Country Park, walkers on SWCP, within LCT 4f: Dunes and NDCAONB.
9	Broad Sands Car Park, on SWCP	246865	132829	Walkers on SWCP and visitors to the beach at Broad Sands. Within LCT 4f: Dunes, NDCAONB and North Devon Heritage Coast.
10	Crow Point	246679	131940	Visitors to the estuary and beaches at Crow Point. Within LCT 4a: Estuaries, NDCAONB and North Devon Heritage Coast.
11	Flagpole Dune, Braunton Burrows	245577	135124	Visitors to Braunton Burrows. Within LCT 4f: Dunes, NDCAONB and North Devon Heritage Coast.

142. Visualisations of the WCS maximum parameter for the Onshore Substation are provided on **Figure 20.14** to **Figure 20.24**, in order to illustrate the maximum potential visual envelope of the Onshore Substation from each of the agreed viewpoint locations. The LVIA Rochdale Envelope for the Onshore Substation is based on a maximum parameter that includes a maximum building height of 10m above a finished floor level of 6.73m AOD. This results in an overestimation of the height of the block model in parts of the Onshore Substation maximum parameter but represents the worst case LVIA Rochdale Envelope in terms of assessment.
143. The proposed landscape mitigation planting has also been shown on viewpoints representing the approximate height of mitigation planting after 15 years (estimated to be 7.5m as shown on the year 15 visualisations).
144. For Viewpoint 1 (**Figure 20.14**), Viewpoint 3 (**Figure 20.16**), and Viewpoint 4 (**Figure 20.17**) a second set of photomontages have been produced to show a more detailed impression of how the proposed Onshore Substation may look in views and the landscape based on the principles of the **Substation Design Code (Design and Access Statement: Appendix B)**.

## 20.5.2 Cumulative baseline

145. Existing developments are included in the baseline for both landscape and visual effects assessments. These developments have an existing influence on the baseline landscape and visual environment. The nearby substation at East Yelland contains existing electricity infrastructure to the north-west of the Onshore Substation. A number of overhead electricity power lines, and wood pole lines, cross the study area and overhead line towers are a common feature in the landscape of the study area.
146. NatureScot guidance and GLVIA3 (para 7.13) states that under-construction are included in the LVIA baseline. A mixed-use residential scheme at East Yelland Quay is currently under-construction immediately to the north of the Onshore Substation site. The application documents suggest that the development proposals would be undertaken in 10 phases with an approximate 13-year build programme. The construction programme for the Onshore Substation is anticipated to be complete by October 2025, which would therefore be complete before there are any residential receptors at Yelland Quay. For these reasons, the East Yelland Quay scheme is considered in the CEA.

147. Adjacent developments may complement one another, or may be discordant with one another, and it is the increased or reduced level of significance of effects which arises as a result of this change that is assessed. Where this occurs, the magnitude of impact varies according to cumulative effect factors such as its consistency of image and degree of contrast or integration with the Onshore Infrastructure, as well as other 'non-cumulative' factors, such as its distance, lateral spread, and amount of visibility.

#### 20.5.2.1 Developments considered in the Cumulative Effects Assessment (CEA)

148. Cumulative effects refer to effects upon receptors arising from the Onshore Infrastructure, when considered alongside other proposed developments and activities and any other reasonably foreseeable project(s) proposals.

149. GLVIA3 (Landscape Institute and IEMA, 2013, p120) defines cumulative landscape and visual effects as those that 'result from additional changes to the landscape and visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.'

150. Other proposed developments that have the potential for cumulative effects in combination with the Onshore Infrastructure are considered to be those developments that are found within the LVIA study areas. Beyond the LVIA study areas cumulative effects are limited by distance and lack of intervisibility with other proposed developments. This is in line with guidance (SNH, 2012, p15) which states that 'the focus should be on the key cumulative effects which are likely to influence decision making, rather than an assessment of every potential cumulative effect'.

151. A comprehensive list of projects that have the potential to contribute to cumulative impacts of the Onshore Infrastructure has been compiled and this 'long list' and the approach to compiling this list is described in **Chapter 6: EIA Methodology**. Those cumulative projects listed within the 'long list' that lie within the LVIA study areas are listed below in **Table 20.14** and mapped on **Figure 20.12: Cumulative Developments**.

*Table 20.14 Cumulative developments considered in the LVIA*

<b>Reference</b>	<b>Type</b>	<b>Status</b>	<b>Preliminary Assessment</b>	<b>Approx. Distance from Onshore Development Area (approximate km)</b>
<b>60823</b>	Residential mixed-use development	Consented at appeal (75797), now under-construction	Included in CEA due to close proximity of development to the Onshore Substation. Whilst the potential for cumulative interaction of the Onshore Substation exists geographically, residential properties would not occur within the same period and therefore cumulative effects of construction activities on future occupiers of the development would not occur.	0.33
<b>72253</b>	Change of use of land to form seasonal tent and motor caravan site (1st March to 31st October) together with erection of reception / facilities building	Consented	Not included in CEA. No potential for significant effects owing to scale and nature of development and lack of intervisibility.	0.91

Reference	Type	Status	Preliminary Assessment	Approx. Distance from Onshore Development Area (approximate km)
<b>73006</b>	Conversion of existing building to holiday accommodation	Consented	No potential for cumulative interaction. Not included in CEA.	0.96
<b>73173</b>	Agricultural Building	Consented	Not included in CEA. Although in close proximity to the Onshore Export Cable Corridor, cumulative interaction would be short-term and temporary and there would be no potential for significant effects.	4.71
<b>74038</b>	Listed Building Consent	Consented	Not included in CEA. No potential for significant effects owing to scale and nature of development.	1.01
<b>74583</b>	Bat Shed	Consented	No potential for cumulative interaction. Not included in CEA.	1.18
<b>74943</b>	Residential development	Consented	Not included in CEA. No potential for significant effects due to distance and limited intervisibility within existing context of Yelland.	0.93

Reference	Type	Status	Preliminary Assessment	Approx. Distance from Onshore Development Area (approximate km)
<b>75047</b>	Energy (solar panel array)	Operational	Considered in the baseline. No potential for cumulative interaction. Not included in CEA.	1.03
<b>75129</b>	Residential development	Consented	No potential for significant effects due to limited intervisibility within existing context of Yelland. Not included in CEA.	0.67
<b>76396</b>	Application for demolition of existing buildings	Consented	Although in relatively close proximity to the Onshore Export Cable Corridor and Onshore Substation potential cumulative interaction would be short-term and temporary and there would be no potential for significant effects. Not included in CEA.	1.08
<b>76726</b>	Energy (solar panel array)	Consented	Although in relatively close proximity to the Onshore Export Cable Corridor and Onshore Substation potential cumulative interaction would	6.38



Reference	Type	Status	Preliminary Assessment	Approx. Distance from Onshore Development Area (approximate km)
			be short-term and temporary and there would be no potential for significant effects. Not included in CEA.	
<b>76796</b>	Residential development	In-planning	No potential for significant effects due to distance and limited intervisibility within existing context of Yelland. Not included in CEIA.	2.33
<b>76811</b>	Residential Development	In-planning	No potential for significant effects due to distance, relatively small scale and residential nature of cumulative scheme, and existing context of built form at Instow. Not included in CEA.	1.17
<b>1/0652/2022/FULM</b>	Residential development	In-planning	No potential for significant effects due to distance and limited intervisibility within existing context of Appledore. Not included in CEA.	3.77

## 20.6 Do Nothing Scenario

152. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 require that "an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge" is included within the ES (EIA Regulations, Schedule 4, Paragraph 3). From the point of assessment, over the course of the development and operational lifetime of the Onshore Project (operational lifetime anticipated to be a minimum of 25 years), long-term trends mean that the condition of the baseline environment is expected to evolve. This section provides a qualitative description of the evolution of the baseline environment, on the assumption that the Onshore Project is not constructed, using available information and scientific knowledge of onshore landscape and visual amenity.
153. The main driver of change within the landscape, seascape, and visual resource is climate change. Aspects that may cause change are likely to take three forms; measures to mitigate against the adverse effects of climate change and measures put in place to try and limit the future effects of it; and the actual effects of climate change on our landscape, for example through coastal erosion, sea level rise, and predicted changes to vegetation cover. In addition, the effects of the United Kingdom's exit from the European Union and long-term effects of the COVID-19 pandemic and the recovery from it may also have a supplementary effects.
154. The need for increased flood defence measures is likely to be a driver for change in relation to the coastline and water courses as well as potential changes to other land use practices.
155. Increased walking, cycling and public transport infrastructure may result in changes within urban and rural areas to accommodate this with the aim of reducing vehicular travel and providing increased amenity resources.
156. Following the United Kingdom's exit from the European Union new policies are being drawn up to replace the Common Agricultural Policy. This may result in different agricultural practices being subsidised so that land-uses and land management practices that can reduce or offset carbon emissions become more prevalent. These may include increased tree cover; hedgerow planting and areas being left un-grazed. There may also be increases in food production in the UK in order to reduce our need to import, which may also change farming infrastructure and practices.

157. The recent change in how people work - at home rather than travelling to offices - is likely to continue and may result in changes to town centres where there is a focus on commercial property. Such changes may also put more development pressure on rural communities.

## 20.7 Potential impacts during construction and decommissioning

158. This section outlines the potential impacts of the Onshore Infrastructure during construction and decommissioning. The assessment is contained below in **Sections 20.9 and 20.10**.

159. No decision has been made regarding the final decommissioning policy for the Onshore Infrastructure as it is recognised that industry best practice, rules and legislation change over time.

160. The anticipated Worst Case Scenario construction and decommissioning activities are outlined in **Section 20.4.3**. The potential impacts of the decommissioning of the Onshore Infrastructure have been assessed for Onshore Landscape and Visual Amenity on the assumption that decommissioning methods will be similar or of a lesser scale than those deployed for construction. The types of impact would be comparable to those identified for the construction phase.

### 20.7.1.1 Landfall to MLWS and Onshore Export Cable Corridor

161. The relatively small scale and ground-based nature of the Landfall to MLWS and Onshore Export Cable Corridor means that only the views of close-range receptors would be impacted during construction. The impacts will also occur over relatively short periods of time as the construction of the Onshore Export Cable Corridor will follow a 'rolling programme.' Illustrative Viewpoint Photographs referred to in the assessment of the Landfall to MLWS and Onshore Export Cable Corridor are provided in **Appendix 20.C: Illustrative Viewpoint Photographs**.

162. The decommissioning of the Landfall to MLWS and Onshore Export Cable Corridor would have a lesser effect, as the ducts would be left in situ underground, while only the cables would potentially be pulled through and removed. Decommissioning would include potential effects on the landscape character and visual amenity of the sites and surrounding area. The effects would relate principally to the decommissioning process, associated plant, materials, infrastructure, and

temporary structures, as well as the presence of dismantled structures, where they would be visible above ground.

#### 20.7.1.2 Onshore Substation

163. The potential effects of the Onshore Substation during construction would include impacts on the physical elements where construction would take place, as well as impacts on the landscape character and visual amenity of the construction works and surrounding area.
164. The impacts would relate principally to the construction process, associated plant, construction compounds, materials, infrastructure, and temporary structures. Construction impacts also relate to the presence of emerging structures of the Onshore Substation, where they would be visible above ground and the use of construction lighting during the hours of darkness (see **Chapter 5: Project Description** for more detail). Construction working hours are proposed to be from 7am to 7pm. The use of construction lighting would therefore be limited to morning or early evening during winter months. Taking this into account, the effect of construction during the hours of darkness is considered to be the same or less than the effect of construction activities during daylight hours.
165. The potential effects of the Onshore Project during decommissioning would relate principally to the removal of the Onshore Substation.
166. The magnitude of impacts during decommissioning would be comparable to or less than those identified for the construction phase for the Onshore Substation. Effects would, therefore, also be less than or equal to them.
167. The potential impacts during construction of the Onshore Infrastructure have been assessed in Section 20.9.1 and Section 20.10.

### 20.8 Potential impacts during operation and maintenance

168. This section outlines the potential impacts of the Onshore Infrastructure during construction and decommissioning. The assessment is contained below in **Sections 20.9 and 20.10**.
169. The potential effects of the Onshore Infrastructure during operation and maintenance relates principally to the presence of the Onshore Substation. The LVIA assesses the potential effects of the Onshore Substation in year 0 (i.e., at the

commencement of operation, once construction activity has completed), and in year 15 which allows for the proposed landscape mitigation planting to mature.

170. The final design of the lighting for the Onshore Substation will be completed as part of the detailed design for the substation, therefore at this stage the full details will not be known. However, the following guidance will be followed in the design of the lighting, with the final design of all exterior lighting completed in accordance with the Institution of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light.
171. Internal lighting will be designed to allow safe movement of personnel and safe operation of equipment, where practicable all of the lights will be LED type with the lighting levels in accordance with British Standard EN12464-1:2021. They will be operated by wall switches positioned adjacent to doorways, including outside at the entrance to rooms and/or at more than one doorway if appropriate, and will incorporate a 4-hour timer manual override switch. All emergency lighting will be designed in accordance with British Standard EN5266-1:2016.
172. Exterior lighting, including perimeter and site lighting, will be required to allow safe access and emergency egress for personnel (including from buildings) and safe operation of equipment during the winter months. A lower level of lighting will also be required to remain overnight for security purposes.
  - Maintained average illuminance 6.0 lux at ground level
  - Minimum maintained point illuminance 2.5 lux at ground level
173. For the perimeter lighting the luminaires shall, where practicable, be LED type with directable light output to minimise light pollution. Exterior site lighting to buildings shall incorporate IP65 wall mounted LED luminaires which will be controlled via integral PIR motion detectors.
174. In summary, while there would be lighting associated with the Onshore Substation during the operational phase, this would be limited in extent and usage, and typically of a low intensity, and appreciated within a context that includes lighting within settlement nearby, and in adjacent buildings, such that it would not give rise to any likely significant effects.
175. Visible operational components of the Onshore Export Cable Corridor are limited to marker posts at field boundaries, the ground level concrete access hatches of Transition Joint Bays at Landfall to MLWS and Cable Jointing Pits along the route. Following the construction phase, the land will be reinstated to its former agricultural

use and disrupted hedgerows will be replaced. On this basis, it is anticipated that once operational, the potential effects of the buried onshore cable would be negligible as a result of their presence largely under ground level. Where unplanned replacement or maintenance of infrastructure is required, this would result in only very localised and temporary effects of a much-reduced scale to the effects assessed for construction. Taking this into account, operational effects of the Onshore Export Cable Corridor and Landfall to MLWS are not considered further in the assessment of operational effects.

176. The one exception to this relates to the few localised areas where hedgerow trees will be removed but potentially replaced elsewhere owing to their location over the Onshore Export Cable Corridor. The effects of these removals are assessed in **Section 20.9.1** and **Section 20.9.2**.

## 20.9 Landscape Effects Assessment

177. This section presents the main assessment of landscape effects. It should be noted that the format of LVIA diverges with that presented in in **Chapter 6: EIA Methodology**. The assessment is undertaken by a receptor focussed approach, as opposed to a project phase approach.

### 20.9.1 Preliminary Assessment of Physical Landscape Effects

178. The proposed construction of the Onshore Substation, and the construction of access roads, open trenching, and construction compounds along the Onshore Export Cable Corridor and at Landfall to MLWS would have physical landscape effects on hedgerows and hedgerow trees, coastal land, and grassland / agricultural land, the pattern of which makes up the landscape character. There are woodlands within the study area, however, direct impacts to these have been avoided through careful siting or use of trenchless technique (or other trenchless crossing techniques) to install cables beneath woodlands and so avoid disturbance.
179. For assessment purposes therefore, the physical landscape elements with the potential for significant effects have been divided into five categories:
- Coastal land
  - Agricultural land / Grassland
  - Hedgerows and Hedgerow Trees
180. As described in **Section 20.7** and **Section 20.8**, the Landfall to MLWS and Onshore Export Cable Corridor is only considered to have potential for significant

effects during the construction phase due to the disturbance of landscape features required to construct the underground infrastructure. While there will be no direct effects during the operational phase there is the potential that residual effects, especially relating to the removal of trees during the construction phase, will extend beyond the construction phase and these are also considered in this section.

## 20.9.2 Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor (Construction)

### 20.9.2.1 Coastal Land

#### 20.9.2.1.1 Baseline

181. This landscape is made up of several distinct physical elements found at the northern extent of the Onshore Development Area. The distinct elements include the bare sand beach at Saunton Sands. Braunton Burrows is an extensive sand dune system including undulating mosaics of bare sand, mobile and fixed dunes (some up to 30m high), dune slack, ponds, species rich grassland, scrub, and woodland. The northern extent of the dune system includes Saunton Golf Course, which includes intensively managed areas of grassland within fairways and greens.
182. The other coastal land within the Onshore Development Area is found at the Taw-Torridge estuary, which includes areas of intertidal sand / mudflats, saltmarsh and rocky shoreline and tidal waterbodies. However, at this location, the Onshore Export Cable Corridor will use trenchless technique to route underneath the estuary, thereby resulting in no disturbance to these features.
183. The Landfall to MLWS and the adjacent section of the Onshore Export Cable Corridor construction compound are located within the coastal landscape.

#### 20.9.2.1.2 Sensitivity

184. Coastal land within the northern extent of the Onshore Development Area (**Figure 20.2**) forms part of the NDCAONB and Devon Heritage Coast (**Figure 20.5**). The beach at Saunton Sands and Braunton Burrows dune system has special value as part of the NDCAONB (contributing to the Special Qualities of 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', as illustrated by Viewpoint A and Viewpoint B (**Appendix 20.C**)). The intertidal zone, beach, and dune system is also part of an extensive SSSI, which also confers the special ecological value of the coastal landscape. Value is therefore considered to be **high**.

185. Reinstatement of the disrupted coastal land can be achieved with relative ease by the mitigation measures described in **Section 20.4.4**. Susceptibility of the coastal land to the Onshore Infrastructure is, therefore, considered to be **medium**.
186. The combination of a high value and medium susceptibility gives rise to an overall **medium-high** sensitivity.

#### 20.9.2.1.3 Magnitude of impact: Construction and Decommissioning

187. During the construction phase, earthwork operations would be undertaken to excavate short sections of temporary trenches, the welding and installation of cable ducts and the subsequent pulling through of the DC cables, with the aid of an offshore vessel.
188. At the Landfall to MLWS, direct disturbance of the intertidal area is expected through trenching for the cable laying. An excavator would be used to dig a trench, with the sand placed either side (or on one side), following which the cable would be placed in the trench and the sand placed back into the trench to cover. The process is expected to take less than five days, though it is noted that where the works would extend over more than one day, the tides would be likely to redistribute any excavated sand and partially refill any open trench above the level of surrounding sand.
189. During the trenching works, approximately 700m<sup>2</sup> of intertidal sand would be temporarily disturbed twice, once during excavation and again once it is reinstated. Consequently, over the works duration a maximum of 2100m<sup>2</sup> would be 'turned' or covered during construction. Due to the sequence of working (as the trench is excavated, then the cable is laid and then the material is placed back in the trench).
190. A trenchless technique drilling rig will be used to install the Onshore Export Cable Corridor from the construction compound within Saunton Sands car park (illustrated from Viewpoint C, **Appendix 20.C**), to the intertidal area. From the Saunton Sands car park, trenchless technique drilling will route the Onshore Export Cable Corridor underground, inland to the agricultural landscape to the east of Braunton Burrows, thus avoiding disturbance to other features of the coastal land, including the extensive Braunton Burrows dune system, scrubland, and golf course. Consequently, the magnitude of impact will relate principally to short-term works taking place at the beach and Saunton Sands car park.
191. The extent of direct change within the expansive coastal area would be small. The use of trenchless technique drilling means that disruption of the coastal land will be



largely avoided other than a short section of open trench activity within the intertidal area, and the access to and presence of the construction compound, trenchless technique drilling rig, and construction of the transition joint bays at Saunton Sands car park.

192. Taking these factors into account, the magnitude of impact is considered to be **low**.

#### 20.9.2.1.4 Significance of effect: Construction and Decommissioning

193. The significance of the effect is concluded to be **moderate-minor not significant adverse** during construction. The extent of the direct physical effect would be contained to approximately 810m<sup>2</sup> within the intertidal area. The effect will be short term, and reversible.

#### 20.9.2.1.5 Further Mitigation

194. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.2.1.6 Residual Effect

195. The residual effect would be a **moderate-minor, not significant adverse** effect during construction.

### 20.9.2.2 Agricultural Land / Grassland

#### 20.9.2.2.1 Baseline

196. Agricultural land is the predominant land use along the Onshore Development Area (**Figure 20.2**). The scale of field parcels varies, and follows a rectilinear pattern, particularly across the Braunton Marshes.

197. In the northern extent of the Onshore Development Area, close to Sandy Lane, the fields predominantly contain arable crops and farm practices are intensive with the land being regularly disturbed through ploughing, planting, and harvesting, throughout the year, across large-scale fields (illustrated from Viewpoint D, **Appendix 20.C**) which reduce in scale to the south where they occupy space between American Road and Braunton Burrows (illustrated from Viewpoint F, **Appendix 20.C**).

198. From Sandy Lane car park to the banks of the River Taw, there is a collection of separate pastures, collectively known as Braunton Marshes, which comprise grazed fields, marshy grassland, semi-improved grassland, fen, scrub, and wet woodland habitat types (illustrated from Viewpoint E, **Appendix 20.C**).
199. To the north of Yelland, is a mosaic of mixed agricultural fields which include marshy and semi-improved grassland, improved grassland, and arable crops (illustrated from Viewpoint G, **Appendix 20.C**). As noted in the NDESCA (2015), Some fields fringing the estuary are encountering a lack of grazing, with a spread of brambles and scrub changing the character of the farmland – conveying an ‘urban fringe’ feel.
200. The changing appearance of the agricultural landscape and the activities associated with ploughing fields, planting and harvesting crops is, therefore, a common and integral characteristic of the agricultural landscape. The presence and activity of farm machinery is also a feature of the arable farmland and on the rural roads, as is the occasional movement of large machinery and vehicles accessing MOD training land at Braunton Burrows, from American Road.

#### 20.9.2.2.2 Sensitivity

201. Agricultural land within the Onshore Development Area largely lies outside of the NDCAONB, apart from a small number of field parcels to the north of Broad Sands. Nonetheless, it is a common feature of the landscape that forms its immediate landward setting. Agricultural land to the east of Braunton Burrows is situated within the landward extent of the Devon Heritage Coast.
202. On balance, the value of the agricultural land is considered to be **medium**.
203. Arable and grass crops are easily replaced and due to the inherent seasonal disruption as a result of crop cultivation, combined with the widespread occurrence of agricultural land as a landscape element, susceptibility to the Onshore Infrastructure is considered to be **low**.
204. The combination of the value and susceptibility gives rise to an overall **medium-low** sensitivity.

#### 20.9.2.2.3 Magnitude of impact: Construction and Decommissioning

205. The Onshore Export Cable Corridor will occupy a width of 30m, within the Onshore Development Area, containing the cable route trenching, construction of haul roads, and the presence of soil bunds and temporary fencing. Haul roads will be

constructed within the corridor, trenches and soil storage bunds formed and, once the cables have been laid, the trenches will be backfilled, and the haul roads removed. The agricultural land would then return to its previous use within the next growing season. Reinstatement is therefore considered straightforward with minimal disruption required to return the land to its previous uses and productivity.

206. Overall, the magnitude of impact would be **medium**. The cable route trenching construction of haul roads, and presence of soil bunds and temporary fencing within the Onshore Export Cable Corridor would be relatively small-scale, short-term, but noticeable change, over a relatively large geographic extent within the LVIA study area.

#### 20.9.2.2.4 Significance of effect: Construction and Decommissioning

207. The significance of the effect is therefore concluded to be **moderate-minor not significant adverse** during construction. The extent of the effect would be contained within the 30m width construction corridor, across approximately 5.6km of the Onshore Export Cable Corridor route which traverses grassland / agricultural land. The effect will be short term, and reversible.

#### 20.9.2.2.5 Mitigation

208. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.2.2.6 Residual Effect

209. The residual effect would remain **moderate-minor not significant adverse** during construction.

### 20.9.2.3 Hedgerows and Hedgerow Trees

#### 20.9.2.3.1 Baseline

210. Hedgerows are a feature of the agricultural landscape within the Onshore Development Area, shown on **Figure 20.2**. The height, continuity, and condition of hedgerows varies; some appear more formally managed, other have a scrubbier form, with a fragmented appearance.

#### 20.9.2.3.2 Sensitivity

211. Hedgerows within the Onshore Development Area do not lie within the NDCAONB, although they are a feature of the landscape that forms its immediate setting, which also lies within the landward extent of the Devon Heritage Coast.
212. Hedgerows form a component of the rural and historic landscape character and a common feature of the agricultural land within the coastal plain. There are taller hedgerows within the Onshore Development Area, which tend to be more informally managed and left to grow beyond the 1m to 2.5m height which is typical of formally managed hedgerows. Ten of the hedgerows to be removed are species-rich (and therefore considered to be “important” when assessed against the wildlife criteria of the Hedgerow Regulations 1997). Where hedgerow trees are found in hedgerows they vary in size, age frequency, and condition.
213. Overall, value is considered to be **medium-high**. The sections of hedgerow lost to construction works would be reinstated post construction and as this can be achieved with relative ease this reduces their overall susceptibility to the Onshore Export Cable Corridor construction. Susceptibility for hedgerows is considered to be **medium-low**.
214. The combination of the value and susceptibility gives rise to an overall **medium** sensitivity.

#### 20.9.2.3.3 Magnitude of impact: Construction and Decommissioning

215. Careful consideration of cable routing has sought to reduce the amount of hedgerow removal within the Onshore Development Area.
216. Construction activity within the Onshore Development Area crosses approximately 24 hedgerows, which equates to c. 474m in length.
217. In addition, longer stretches of hedgerow coppicing are proposed at the following two points:
- The point where the haul road crosses Sandy Lane, just to the north of Sandy Lane car park; this that will require a temporary removal of a 40m stretch of hedgerow on the east side of the road to provide access and to allow for a visibility splay
  - The haul road access point off Saunton Road B3231 where a maximum 90m stretch of hedgerow will require temporary removal to allow for a visibility splay.

218. Through the use of trenchless technique drilling, three of these hedgerows have been avoided. The remaining 21 sections of hedgerows will be subject to direct impacts as a result of short-term removal to permit the construction activity involving the excavation of cable trenches and the creation of the temporary haul road.
219. To minimise the impacts of crossing the hedgerows, the working width will be reduced where possible (i.e., five crossing points will be 30m in width; 14 will be 20m in width; 2 will be 12m in width; and 2 will be 10m in width).
220. Taking the above into account, the temporary hedgerow losses during construction would give rise to a **medium** magnitude of impact.

#### 20.9.2.3.4 Significance of effect: Construction and Decommissioning

221. The impact of the Onshore Export Cable Corridor on hedgerows is considered to be of a medium-low magnitude, and the sensitivity of receptors is considered to be medium.
222. The effect is therefore concluded to be **moderate-minor not significant adverse**. Reinstatement would mitigate the effects of lost hedgerows by infilling gaps and completing the enclosure, taking 3-5 years for low hedgerows to establish, taking 5 to 10 years for taller hedgerows to grow to their original height. Restrictions to planting over cable easements will, however, prevent hedgerow trees from being replanted over the Onshore Export Cable Corridor, although they may be replanted elsewhere within the corridor. The effect will be short term, and reversible.
223. Hedgerow trees removed from locations within the Onshore Export Cable Corridor would be unable to be replanted within the 25 year project lifespan and only reversible following decommission.

#### 20.9.2.3.5 Mitigation

224. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.2.3.6 Residual Effect

225. The residual effect would remain **moderate-minor not significant adverse** during construction.

## 20.9.3 Impact 2: Physical Landscape – Onshore Substation (Construction)

### 20.9.3.1 Agricultural Land / Grassland

#### 20.9.3.1.1 Baseline

226. Agricultural marshy grassland, and semi-improved grassland with scattered scrub on previously developed, brownfield land, is the predominant land use within the Onshore Substation footprint, shown on **Figure 20.2**.

227. As noted in the NDESCA (2015), some fields fringing the estuary suffering from a lack of grazing, with a spread of brambles and scrub changing the character of the farmland – conveying an ‘urban fringe’ feel. This is evident in the condition of these elements within parts of the Onshore Substation site.

#### 20.9.3.1.2 Sensitivity

228. Agricultural land / grassland within the Onshore Substation site does not lie within any designated or defined area of landscape. It includes an area of brownfield land, which has been left to grass-over.

229. On balance, the value of the agricultural land / grassland is considered to be **medium**. It has some value as an area open land that is perceived as being natural as a key component of countryside character. Agricultural land / grassland and scrub vegetation is more straightforward to establish with appropriate management, and due to the inherent seasonal disruption as a result of crop cultivation or grazing, combined with the widespread occurrence of these landscape elements, susceptibility is considered to be **low**.

230. The combination of the value and susceptibility gives rise to an overall **medium-low** sensitivity.

#### 20.9.3.1.3 Magnitude of impact: Construction and Decommissioning

231. The construction of the Onshore Substation would involve the creation of a temporary construction compound, plant, material storage areas and potentially laydown areas. This process would involve the loss of existing areas of agricultural land / grassland as preparatory groundworks and stripping and regrading of soils are undertaken before the access road and platform level and foundations of the onshore substation are excavated and constructed.

232. The loss of agricultural land / grassland and scrub would be limited to a small geographic extent within the footprint of the Onshore Substation and a short section of access road. During the operational life of the Onshore Substation the loss of areas of agricultural land would be mitigated to some extent by the inclusion of substantial areas of woodland and scrub planting which would increase the biodiversity through a greater variety of species being allowed to grow to maturity.
233. On balance, the magnitude of impact to the agricultural land as an element of the landscape is considered to be **low**.

#### 20.9.3.1.4 Significance of effect: Construction and Decommissioning

234. The impact of the Onshore Substation during construction and decommissioning is considered to be of a medium-low magnitude, and the sensitivity of receptors is considered to be medium-low.
235. The effect is therefore concluded to be **Minor-negligible not significant adverse** during construction. The effect will be short term, and reversible.

#### 20.9.3.1.5 Mitigation

236. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.3.1.6 Residual Effect

237. The residual effect would remain **Minor-negligible not significant adverse** during construction.

### 20.9.4 Preliminary Assessment of Landscape Character, Landscape Designations and Defined Areas – Landfall to MLWS and Onshore Export Cable Corridor

238. At the Landfall to MLWS there would be temporary disruption to the beach area (if the open trench option is pursued), however, the key characteristics of the wider landscape in the area would remain intact with only a very localised level of disruption. The Landfall to MLWS and Onshore Export Cable Corridor construction compound is located in a discrete part of the coastal and dunes landscape at Saunton Beach car park, where the introduction of installation features would be contained by surrounding landform and perceived in the context of a high number

of vehicle movements and the influence of man-made elements and features in nearby settlement. trenchless technique drilling crossing of the Braunton Burrows would avoid significant impacts on the character of this valued landscape.

239. To the east of the Braunton Burrows, and south of the River Taw, the Onshore Export Cable Corridor crosses a predominantly agricultural landscape within LCT 4B Marine levels and coastal plains, and 4A Estuaries, respectively (**Figure 20.3**). The landform is low-lying and level. Tree cover is limited to scattered stands of trees, with some riparian and secondary woodland. However, hedgerows provide a layered screening effect within the flat landscape, particularly high hedgerows which typically line roads. As a working, farmed landscape, the movement of large agricultural machinery and seasonal change to crops and ground cover is commonplace.
240. The Worst Case Scenario for the Onshore Export Cable Corridor are described in **Section 20.4.3** and are not repeated here. The installation activities would introduce uncharacteristic features into the landscape which would have slightly apparent influence on the landscape and views, for example signage, temporary fences, stockpiles, and temporary construction compounds. However, the introduction of vehicle movements, spoil heaps, management of hedgerows, and changes to ground cover would be perceived in the context of influence from similar characteristics in the farmed landscape. The Worst Case Scenario for the length of time for installation of the Landfall to MLWS and Onshore Export Cable Corridor is 18 months. The duration of the change would therefore be short-term and temporary.
241. As the proposed cables are to be buried underground there would be little or no character effects resulting from the Landfall to MLWS and Onshore Export Cable Corridor once operational. Whilst some permanent vegetation removal would occur as a result of the Onshore Export Cable Corridor, during operation the effects will be limited owing to their localised extents, which within the broader context of the LCTs will not redefine landscape character.
242. It is considered that whilst the Landfall to MLWS and Onshore Export Cable Corridor will have some effect on the LCTs in which they occur, these LCTs are only likely to experience low level of change and / or effects experienced over limited geographic extents. This includes potential effects within the designated NDCAONB and Devon Heritage Coast in which Landfall to MLWS and sections of the Onshore Export Cable Corridor would be located. This conclusion is supported by the assessment of physical landscape features in **Section 20.9.1**.



243. As a result, it is considered that the Onshore Export Cable Corridor and Landfall to MLWS will not become a prevailing or defining element or characteristic within the context of the baseline and are, therefore, not assessed any further in the assessment of effects on landscape character.

### 20.9.5 Preliminary Assessment of Landscape Character, Landscape Designations and Defined Areas – Onshore Substation

244. **Table 20.15** identifies which landscape receptors have the potential to undergo significant effects and require to be assessed in detail.

*Table 20.15: Preliminary Assessment of Landscape Character, Landscape Designations and Defined Areas – Onshore Substation*

Landscape Character Receptor	Comment
<b>Status- Potential for significant effects and included in detailed assessment</b>	
<b>LCT 4A – Estuaries</b>	Onshore Substation would be located within this LCT, which would undergo both direct and indirect impacts, with the potential for significant effects.
<b>LCT 3A – Upper farmed and wooded valley slopes</b>	In close proximity to Onshore Substation, which would be located in an adjacent LCT, there is the potential for localised significant effects.
<b>NDCAONB / North Devon Heritage Coast</b>	The boundary of the NDCAONB is largely coincides with that of LCT 4f to the north of the River Taw. In respect of all areas of the NDCAONB within the study area, the Onshore Substation is located at a minimum range of approximately 1.5km, resulting in no direct effects to the physical features and elements within the designated landscape, with only indirect changes to the perceived setting of the NDCAONB. Whilst no potential for significant effects is considered for the Landfall to MLWS and Onshore Export Cable Corridor from this high sensitivity designated landscape, the larger scale of the Onshore Substation and theoretical visibility requires further detailed assessment in the LVIA, requested by Stakeholders at ETG. The effects of the Onshore Substation on Heritage Coasts are considered as integral to the assessment of the NDCAONB.

Landscape Character Receptor	Comment
<b>Status – Considered further in preliminary assessment but found to have no potential for significant impacts and not included in detailed assessment.</b>	
<b>LCT 4B – Marine levels and coastal plains</b>	No potential for significant effects. Whilst the proposed Onshore Substation would be theoretically visible from parts of this LCT across the River Taw, the ZTV shows more limited visibility and intervening landscape elements further restrict actual visibility. Potential significant character effects as a result of Onshore Substation would also largely be limited due to distance and that the Onshore Substation is located in the context of the settled estuary margins and close to existing electrical infrastructure.
<b>LCT 4F - Dunes</b>	No potential for significant effects. Whilst the proposed Onshore Substation would be theoretically visible from parts of this LCT across the River Taw, the ZTV shows more limited visibility and intervening landscape elements further restrict actual visibility. Potential significant character effects as a result of Onshore Substation would also largely be limited due to distance and that the Onshore Substation is located in the context of the settled estuary margins and close to existing electrical infrastructure.
<b>LCT 5B – Coastal undulating farmland</b>	No potential for significant effects. Whilst the proposed Onshore Substation would be theoretically visible from parts of this LCT across the River Torridge, the ZTV shows more limited visibility and intervening landscape elements further restrict actual visibility. Potential significant character effects as a result of Onshore Substation would also largely be limited due to distance and the existing influence of built form within the urban area of Appledore.
<b>LCT 4E – Extensive inter-tidal sands</b>	No potential for significant effects. Whilst the proposed Onshore Substation would be theoretically visible from parts of this LCT across the River Torridge, the ZTV shows more limited visibility and intervening landscape elements further restrict actual visibility. Potential significant character effects as a result of Onshore Substation would also largely be limited due to distance and the existing influence of built form within the urban area of Appledore and that the Onshore Substation is located in the context of the settled estuary margins and close to existing electrical infrastructure.
<b>Tapeley Park RPG</b>	No potential for significant effects. The ZTV shows theoretical visibility of the proposed Onshore Substation within this non-statutory designated landscape is of limited extent and actual visibility is further limited by distance and landscape elements within the RPG which includes mature estate woodland boundaries, and tall

Landscape Character Receptor	Comment
	hedgerows, woods, and field boundary / roadside trees in the intervening landscape.

245. The finding of this preliminary assessment is that only two LCTs have the potential to be significantly affected by the Onshore Substation. A detailed assessment of the NDCAONB has been included at the request of Stakeholders during ETG (2<sup>nd</sup> November 2022). These landscape receptors are assessed in detail below. The other LCTs and designated and / or defined landscapes have been discounted from the detailed assessment owing to the very limited potential for significant effects to arise.

## 20.9.6 Impact 3: Landscape Character, Landscape Designations and Defined Areas – Onshore Substation

### 20.9.6.1 LCT 4A – Estuaries

#### 20.9.6.1.1 Baseline

246. The location of LCT 4A Estuaries is shown on **Figure 20.3**. The (2011) JLCA 'Key Characteristics' relevant to the parts of LCT 4A within the study area are:

- "Broad, sweeping estuary of the Taw / Torridge, with expansive mudflats and sandbanks inundated by water from the sea at high tide
- Backed by gradually rising land, the estuary reaching its coastal extent between the sand dunes of Braunton and Northam Burrows
- Estuary immediately fringed by areas of saltmarsh, sand spits, lagoons and reclaimed farmland
- Tree cover limited to overgrown hedges and areas of scrub within fringing farmland, with small blocks of broadleaved and ancient woodlands overlooking the tidal reaches of the Taw and Torridge rivers
- Banks of estuary defined by grazing marsh, arable fields and rough grassland divided by brackish ditches, fencing and thorny hedges
- Farmland drained and enclosed in post-medieval and recent times, comprising regular fields and unenclosed marshes
- Nationally important for biodiversity – supporting major populations of migratory and overwintering wading birds, fish including sea trout and salmon, rich

- saltmarshes with rare plants and flowers, and areas of brackish water fringed by willow
- Streams and drainage ditches flowing into the estuary across the surrounding farmland
  - historic quays dotted along the shore
  - Unsettled landscape, although strongly influenced by housing, industrial and commercial development associated with Barnstaple, Appledore and Bideford sitting on the estuary banks
  - Main roads crossing the water on bridges; adjacent farmland crossed by the Tarka Trail and South West Coast Path
  - Sewage works located on the north bank of the estuary, with views of nearby development and the airfield at Chivenor also affecting overarching perceptions of tranquillity and remoteness associated with the estuary
  - Strong sensory characteristics: colour and texture of habitats; smell of mudflats and the sea; birdsong and calls; sight of sunlight reflecting off water."
247. The 'Overall Strategy' presented in the JLCA summarises what the subsequent landscape guidelines are seeking to achieve for the landscape as a whole in the future, which aims to provide an overarching ambition for the future landscape of the LCT concerned. The Overall Strategy for LCA 4A - Estuaries states, "*To protect the open character and expansive views to and from the estuary, ensuring new development on its fringes is incorporated into its landscape setting.*" The relevant guideline is "*Protect the open character of the estuary and its important views to and from the surrounding landscapes.*"
248. LCT 4A is one of the SCTs which form part of SCA 19: Taw-Torridge Estuary and SCA 20: Northam Burrows and Westward Ho!
249. The NDESCA (2015) describes the key characteristics of the seascape within the SCTs, of which the following are related to the landscape and visual amenity of LCT 4A:
- 20.9.6.1.1.1 SCT19: Taw-Torridge Estuary
- "A complex estuarine system with contrasting geomorphology. The Taw flows through a broad valley, rising up steeply to the north to Saunton Down. The Torridge estuary is narrower and deeper occasionally enclosed by rocky, often wooded cliffs.

- Appledore once housed the largest indoor dry dock in Europe; the historic port town still has a working ship building industry, recently building ships for the Irish Navy.
- Chivenor Airfield, sited on 19th century reclaimed marsh on the banks of the Taw. Dating from the 1930s it includes barracks and hangars and areas of brownfield land; still used as a Royal Marines Training Base.
- Ongoing military activities and exercises linked to the Atturm base at Instow and Zeta berth at Westleigh, commonly sighted within the estuary.
- Valued as an important recreational space for nearby urban populations and visitors, including via the South West Coast Path and the Tarka Trail Cycleway. The Tarka Trail follows former railway lines which connected the local ports to Barnstaple, Ilfracombe and through to London Waterloo (until closure in 1964).
- The estuary also provides sheltered waters for a range of water-based recreational activities, including sailing and water-sports.
- North Devon Yacht Club is based in Instow, and Bideford is the embarkation point for trips to Lundy on the MS Oldenburg.
- The Appledore Ferry operates in the summer between Instow and Appledore, often used by SW Coast Path walkers. A ferry previously operated for hundreds of years from Crow Point.
- A sheltered estuarine environment contrasting with the adjacent open and exposed coast.
- Rapid and ever-changing tidal character, with expansive mudflats exposed at low tide quickly disappearing as the estuary fills with water.
- Rural setting provided by the banks of the Taw Estuary and the wooded hills slopes enclosing the Torridge to the east.
- Adjacent development at Westward Ho! influencing views within the west and Fullabrook wind farm and other turbines often form moving structures on landward horizons.
- Range of contrasting views, from channelled views within the estuary to open coastal vistas at its mouth across Bideford Bay, framed to the west by the protruding form of the Hartland Peninsula.
- Expansive views across the flat marshes, sometimes obscuring the estuary itself to give the impression of being able to walk across a complete expanse of marsh.
- Rugged expansive sand dunes and golden beaches framing the estuary mouth, with contrasting views to the settled enclosing hills and development at Appledore, Instow and Bideford.
- The sounds and movements of thousands of birds and the expansive intertidal habitats contrasting with nearby human activities and noise.

- Strong sensory characteristics: changing colours and qualities of light, sunlight reflecting on the water and rich textures of the salt marshes and exposed sand flats.
- Seascape providing artistic and literary inspiration; perhaps most famously as the setting for Henry Williamson's *Tarka the Otter*, its setting focused on the marshes around Horsey Island."

#### 20.9.6.1.1.2 SCT20: Northam Burrows and Westward Ho!

- "Extensive intertidal sands subject to tidal inundation backed by a natural pebble ridge and flat expanses of grazed common marsh and sand dunes at Northam Burrows.
- Northam Burrows nationally designated as a SSSI and part of the Buffer Zone of the North Devon Biosphere Reserve; the dune system and maritime grasslands supporting an enormous diversity of wildlife, including several hundred species of flowering plants.
- Wide area of very shallow coastal waters drying at high water, also creating difficult navigational conditions into the estuary. Boats are confined to a narrow channel between drying sand banks.
- Westerly aspect, with the intertidal sands, saltmarshes and sand dunes particularly open and exposed to the elements.
- Expansive views along the scenic AONB coastline, including to Hartland Point with its lighthouse in clear conditions, and framed by Baggy Point and the elevated Saunton Down to the north (with white hotel and ribbon development).
- Long seaward views extending to Lundy, its distinctive form particularly prominent in evening shadow when the sun sets behind.
- Views from the sea defined by rows of white/colour washed housing and large, modern sea front developments at Westward Ho!, with Appledore, Northam and the moving turbines of Fullabrook featuring behind.
- Contrasts between the views of development and the naturalistic tones and textures provided by the dunes, sands and sea.
- Popularity of the Country Park, golf course and Westward Ho! itself brings an influx of people, traffic and movement at weekends and in the holiday season".

250. The NDESCA also identifies special qualities and key sensitivities which would be most sensitive to development-led change. Those of most relevance to the landscape and visual amenity of the LVIA study area are:

#### 20.9.6.1.1.3 SCT19: Taw-Torridge Estuary

- “Ease of access to take part in a wide range of activities, including sailing, walking or cycling along the Tarka Trail, or simply enjoying the view.
- Strong sensory characteristics, with constantly shifting colours, smells and textures and the sound and movements of thousands of birds.
- High levels of relative tranquillity, on the doorstep of development and urban populations.
- Range of contrasting views linking land and sea, from enclosed views within to open vistas at the estuary mouth across Bideford Bay.”

#### 20.9.6.1.1.4 SCT20: Northam Burrows and Westward Ho!

- “Wide open spaces with panoramic views across the estuary, along the Hartland Coast and out to Lundy.
- Qualities of wildness, remoteness and despite the close proximity to areas of modern development.
- Wide range of opportunities for recreation and enjoyment, including surfing, water sports, swimming, fishing and bathing.”

251. These characteristics have been verified on site. Despite some isolated areas of woodland cover and taller hedgerow field boundaries, it does appear as an open landscape. This is, generally, a low-lying and level landscape around the estuary, mudflats, and sandbanks, rising gently across the dunes, flood embankments, and reclaimed farmland, which contributes to the open feeling and some wide-ranging views. While the rural character is reinforced by the natural qualities of the estuary and its farmed hinterland, the existing East Yelland Substation, overhead electricity transmission lines, light and noise pollution as well as visual intrusion from settlement at Appledore, Northam and Instow, development at Chivenor Airfield and Yelland Quay on the fringes of the estuary present a more developed character.

#### 20.9.6.1.2 Sensitivity

252. The value of LCT 4A – Estuaries is **medium-high**. This reflects that, while the LCT is not covered by a national, county, or district-level landscape planning designation which would otherwise denote a special scenic value, it is adjacent to the NDCAONB (see **Figure 20.3** and **Figure 20.5**) and therefore forms part of its immediate landscape setting.

253. The susceptibility of this LCT to the Onshore Substation is **medium**. This reflects the narrow, linear nature and relatively small extent of this LCT within North Devon,



and the small footprint of the Onshore Substation within it, as well as the extent of visibility shown in the ZTV (**Figure 20.9**). The susceptible aspects of its characteristics relate to the open, largely rural character of the landscape which backs the broad, sweeping estuary, and its perceptual qualities of tranquillity and remoteness. However, susceptibility to the Onshore Substation is moderated by the influence of existing East Yelland Substation, overhead electricity transmission lines, and in the wider landscape and views the influence of settlement at Appledore, Instow, Fremington and Yelland and built form at Chivenor Airfield.

254. The combination of the medium-high value of this LCT, and its medium susceptibility to the Onshore Infrastructure, gives rise to an overall **medium-high** sensitivity.

#### 20.9.6.1.3 Magnitude of impact: Construction and Decommissioning

255. The Onshore Substation is located within this LCT and therefore will result in both direct physical impacts (described in **Section 20.9.1**) and indirect impacts through its visibility within the landscape.
256. During the construction phase, the magnitude of change will be **medium-high** within a localised from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south. These impacts will relate to the presence of the emerging Onshore Substation, the access road and the construction compound and includes the presence and activity of the plant, equipment and materials required for construction. While there is a baseline influence from overhead electricity transmission lines through this LCT, the relatively well screened existing East Yelland Substation, settlement, and industrial / commercial buildings at Sandbanks Business Park / Yelland Terminal, the scale of the Onshore Substation site, construction compound, and the emerging structures will present a notable addition that will appear at variance with the established landscape characteristics.
257. In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be **medium-low**. This is as a result of increasing distance, more limited visibility experienced in actuality as a result of the screening effect of layered vegetation in views within the largely level landscape, and that the change to the landscape and views would occur within the context of the man-made influence noted in the baseline. The magnitude of change would reduce rapidly with distance beyond.



#### 20.9.6.1.4 Magnitude of impact: Operation and Maintenance

258. The screened ZTV (**Figure 20.8**) shows relatively widespread visibility across this LCT within the study area. Theoretical visibility extends across the low-lying settled and agricultural margins to the south and west of the Taw-Torridge estuary, from Fremington in the east to Instow in the west. The extent of visibility is reduced within the River Taw waterbody and inter-tidal areas, where dune systems and flood embankments, together with vegetation, offer some localised screening on the landward side of the estuary edge see Viewpoint 1 (**Figure 20.14**), Viewpoint 2 (**Figure 20.15**), Viewpoint 3 (**Figure 20.16**), and Viewpoint 10 (**Figure 20.23**).
259. The magnitude of impact at year 0 and year 15 would be **medium** within a localised area from Instow Barton Marsh approximately 0.5km to the west, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3 to 1.0km to the east and south. Within this localised area, the operational Onshore Substation would be a readily apparent influence on landscape character. The Onshore Substation would contrast with some of the rural characteristics of the LCT. However, it would introduce further electricity infrastructure features into a part of this landscape which has some degree of influence from similar characteristics. The changes to landscape characteristics would often be perceived in a developed part of the landscape and views within this LCT, in which there is baseline influence from the nearby existing overhead electricity transmission lines and existing East Yelland Substation, settlement, and industrial / commercial buildings at Sandbanks Business Park / Yelland Terminal.
260. In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be **low**. This is because of the layered screening effect of vegetation within the broadly level landscape which, with increasing distance, would reduce actual visibility, and therefore influence, of the Onshore Substation on the landscape character. Over time, the mitigation woodland would assist in assimilating the Onshore Substation into the landscape.

#### 20.9.6.1.5 Significance of effect: Construction and Decommissioning

261. During construction and decommissioning the effect would be **major-moderate significant adverse** within a localised area from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south. In parts of the LCT beyond this localised area, to the west as far as

Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the effects would be **moderate not significant adverse**. Construction and decommissioning effects are short term and temporary, and reversible.

#### 20.9.6.1.6 Further Mitigation

262. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.6.1.7 Residual Effect

263. The residual effect would remain **major-moderate significant adverse** during construction.

#### 20.9.6.1.8 Significance of effect: Operation and Maintenance

264. During operation and maintenance, at year 0 and year 15, the effect would be **moderate significant adverse** within a localised area from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3 to the east and south. In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the effects would be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term, and reversible.

#### 20.9.6.1.9 Further Mitigation

265. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.6.1.10 Residual Effect

266. The residual effect, at year 15, would remain **moderate significant adverse** during operation and maintenance.

### 20.9.6.2 LCT 3A – Upper Farmed and Wooded Slopes

#### 20.9.6.2.1 Baseline

267. The location of LCT 3A is shown on **Figure 20.3**. The 'Key Characteristics' relevant to parts of LCT 3A within the study area are:

- “Strongly undulating landform of rolling hills and farmland cut by tributary streams feeding into the main river valleys.
  - Underlying geology comprising mudstones and siltstones with bands of sandstone creating the rolling landform (‘Culm Measures’).
  - A pastoral landscape, with some fields of arable cultivation on higher slopes, forming a strong mosaic with copses interlinking Devon hedges and small woodlands as well as occasional small blocks of coniferous plantation.
  - Strong pattern of medium-scale fields of medieval and post-medieval origin enclosed by species-rich Devon hedges with flower-rich banks. Thick hedges with frequent hedgerow trees found on more sheltered valley slopes.
  - Some areas of intensive arable cultivation in larger, regular fields found on more elevated land. Villages and tributary valleys often characterised by smaller, historic field patterns.
  - Dispersed historic villages and hamlets clustered on hilltops with farmsteads distributed throughout, linked by a network of winding rural roads and steep sunken lanes crossing watercourses over stone bridges.
  - Linhays (traditional animal shelters) constructed of cob and local stone with slate or corrugated iron roofs reinforce a strong history of farming.
  - Main ...prominent pylon lines and the influence of modern development ...erode levels of tranquillity locally – although overall this is a peaceful and highly rural landscape.
  - Square church towers form strong local landmark features peeping through the rolling hills.”
268. The local landscape of LCT 3A within the study area broadly reflects the characteristics of rolling to undulating landform overlain by a pastoral rural landscape defined by a strong pattern of hedgerows, with woodland cover particularly on lower hill slopes. The influence of development around the northern fringes of this LCT include the B3233 and settlement at Fremington, Yelland, and Instow, and pylon lines which cross the rolling hills and lower slopes to the existing substation at East Yelland.
269. The relevant parts of the ‘Overall Strategy’ for LCT 3A are “To protect the landscape’s strong rural character and historic sense of place. The farmed landscape comprises a rich mosaic of fields bounded by an intact network of species-rich Devon hedges. Valued farmland and woodland habitats are managed and extended, with opportunities for Green Infrastructure links to settlements pursued.”

#### 20.9.6.2.2 Sensitivity of the receptor

270. The value of LCT 3A – Upper Farmed and Wooded Slopes is **medium**. There are no landscape planning designations covering this LCT which would otherwise denote a special scenic value, although it is recognised that it will have a value to local people.
271. The Onshore Substation would be located in the neighbouring LCT 4A – Estuaries. Any changes to the character of this LCT would, therefore, be as a result of visibility of the Onshore Substation. Overall, the susceptibility of this LCT to the Onshore Substation is **medium**. This relates to the extent to which the LCT has already been modified by human influences, most notably by the presence of development in the form of settlement, roads, and pylon lines particularly along its northern fringes within the study area, and within the neighbouring LCT 4A to the north, as well as the theoretical extent of visibility shown in the ZTV (**Figure 20.9**).
272. The combination gives rise to an overall **medium** sensitivity.

#### 20.9.6.2.3 Magnitude of impact: Construction and Decommissioning

273. During the construction phase, impacts will relate to the presence of the emerging Onshore Substation, the access road and the construction compound and includes the presence and activity of the plant, equipment and materials required for construction, within an adjacent LCT. Construction activities would introduce features that would contrast with the baseline character of the landscape and would be apparent in open views to the north, which a very localised part of this LCT.
274. The influence of construction activities would be possible from more open or elevated parts of the sloping landform and hills but would be screened to varying degrees in closer proximity by intervening vegetation to the north of Yelland and by adjacent built form within settlement. Where visible, construction activities will present a readily apparent addition in an adjacent LCT that will appear at variance with the characteristics of LCT 3A; however, the baseline influence from overhead electricity transmission lines through this LCT, settlement, as well as the influence in wider views to LCT 4A of industrial / commercial buildings at Sandbanks Business Park / Yelland Terminal and existing East Yelland Substation, will moderate the change. Overall, the magnitude of change would be **medium** within a very localised area, from open locations on north-facing slopes up to approximately 1km, dropping noticeably with distance in other parts of the LCT.

#### 20.9.6.2.4 Magnitude of impact: Operation and Maintenance

275. The screened ZTV (**Figure 20.8**) shows the visibility is relatively contained across this LCT, to the south of Yelland and the B3233, and east of Instow, across the open north-west and north facing slopes of the culm landscape.
276. The magnitude of impact at year 0 would be **medium-low**. Within this localised area the operational Onshore Substation will have a more ordered appearance that would be a slightly apparent influence on landscape character. The Onshore Substation would present a large scale energy development that will appear prominent amid the wider context of the rural landscape. However, it would be in keeping with the characteristics of the baseline, which include: existing overhead electricity transmission lines, the existing East Yelland Substation; settlement; and industrial / commercial buildings at Sandbanks Business Park / Yelland Terminal, perceived at close proximity in an adjacent LCT (4A – Estuaries).
277. At year 15 following the establishment of landscape mitigation the magnitude of impact would reduce to **low**, as the proposed woodland planting reduces the visibility of the Onshore Substation in views from this LCT, as shown in the visualisations from Viewpoint 4 (**Figure 20.17**) and Viewpoint 6 (**Figure 20.19**).

#### 20.9.6.2.5 Significance of effect: Construction and Decommissioning

278. During construction and decommissioning the effect would be **moderate not significant adverse** within a very localised area on open, north facing slopes between Instow Town and Yelland, up to approximately 1km, dropping noticeably with distance in other parts of the LCT. Where there is not visibility there would be no effect. Construction and decommissioning effects are short term and temporary, and reversible.

#### 20.9.6.2.6 Further Mitigation

279. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.6.2.7 Residual Effect

280. The residual effect would remain **moderate not significant adverse** during construction.

#### 20.9.6.2.8 Significance of effect: Operation and Maintenance

281. During operation and maintenance, at year 0, the effect would be **moderate-minor not significant adverse** within the areas identified above.

#### 20.9.6.2.9 Further Mitigation

282. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.6.2.10 Residual Effect

283. The level of effect would reduce at year 15 to **minor not significant adverse**. Effects during operation and maintenance are long term, and reversible.

### 20.9.6.3 North Devon Coast Area of Outstanding Natural Beauty (NDCAONB)

#### 20.9.6.3.1 Baseline

284. The NDCAONB covers the coastline to the west of the Onshore Substation study area. It includes the extensive dune areas at Braunton and Northam Burrows, the adjacent extensive sandy beaches at Saunton Sands and along the Taw-Torridge Estuary.

285. The North Devon Coast AONB Management Plan 2019-2024 refers to the 2010 JLCA which characterises the landscape of the NDCAONB. The landscape character context of the NDCAONB is shown on **Figure 20.3**. Predominantly, the landscape is defined by LCT 4F – Dunes, and 4E – Extensive inter-tidal sands, with a small extent of the NDCAONB boundary including scrubland or secondary woodland within LCT 4B – Marine levels and coastal plains.

286. It is the scenic combination of natural physical landscape features and elements which contribute to the Special Quality 1: Distinctive Coastal Scenery. The NDCAONB Management Plan notes *“In Braunton Burrows, the vast sand-dune system, infinite sky and an expansive sandy beach are bordered by tranquil grazing marshes... Coastal landforms provide classic examples of erosion and deposition, as well as rare and characteristic landscape features.”*

287. Within the study area, the landscape features which characterise LCT 4F, include *“hummock dune system backing sandy beaches, forming prominent features along the west coast of the North Devon AONB”*. Within LCT 4E the distinctive scenic

characteristics of the landscape include *"Wide sandy beaches...backed by sand dunes and framed within broad bays often marked by spectacular cliffs."* The NDESCA (2015) descriptions for SCA 18: Braunton Burrows and Saunton Coast, which includes parts of the above LCTs (see **Figure 20.3** and **Figure 20.4**), note perceptual and aesthetic key characteristics that include *"Large skies and seas dominating...."*

288. The North Devon Coast AONB Partnership (2019) NDCAONB Management Plan notes that the distinctive coastal scenery contributes to a strong perceptual *"sense of tranquillity and remoteness...."*
289. LCT 4F is described as an *"Undeveloped landscape with strong sense of wildness and high levels of tranquillity"*. Relevant descriptions from the NDESCA, for SCA 18 also notes that the seascape character of SCA 18 has *"this is a wide and open landscape with high levels of tranquillity and qualities of wildness, particularly within Braunton Burrows"*.
290. Remoteness and tranquillity in this landscape is reduced around the fringes of the dune areas. This is as a result of the greater prominence of noise pollution as well as visual intrusion from settlement at Appledore, Northam and Instow, RAF Chivenor, existing industrial uses and electricity infrastructure including pylon lines. During summer months tourism / recreation activity notably increases within the dunes and beaches, bringing activity and movement to the landscape. Less frequently, the wild and tranquil perceptual qualities of Braunton Burrows are broken by its use for military training.
291. It is the nature and high scenic quality of the views and visual amenity experienced within the NDCAONB that contribute to Special Quality 2: A Landscape and Seascape of High Visual Quality. Of relevance to the study area, the NDCAONB Management Plan states *"Inland, the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views. The coast path provides long views along the coast across the estuary and inland to the undeveloped skyline and downland."*
292. The landscape characteristics of the dune system and extensive inter-tidal areas include limited tree cover, aside from *"low-growing wind-sculpted scrub and small patches of secondary woodland"*. The JLCA notes that even minor elevation within the hummocky dune system can afford *"... extensive views along the coast, out to sea and inland."* LCT 4E: Extensive Inter-tidal Sands is described as an open landscape with *"Wide sandy beaches with a westerly aspect, backed by sand dunes"*



which give rise to extensive views along the AONB coastline, a sense of open space and wide panoramas out to sea. In respect of seascape character, the NDESCA description for SCT 18 notes "*Seascape strongly recognisable in views from along the Bideford Bay coast (as far as Hartland Point) and out to sea – particularly the golden expanse of the sands and dunes. The turbines of Fullabrook Down form moving features behind.*" and "*Wide views across the Taw Torridge estuary from the slopes below Saunton Down towards development at Instow, Appledore, Northam and Westward Ho! – contrasting with the naturalistic seascape in-between.*", and an overarching visual connection with and across the Taw-Torridge Estuary and wider Bideford Bay.

293. The views and scenic qualities of these landscapes within the NDCAONB are, however, influenced by visual intrusion from distant features seen inland, including settlement, existing electricity infrastructure and pylons, and industrial forms along the estuary edges.
294. Regarding setting, the NDCAONB Management Plan describes the setting to the designated landscape in broad terms, of which the following is relevant "*...include[s]: the majority of the Taw-Torridge Estuary SSSI and the wider catchments of the Taw and Torridge rivers which specifically affect water quality, biodiversity, tranquillity and visual impact; the surrounding marine environment including the Atlantic Ocean, the Bristol Channel and Lundy Island which impact on the seascape, visual impact, recreational impact and biodiversity; and the settlements of Ilfracombe and Westward Ho! With effects on tranquillity, visual impact and recreation.*" While the Onshore Substation Site does not lie within the Taw-Torridge Estuary SSSI and river catchments, it nonetheless is situated in a landscape which forms part of the estuary setting.
295. The Onshore Substation is located outside of the NDCAONB and, therefore, would not impact the Special Qualities of either 4: A Varied Geology, or 5: A Remarkable Heritage, which primarily relate to the baseline physical features and characteristics of the designated landscape.

#### 20.9.6.3.2 Sensitivity of the receptor

296. The value of the NDCAONB is **high**. This reflects the national importance of the AONB landscape planning designation covering this area.



297. The susceptibility of the NDCAONB to the Onshore Substation is **medium-high**. This is primarily because the Onshore Substation will be located outside the boundary of the NDCAONB.
298. There are pockets of the NDCAONB landscape where the baseline conditions are such that the value of particular features or aesthetic dimensions are reduced, for example around the fringes of the Braunton Burrows and Northam Burrows, as described above. While the inherent sensitivity is **high**, there is some variation in the susceptibility of the LCTs within the NDCAONB to the specific nature of changes associated Onshore Substation since the assessment of susceptibility to change is tailored to this aspect of the Onshore Infrastructure. These assessments of sensitivity are factored into the following assessments of each relevant Special Quality.

### 20.9.6.3.3 Magnitude of impact

#### 20.9.6.3.3.1 Special Quality 1: Distinctive Coastal Scenery

299. Special Quality 1 'Distinctive Coastal Scenery' is described in **Table 20.20.12**. This Special Quality broadly relates to the open, vast, and undeveloped seascape that provides the marine setting to the NDCAONB. It also includes the sense of remoteness that can be gained from parts of the coast that lie away from settlements and developments, where the exposure to nature becomes heightened. Whether this is through the exposure to inclement weather, or feelings of tranquillity and wildness that come from the relative lack of influence from man-made features. In particular, this Special Quality notes the focus of attention on the dramatic coastal landforms within the NDCAONB.
300. The Onshore Substation is located outside of the NDCAONB and, therefore, during construction and decommissioning, and operation and maintenance of the Onshore Substation would result in no impacts and therefore no significant effects on the physical characteristics of the NDCAONB that contribute to this Special Quality, including the "*vast sand-dune system...and an expansive sandy beach bordered by tranquil grazing marshes...*" and "*coastal landforms [which] provide classic examples of erosion and deposition...*"
301. The contained geographic extent of the proposed Onshore Substation, together with the separating distance of approximately 1.5km and its physical separation from the NDCAONB by the River Taw, means that the Onshore Substation would be both sufficiently distant and of small scale such that it would not introduce features into the NDCAONB setting of the Taw-Torridge Estuary which might compete with the

aesthetic characteristics of “*large skies and seas dominating*” and “*Wide sandy beaches...backed by sand dunes and framed within broad bays often marked by spectacular cliffs*”, or the prominence of dune features that contribute to this Special Quality.

302. The location of the Onshore Substation inland and to the east of the NDCAONB, within the landscape of the Taw-Torridge Estuary, means that the nature of views westwards “*across the seemingly infinite expanse of ocean, [in which] there is a sense of timelessness and of raw nature devoid of human influence*” would be retained and remain unchanged.
303. The Onshore Substation would, however, result in change to views to the inland setting of the NDCAONB, within part of the undesignated landscape which forms a backdrop to the coast. In relation to a “*sense of tranquillity and remoteness*”, the viewpoint assessments undertaken in **Section 20.10** from representative locations at Viewpoint 7 (**Figure 20.20**), Viewpoint 8 (**Figure 20.21**) Viewpoint 9 (**Figure 20.22**), Viewpoint 10 (**Figure 20.23**), and Viewpoint 11 (**Figure 20.24**) from within the NDCAONB, or close to its boundary, indicate that the introduction the Onshore Substation outside of the designated landscape would be perceived in the context of established areas of settlement and electricity infrastructure, including the existing East Yelland substation and overhead pylon lines, the influence of which reduces a perception of tranquillity, remoteness, and wildness. The degree of change is further moderated by the separating distance to the Onshore Substation, and its location to the south of the River Taw.
304. The addition of the Onshore Substation in views inland, being relatively small in scale and occupying a small HFoV, in a part of the wider undesignated landscape already influenced by established development and electricity features, moderates the magnitude of impact on the 'Distinctive Coastal Scenery' experienced.
305. On balance, the impact during construction and decommissioning and the operation and maintenance of the Onshore Substation on Special Quality 1: Distinctive Coastal Scenery is assessed as **low** magnitude.

#### 20.9.6.3.3.2 Special Quality 2: A Landscape and Seascape of High Visual Quality

306. Special Quality 2 'A Landscape and Seascape of High Visual Quality' is described in **Table 20.12**. This Special Quality relates to the nature and availability of views gained from the NDCAONB, including panoramic and elevated views across rolling countryside, framed sea views from combes, and wide and coastal vistas to Lundy Island framed by the distant Welsh coast. It also places emphasis on the long views

along the coast across the Taw-Torridge estuary and inland to undeveloped skylines and downland.

307. The construction and decommissioning, and operation and maintenance of the Onshore Substation will result in no change and no significant effects on the framed coastal views from within the combes, coastal vistas across to Lundy, or the intimate distant views of the Welsh coast which all look out to sea, in the opposite direction to the Onshore Infrastructure. Visual characteristics of the NDCAONB landscape (within LCT 4A and 4F), include views along Bideford Bay and expansive views along the scenic AONB coastline, to Hartland Point, and wide panoramas out to sea, relate to vistas facing westwards, to the north or south. These views would be retained and remain unchanged owing to the location of the Onshore Substation inland and over approximately 1.5km to the east of the designated area, therefore seen in successive views away from the coast.
308. The location of the Onshore Substation means that there is potential for impacts on the inland undesignated countryside, which "*forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", which is the key matter to be considered.
309. The ZTV (**Figure 20.10**), indicates that there will be relatively small extent of fragmented visibility around the fringes of the Braunton Burrows and Taw-Torridge Estuary, and views from elevated and open locations from within the hummocky sand dune landscape further north. Assessments undertaken in **Section 20.10** from representative locations at Viewpoint 7 (**Figure 20.20**), Viewpoint 8 (**Figure 20.21**) Viewpoint 9 (**Figure 20.22**), Viewpoint 10 (**Figure 20.23**), and Viewpoint 11 (**Figure 20.24**) from within the NDCAONB, or close to its boundary, indicate that the introduction the Onshore Substation outside of the designated landscape would be perceived in the context of established areas of settlement and electricity infrastructure, including the existing East Yelland substation and overhead pylon lines. The availability of the panoramic and wide-open views to inland areas are retained and the perceived change to the composition of these views following the introduction of the Onshore Substation will not notably change this aesthetic aspect of the landscape.
310. The effects of the Onshore Substation on views from the NDCAONB has been assessed in detail in **Section 20.10**, which has found effects of no greater than **moderate-minor not significant adverse** on views from viewpoints within the designated area during operation and maintenance. In respect of the NDCAONB within the study area, the Onshore Substation would result only in indirect impacts

to the perceived inland setting of the coast, through the addition of relatively small scale development, seen over a minimum range of 1.5km from the closest part of the designated landscape, in part of the undesignated landscape setting of the Taw-Torridge Estuary, which is influenced by visual intrusion from settlement at Appledore, Northam and Instow, existing electricity infrastructure, and working or remnant coastal features including jetties.

311. On balance, the impact during construction and decommissioning and the operation and maintenance of the Onshore Substation on Special Quality 1: Distinctive Coastal Scenery is assessed as **low** magnitude.

#### 20.9.6.3.4 Significance of effect

312. The effect of the Onshore Substation on Special Quality 1: Distinctive Coastal Scenery is assessed as **moderate-minor not significant adverse**. The 'Distinctive Coastal Scenery' will fundamentally remain present and continue to be experienced notwithstanding the presence of the Onshore Substation in the wider undesignated landscape.

313. The effect of the Onshore Substation on Special Quality 2: A Landscape and Seascape of High Visual Quality is assessed as **moderate-minor not significant adverse**. The Special Quality will fundamentally remain present and continue to be experienced.

314. Overall, the potential impacts on the Special Qualities for which the NDCAONB has been designated has been taken into consideration and significant adverse effects on the designated landscape have been avoided. The distinctive coastal scenery of the landscape will remain, and significant effects on the landscape and seascape of high quality are avoided. The Onshore Substation will not have a significant effect on landscape or seascape character, quality, or diversity, including the Special Qualities of the NDCAONB.

#### 20.9.6.3.5 Further Mitigation

315. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**, and landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.9.6.3.6 Residual Effect

316. The residual level of effect would be as described above.

### 20.10 Visual Effects Assessment

317. This section presents the main assessment of visual effects. It should be noted that the LVIA diverges with that presented in in **Chapter 6: EIA Methodology**. The assessment is undertaken by a receptor focussed approach, as opposed to a project phase approach.

#### 20.10.1 Preliminary Assessment of Visual Effects – Landfall to MLWS and Onshore Export Cable Corridor (Construction)

318. As described in **Section 20.7** and **20.8**, the effects of the Landfall to MLWS and the Onshore Export Cable Corridor would relate principally to the construction phase as a result of its underground nature. **Table 20.16**, therefore identifies where there are likely to be visual receptors that have the potential to undergo significant effects during construction of the Landfall to MLWS and Onshore Export Cable Corridor works and require to be assessed in detail.

*Table 20.16 Preliminary Assessment Visual Effects – Landfall to MLWS and Onshore Export Cable Corridor (Construction)*

Visual Receptor Location	Comment
<b>Status- Potential for significant effects and included in detailed assessment</b>	
<b>Saunton Sands Beach and Car Park</b>	Potential for significant effects in views at close proximity of the construction activities associated with the Landfall to MLWS and Onshore Export Cable Corridor. Assessed from Illustrative Viewpoint A ( <b>Appendix 20.C</b> ).
<b>Saunton settlement and beach cabin holiday homes</b>	Potential for significant effects in views at relatively close range to the Landfall to MLWS and Onshore Export Cable Corridor. Assessed from Illustrative Viewpoint B ( <b>Appendix 20.C</b> ).
<b>Properties within 100m of the cable route along Burrows Close Lane and Sandy Lane, and Crow Beach House</b>	These properties are within close proximity of the Onshore Export Cable Corridor and combined with their high sensitivity are considered to have the potential to

Visual Receptor Location	Comment
	experience significant effects. Included in the detailed assessment in relation to views. Assessed from Illustrative Viewpoint C ( <b>Appendix 20.C</b> ).
<b>SWCP at Saunton, and north of the River Taw</b>	Potential for significant effects in views from the SWCP long distance recreational routes in close proximity to Landfall to MLWS and / or sections of the Onshore Export Cable Corridor at Saunton and on the northern banks of the River Taw, Assessed from Illustrative Viewpoint D, Viewpoint E, and Viewpoint F ( <b>Appendix 20.C</b> ).
<b>SWCP south of the River Taw</b>	Potential for significant effects in views from the SWCP long distance recreational routes in close proximity to Landfall to MLWS and / or sections of the Onshore Export Cable Corridor at Saunton and on the northern banks of the River Taw, Assessed from Illustrative Viewpoint G ( <b>Appendix 20.C</b> ).
<b>Tarka Trail and NCR 3, east of Instow</b>	Potential for significant effects in views from these long distance recreational routes in close proximity to Landfall to MLWS and / or sections of the Onshore Export Cable Corridor. Assessed from Onshore Substation Viewpoint 1.
<b>Status – Considered further in preliminary assessment but found to have no potential for significant impacts and not included in detailed assessment.</b>	
<b>Visitors to Braunton Burrows</b>	Within close proximity to the proposed Landfall to MLWS and on some elevated dunes with visibility of the Onshore Export Cable Corridor amid agricultural land to the east however, these visual effects would be very localised. Localised dune landforms, scrub, and secondary woodland to the east of Braunton Burrows is likely to provide some screening of construction activity particularly from eastern fringes of Braunton Burrows and is not considered to have the potential for significant effects.

Visual Receptor Location	Comment
<b>Burrows Close Lane and Sandy Lane minor roads</b>	Whilst there is potential visibility of the Onshore Export Cable Corridor from short sections of these vehicular routes, potential significant effects are considered unlikely due to distance, direction of travel, and owing to the occupation of receptors and intervening hedges, woodland, and trees, which combine to reduce the actual visibility from these routes.
<b>Braunton settlement</b>	Whilst there is potential visibility of the Onshore Export Cable Corridor construction activity from the western edges and elevated parts of Braunton, potential significant effects are considered unlikely due to distance and intervening hedges, woodlands, and trees, which combine to reduce the actual visibility experienced from the settlement edge.
<b>Instow, Instow Town, Yelland, Fremington settlement</b>	Whilst there is potential visibility of the Onshore Export Cable Corridor construction activity from these settlements, potential significant effects are considered unlikely due to distance and intervening hedges, woodlands, and trees, which combine to reduce the actual visibility experienced from the settlement edge.
<b>B3231 and B3233</b>	Whilst there is potential visibility of the Onshore Export Cable Corridor from short sections of these vehicular routes, potential significant effects are considered unlikely due to distance, direction of travel, and owing to the occupation of receptors and intervening hedges, woodland, and trees, which combine to reduce the actual visibility from these routes.
<b>NCR 27</b>	A short section of NCR 27 lies within the study area between Braunton and Chivenor within 1km of the Onshore Export Cable Corridor access, along the existing toll road to Broad Sands. This is an existing access and more distant construction activities would be in excess of 1km from NCR 27 and



Visual Receptor Location	Comment
	therefore not considered to have the potential for significant effects.

## 20.10.2 Preliminary Assessment of Visual Effects – Onshore Substation

319. Construction and decommissioning, and operation and maintenance phase effects for the Onshore Substation are assessed and reported together to avoid repetition of detailed baseline and sensitivity assessments. As such the following preliminary assessment also considers these together. **Table 20.17** identifies those receptors that have the potential to undergo significant effects as a result of the Onshore Substation and require detailed assessment.

*Table 20.17 Preliminary Assessment Visual Effects – Onshore Substation (Construction and Decommissioning and Operation and Maintenance)*

Visual Receptor	Comment
<b>Status – Potential for significant effects and included in detailed assessment.</b>	
<b>Tarka Trail / NCN3</b>	Potential for significant effects due to relatively close proximity of the Onshore Substation. Assessed in detail from Viewpoint 1 ( <b>Figure 20.14</b> ), Viewpoint 2 ( <b>Figure 20.15</b> ), and Viewpoint 3 ( <b>Figure 20.16</b> ), and Viewpoint 9 ( <b>Figure 20.22</b> ).
<b>SWCP</b>	Potential for significant effects on short sections of this route, principally to the north of the River Taw. Assessed from Viewpoint 9 ( <b>Figure 20.22</b> ). The following viewpoints are also located on the SWCP: Viewpoint 8 ( <b>Figure 20.21</b> ) and Viewpoint 9 ( <b>Figure 20.22</b> ).
<b>PRoW Instow Footpath No.16</b>	Potential for significant effects due to relatively close proximity of the Onshore Substation. Assessed in detail from Viewpoint 5 ( <b>Figure 20.18</b> ).
<b>B3233</b>	Potential for significant effects due to the opportunity for views of the Onshore Substation between existing landscape elements on section of the route between



Visual Receptor	Comment
	Instow and Yelland. Assessed in detail from Viewpoint 4 ( <b>Figure 20.17</b> ).
<b>Instow Town settlement</b>	Potential for significant effects due to the relatively close proximity of the Onshore Substation. Assessed in detail from Viewpoint 4 ( <b>Figure 20.17</b> ).
<b>Minor road, east of Instow Town</b>	Potential for significant effects due to views of the Onshore Substation from an elevated settled landscape to south. Assessed in detail from Viewpoint 6 ( <b>Figure 20.19</b> ).
<b>Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.</b>	
<b>NDCAONB</b>	<p>The AONB is located to the west of the Onshore Export Cable Corridor and Onshore Substation. At ETG (2<sup>nd</sup> November 2022) consultees requested viewpoints and detailed assessment to illustrate the range in potential visual effects from within and on the edges of the NDCAONB, including a distant viewpoint outside of the LVIA study area at Flagpole Dune, Braunton Burrows.</p> <p>Viewpoint 7 (<b>Figure 20.20</b>), Viewpoint 8 (<b>Figure 20.21</b>), Viewpoint 9 (<b>Figure 20.22</b>), Viewpoint 10 (<b>Figure 20.23</b>) and Viewpoint 11 (<b>Figure 20.24</b>). were agreed during this consultation and visualisations have been prepared from these locations. The detailed assessment of the NDCAONB Special Qualities in <b>Section 20.9.6</b> finds that effects would be no greater than moderate-minor not significant. The Special Qualities primary relate to the views and visual characteristics of the NDCAONB and therefore are not assessed further in this section.</p>
<b>Settlements –Yelland, Appledore</b>	No potential for significant effects due to distance and intervening landscape elements (hedges, woodlands, and trees), which combine to limit visibility of the Onshore Substation and context of settled estuary margins in which the Onshore Substation

Visual Receptor	Comment
	would be appreciated. See screened ZTV, <b>Figure 20.8.</b>
<b>Status – Limited level of influence, due to limited / restricted or distant visibility of the proposed Onshore Substation, such that there is no potential for significant effects.</b>	
<b>Settlement – Fremington, Instow, Northam, Bickleton, Westleigh.</b>	
<b>Other PROWs within the LVIA study area.</b>	
<b>Other minor roads within the LVIA study area.</b>	

### 20.10.3 Impact 4: Visual Effects - Landfall to MLWS and Onshore Export Cable Corridor (Construction)

#### 20.10.3.1 Saunton Sands beach and users of the SWCP

320. The sensitivity of receptors is considered to be **high**, reflecting that the views are of high value and people experiencing the view have a high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.3.1.1 Baseline

321. Saunton Sands is a popular beach for visitors with its own car park, toilets, and café. Illustrative Viewpoint A (**Appendix 20.C**) is located on the wide, flat beach and has views out across Bideford Bay and along the NDCAONB coastline to the south. The seaward view from the beach is framed by the steeply rising hillsides of Saunton Down to the north, backed by Braunton Burrows to the east, and framed by distant low hills to the south of Westward Ho! Seaward views take in the outer reaches of the Bay. Westward views focus on Lundy Island on the distant sea horizon.

322. The SWCP is a 1,014km long distance National Trail which follows the entire South West Peninsula. A section of the SWCP between Saunton Down and Saunton has the potential to experience visibility of the Landfall to MLWS and Onshore Export Cable Corridor construction at Saunton Beach. Wide-ranging, elevated views across the seascape and landscape to the are possible from the elevated section of the route south of Saunton Down, as shown on Illustrative Viewpoint B (**Appendix 20.C**). This section of the SWCP loses elevation as it connects to Saunton Sands

and passes to the south of settlement at Saunton, shown on Illustrative Viewpoint C (**Appendix 20.C**).

#### 20.10.3.1.2 Value

323. Visitors to Saunton Sands and this section of the SWCP are within the NDCAONB and along the North Devon Heritage Coast.
324. From the beach and SWCP, views affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. This implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape.
325. Saunton Sands and Braunton Burrows are popular with visitors and are accessible to recreational walkers and from the SWCP therefore, the value is considered to be **high**.

#### 20.10.3.1.3 Susceptibility

326. Visitors and walkers at Saunton Sands beach and car park are likely to be focused on their surroundings where views are available and may be prolonged or regular for beach goers.
327. People using the SWCP tend to do so with the purpose of both exercise and appreciation of the views and environment through which they pass. They are transient, so do not tend to have the same view for long periods but tend to be slow moving. Although the path closely follows the coastline, the directions are continuously altering. Susceptibility is intensified by the close proximity to the construction activity associated with the Landfall to MLWS and Onshore Export Cable Corridor, although the experience would be transient and / or localised. Susceptibility is considered to be **medium-high**.

#### 20.10.3.1.4 Magnitude of impact: Construction and Decommissioning

328. The construction activities associated with Landfall to MLWS and the Onshore Export Cable Corridor would have varying degrees of visual magnitude. The construction compound and concentration of construction activities would be situated within the Braunton Beach car park. Trenchless technique drilling would also take place within Saunton Sands car park and would drill under the dunes and beach to emerge just offshore, and inland to the east of Braunton Burrows. For a short duration, there

would be a small number of vessels moored offshore whilst the cables are installed at Landfall to MLWS.

329. Visibility of Landfall to MLWS and Onshore Export Cable Corridor construction activities and construction compound at Saunton Sands beach car park would be possible from elevated parts of the SWCP. Receptors on this section of the route would experience localised change in views towards the northern section of the beach and Braunton Burrows dune system, in the context of movement of traffic on the B3233, and vehicles and movement at Saunton Beach car park, and influence of settlement at Saunton. At close range, from a short section of the route (approximately 0.8km) to the south of the Saunton Sands Hotel, Saunton Sands beach car park, and B3233, the key changes to views are likely to focus on activities related to trenchless technique within the construction compound as the Onshore Export Cable Corridor construction is of limited duration.
330. People using the beach would have limited visibility of the works at the temporary construction compound, which is located inland to the east, beyond tall sand dunes; conversely, visibility of the beach from the car park is also restricted by these landforms. Those arriving at the Saunton Sands beach car park, and users of the beach facilities and holiday cabins would experience close range visibility of the temporary construction compound and trenchless technique. However, this would be perceived in the context of an area of hardstanding frequently used by vehicles, with commercial structures and settlement nearby, which detracts from the scenic qualities of the surrounding dune system within Braunton Burrows. Visitors to Saunton Sands beach, on the sands, would perceive a small increase in the number of vessels seen within inshore waters, and disturbance within the intertidal zone at an exit pit at a suitable water depth or on the beach. Disturbance on the intertidal part of Saunton Sands would be of a temporary nature and these areas would be easily returned to existing conditions following the completion of the construction activity.
331. Across a localised section of the SWCP, at close range, the magnitude of impact would be **medium-high**. Overall, the magnitude of impact on visitors to the beach is considered to be **medium**.

#### 20.10.3.1.5 Significance of effect: Construction and Decommissioning

332. The geographic extent of effects from the SWCP would occur at close range, from a short section of the route, approximately 0.8km, to the south of the Saunton Sands Hotel, Saunton Sands beach car park, and B3233, the effect on users of the

SWCP would be **major significant adverse**, reducing rapidly with distance beyond this point to the east and west.

333. The effect on visitors to Saunton Sands beach is considered to be **major-moderate significant adverse** within approximately 0.5km, reducing beyond this range. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.1.6 Further Mitigation

334. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.1.7 Residual Effect

335. The residual effect on users of the SWCP within the extent described above would remain **major significant adverse** during construction. The residual effect on visitors to Saunton Sands beach within the extent described above would be **major-moderate significant adverse**.

#### 20.10.3.2 Saunton settlement and beach cabin holiday homes

336. The sensitivity of receptors in the settlement is considered to be **high**, reflecting that the views from the settlement generally have high value and the receptors experiencing the view have a high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.3.2.1 Baseline

337. The small, linear settlement of Saunton is nestled into the lower hillslopes of Saunton Down, largely to the south of the B3231 as seen in Illustrative Viewpoint B (**Appendix 20.C**). The properties within the settlement are mainly orientated south to take advantage of views across Braunton Burrows and Saunton Sands. Views east towards the level, low-lying agricultural landscape around Braunton are more distant, simple, and less scenic in their composition. Although there are varying levels of enclosure by vegetation within the curtilage of properties, they generally all have open views out across the landscape to the south. There are influences from vehicles and recreational development at Saunton Sands car park, as seen in Illustrative Viewpoints B and C (**Appendix 20.C**) and varied built forms and agricultural farmland which define much of the distant undesignated landscape

context to the east. This viewpoint is also representative of a small number of holiday cabins immediately to the north of Saunton Sands beach car park.

#### 20.10.3.2.2 Value

338. Saunton lies largely within the NDCAONB and North Devon Heritage Coast. From the settlement, views afford the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. This implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape.
339. Notwithstanding the influence of settlement, there is a high level of visual amenity at this location, which relates primarily to the composition and high scenic quality of the distinctive landscape features within Braunton Burrows and the dynamic seascape at Saunton Sands and Bideford Bay to the west. Overall, value is considered to be **high**.

#### 20.10.3.2.3 Susceptibility

340. The susceptibility of residents is **high**. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting, as would visitors to the holiday cabins, albeit on a temporary basis. There is the potential that views from internal and external spaces have the potential to be impacted by the Onshore Export Cable Corridor and Landfall to MLWS.

#### 20.10.3.2.4 Magnitude of impact: Construction and Decommissioning

341. Potential visual effects would occur as a result of the temporary construction compound and activities that would be located in close proximity to the south-west of the settlement and holiday cabins at Saunton Sands car park. Properties to the west of Saunton may also gain distant views of a small number of specialist vessels moored offshore and construction activities within the intertidal area at Landfall to MLWS. Key changes to views are likely to focus on activities related to trenchless technique within the construction compound as the Onshore Export Cable Corridor construction is of limited duration. The Onshore Export Cable Corridor would be underground between the construction compound at Saunton Beach car park and Landfall to MLWS to the west, and to the east of Braunton Burrows. None of the dune system features would be impacted. Construction activity would be visible in

a context of recreational beach facilities, vehicle movements and existing hardstanding.

342. A small number of more elevated properties to the east of Saunton may gain relatively distant views of Onshore Export Cable Corridor construction amidst agricultural land, in an undesignated part of the landscape within which the seasonal disturbance of ground cover and movement of large agricultural vehicles are commonplace.

343. Overall, the magnitude of impact is considered to be **medium-high**.

#### 20.10.3.2.5 Significance of effect: Construction and Decommissioning

344. The effect on western parts of the settlement is considered to be **major significant adverse**. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.2.6 Further Mitigation

345. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.2.7 Residual Effect

346. The residual effect on western parts of the settlement is considered to be **major significant adverse**.

#### 20.10.3.3 Properties at Burrows Close Lane and Sandy Lane

347. The sensitivity of receptors is considered to be **high**, reflecting that the views from this loose cluster of dwellings has medium-high value and the receptors experiencing the view have high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.3.3.1 Baseline

348. Whilst these properties would be impacted by different sections of the Onshore Export Cable Corridor construction works, they are largely similar in terms of their distance from it.

349. Properties on Burrows Close Lane and Sandy Lane are surrounded by agricultural fields to the east and west. Garden and field boundary vegetation restricts views to varying degrees, with some dwellings also partly enclosed by agricultural buildings. Views to the west are backed by the low hummocky profiles of the Braunton Burrows sand dune system, which forms the near skyline (shown in Illustrative Viewpoint D and Illustrative Viewpoint F (**Appendix 20.C**)). Within the low-lying landscape the layering effect of field boundary and roadside vegetation can compartment visibility and restrict views across the surrounding level agricultural landscape to relatively short range, varying depending on the scale of field parcel, particularly to the south of this cluster. Conversely, slight undulations and larger fields can provide for more distant views.

#### 20.10.3.3.2 Value

350. Value is considered to be **medium-high**. The properties, and the surrounding agricultural land to the north, east, and south are situated within the North Devon Heritage Coast. To the west, Braunton Burrows sand dune system provides the backdrop and near skyline to views from these properties, and forms part of the designated landscape of the NDCAONB.

#### 20.10.3.3.3 Susceptibility

351. The susceptibility of residents is **high**. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting. There is the potential that views from internal and external spaces have the potential to be impacted by the Onshore Export Cable Corridor.

#### 20.10.3.3.4 Magnitude of impact: Construction and Decommissioning

352. Construction effects of the Onshore Export Cable Corridor would be experienced at these properties as a result of selective vegetation clearance, construction of the haul road, open cut trenching and two trenchless technique crossings for the Onshore Export Cable Corridor, and subsequent movement of vehicles, seen in views to the west of Burrows Close Lane and Sandy Lane, at very close range.

353. More distant visibility of the Onshore Export Cable Corridor construction and secondary construction compound to the south of the B3231, would be restricted by intervening hedgerows within the landscape from most properties within this group.



354. Considering the working, agricultural landscape setting to these dwellings, in which the seasonal cultivation of the land and movement of large vehicles is common, and the relatively short duration of the rolling construction programme as it passes along the Onshore Export Cable Corridor, the magnitude of impact for this property group during construction is considered to be **medium**.

#### 20.10.3.3.5 Significance of effect: Construction and Decommissioning

355. The sensitivity of the receptor is considered to be medium-high and the magnitude of impact as a result of the Onshore Export Cable Corridor construction is deemed to be medium. The effect would, therefore, be **major-moderate significant adverse**. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.3.6 Further Mitigation

356. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.3.7 Residual Effect

357. The residual effect would be major-moderate significant adverse.

#### 20.10.3.4 Crow Beach House

358. The sensitivity of the receptor is considered to be **high**, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.3.4.1 Baseline

359. Crow Beach House is an isolated property on the northern banks of the River Taw. The property is situated on a slightly elevated embankment which offers open views from its primary frontage across the river to the south. The curtilage of Crow Beach House is enclosed by a group of mature trees to the west and north but is more open to the east.

360. Views to the south look across the wide estuary landscape taking in the distant settled landscape around Yelland and Fremington, backed by low undulating hillsides overlain by pastoral fields. To the north, views look across the expanse of low-lying agricultural land at Braunton Marshes to distant settlement at Braunton,

and a backdrop of distant rolling hills. To the west and north-west, the extensive, hummocky Braunton Burrows sand dunes system is visible at mid-range, shown in Illustrative Viewpoint E (**Appendix 20.C**).

#### 20.10.3.4.2 Value

361. Value is considered to be **high**. The property and its immediate setting are situated within the NDCAONB and North Devon Heritage Coast (**Figure 20.5**). The NDCAONB includes parts of Braunton Marshes and Braunton Burrows sand dune system further west which characterise the view in these directions. The agricultural landscape to the north and east lie within an area defined as Heritage Coast, while the estuarine landscape to the south is undesignated.

#### 20.10.3.4.3 Susceptibility

362. The susceptibility of residents is **high**. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting. There is the potential that views from internal and external spaces have the potential to be impacted by the Onshore Export Cable Corridor.

#### 20.10.3.4.4 Magnitude of impact: Construction and Decommissioning

363. Visual impacts arising from the construction of the Onshore Export Cable Corridor would be experienced as a result of vegetation removal, cable trenching and construction of the temporary haul road, cable pull sections, and an trenchless technique compound in views to the north at close range, within the agricultural fields that provide the immediate setting to the property.

364. Visibility of the Onshore Export Cable Corridor construction would, however, be partially screened by vegetation within its curtilage, and would be seen in the opposite direction to the dwelling's main aspect, which faces south. There would also be prolonged views of construction activity experienced in views west from the private toll road which provides access to the dwelling, albeit intervening vegetation within the landscape would provide some screening.

365. Overall, the magnitude of impact during construction is considered to be **medium-high**.

#### 20.10.3.4.5 Significance of effect: Construction and Decommissioning

366. The sensitivity of the receptor is considered to be high and the magnitude of impact as a result of the Onshore Export Cable Corridor construction is deemed to be

medium-high. The effect would, therefore, be **major significant adverse**. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.4.6 Further Mitigation

367. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.4.7 Residual Effect

368. The residual effect would be **major significant adverse**.

#### 20.10.3.5 SWCP at Broad Sands, north of the River Taw

369. The sensitivity of this section of the SWCP (also part of the Tarka Trail) is considered to be **high**, reflecting that the views from the long-distance route have high value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.3.5.1 Baseline

370. The route of the SWCP is shown on **Figure 20.6**. At the time of fieldwork survey (February 2023), the route to the south of Horsey Island was closed. Consequently, the SWCP follows the same raised embankment as the Tarka Trail, which follows the private toll road to Broad Sands car park. Further west, the SWCP heads inland and to the north following American Road as it follows the eastern boundary of Braunton Burrows to Sandy Lane Car Park.

371. There are slightly elevated views from this section of the route on an embankment between Velator (south of Braunton) and Broad Sands car park. Views to the west and north west look across the extensive, low-lying, and level agricultural landscape of the Braunton Marshes. In the background, the low hummocky profile of Braunton Burrows acts as a backdrop to the marshes and forms the near horizon. To the south, the estuarine landscape provides a dynamic and contrasting composition to views inland in the fore to mid-ground. There are more distant views to the settled estuary margins to the south, encompassing parts of Fremington, Yelland, Instow Town, Instow, and Appledore, as shown in the baseline view from Viewpoint 9 (**Figure 20.22**).

372. To the west of the car park, the route heads inland, amid dunes and scrub vegetation, which frequently screens views out to the surrounding landscape, aside from some slightly elevated and more open sections at the southern extent of American Road.

#### 20.10.3.5.2 Value

373. The section of the SWCP to the west of the car park passes through the NDCAONB and the North Devon Heritage Coast (**Figure 20.6**).

374. As described above, from the section of the route within the NDCAONB screening vegetation and localised landform restricts opportunities to appreciate a wide range of the Special Qualities of 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality,' described in **Table 20.12**. Similarly, from this section of the route there are infrequent opportunities to experience views inland, which encompass "*...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", a component of the Special Qualities. However, the Onshore Export Cable Corridor construction to the north of the River Taw would be partly within the NDCAONB and therefore seen within and in its immediate setting.

375. Overall, the value is considered to be **high**.

#### 20.10.3.5.3 Susceptibility

376. People using the SWCP tend to do so with the purpose of both exercise and appreciation of the views and environment through which they pass. They are transient, so do not tend to have the same view for long periods but tend to be slow moving. Although the path closely follows the coastline, the directions are continuously altering. Susceptibility is intensified by the close proximity to the construction activity associated with the Onshore Export Cable Corridor, although the experience would be transient from a localised section of the route and is considered to be **medium-high**.

#### 20.10.3.5.4 Magnitude of impact

377. Visibility of Onshore Export Cable Corridor installation activities would be possible from a section of the SWCP between Sandy Lane car park in the west, and Velator (south of Braunton) in the east, at a range of distances between 0m (on the Onshore

Export Cable Corridor boundary) to approximately 1.8km (along the proposed construction access route).

378. The impacts as a result of the Onshore Export Cable Corridor installation would be experienced from a limited section of the route as a result of close range visibility of vegetation removal, cable trenching and construction of the temporary haul road, cable pull sections, and an trenchless technique compound in views to the north at close range, within the agricultural fields to the north of the route as it passes between Broad Sands car park and up to approximately 0.7km to the east of Crow Beach House.
379. Beyond these distances, visibility of the Onshore Export Cable Corridor construction from the SWCP would become increasingly restricted by intervening vegetation within the wider landscape.
380. Overall, the magnitude of impact is considered to be **medium-high**.

#### 20.10.3.5.5 Significance of effect

381. The sensitivity of the receptor is considered to be high and the magnitude of impact as a result of the Onshore Export Cable Corridor installation is deemed to be medium-high. The effect would, therefore, be **major significant adverse**. The geographic extent of this effect would occur on a section of the SWCP between Broad Sands car park and approximately 0.7km to the east of Crow Beach House, with views on the section to the west contained by dune landforms and scrub vegetation. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.5.6 Further Mitigation

382. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.5.7 Residual Effect

383. The residual effect on users of the SWCP within the extent described above would remain **major significant adverse** during construction.

### 20.10.3.6 SWCP south of the River Taw

384. The sensitivity of this section of the SWCP is considered to be **medium**, reflecting that the views from this section of the long-distance route have medium value and the receptors experiencing the view have a medium susceptibility to the proposed change, for the reasons set out below.

#### 20.10.3.6.1 Baseline

385. To the south of the River Taw, the SWCP enters the Onshore Export Cable Corridor study area from Instow to the south-west, following the river's edge to East Yelland Marsh, before joining up with the Tarka Trail / NCR 3.

386. Outwards views from the route are limited whilst it passes through settlement at Instow. Between Instow Cricket Club and the existing East Yelland Substation, there are open, slightly elevated views from this section of the SWCP as it rounds the coast, shown in Illustrative Viewpoint G (**Appendix 20.C**). To the south, there is visibility across the agricultural estuary margins and settled landscape to the north of the B3233, which include existing substations and tall overhead lines. To the north, there are wide views across the Taw-Torridge estuary, including views out to Bideford Bay and distant visibility of the extensive dune system at Braunton Burrows to the north, and Appledore to the west.

#### 20.10.3.6.2 Value

387. This section of the SWCP does not pass through a landscape subject to designation or recognised for its scenic views.

388. Parts of the wider views include separate parts of the NDCAONB to the north, to Braunton Burrows, and west to Northam Burrows, which are considered to have local value. From this section of the route people gain an appreciation of the range of contrasting views that are typical of the Taw-Torridge estuary margins, including views to the coast, across the flat marshes, and less scenic views inland across the farmed and settled landscape.

389. Value of the views inland that encompass the Onshore Export Cable Corridor is considered to be **medium**.

#### 20.10.3.6.3 Susceptibility

390. People using the SWCP tend to do so with the purpose of both exercise and appreciation of the views / environment through which they pass. They are

transient, so do not tend to have the same view for long periods but tend to be slow moving. Although the path closely follows the coastline, the directions are continuously altering. The expectation of the experience along this section of the route is not one of tranquillity or lack of development influences and this moderates the susceptibility of people using this section of the SWCP. However, susceptibility is heightened by the close proximity to the installation activity associated with the Onshore Export Cable Corridor, although the experience would be transient from a localised section of the route and is considered to be **medium**.

#### 20.10.3.6.4 Magnitude of impact

391. Visibility of Onshore Export Cable Corridor construction activities would be possible from a section of the SWCP approximately 1km in length, from Instow Cricket Club eastwards to the north of the existing East Yelland Substation.
392. The principal visual impacts as a result of the of the Onshore Export Cable Corridor construction would be experienced from a limited section of the route as a result of close range visibility of vegetation removal, cable trenching and construction of the temporary haul road, cable pull sections, and an trenchless technique compound in views to the north at close range, within the agricultural fields to the south of the route at Instow Barton Marsh.
393. From more distant locations, visibility of the Onshore Export Cable Corridor construction would become increasingly restricted by intervening vegetation within the wider landscape.
394. Overall, the magnitude of impact is considered to be **medium-high**.

#### 20.10.3.6.5 Significance of effect

395. The sensitivity of the receptor is considered to be medium and the magnitude of impact as a result of the Onshore Export Cable Corridor construction is deemed to be medium. The effect would, therefore, be **moderate significant adverse**. The geographic extent of this effect would occur across approximately 1km from Instow Cricket Club eastwards to the north of the existing East Yelland Substation.
396. Construction effects are short term, approximately 18 months for the cable installation, and reversible.

#### 20.10.3.6.6 Further Mitigation

397. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.3.6.7 Residual Effect

398. The residual effect on users of the SWCP within the extent described above would remain **moderate significant adverse** during construction.

### 20.10.4 Impact 5: Visual Effects - Onshore Substation

#### 20.10.4.1 Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh:

399. The location and baseline panorama from are shown in **Figure 20.14**. The sensitivity of the viewpoint is considered to be **medium**, reflecting that the view has medium value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.1.1 Baseline

400. This viewpoint is located on the Tarka Trail (also part of NCR 3), to the west of the existing East Yelland Substation. The viewpoint is representative of users of the long-distance recreational trail and cycle route.

401. The view looks east over the low-lying, rural farmed landscape which characterises the coastal margin of the Taw-Torridge Estuary to the east of Instow.

402. Landform is flat across the estuary margins, with some small undulations towards the coastal edge. The landform rises gently inland to the south, to the low undulating to rolling slopes and hills which enclose the estuary. In views to the north, the distinctive hummocky sand dune system at Braunton Burrows is visible above the intervening level landscape, with the estuary itself screened by topography.

403. Within the fore to mid-ground of the view are a series of medium to large scale fields, subdivided by hedgerows which in places have gaps or have become overgrown. Towards the mid-ground, more extensive woodland is found around the existing East Yelland Substation and sewage works on Yelland Quay Road. There is a sense of openness in views particularly to the north, towards the estuary, where



low vegetation and the low-lying level topography combine to offer the opportunity for wide vistas.

404. Overhead pylon lines span the view to the east, crossing the landscape from the hills to the south to the terminal point at the existing East Yelland Substation. The substation is largely screened by intervening woodland planting seen to the north of the Tarka Trail. Further pole mounted transmission lines cross the fields in the immediate foreground. Towards the mid-ground of the view, the rectangular massing of the upper storeys of the Sandbanks Business Park / Yelland Terminal is visible above intervening high hedgerows and trees. To the south, the small village of Instow Town occupies part of the hillside to the south of the B3233. In more distant views, settlement at Ashford is situated across the low hill slopes towards the background to the east, while to the north of the Taw-Torridge Estuary, parts of settlement at Saunton and Braunton are visible above intervening vegetation across the coastal margin and coastal plains. In the background of the view to the east is the settlement of Ashford, situated amongst the distant farmed hillsides. A number of the Fullabrook wind farm turbines are visible on the open skyline in views to the east.

#### 20.10.4.1.2 Value

405. The value of the view is **medium**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape. Small parts of the wider views include the NDCAONB to the north, to Braunton Burrows, however this is not the focus of the view and therefore does not strongly influence value; however, the relatively wide and open views from the estuary margins have local value.

#### 20.10.4.1.3 Susceptibility

406. This viewpoint is representative of the view experienced by people using the Tarka Trail / NCR 3 who gain dynamic views along this section of the route, within the ZTV (**Figure 20.11**). At this location and approximately 0.3km to the east, there are open views from the Tarka Trail / NCR 3, from the slightly elevated vantage overlooking the tightly clipped hedgerows in the foreground. To the south of the existing East Yelland Substation, high hedgerows and trees restrict visibility from the route. Further west of this viewpoint, to Instow, a combination of small copses of woodland and hedgerow trees provide intermittent screening.
407. Recreational walkers and cyclists are likely to be focused on their surroundings where open views are available (such as at the viewpoint location). However, the

expectation of the experience along this section of the route is not one of tranquillity or lack of development influences and this moderates the susceptibility of people using this section of the Tarka Trail / NCR3. Susceptibility is considered to be **medium**.

#### 20.10.4.1.4 Magnitude of impact: Construction and Decommissioning

408. The visualisation (**Figure 20.14**) shows that the Onshore Substation Worst Case Scenario maximum parameter occupies a small part of the HFoV to the east, seen towards the mid-ground of the view.
409. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor will be visible in combination with the construction of the Onshore Substation, seen closer to this viewpoint. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is considered in this assessment.
410. Taller components involved in the Onshore Substation construction process would be visible above intervening, tall, hedgerow vegetation to the west of the substation site and would break the skyline. Ground based construction activity associated with the formation of the Onshore Substation platform and operational compound would be partially screened by vegetation, aside from where visibility would be possible through gaps in intervening hedgerow removed during the Onshore Export Cable Corridor construction. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium-high**.

#### 20.10.4.1.5 Magnitude of impact: Operation and Maintenance

411. The magnitude of impact is considered to be **medium** in year 0 of the operation and maintenance phase, reducing to **medium-low** in year 15 once mitigation planting matures. This is largely as a result of the close proximity of the Onshore Substation Worst Case Scenario maximum parameter to this location.
412. As shown in the visualisation (**Figure 20.14**), at year 0 the upper parts and almost the full extent of the southern extents of the Worst Case Scenario maximum parameter of the Onshore Substation would be visible to the east of this location, in the midground of the view, seen above intervening hedgerow vegetation. It would appear to rise very slightly above the skyline of part of the settled hillsides in the background of the view.

413. The Onshore Substation Worst Case Scenario maximum parameter (refer to **Section 20.4.3**) is visible in a portion of the view already influenced by existing industrial and commercial built form, wind turbines, and the overhead electricity transmission. The Onshore Substation Worst Case Scenario maximum parameter is shown to be larger than buildings at the Sandbanks Business Park / Yelland Terminal and nearby residential built form. The close proximity of the Onshore Substation Worst Case Scenario maximum parameter, its large scale and industrial character, will have a readily apparent influence on the views of users of the recreational route.
414. At year 15, mitigation planting will have established and would provide screening aside from the upper portions of the Onshore Substation Worst Case Scenario maximum parameter, reducing its prominence in the view and integrating the buildings with the existing landscape setting. The increased elevation of the Onshore Substation Worst Case Scenario maximum parameter platform relative to the existing ground level would result in a reduction of screening potential for the proposed indicative mitigation. Due to the position of the Onshore Export Cable Corridor as it approaches the Onshore Substation it would not be possible to completely screen the Onshore Substation infrastructure from this viewpoint.

#### 20.10.4.1.6 Significance of effect: Construction and Decommissioning

415. During construction and decommissioning the effect would be **moderate significant adverse**. The geographic extent of the effect would occur over approximately 0.8km of the route, from Instow in the west to the existing East Yelland Substation. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.10.4.1.7 Further Mitigation

416. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.1.8 Residual Effect

417. The residual effect on users of the SWCP within the extent described above would remain **moderate significant adverse** during construction.

#### 20.10.4.1.9 Significance of effect: Operation and Maintenance

418. During operation and maintenance at year 0, the effect would be **moderate not significant adverse**. The geographic extent of the effect would occur over approximately 0.3km of the route, from the viewpoint location at Instow Barton Marsh in the west to the existing East Yelland Substation. The level of effect would reduce with distance further to the west, towards Instow. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.1.10 Further Mitigation

419. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.1.11 Residual Effect

420. At year 15, the residual effect would reduce to **moderate-minor not significant adverse** within the extent described above. Effects during operation and maintenance are long term and reversible.

### 20.10.4.2 Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay

421. The location and baseline panorama are shown in **Figure 20.15**. The sensitivity of the viewpoint is considered to be **medium**, reflecting that the view has medium value and the receptors experiencing the view have a medium susceptibility to the proposed change, for the reasons set out below.

#### 20.10.4.2.1 Baseline

422. This viewpoint is located on the Tarka Trail (also part of NCR 3), to the east of Yelland Quay, at the junction with the SWCP. The viewpoint is representative of users of the long-distance recreational trail and cycle route.

423. The view looks south-west from the footway from a gap in the trail-side vegetation over the settled estuary margin landscape to the north of Yelland.

424. Landform across the fore to mid-ground of the view is flat and low-lying. The landform rises gently inland to the south, to the low undulating to rolling slopes and hills which enclose the estuary. To the west, the upper slopes of the hills above Appledore are seen above the intervening built form at Sandbanks Business Park / Yelland Terminal.

425. Occupying the foreground of the view, extending south to the B3233 and south-east to the edges of Yelland, are several marshy grazing fields. The fields are large scale, weakly enclosed by post-and-wire fencing. Woodland along the northern fringes of Yelland and the B3233 creates enclosure to the field parcels to the south, either screening or filtering most views of low-lying settlement beyond. Low slopes and hills to the south through to the south-west provide the background to the view and form the undulating skyline. The hills are overlain by agricultural farmland defined by a strong pattern of hedgerows, punctuated with some scattered hedgerow trees and larger blocks of woodland. The settlement of Instow Town rises up the hillslopes to the south-west, seen above intervening woodland along the B3233.
426. In gaps in the trailside vegetation, Sandbanks Business Park / Yelland Terminal is prominent in views to the south-west. The Business Park contains varied built forms and massing, from larger two-storey industrial units with a metal clad finish, to single storey red-brick buildings, with associated industrial forms including large storage tanks, pipe work and metal lattice structures, tall lighting columns, and security fencing. Parts of Appledore can be seen in the background, through and beyond the low, single storey industrial units and infrastructure. Overhead pylon lines span the view from the hills to the south extending north, to the west of the Business Park. Smaller wood pole mounted transmission lines span the foreground and hills to the south.

#### 20.10.4.2.2 Value

427. The value of the view is **medium**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape.

#### 20.10.4.2.3 Susceptibility

428. This viewpoint is representative of the view experienced by people using the Tarka Trail and NCR 3 at a location where there would be open, close range views of the Onshore Substation site. To the east of this location, there are short duration, distant views towards the Onshore Substation site from the Tarka Trail gained in close proximity to Lower Yelland Farm, at a range of approximately 0.7km. Visibility then reduces as a result of intervening vegetation until approximately 0.5km, at which point gaps in woodland provide some intermittent and / or filtered views (see Viewpoint 3, **Figure 20.16**) at varying ranges up to Yelland Quay road. In very close proximity immediately to the north of the Onshore Substation site, views are

screened to varying degrees by high hedgerow and woodland vegetation along the trailside.

429. Recreational walkers and cyclists are likely to be focused on their surroundings where views are available (such as at the viewpoint location). However, the expectation of the experience along this section of the route is not one of tranquillity or lack of development influences and this moderates the susceptibility of people using this section of the Tarka Trail / NCR3. Overall, susceptibility is considered to be **medium**.

#### 20.10.4.2.4 Magnitude of impact: Construction and Decommissioning

430. As shown in the visualisation (**Figure 20.15**), the Onshore Substation Worst Case Scenario maximum parameter occupies a narrow horizontal extent (approximately 10 degrees) within the view to the south-west.
431. Traffic movements on the minor road to Yelland Quay, and the construction of the access road, would be visible in the foreground of the view and would introduce temporary features that would be slightly uncharacteristic. However, the movement of vehicles is fairly frequent as they access Sandbanks Business Park / Yelland Terminal, which moderates the change. Some ground based construction activity associated with the formation of the Onshore Substation platform and operational compound would be visible to varying degrees through gaps between intervening built form, although difficult to discern amid screening by the variety of forms and movement of vehicles around Sandbanks Business Park / Yelland Terminal, and intervening vegetation along the Tarka Trail to the west. Taller components involved in the Onshore Substation construction would be seen above intervening vegetation and built form and would break the skyline, and thus would be more prominent in the view, although a number of tall features break the skyline and because of this the change would not be uncharacteristic. Construction lighting would be evident in winter months when working days would extend into hours of darkness but would be perceived in the context of existing security lighting around the Sandbanks Business Park / Yelland Terminal. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium**.

#### 20.10.4.2.5 Magnitude of impact: Operation and Maintenance

432. The magnitude of impact is considered to be **medium-low** in year 0 of the operation and maintenance phase and would remain so at year 15 and beyond.

433. The Onshore Substation Worst Case Scenario maximum parameter has an apparent influence in the western sector of the view. Within this part of the view, varying forms of industrial and commercial buildings at Sandbanks Business Park / Yelland Terminal, tall overhead pylon lines and distant settlement at Appledore are discordant baseline features seen across the fore to background, and in this context the Onshore Substation Worst Case Scenario maximum parameter does not appear atypical.
434. The Onshore Substation Worst Case Scenario maximum parameter occupies a slightly larger HFoV to other buildings within Sandbanks Business Park / Yelland Terminal and is markedly higher, but lower than the more distant pylon towers. The Onshore Substation Worst Case Scenario maximum parameter results in a perceptible increase in development, although in an already built up part of the view with varied industrial and commercial built form seen at similar range, some of it (to the left of the view) of an apparently similar scale.

#### 20.10.4.2.6 Significance of effect: Construction and Decommissioning

435. During construction and decommissioning the effect would be **moderate not significant adverse**. The geographic extent of this effect would occur on a section of the route from Yelland Quay road up to approximately 0.3km further east. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.2.7 Further Mitigation

436. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.2.8 Residual Effect

437. The residual effect on users of the routes within the extent described above would remain **moderate note significant adverse** during construction.

#### 20.10.4.2.9 Significance of effect: Operation and Maintenance

438. During operation and maintenance at year 0 the effect would be **moderate-minor not significant adverse**. The geographic extent of this effect would occur on a section of the route from Yelland Quay road up to approximately 0.3km further east. Effects during operation and maintenance are long term and reversible.



#### 20.10.4.2.10 Further Mitigation

439. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.2.11 Residual Effect

440. The residual effect would be **moderate-minor not significant adverse** within the extents described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.3 Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland

441. The location and baseline panorama are shown in **Figure 20.16**. The sensitivity of the viewpoint is considered to be **medium**, reflecting that the view has medium value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.3.1 Baseline

442. This viewpoint is located on a footpath which connects Yelland to the Tarka Trail (also part of NCR 3), close to the junction with the SWCP. The viewpoint has been moved from the location on the Tarka Trail / NCR 3 agreed at ETG on 2<sup>nd</sup> November, to a footpath approximately 20m to the south, to avoid intervening screening features in the view. The view from this location is therefore considered to represent a 'worst case,' where there may be open, unrestricted visibility at a range of approximately 0.5km. The view is representative of users of the footpath to the north of Yelland, and users of the Tarka Trail / NCR 3, albeit their views would be less open.

443. This view from this location has an open aspect to the west looking across a wide expanse of marshy, grassland field parcels. The fields are large scale, enclosed by post-and-wire fencing. Woodland along the northern fringes of Yelland and the B3233 creates enclosure to the field parcels to the south, either screening or filtering most views of low-lying settlement beyond. Low slopes and hills to the south through to the south-west enclose the view and form the undulating skyline. The hills are overlain by open farmland defined by a strong pattern of hedgerows, punctuated with some scattered hedgerow trees and larger blocks of woodland.



444. Sandbanks Business Park / Yelland Terminal is prominent in the midground of the view to the west. The Business Park contains varied built forms and massing, from larger two-storey industrial units with a metal clad finish, to single storey red-brick buildings, with associated industrial forms including large storage tanks, pipe work and metal lattice structures, tall lighting columns, and security fencing. Parts of Appledore can be seen in the background, through and beyond the low, single storey industrial units and infrastructure. Overhead pylon lines span the view from the hills to the south extending north, to the west of the Business Park. Smaller wood pole mounted transmission lines span the foreground.
445. To the north, vegetation along the Tarka Trail / NCR 3 encloses the view. In respect of views from these long-distance routes, between this location and Viewpoint 2 (**Figure 20.15**) to the west as far as Yelland Quay, there are intermittent gaps in the vegetation which afford partially screened views across the landscape to the south. To the east of this viewpoint there is a short section of more open visibility near Lower Yelland Farm at approximately 0.7km to the east.

#### 20.10.4.3.2 Value

446. The value of the view is **medium**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape. However, the view is taken on part of the regionally important Tarka Trail, and the SWCP and NCR 3 which are nationally important routes. The quality of the view moderates the local value.

#### 20.10.4.3.3 Susceptibility

447. This viewpoint is representative of the view experienced by people using the local footpath network and Tarka Trail and NCR 3 at a location where there would be open views towards the Onshore Substation site. As discussed above, views from the Tarka Trail / NCR are restricted by trailside vegetation.
448. Recreational walkers and cyclists are likely to be focused on their surroundings where views are available (such as at the viewpoint location). However, the expectation of the experience along this section of the route is not one of tranquillity or lack of development influences and this moderates the susceptibility of people using this section of the Tarka Trail / NCR3. Overall, susceptibility is considered to be **medium**.

#### 20.10.4.3.4 Magnitude of impact: Construction and Decommissioning

449. As shown in the visualisation (**Figure 20.16**), the Onshore Substation Worst Case Scenario maximum parameter occupies a small horizontal extent within the view to the west.
450. Traffic movements on the minor road to Yelland Quay, and the construction of the access road, would be visible in the midground of the view and would introduce some temporary features that would be slightly uncharacteristic. However, the movement of vehicles is fairly frequent as they access Sandbanks Business Park / Yelland Terminal, which moderates the change.
451. Some construction activity associated with the formation of the Onshore Substation platform and operational compound would be visible to varying degrees through gaps between intervening built form, although difficult to discern amid screening by the variety of forms and movement of vehicles around Sandbanks Business Park / Yelland Terminal, and intervening vegetation along the Tarka Trail to the west. Taller components involved in the Onshore Substation construction would be seen above intervening vegetation and built form and would break the skyline, and thus more prominent in the view, and uncharacteristic to the baseline composition. Construction lighting would be evident in winter months when working days would extend into hours of darkness but would be perceived in the context of existing security lighting around the Sandbanks Business Park / Yelland Terminal. At this range, and direction of view, construction activities would take place across a small extent of the view, which slightly moderates the impact.
452. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium**.

#### 20.10.4.3.5 Magnitude of impact: Operation and Maintenance

453. The magnitude of impact is considered to be **medium-low** in year 0 of the operation and maintenance phase and would remain so at year 15 and beyond.
454. The Onshore Substation would have an apparent influence in the western sector of the view. Within this part of the view, varying forms of industrial and commercial buildings at Sandbanks Business Park / Yelland Terminal, tall overhead pylon lines and distant settlement at Appledore are baseline features seen across the fore to background, and in this context the Onshore Substation would not appear atypical.

455. The Onshore Substation would occupy a slightly larger HFoV to other buildings within Sandbanks Business Park / Yelland Terminal and appear slightly taller, but lower than the more distant pylon towers. The Onshore Substation would result in a perceptible increase in built form, although in an already developed part of the view with varied industrial and commercial built form seen at similar range.

#### 20.10.4.3.6 Significance of effect: Construction and Decommissioning

456. During construction and decommissioning the effect would be **moderate not significant adverse**. The geographic extent of this effect would be limited to isolated sections of the route at approximately 0.5km from the Onshore Substation site. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.3.7 Further Mitigation

457. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.3.8 Residual Effect

458. The residual effect on users of the route within the extent described above would remain **moderate not significant adverse** during construction.

#### 20.10.4.3.9 Significance of effect: Operation and Maintenance

459. During operation and maintenance at year 0 the effect would be **moderate-minor not significant adverse**. The geographic extent of this effect would be limited to isolated sections of the route at approximately 0.5km from the Onshore Substation site.

#### 20.10.4.3.10 Further Mitigation

460. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.3.11 Residual Effect

461. At year 15, the residual effect would be **moderate-minor not significant adverse** within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.4 Viewpoint 4: B3233, east of Instow

462. The location and baseline panorama are shown in **Figure 20.17**. This view is representative of road users on the B3233 and the settlement at Instow Town.
463. The sensitivity of the viewpoint is considered to be **medium-high** for people in the settlement, and **medium** for road users. For the reasons set out below.

##### 20.10.4.4.1 Baseline

464. This viewpoint is located adjacent to the eastbound carriageway of the B3233 near to Instow Town, at an open location near a field gate. The viewpoint is representative of users of the road and is also representative of views from nearby properties on the northern edge of Instow Town which have similar, slightly elevated views across the landscape.
465. The view looks north-east across the low-lying, rural farmed landscape which characterises the margins of the River Taw at this location.
466. Landform slopes away gently to the north to the flat estuary margins, with undulating dune systems and flood embankments the only variation in landform along the river's edge. Inland, the topography rises steeply to the south of the B3233 to the farmed lower slopes and hills of the Culm Measures landscape.
467. In the fore to midground the land use is characterised by mixed agricultural pastoral and arable land use, across a pattern of medium scale fields enclosed by low, tightly clipped hedgerows. Woodland cover is concentrated around Yelland Quay to the north-east, where it provides screening of the existing East Yelland Substation and parts of Yelland Quay, and enclosure to properties to the north of the B3233. Smaller copses of woodland are found field margins and there is some low scrub vegetation around the dune systems.
468. From this elevated location there are views north to the River Taw and extensive Braunton Marshes beyond, backed by the rolling open hills to the north of Saunton. To the north west, the distinctive hummocky profile of Braunton Burrows provides a unique low skyline, with Bideford Bay seen further round to the west, framed by Appledore to south-west. The low profile of Lundy Island is visible far offshore on the sea horizon.
469. The influence of industrial land uses, and electricity infrastructure is seen to the north east. The existing East Yelland Substation is screened by established

woodland; however, the line of overhead pylons leads the eye to its location in the view. Industrial land uses are seen beyond intervening woodland. In the same part of the view, in the far distance, is extensive settlement around Braunton, large buildings at RAF Chivenor, and the Fullabrook wind farm across the distant hills that provide the backdrop to the view. To the west are single storey properties at Sandyhills and the large modern buildings at Arromanches Camp, the Royal Marines complex on the north-eastern edge of Instow.

#### 20.10.4.4.2 Value

470. The value of the view is **medium**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape. Small parts of the wider views include the NDCAONB to the north-west, to Braunton Burrows, however this is not the focus of the view and therefore does not influence value. The view contains a mix of natural, rural, and built components and is influenced by settlement and overhead pylons and other modern built influences seen at relatively close proximity.

#### 20.10.4.4.3 Susceptibility

471. This viewpoint is representative of the view experienced by people using the B3233 who gain dynamic views over approximately 0.6km, from Instow to Yelland, within the ZTV (see **Figure 20.11**), and primarily those travelling eastbound. Sections of the route further to the east and west are otherwise screened and filtered by roadside vegetation, landform and built form within settlement. Taking this all into account, the susceptibility to change of road users to the Onshore Substation is considered to be **medium-low**.

472. There is the potential that views from internal and external spaces associated with the small number of properties in this area have the potential to be impacted by the Onshore Substation. The high part of the susceptibility rating relates to the duration of their views potentially each day and also over the years, and the medium part relates to the influence of varied built forms, vehicles on the B3233, and electricity infrastructure on their views. The susceptibility of residents is **medium-high**.

#### 20.10.4.4.4 Magnitude of impact: Construction and Decommissioning

473. As shown in the visualisation (**Figure 20.17**), the Onshore Substation Worst Case Scenario maximum parameter occupies a small HFoV within the wide-ranging view to the north, seen at mid-range, beyond intervening field parcels.

474. Taller components involved in the Onshore Substation construction process would be visible above intervening tall hedgerow vegetation and woodland. Ground based construction activity associated with the formation of the Onshore Substation platform and operational compound would be largely screened by intervening vegetation in the wider landscape, which would reduce its prominence.
475. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor will be visible in combination with the construction of the Onshore Substation. Onshore Export Cable Corridor construction activity would be visible in midground, from the compound to the south of the River Taw and to the south of woodland surrounding East Yelland Substation to Instow Barton Marsh. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is also considered in this assessment. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium**.

#### 20.10.4.4.5 Magnitude of impact: Operation and Maintenance

476. At year 0, the Onshore Substation would be an apparent influence in the north-east portion of the view from the B3233. Its large scale and industrial character would be noticeable relative to the rural character of the foreground landscape. The upper parts of the Onshore Substation would be visible above intervening tall hedgerow vegetation and woodland.
477. Within the level landscape, the low, horizontal profile of the GIS buildings would slightly reduce their prominence. Change would be perceived in a portion of the view which has baseline influence from the nearby overhead electricity transmission lines, and distant influence from large built form at RAF Chivenor, distant settlement, and wind farms, which serves to moderate the change. The magnitude of impact on road users and residents at year 0 is considered to be **medium**.
478. At year 15 proposed woodland planting to the south and west of the Onshore Substation would screen the majority of the Onshore Substation aside from the upper parts of the buildings. The proposed woodland planting would help to assimilate the Onshore Substation into its immediate landscape context which includes existing screening woodland surrounding the existing East Yelland substation and sections of the Tarka Trail / NCR 3. The magnitude of impact would reduce to **medium-low**.

#### 20.10.4.4.6 Significance of effect: Construction and Decommissioning

479. During construction and decommissioning the effect on a small number of residential receptors at Instow Town would be **moderate significant adverse**.
480. On balance, effects on road users would be **moderate not significant adverse**. The geographic extent of this effect would occur across approximately 0.6km of the B3233 between Instow and Yelland.
481. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.4.7 Further Mitigation

482. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.4.8 Residual Effect

483. The residual effect on residential receptors at Instow Town would be **moderate significant adverse**. Residual effects on road users would be **moderate not significant adverse**.

#### 20.10.4.4.9 Significance of effect: Operation and Maintenance

484. During operation and maintenance at year 0, the effect on residential receptors would be **moderate not significant adverse**.
485. At year 0, effects on road users on this section of the B3233 would be **moderate not significant adverse**. The geographic extent of this effect would occur across approximately 0.6km of the B3233 between Instow and Yelland. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.4.10 Further Mitigation

486. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.4.11 Residual Effect

487. During operation and maintenance at year 15, the residual effect on residential receptors would reduce to **moderate-minor not significant adverse**.



488. At year 15, the residual effect on users of the B3233 would reduce to **moderate-minor not significant adverse** within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.5 Viewpoint 5: PRoW (Instow Footpath no. 16), north of properties near B3233

489. The location and baseline panorama are shown in **Figure 20.18**. The sensitivity of the viewpoint is considered to be **medium**, reflecting that the view has medium value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.5.1 Baseline

490. This viewpoint is located on a PRoW (Instow Footpath, No. 16) which provides connectivity between Instow Town to the south, and the Tarka Trail / NCR 3 to the north. The view looks north across a farmed landscape towards the estuary margins of the River Taw to the north. The view is representative of users of the PRoW.

491. The landscape is flat and low-lying. The view is primarily characterised by medium scale fields enclosed by low, clipped hedgerows, which afford some open views out to the north-west and west. Within the broadly level landscape, hedgerow trees and copses of woodland also provide scattered, layered screening in these directions. There is further enclosure by woodland planting in the views to the north through to the east, which surrounds the existing East Yelland Substation and properties to the south of the B3233. Less dense woodland planting and linear hedgerow trees filter views towards Yelland Quay and Sandbanks Business Park / Yelland Terminal further east. Within the open views to the north west, it is possible to see the low undulating dune system at Braunton Burrows, and higher hills further to the north, however because of the low-lying elevation and intervening flood embankments there is no visibility of the River Taw or Bideford Bay.

492. Overhead pylon lines span the view from the south-east through to the north-east, although the existing East Yelland Substation is well-screened by woodland. There are filtered views to Sandbanks Business Park / Yelland Terminal, seen beyond the pylon lines to the north-east, and to properties adjacent to the B3233 to the south-east. Settlement at Instow Town is prominent across the lower hill slopes to the south.



#### 20.10.4.5.2 Value

493. The value of the view is **medium**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape. Small parts of the wider views include the NDCAONB to the north, to Braunton Burrows, however this is not the focus of the view and therefore does not influence value; however, the relatively wide and open views from the estuary margins have local value.

#### 20.10.4.5.3 Susceptibility

494. This viewpoint is representative of the view experienced by people using the PRoW who gain transient views along this short section of footpath, within the ZTV (**Figure 20.11**). The view to the north is rural, albeit with influence from the relatively well screened East Yelland Substation and prominent overhead pylons seen in relatively close proximity, which moderates susceptibility to the type of change proposed.

495. Recreational walkers are likely to be focused on their surroundings where views are available (such as at the viewpoint location). However, views are transient and would not be experienced across the entirety of the PRoW route. However, the expectation of the experience along this section of the route is not one of tranquillity or lack of development influences and this moderates the susceptibility of people on this PRoW. Susceptibility is considered to be **medium**.

#### 20.10.4.5.4 Magnitude of impact: Construction and Decommissioning

496. As shown in the visualisation (**Figure 20.18**), the Onshore Substation Worst Case Scenario maximum parameter occupies a small extent of the view to the north-east at relatively close proximity, beyond intervening field parcels.

497. At this viewpoint, construction activities associated with the Onshore Export Cable Corridor will be visible to the north, in combination with the construction of the Onshore Substation, and seen closer to this viewpoint. Onshore Export Cable Corridor construction activity would be partly screened by intervening hedgerows. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is considered in this assessment.

498. Taller components involved in the Onshore Substation construction process would be visible above intervening tall hedgerow vegetation and woodland and would break the skyline. Much of the construction activity associated with the formation of the Onshore Substation platform, lower components of the Onshore Substation

construction and operational compound would be screened by this intervening vegetation, which would markedly reduce its prominence. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium**.

#### 20.10.4.5.5 Magnitude of impact: Operation and Maintenance

499. At year 0 and year 15 the magnitude of impact would be **low**. Only the upper parts of the Onshore Substation Worst Case Scenario maximum parameter are visible above intervening vegetation in the landscape, within a small HFoV, and have only slightly apparent influence in the view. Within the level landscape, the low, horizontal profile of the Onshore Substation Worst Case Scenario maximum parameter and fact that it sits below the skyline further reduces its prominence.
500. At year 15 proposed woodland planting to the south of the Onshore Substation would further increase screening around the Onshore Substation. The proposed woodland planting would help to assimilate the Onshore Substation into its immediate landscape context which includes existing screening woodland surrounding the existing East Yelland substation and sections of the Tarka Trail / NCR 3 to the north of the site.

#### 20.10.4.5.6 Significance of effect: Construction and Decommissioning

501. During construction and decommissioning the effect would be **moderate significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.5.7 Further Mitigation

502. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.5.8 Residual Effect

503. The residual effect on users of the route would remain **moderate significant adverse** during construction.

#### 20.10.4.5.9 Significance of effect: Operation and Maintenance

504. During operation and maintenance at year 0 the effect would be **minor not significant adverse**. The geographic extent of the effect would occur across approximately 0.3km of the route, to the north of Yelland. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.5.10 Further Mitigation

505. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.5.11 Residual Effect

506. At year 15, the residual effect would be **minor not significant adverse** within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.6 Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)

507. The location and baseline panorama are shown in **Figure 20.19**. The sensitivity of road users is considered to be **medium-low**, and the sensitivity of pedestrians **medium**, for the reasons set out below.

##### 20.10.4.6.1 Baseline

508. This view is located on a minor road to the east of Instow Town, at a field gate in close proximity to a PRoW (Fremington Footpath, No. 43). The elevated view looks out across a farmed, settled landscape to the south of the River Taw.

509. The minor road is narrow with low traffic flows, like many of the roads which lie across the lower hill slopes to the south of Instow Town, Yelland, and Fremington. Consequently, these roads are also popular with pedestrian who walk these routes even though there are no footways. The viewpoint is also located close to a PRoW (Fremington footpath, No.43). The PRoW connects the minor road to West Yelland Farm, enclosed by high hedgebanks and vegetation. The viewpoint is representative of road-users and pedestrians.

510. The road is enclosed by high hedgerows; therefore, field gates tend to provide the only opportunities for notable open views. The view looks north of a rural, farmed

landscape, which characterises the lower slopes and hillsides to the south of the B3233 and settlement at Yelland, and Fremington.

511. The immediate foreground is characterised by a large pastoral field. Low hedgerows and linear woodland planting along field margins provide enclosure to the east, while undulating landform encloses the view to the west. Pylons and overhead transmission lines span the hills from the south through to the north.
512. Landform falls away relatively steeply to the low-lying estuary margins to the north. In the mid-ground of the view, settlement extends eastwards across the line of the B3233. From this elevated viewpoint, woodland cover is evident to the south of many of these properties. Further planting encloses the sewage works and solar panels and industrial units on Yelland Quay Road, and the construction works at Yelland Quay on the southern banks of the River Taw. While the overhead pylon lines lead the eye to the existing East Yelland Substation, the substation structures themselves are well-screened by extensive woodland. The varied built forms are situated within the largely agricultural landscape that characterises parts of the estuary margins. The working jetty at Instow Barton Marsh is partially visible beyond intervening landform to the north-west.
513. In the mid to background of the view, the River Taw provides visual separation between the settled landscape to the south of the river, and extensive landscape of grazing marshes and dune systems at Braunton Burrows to the north. These distinctive, coastal landscapes are backed by distant settlement at Braunton and Saunton, seen against the slopes of the high rolling hills to the north. To the north-west there are views out to Bideford Bay, with Lundy Island just visible on the very distant sea horizon to the west.

#### 20.10.4.6.2 Value

514. The value of the view is **medium-low**. This is not an OS marked viewpoint, nor is it located within any local or nationally designated landscape. Distant parts of the wider views include the NDCAONB to the north-west, however this is a wide ranging view and the NDCAONB is not the focus. The view contains a mix of rural and built components and is influenced by settlement and overhead pylons and other modern built influences seen in relatively close proximity which detract from its scenic value.

#### 20.10.4.6.3 Susceptibility

515. This viewpoint is representative of the view experienced by people using the minor road who gain dynamic, fleeting views along a short section of the route, within the

ZTV (**Figure 20.11**), where there is open visibility, which is otherwise screened and filtered by roadside vegetation. This section of the road has a speed limit of 60 mph, albeit the narrow and winding route, and limited visibility, means in reality speeds are lower. Taking this all into account, the susceptibility to change of road users to the Onshore Substation is considered to be **low**.

516. Recreational walkers are likely to be focused on their surroundings where views are available, such as at field gates (for example at the viewpoint location). However, walker's views are transient and for the most part views from this road are not open to the wider landscape owing to the hedgerow roadside vegetation and consequently susceptibility is considered to be **medium**.

#### 20.10.4.6.4 Magnitude of impact: Construction and Decommissioning

517. As shown in the visualisation (**Figure 20.19**), the Onshore Substation Worst Case Scenario maximum parameter occupies a small horizontal extent of the view to the north-west, seen in the mid-ground of the view, which overlooks the settled and developed estuary margin to the south of the River Taw.
518. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor will be visible in combination with the construction of the Onshore Substation. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is also considered in this assessment.
519. Because of the elevated nature of the viewpoint, construction activity would be visible in the mid-ground of the view, at a minimum range of approximately 1.3km, beyond intervening vegetation that surrounds the sewage works / solar farm to the south of Yelland Quay. Construction activity would be visible within the Onshore Substation site and Onshore Export Cable Corridor. They would be uncharacteristic to the baseline composition, and readily apparent within the view. However, at this range would be small scale, within a wide ranging view containing a variety of built forms and movement from vehicles along the local road network. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium**.

#### 20.10.4.6.5 Magnitude of impact: Operation and Maintenance

520. The magnitude of impact is considered to be **medium-low** in year 0 of the operation and maintenance phase.
521. During operation and maintenance, the Onshore Substation would have a more ordered appearance. The large scale of the Onshore Substation Worst Case Scenario maximum parameter compared to existing structures would make it apparent in the midground of the view. However, its low profile and rectangular massing, and industrial character, would not be uncharacteristic in the context of existing built form at Sandbanks Business Park / Yelland Terminal. The siting of the Onshore Substation means that it would appear in the same portion of the view as varied built forms seen to the south of the B3233 which include residential settlement, solar farms, industrial and commercial units, and electricity infrastructure in the form of tall overhead pylon lines and the existing substation at East Yelland.
522. The magnitude of impact following 15 years growth on mitigation planting would be **low**. The photomontage on **Figure 20.19** shows that following 15 years of growth, the intervening mitigation planting will have grown to a sufficient scale to screen the Onshore Substation Worst Case Scenario maximum parameter with the roof top potentially visible above the tree tops. This will notably reduce the influence of the Onshore Substation on road-users and walkers represented by this viewpoint.

#### 20.10.4.6.6 Significance of effect: Construction and Decommissioning

523. During construction and decommissioning the effect on road users would be **moderate-minor not significant adverse**.
524. The effect on pedestrians at this isolated location would be **moderate not significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.6.7 Further Mitigation

525. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.6.8 Residual Effect

526. The residual effect during construction and decommissioning on road users would be **moderate-minor not significant adverse**.

527. The residual effect on pedestrians at this isolated location would be **moderate not significant adverse**.

#### 20.10.4.6.9 Significance of effect: Operation and Maintenance

528. During operation and maintenance at year 0, the effect on road users would be **minor not significant adverse**.

529. At year 0, the effect on pedestrians would be **moderate-minor not significant adverse**.

530. Effects would be isolated to very short sections of the road, mainly at field gates where there is no screening by hedgerow vegetation. Therefore, on other sections of this road there would be very limited, or no visibility and the effect would be not significant. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.6.10 Further Mitigation

531. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.6.11 Residual Effect

532. At year 15, the residual effect on road users would reduce to **minor-negligible not significant adverse** within the extent described above.

533. At year 15, the residual effect on pedestrians would reduce to **minor not significant adverse** within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.7 Viewpoint 7: Northam Burrows Country Park, on SWCP

534. The location and baseline panorama are shown in **Figure 20.20**. The sensitivity of the viewpoint is considered to be **medium-high**, reflecting that the view has medium-high value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

#### 20.10.4.7.1 Baseline

535. This viewpoint is located at a popular parking spot on the eastern side of Northam Burrows, where people come to park to enjoy the view, or walk either within the



undulating dune system of Northam Burrows, or along the SWCP which follows the coastal edge. It is representative of visitors to Northam Burrows and walkers at this location.

536. The fore and mid-ground of the view looks across the inter-tidal saltmarshes, mudflats and beaches that line the estuary, which become inundated by water at high tide. To the east, across the water, the settlement of Appledore wraps around the lower slopes of the headland which divides the rivers Taw and Torridge.
537. In the background of the view, to the south of the River Taw, is settlement at Instow, and Royal Marine buildings at Arromanches Camp, which extend eastwards across the low-lying estuary margins. Scattered hamlets, groups of properties and individual farmsteads are visible across the low slopes and hills that provide a backdrop to the estuary.
538. To the north of Instow Town, the low-lying coastal edge appears enclosed by layers of vegetation which give the impression of a well-wooded landscape from this direction and elevation. Woodland screens parts of the settlement at Yelland and Fremington. The upper parts of one of the buildings at Sandbanks Business Park / Yelland Terminal is just visible above intervening vegetation.
539. Overhead pylon lines extend from the hills to the south to the existing East Yelland Substation, which is well-screened by woodland. The working jetty at Instow Barton Marsh extends out into the River Taw. Fullabrook wind farm is a distinctive feature on the skyline to the north-east in the background of the view.

#### 20.10.4.7.2 Value

540. The view itself is not protected in planning policy, however the viewpoint is located within the NDCAONB (**Figure 20.5**) and parts of the view to the north and west affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. The location of the viewpoint within the NDCAONB and North Devon Heritage Coast, implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape. The viewpoint location provides an opportunity to experience a view inland, which encompasses "*...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", a component of the Special Qualities.



541. The viewpoint allows a direct view inland, in which there is a distinct contrast between the vast expanse of the fore to midground of the estuary landscape and dune systems of Northam Burrows to the north and west, and the complexity of the highly patterned, and settled agricultural landscape, which provides distant interest in views to the east.
542. Varied structures and built form exert influence on the view at medium to long range, across the settled estuary margins and distant background hills. Notwithstanding this influence, there is a high level of visual amenity at this location, which relates primarily to the composition and high scenic quality of the distinctive landscape features within Northam Burrows and the dynamic, open estuary landscape. Overall, value is considered to be **medium-high**.

#### 20.10.4.7.3 Susceptibility

543. This viewpoint is representative of the view experienced by people visiting the estuary edge at Broad Sands. The attention of people at this location is likely to be focussed on their surroundings, including the contrasts and complexities of the inland landscape in relation to the natural landscape of the estuary, and scenic qualities of the NDCAONB coast to the north and west. However, there is visual intrusion from distant settlement around the estuary margins to the east, settlement, industrial development, and existing electricity infrastructure and pylons at East Yelland, which moderates susceptibility to the type of change proposed. Susceptibility is considered to be **medium-high**.

#### 20.10.4.7.4 Magnitude of impact: Construction and Decommissioning

544. As shown in the visualisation (**Figure 20.20**), the Onshore Substation Worst Case Scenario maximum parameter occupies a very small horizontal extent of the view to the east, seen towards the background of the of the view, within the settled and developed estuary margin to the south of the River Taw.
545. From this viewpoint, distant construction activities associated with the Onshore Export Cable Corridor may be visible in combination with the construction of the Onshore Substation, although difficult to perceive in isolation. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is also considered in this assessment.
546. The construction activities associated with the building of the Onshore Substation would be visible from this location. Ground level activity would be screened by

intervening vegetation within the estuary margin landscape. Taller construction components would appear above this vegetation, but would be small-scale and distant features, occupying a small horizontal extent of the view and below the skyline of the hill backdrop. Construction lighting would be evident in winter months when working days would extend into hours of darkness.

547. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium-low**.

#### 20.10.4.7.5 Magnitude of impact: Operation and Maintenance

548. The magnitude of impact is considered to be **low** in year 0 of the operation and maintenance phase, and at year 15 once mitigation planting matures.

549. The operational Onshore Substation would form a small feature in the easterly sector of the view, which is already influenced by development along the distant estuary margins. It is clear from the visualisation that even at year 0 of operation and maintenance the level of visibility from this location would be minimal. The Onshore Substation would occupy a very small HFoV, seen at a minimum range of approximately 3.4km. Existing woodland and scrub vegetation around the estuary edge and East Yelland substation provides some intervening screening and consequently only the upper parts of the Onshore Substation would be visible. The images shown on the visualisation were captured when trees are not in full leaf and the screening effect in summer months would therefore be greater.

550. The photomontage on **Figure 20.20** shows that following 15 years of growth, the intervening mitigation planting will have grown to a sufficient scale to further screen the Onshore Substation Worst Case Scenario maximum parameter with only the upper parts potentially visible above the tree tops.

#### 20.10.4.7.6 Significance of effect: Construction and Decommissioning

551. During construction and decommissioning the effect would be **moderate not significant adverse**. The geographic extent of this effect would occur across approximately 0.7km of the SWCP around the east-facing bay at Skern. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.10.4.7.7 Further Mitigation

552. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.7.8 Residual Effect

553. The residual effect on users of the route and visitors to Northam Burrows would remain **moderate not significant adverse** during construction.

#### 20.10.4.7.9 Significance of effect: Operation and Maintenance

554. During operation and maintenance, at year 0, the effect would be **moderate-minor not significant adverse**. The geographic extent of this effect would occur across approximately 0.7km of the SWCP around the east-facing bay at Skern. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.7.10 Further Mitigation

555. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.7.11 Residual Effect

556. At year 15, the residual effect would be **moderate-minor not significant adverse** on visitors to Northam Burrows at this location and on the SWCP within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.8 Viewpoint 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP

557. The location and baseline panorama are shown in **Figure 20.21**. The sensitivity of the viewpoint is considered to be **medium-high**, reflecting that the view has medium-high value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.8.1 Baseline

558. This viewpoint is located at Grey Sand Hill, a small promontory to the north-east of Northam Burrows Country Park, situated at the mouth of the River Taw-Torridge

estuary. The viewpoint is representative of visitors to Northam Burrows and users of the SWCP which follows the water's edge at this location.

559. The fore and mid-ground of the view looks across the inter-tidal mudflats and beaches within the estuary, which become inundated by water at high tide.
560. To the south-east, the settlement of Appledore wraps around the lower slopes of the headland which divides the rivers Taw and Torridge.
561. In the background of the view, to the south of the River Taw, settlement at Instow and Royal Marine buildings at Arromanches Camp are visible across the low-lying and level estuary margins. Scattered hamlets, groups of properties and individual farmsteads encroach on the low slopes and hills that provide a backdrop to the estuary. Pylons and small individual wind turbines break the skyline to the south-east. Overhead pylon lines extend from the hills to the south to the existing East Yelland Substation, which is well-screened by woodland. The working jetty at Instow Barton Marsh extends out into the River Taw.
562. The coastal margin to the south of the River Taw appears well-wooded owing to layers of intervening vegetation across the level landscape, which offer screening in views from this direction and elevation.
563. In contrast to the view at Northam Burrows (Viewpoint 7, **Figure 20.20**) slightly further to the south, this viewpoint affords wide, sweeping views to Braunton Burrows and Saunton Sands to the north of the estuary mouth, extending out to Bideford Bay to the north-west, and taking in the distant coastal cliffs further to the north. Braunton Burrows provides enclosure to views north, leaving only the upper slopes and open skyline of the distant undulating hills at Saunton Down to the north visible above the intervening landform. In the sector of the view there are few built features in the view, which is primarily defined by natural processes and elements.

#### 20.10.4.8.2 Value

564. The view itself is not protected in planning policy, however the viewpoint is located within the NDCAONB (**Figure 20.5**) and the view to the north and west affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. The location of the viewpoint within the NDCAONB and North Devon Heritage Coast, implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape. The viewpoint location provides an opportunity to experience a view

inland, which encompasses "...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.", a component of the Special Qualities.

565. The viewpoint allows a direct view inland to the east, in which there is a distinct contrast between the vast expanse of the fore to midground of the estuary landscape and dune systems of Braunton Burrows and Northam Burrows to the north and west, and the complexity of the highly patterned, and settled agricultural landscape, which provides distant interest in views to the east.
566. Notwithstanding the distant influence of the settled estuary margins, there is a high level of visual amenity at this location, which relates primarily to the composition and high scenic quality of the distinctive landscape features within Braunton Burrows and Northam Burrows and the dynamic, open estuary landscape. Overall, value is considered to be **medium-high**.

#### 20.10.4.8.3 Susceptibility

567. This viewpoint is representative of the view experienced by people visiting Northam Burrows and walkers who may take advantage of the open access across the country park or following the SWCP along the water's edge. The attention of people at this location is likely to be focussed on their surroundings, including the contrasts and complexities of the inland landscape in relation to the natural landscape of the estuary, and scenic qualities of the NDCAONB coast to the north and west. However, there is influence from distant settlement around the estuary margins to the east, and varied structures within industrial development, and existing electricity infrastructure and pylons at East Yelland, which moderates susceptibility to the type of change proposed. Susceptibility is considered to be **medium-high**.

#### 20.10.4.8.4 Magnitude of impact: Construction and Decommissioning

568. As shown in the visualisation (**Figure 20.21**), the Onshore Substation Worst Case Scenario maximum parameter occupies a very small HFoV of the view to the east, seen towards the background of the of the view, within the settled and developed estuary margin to the south of the River Taw.
569. From this viewpoint, distant construction activities associated with the Onshore Export Cable Corridor may be visible in combination with the construction of the Onshore Substation, although difficult to perceive in isolation. The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section**

**20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is also considered in this assessment.

570. The construction activities associated with the building of the onshore substation would be visible from this location. Ground level activity would be screened by intervening vegetation within the estuary margin landscape. Taller construction components would appear above this vegetation, but would be small-scale and distant features, occupying a small horizontal extent of the view below the skyline formed by the backdrop of hills. Construction lighting would be evident in winter months when working days would extend into hours of darkness.
571. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium-low**.

#### 20.10.4.8.5 Magnitude of impact: Operation and Maintenance

572. The magnitude of impact is considered to be **low** in year 0 of the operation and maintenance phase, and at year 15 once mitigation planting matures.
573. The operational Onshore Substation Worst Case Scenario maximum parameter forms a small feature in the easterly sector of the view, which is already influenced by development along the distant estuary margins. It is clear from the visualisation that even at year 0 of operation and maintenance the level of visibility from this location would be minimal. The Onshore Substation would occupy a very small HFoV, seen at a minimum range of approximately 2.9km. Existing woodland and scrub vegetation around the estuary edge and East Yelland substation, including the substation structures themselves, provides some intervening screening and consequently only the upper parts of the Onshore Substation would be visible. The images shown on the visualisation were captured when trees are not in full leaf and the screening effect in summer months would therefore be greater.
574. The photomontage on **Figure 20.21** shows that following 15 years of growth, the intervening mitigation planting will have grown to a sufficient scale to further screen the Onshore Substation Worst Case Scenario maximum parameter with only the upper parts potentially visible above the tree tops.

#### 20.10.4.8.6 Significance of effect: Construction and Decommissioning

575. During construction and decommissioning the effect would be **moderate not significant adverse**. The geographic extent of this effect would occur across approximately 0.7km of the SWCP between Greysands Beach and Grey Sand Hill.

Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.10.4.8.7 Further Mitigation

576. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.8.8 Residual Effect

577. The residual effect on users of the route would remain **moderate not significant adverse** during construction within the extent described above.

#### 20.10.4.8.9 Significance of effect: Operation and Maintenance

578. During operation and maintenance, at year 0 and year 15, the effect would reduce to **moderate-minor not significant adverse**. The geographic extent of this effect would occur across approximately 0.7km of the SWCP between Greysands Beach and Grey Sand Hill. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.8.10 Further Mitigation

579. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.8.11 Residual Effect

580. At year 15, the residual effect would be **moderate-minor not significant adverse** on visitors to Northam Burrows at this location and on users of the SWCP within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.9 Viewpoint 9: Broad Sands Car Park, on SWCP

581. The location and baseline panorama are shown in **Figure 20.22**. The sensitivity of the viewpoint is considered to be **medium-high**, reflecting that the view has high value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.



#### 20.10.4.9.1 Baseline

582. This viewpoint is located at Broad Sands Car Park, to the north of the River Taw. The viewpoint is representative of visitors to this popular location, which affords access to the estuary, sandy beaches at Broad Sands, and Crow Point peninsula. This viewpoint is also representative of users of the SWCP (also part of the Tarka Trail), which passes through the car park as it passes between Braunton and Braunton Burrows.
583. The view looks south, across the broad sandy estuary of the River Taw. The fore to mid-ground of the view encompasses the characteristic, sweeping estuary with extensive mudflats and sandbanks, which become inundated with water from the sea at high tide. To the south of the estuary, the landform rises slightly to the rural, farmed estuary margins, which owing to their low-lying landform are screened from view by intervening topography. Within the estuary margin to the south, blocks of woodland and low scrub vegetation which enclose the existing East Yelland Substation, Yelland Sewage Works, and Yelland Quay, and layering effect of more distant small blocks of vegetation within the low- coastal plain and estuary margin give the impression of a well-wooded landscape. Farmed hillsides rise up from the estuary, defined by a strong pattern of hedgerow field boundaries, interspersed by small areas of woodland.
584. To the north-west of this viewpoint are the complex, hummocky sand dunes within Braunton Burrows, distinctive landscape features overlain by grassland and scrub vegetation, which form the near skyline in this portion of the view.
585. Directly north of this location is the car park at Broad Sands, a large flat area of gravel hardstanding situated just behind the embankment on the estuary margins. The low-lying Braunton Marshes pastoral landscape are visible to the north of the car park, however scrub woodland immediately adjoining the car park, and more distant vegetation across the Marshes, partially screens views to this part of the landscape to the north. The low undulating farmed hills of Saunton Down provide the distant backdrop to the views north.

#### 20.10.4.9.2 Value

586. The view itself is not protected in planning policy, the viewpoint is located within the NDCAONB (**Figure 20.22**) and the view to the south-west and west affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy



protection. The location of the viewpoint within the NDCAONB and North Devon Heritage Coast, implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape. The viewpoint location also provides an opportunity to experience a view inland, which encompasses "*...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", a component of the Special Qualities.

587. The viewpoint takes in the contrast between the vast expanse of the fore to midground of the dynamic estuary landscape, the distinctive landscape of Braunton Burrows to the west, and the complexity of the highly patterned, and settled landscape, which provides distant influence in the background of the view to the south.
588. Despite the distant influence of varied built form across the settled estuary margins, there is a high level of visual amenity at this location, which relates primarily to the dynamic, open estuary landscape to the south, and distinctive sand dune system at Braunton Burrows to the west. Overall, value is considered to be **medium-high**.

#### 20.10.4.9.3 Susceptibility

589. This viewpoint is representative of the view experienced by people visiting Broad Sand car park and walkers on the SWCP who may take advantage of the open access along the water's edge. The attention of people at this location is likely to be focussed on their surroundings, including the contrasts and complexities of the inland landscape in relation to the natural landscape and dynamic processes of the estuary, and scenic qualities of the NDCAONB coast to the west. However, there is visual intrusion around the estuary margins from settlement, industrial development, and existing electricity infrastructure and pylons at East Yelland, which moderates susceptibility to the type of change proposed. Susceptibility is considered to be **medium-high**.

#### 20.10.4.9.4 Magnitude of impact: Construction and Decommissioning

590. As shown in the visualisation (**Figure 20.22**), the Onshore Substation Worst Case Scenario maximum parameter occupies a very small horizontal extent of the view, seen in background amid the developed estuary margin to the south of the River Taw.
591. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor would be visible in combination with the construction of the Onshore

Substation in views to the south of the River Taw. Construction activity relating to the Onshore Export Cable Corridor would also take place in close proximity to the north of this location, as described for Illustrative Viewpoint E (**Appendix 20.C**). The Worst Case Scenario and impacts of the Onshore Export Cable Corridor are described in **Section 20.4.10** and **20.9.1** and are not repeated here. The resulting intensification of construction effects is considered in this assessment.

592. The construction activities associated with the building of the Onshore Substation would be partially visible from this location. Ground level activity would be screened by intervening vegetation and woodland at Yelland Quay and the existing East Yelland substation to the south of the River Taw. Taller construction components would appear above this vegetation, but would be small-scale and distant features, occupying a small horizontal extent of the view. Construction lighting would be evident in winter months when working days would extend into hours of darkness.
593. Overall, the magnitude of impact during construction and decommissioning is considered to be medium-high (discussed in **Section 20.10.3.5**), primarily from activities associated with the Onshore Export Cable Corridor in close proximity to the north. Construction activities relating to the Onshore Substation to the south would result in a **medium-low** magnitude of impact.

#### 20.10.4.9.5 Magnitude of impact: Operation and Maintenance

594. The magnitude of impact is considered to be **low** in year 0 and at year 15. The Onshore Substation Worst Case Scenario maximum parameters form a small feature in the southern sector of the view, which is already influenced by electricity infrastructure and varied built form along the estuary margin to the south of the River Taw. It is clear from the visualisation (**Figure 20.22**) that even at year 0 of operation and maintenance the level of visibility from this location would be minimal. The Onshore Substation would occupy a small HFoV, seen at a minimum range of 1.47km. Existing woodland and scrub vegetation around Yelland Quay and the East Yelland substation provide intervening screening of views to the Onshore Substation Worst Case Scenario maximum parameter. The images shown on the visualisation were captured when trees are not in full leaf and the screening effect in summer months would therefore be greater.
595. Whilst the proposed mitigation woodland is not entirely visible from this location the existing woodland and vegetation in the view continue to screen and filter the Onshore Substation Worst Case Scenario maximum parameter in this view during the operation and maintenance phase.

#### 20.10.4.9.6 Significance of effect: Construction and Decommissioning

596. During construction and decommissioning the effect would be **major significant adverse** as a result of installation of the Onshore Export Cable Corridor at close range to the north (see **Section 20.10.3.5**). Effects relating to the construction of the Onshore Substation to the south would be **moderate not significant adverse**. For users of the SWCP, the geographic extent of this effect would occur on a section between Broad Sands car park and approximately 0.7km to the east of Crow Beach House. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.10.4.9.7 Further Mitigation

597. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.9.8 Residual Effect

598. The residual effect on users of the route as a result of the construction of the Onshore Substation would remain **moderate not significant adverse** during construction within the extent described above. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.10.4.9.9 Significance of effect: Operation and Maintenance

599. During operation and maintenance, at year 0 the effect would be **moderate-minor not significant adverse**. For users of the SWCP, the geographic extent of this effect would occur on a section between Broad Sands car park and approximately 0.7km to the east of Crow Beach House. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.9.10 Further Mitigation

600. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.9.11 Residual Effect

601. At year 15, the residual effect would be **moderate-minor not significant adverse** on users of the SWCP within the extent described above. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.10 Viewpoint 10: Crow Point

602. The location and baseline panorama are shown in **Figure 20.23**. The sensitivity of the viewpoint is considered to be **medium-high**, reflecting that the view has high value and the receptors experiencing the view have a medium-high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.10.1 Baseline

603. This viewpoint is located at Crow Point, a sandy peninsula to the south of Braunton Burrows. The location provides a unique vista from near the middle of the estuary mouth from which it is possible to see along parts of the River Taw and River Torridge. There is a small, automated navigation light at Crow Point which acts as a natural destination for people to walk out to at low tide. This viewpoint is representative of visitors to the beach and open access land along the estuary.

604. The fore and mid-ground of the view looks across the wide, open inter-tidal saltmarshes, mudflats and beaches that line the estuary, which become inundated by water at high tide. To the south-east, across the water, the working jetty at Instow Barton Marsh extends out into the River Taw, with the Yelland Quay jetty visible further to the east.

605. To the south-east, flood embankments and dunes screen the low-lying agricultural margin to the south of the estuary, within which woodland and scrub vegetation combine to give the impression of a well vegetated landscape. This combination of woodland and scrub vegetation screens much of the existing East Yelland Substation, which is situated within the estuary margin to the south of the river, although its location is identified by the lines of overhead pylons which span across the estuary margins and low hills to the south of the river. Intervening vegetation screens much of the settlement at Yelland and Fremington to the south-east.

606. To the south and south west, the view opens out and the enclosure by vegetation reduces, offering a wide-ranging vista with settlement and varied built forms at Instow Town, Instow, and Appledore, seen across the estuary and its margins, and

amid the rising landform of the low, farmed hills which provide the backdrop to the view.

607. The view to the north and north-west is restricted by the high sand dunes at Crow Point and Braunton Burrows beyond. In the background of the view to the east is the farmed and settled landscape which stretches east from Braunton. The RAF Base at Chivenor and Fullabrook wind farm are notable built features in this portion of the view, seen on the estuary margins and distant enclosing hillsides, respectively.

#### 20.10.4.10.2 Value

608. The view itself is not protected in planning policy, however it is located on the fringes of the NDCAONB (**Figure 20.23**). The view to the north and north-west affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. The location of the viewpoint within the NDCAONB and North Devon Heritage Coast, implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape. The viewpoint location provides an opportunity to experience a view inland to the south and east, which encompasses "*...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", a component of the Special Qualities.
609. The unique nature of the viewpoint takes in the vast expanse of the estuary landscape, the distinctive landscape of Braunton Burrows to the north, and the complexity of the highly patterned, and settled landscape, which provides interest and influence in view to the south and east.
610. Notwithstanding the influence of varied built form across the settled estuary margins, there is a high level of visual amenity at this location, which relates primarily to the composition and high scenic quality of the distinctive sand dune features within Northam Burrows and the dynamic, open estuary landscape. Overall, value is considered to be **medium-high**.

#### 20.10.4.10.3 Susceptibility

611. This viewpoint is representative of the view experienced by walkers who may take advantage of access across the intertidal flats and beaches during low tide. The attention of people at this location is likely to be focussed on their surroundings,

including the contrasts and complexities of the inland landscape in relation to the natural landscape and dynamic processes of the estuary, and scenic qualities of the NDCAONB coast to the north and north-west. However, there is visual intrusion around the estuary margins to the south and south-east from settlement, industrial development, and existing electricity infrastructure and pylons at East Yelland, which moderates susceptibility to the type of change proposed. Susceptibility is considered to be **medium-high**.

#### 20.10.4.10.4 Magnitude of impact: Construction and Decommissioning

612. As shown in the visualisation (**Figure 20.23**), the Onshore Substation Worst Case Scenario maximum parameter occupies a very small horizontal extent of the south-east sector of the view, seen in background amid the developed estuary margin to the south of the River Taw.
613. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor would be visible in combination with the construction of the Onshore Substation in views to the south of the River Taw. The resulting intensification of construction effects is considered in this assessment.
614. The construction activities associated with the building of the Onshore Substation would be partially visible from this location. Ground level activity would be screened by intervening vegetation and woodland at Yelland Quay and the existing East Yelland substation to the south of the River Taw. Taller construction components would appear above this vegetation, which although uncharacteristic to the baseline context, would be small-scale and distant features, occupying a small horizontal extent of the view and located largely below the skyline formed by the hill backdrop. Construction lighting would be evident in winter months when working days would extend into hours of darkness.
615. Overall, the magnitude of impact during construction and decommissioning is considered to be **low**.

#### 20.10.4.10.5 Magnitude of impact: Operation and Maintenance

616. The magnitude of impact is considered to be **low** in year 0 and at year 15. The Onshore Substation Worst Case Scenario maximum parameters are seen in the south-east sector of the view, which is already influenced by electricity infrastructure and would not be uncharacteristic in the context of other large buildings seen to the south at Instow. The Onshore Substation Worst Case Scenario maximum parameters occupy a very small HFoV, seen at a minimum range of 1.5km. The

upper parts of the Onshore Substation Worst Case Scenario maximum parameters are just visible above intervening vegetation in the landscape, Existing woodland, and scrub vegetation around the estuary edge and East Yelland substation, including the substation structures themselves, provides some intervening screening and consequently only the upper parts of the Onshore Substation Worst Case Scenario maximum parameters would be visible. Within the level landscape, the low, horizontal massing of the buildings would slightly reduce their prominence such that the Onshore Substation Worst Case Scenario maximum parameters have only a slight apparent influence within the view. The images shown on the visualisation were captured when trees are not in full leaf and the screening effect in summer months would therefore be greater.

617. Whilst the proposed mitigation woodland is not entirely visible from this location the existing woodland and vegetation in the view will continue to screen and filter the Onshore Substation Worst Case Scenario maximum parameters in this view during the operation and maintenance phase.

#### 20.10.4.10.6 Significance of effect: Construction and Decommissioning

618. During construction and decommissioning of the Onshore Substation the effect would be **moderate-minor not significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.10.7 Further Mitigation

619. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.10.8 Residual Effect

620. The residual effect would be **moderate-minor not significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.10.9 Significance of effect: Operation and Maintenance

621. During operation and maintenance at year 0 the effect would be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.



#### 20.10.4.10.10 Further Mitigation

622. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.10.11 Residual Effect

623. At year 15, the residual effect would be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.11 Viewpoint 11: Flagpole Dune, Braunton Burrows

624. The location and baseline panorama are shown in **Figure 20.24**. The sensitivity of the viewpoint is considered to be **high**, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to the proposed change, for the reasons set out below.

##### 20.10.4.11.1 Baseline

625. This viewpoint is located on Flagpole Dune, a prominent sand dune within Braunton Burrows, to the west of the public car park at Sandy Lane. The viewpoint is representative of visitors to the extensive dune system. Walkers on the Tarka Trail / SWCP pass to the east of Braunton Burrows and do not gain elevated views such as this.

626. To the south, this wide-ranging, panoramic view looks across the extensive hummocky sand dune system within Braunton Burrows, interspersed with patches of low scrub vegetation. The River Taw and adjacent inter-tidal areas are obscured by intervening landform. To the south of the River Taw, the landform rises to gently rolling to undulating hills, overlain by a pastoral agricultural landscape punctuated with pockets of woodland. Visible on the distant lower-lying estuary are parts of Yelland Quay Jetty, the upper portions of the existing East Yelland Substation, pylon lines, and settlement at Instow Town, Instow, Yelland, and Fremington. Wind turbines and overhead pylon lines break the distant skyline.

627. To the east, beyond the complex localised topography, the view looks across the extensive low-lying agricultural landscape of the Braunton Marshes. Large buildings at RAF Chivenor Braunton fringe the agricultural land to the east. The extensive settlement at Braunton wraps the lower hill slopes which rise out of the coastal marshes to the east and north-east.



628. To the west, there are wide-ranging views out to Bideford Bay, framed by hills to the north and south, with Lundy Island a notable focal point on the distant sea horizon.

#### 20.10.4.11.2 Value

629. This not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors; however, it is located at a place of interest within Braunton Burrows as it is one of the highest points within the extensive sand dune system which offers 360-degree panoramic views.

630. The view itself is not protected in planning policy, however it is located within the NDCAONB (**Figure 20.5**) and the view south affords the opportunity to appreciate the Special Qualities 'Distinctive Coastal Scenery' and 'A Landscape and Seascape of High Visual Quality', which are afforded planning policy protection. The location of the viewpoint within the NDCAONB and North Devon Heritage Coast, implies a higher value to the visible landscape and high scenic qualities relating to the content and composition of the visible seascape and landscape. The elevated location within the dune system provides an opportunity to experience a view inland, which encompasses "*...the countryside, much of it undesignated, forms an important backdrop to the coast and is a defining element to the visual quality of the AONB providing a variety of open views.*", a component of the Special Qualities.

631. The view looks across the vast surrounding dune systems of Northam Burrows to the south, and coastal landscape and seascape to the west, but also takes in the complexity of the highly patterned and settled landscapes which provide interest in the background to the north and east, through to the south.

632. There is a high level of visual amenity at this location, which relates primarily to the composition and high scenic quality of the distinctive landscape features within Northam Burrows and expansive views to the coast and Bideford Bay to the west. Overall, value is considered to be **high**.

#### 20.10.4.11.3 Susceptibility

633. This viewpoint is representative of the view experienced by people visiting Braunton Burrows who make the short detour to visit this well-known and publicised sand dune. The attention of people at this location is likely to be on the surrounding landscape. The undesignated landscape inland to the south provides a foil to the natural and relatively undeveloped landscape of Braunton Burrows and Bideford Bay. The lack of visible development out to sea differs from views inland, where

there is visual intrusion from varied forms, including electricity infrastructure, settlement, and industry, which moderate susceptibility to the type of change proposed. Overall, susceptibility is considered to be **medium-high**.

#### 20.10.4.11.4 Magnitude of impact: Construction and Decommissioning

634. As shown in the visualisation (**Figure 20.24**), the Onshore Substation Worst Case Scenario occupies a very small horizontal extent of the view to the south, seen in the background of the view, to the south of the River Taw.
635. From this viewpoint, construction activities associated with the Onshore Export Cable Corridor may be visible in combination with the construction of the Onshore Substation, as the Onshore Export Cable Corridor route passes to the east of Braunton Burrows and southwards towards the River Taw. The resulting intensification of construction effects is considered in this assessment.
636. The construction activities associated with the building of the Onshore Substation may be visible from this location but would be difficult to discern given the substantial separation distance. Ground level activity would be screened by intervening vegetation and woodland at Yelland Quay and the existing East Yelland substation to the south of the River Taw. Taller construction components would appear above this vegetation, but would be small-scale and distant features, occupying a very small horizontal extent of the view. Given the substantial separation distance, and context of varied settlement and built form to the south, it is unlikely that construction lighting at the Onshore Substation would be perceptible in isolation.
637. Overall, the magnitude of impact during construction and decommissioning is considered to be **low**.

#### 20.10.4.11.5 Magnitude of impact: Operation and Maintenance

638. The magnitude of impact is considered to be **low** in year 0 of the operation and maintenance phase and would remain so at year 15 and beyond.
639. It is clear from the visualisation that even at year 0 of operation and maintenance the Onshore Substation Worst Case Scenario maximum parameter forms a barely discernible feature in the southern sector of the view, amid a background which is already influenced by varied settlement and built form along the distant estuary margins. The Onshore Substation would occupy a very small HFoV, seen at a minimum range of approximately 3.9km. Existing woodland and scrub vegetation

around the estuary edge and East Yelland substation provides some intervening screening and filtering of views to the Onshore Substation. The images shown on the visualisation were captured when trees are not in full leaf and the screening effect in summer months would therefore be greater.

640. Whilst the proposed mitigation woodland is not entirely visible from this location the existing woodland and vegetation in the view will continue to screen and filter the Onshore Substation in this view during the operation and maintenance phase.

#### 20.10.4.11.6 Significance of effect: Construction and Decommissioning

641. During construction and decommissioning the effect would be **moderate-minor not significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.10.4.11.7 Further Mitigation

642. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.11.8 Residual Effect

643. The residual effect on users of the route would remain **moderate-minor not significant adverse** during construction within the extent described above.

#### 20.10.4.11.9 Significance of effect: Operation and Maintenance

644. During operation and maintenance at year 0 the effect would, at most, be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.10.4.11.10 Further Mitigation

645. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.10.4.11.11 Residual Effect

646. At year 15, the residual effect would be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

## 20.11 Potential Cumulative Effects Assessment

647. The approach to cumulative effects assessment (CEA) is set out in **Chapter 6: EIA Methodology**. Only projects which are reasonably well described and sufficiently advanced to provide information on which to base a meaningful and robust assessment have been included in the CEA. Projects which are sufficiently implemented during the site characterisation for the Project have been considered as part of the baseline for the EIA. Where possible, WCOWL has sought to agree with stakeholders the use of as-built project parameter information (if available) as opposed to consented parameters to reduce over-precaution in the cumulative assessment. The scope of the CEA was therefore to be established on a topic-by-topic basis with the relevant consultees (see **Table 20.11**).
648. The cumulative impact assessment for onshore landscape and visual amenity was undertaken in two stages. The first stage was to consider the potential for the impacts assessed as part of the Project to lead to cumulative impacts in conjunction with other projects. The first stage of the assessment is detailed in **Table 20.18**.

*Table 20.18 Potential cumulative impacts considered for Onshore Landscape and Visual Amenity*

Impact	Potential for cumulative impact	Rationale
<b>Physical landscape</b>	There is the potential for the construction of the Onshore Infrastructure to occur within a similar time period as the identified East Yelland Quay cumulative scheme.	Some disruption to physical landscape elements would occur cumulatively as a result of the addition of the Onshore Infrastructure and East Yelland Quay. The East Yelland Quay development would result in physical changes at the level of the site, which is noted to be degraded and in poor condition, to a new settlement, flood defences, and green infrastructure landscape framework. The detailed assessment of effects on physical landscape elements in <b>Section 20.9</b> supports the conclusion that the sensitive siting and routing of the Onshore Export Cable Corridor has sought to minimise impacts to valued landscape features e.g., hedgerows and trees, and that losses of these features, and reinstatement of agricultural land would be relatively easy to achieve.

Impact	Potential for cumulative impact	Rationale
		<p>The construction and operation of the Onshore Substation would result in not significant adverse effects to agricultural / brownfield land, and hedgerows at the site level; however, that these losses would be localised within a smaller extent than East Yelland Quay and can, with the exception of agricultural land, be replaced within the Onshore Substation site. No potential for significant cumulative effects. This receptor is not included in the CEA.</p>
<b>LCT 4A - Estuaries</b>	<p>The East Yelland Quay cumulative scheme would be located within this LCT, in close proximity to the Onshore Substation and Onshore Export Cable Corridor.</p>	<p>There is potential for significant indirect cumulative effects on the character of this LCT due to the addition of the Onshore Infrastructure to the construction and operation of the East Yelland Quay cumulative scheme. Receptor included in the CEA.</p>
<b>LCT 3A – Upper Farmed and Wooded Slopes</b>	<p>The East Yelland Quay cumulative scheme, the Onshore Substation, and Onshore Export Cable Corridor are located in close proximity to the boundary of this LCT.</p>	<p>There is potential for significant indirect cumulative effects on the character of this LCT due to the addition of the Onshore Infrastructure to the construction and operation of the East Yelland Quay cumulative scheme. Receptor included in the CEA.</p>
<b>NDCAONB</b>	<p>The East Yelland Quay cumulative scheme and Onshore Substation would not be located within the NDCAONB. Parts of the Onshore Export Cable Corridor would be located within the NDCAONB.</p>	<p>The East Yelland Quay cumulative scheme is not located within the NDCAONB and would exert a limited influence on the Special Qualities and setting of this designated landscape. The detailed assessment of effects on the NDCAONB in <b>Section 20.9</b> supports the judgement that the Onshore Infrastructure would also exert limited influence on the Special Qualities of the NDCAONB and its setting. The addition of the Onshore Infrastructure to the East Yelland Quay cumulative scheme would not have the potential to result in significant</p>

Impact	Potential for cumulative impact	Rationale
		cumulative effects and this receptor is not included in the CEA.
<b>Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh</b>	There is the potential for visibility of the East Yelland Quay cumulative scheme to the north-east. The construction of the Onshore Export Cable Corridor, and construction and operation of the Onshore Substation would be visible to the east.	Potential for significant cumulative effects. This receptor is included in the CEA.
<b>Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay</b>	There is the potential for visibility of the East Yelland Quay cumulative scheme at close range to the north and south. The construction and operation of the Onshore Substation would be visible to the west.	Potential for significant cumulative effects. This receptor is included in the CEA.
<b>Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland</b>	There is the potential for visibility of the East Yelland Quay cumulative scheme at close range to west. The construction and operation of the Onshore Substation would also be visible to the west.	Potential for significant cumulative effects. This receptor is included in the CEA.
<b>Viewpoint 4: B3233, east of Instow</b>	There is the potential for visibility of the East Yelland Quay cumulative scheme to the north-east. The construction of the Onshore Export Cable Corridor, and construction and operation of the Onshore Substation would be visible to the east.	Potential for significant cumulative effects. This receptor is included in the CEA.
<b>Viewpoint 5: PRow (Instow Footpath,</b>	Potential visibility of the East Yelland Quay	Given the limited nature of the potential cumulative interaction, it is

Impact	Potential for cumulative impact	Rationale
<b>No. 16), north of properties on B3233</b>	<p>cumulative scheme to the north-east would be largely screened by intervening woodland around the existing East Yelland substation and Tarka Trail / NCN3. The construction of the Onshore Export Cable Corridor would be visible to the north, and construction and operation of the Onshore Substation would be visible, albeit partially screened by intervening vegetation, to the north-east.</p>	<p>considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Infrastructure and this receptor is not included in the CEA.</p>
<b>Viewpoint 6: Minor road, east of Instow Town, near PRow (Fremington Footpath, No. 43)</b>	<p>There is the potential for visibility of the East Yelland Quay cumulative scheme in the midground to the north-west. The construction of the Onshore Export Cable Corridor, and construction and operation of the Onshore Substation would be visible at similar range to the north-west.</p>	<p>Potential for significant cumulative effects. This receptor is included in the CEA.</p>
<b>Viewpoint 7: Northam Burrows Country Park, on SWCP</b>	<p>Potential for distant visibility of the East Yelland Quay cumulative scheme to the east. The construction of the Onshore Export Cable Corridor, and construction and operation of the Onshore Substation would also be visible to the east, albeit partially screened by intervening vegetation.</p>	<p>The detailed assessment in <b>Section 20.10</b> demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Infrastructure. Potential visibility of the East Yelland Quay cumulative scheme would be limited given the distances involved. Given the limited nature of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore</p>



Impact	Potential for cumulative impact	Rationale
		Infrastructure and this receptor is not included in the CEA.
<b>Viewpoint 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP</b>	Potential for distant visibility of the East Yelland Quay cumulative scheme to the east. The construction of the Onshore Export Cable Corridor, and construction and operation of the Onshore Substation would also be visible to the east, albeit partially screened by intervening vegetation.	The detailed assessment in <b>Section 20.10</b> demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Infrastructure. Potential visibility of the East Yelland Quay cumulative scheme would be limited given the distances involved. Given the limited nature of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Infrastructure and this receptor is not included in the CEA.
<b>Viewpoint 9: Broad Sands Car Park, on SWCP</b>	Potential for distant visibility of the East Yelland Quay cumulative scheme at midrange to the south of the River Taw. The construction of the Onshore Export Cable Corridor would be visible to the south-west at Instow Barton Marsh, albeit partially screened, but would be visible at close range to the north. Construction and operation of the Onshore Substation would also be visible to the south albeit partially screened by intervening vegetation.	The detailed assessment in <b>Section 20.10</b> demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Substation. There would be some cumulative interaction between the construction of the Onshore Export Cable Corridor and identified cumulative schemes. This receptor is included in the CEA.
<b>Viewpoint 10: Crow Point</b>	Potential for distant visibility of the East Yelland Quay cumulative scheme at midrange to the south of the River Taw. The construction of	The detailed assessment in <b>Section 20.10</b> demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Infrastructure. Given the limited nature



Impact	Potential for cumulative impact	Rationale
	<p>the Onshore Export Cable Corridor would be visible to the south-east at Instow Barton Marsh, albeit partially screened by landform along the estuary edge.</p> <p>Construction of the Onshore Export Cable Corridor to the north of the River Taw is unlikely to be visible from this low-lying location.</p> <p>Construction and operation of the Onshore Substation would also be visible to the south albeit partially screened by intervening landform and vegetation.</p>	<p>of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Infrastructure and this receptor is not included in the CEA.</p>
<p><b>Viewpoint 11: Flagpole Dune, Braunton Burrows</b></p>	<p>Potential for very distant visibility of the East Yelland Quay cumulative scheme to the south of the River Taw. The construction of the Onshore Export Cable Corridor would be visible to the west at Braunton Marshes and more distant in views to the south-west. Construction and operation of the Onshore Substation would also be very distant in views to the south albeit partially screened by intervening vegetation.</p>	<p>The detailed assessment in <b>Section 20.10</b> demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Infrastructure. Given the limited nature of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Infrastructure and this receptor is not included in the CEA.</p>

649. The second stage of the CEA is to evaluate the projects considered for the CEA to determine whether a cumulative impact is likely to arise. The list of considered projects (identified in **Chapter 6: EIA Methodology Section 6.6.11**) and their anticipated potential for cumulative impacts are summarised in **Table 20.19**.

*Table 20.19 Projects considered in the cumulative impact assessment on Onshore Landscape and Visual Amenity*

<b>Project</b>	<b>Status</b>	<b>Distance from Onshore Infrastructure (km)</b>	<b>Included in the CIA?</b>	<b>Rationale</b>
<b>White Cross Offshore Project</b>	Consent application submitted	0km	Yes	Overlap in spatial extent and timing of works.
<b>East Yelland Quay mixed-use residential development</b>	Application consented at appeal. Currently under-construction	0km	Yes	Assessed in detail. Included in CEA due to the proximity to the Onshore Substation and parts of the Onshore Export Cable Corridor, and potential overlap in timing of construction programme; the construction of the East Yelland Quay cumulative scheme is understood to be undertaken in 10 phases with an approximate 13 year build programme, resulting in potential for cumulative impacts during the construction and operational phase of the Onshore Infrastructure.

650. It is noted that the first project listed is the Section 36 consent application for the offshore components of the White Cross OWF which are separate components to those considered in the onshore Town and Country Planning Application for which this ES is prepared. The specific combined project components are assessed cumulatively first and then cumulatively with all other projects.

### 20.11.1 Cumulative Effects – White Cross Offshore Project

651. **Chapter 19: Offshore Seascape Landscape and Visual Amenity** (SLVIA) of the Offshore Project ES presents an assessment of effects on offshore seascape, landscape, and visual amenity (SLVIA). The assessment has been conducted within a 60km study area (for the purposes of the assessment, this comprised an offset from the maximum extent of the Windfarm Site).
652. The Offshore Export Cables will be constructed along the seabed and would therefore not be visible during operation. During the construction and decommissioning of the Offshore Export Cables the only effect on the seascape, landscape and visual resource would be the visibility of a small number of vessels out at sea, which are a common occurrence as part of the baseline character and views. It is considered that, even taking into account the designated status of the landscapes along the coastline closest to the Offshore Export Cable Corridor and at the Landfall to MLWS (**Chapter 19: Offshore Seascape Landscape and Visual Amenity** of the Offshore Project ES, **Figure 19.1**) such temporary, short duration effects are not likely to give rise to significant effects. Therefore, the SLVIA assesses the effects of the construction, operation, and decommissioning of only the Windfarm aspect of the Project.
653. The SLVIA identified significant direct and indirect effects within parts the seascape of Marine Character Area (MCA) 51: Bristol Channel Approaches and MCA 43: Lundy and Outer Bristol Channel.
654. The Windfarm Site directly affects MCA 51: Bristol Channel Approaches and introduces components that could partially affect its perceived seascape character, indirectly through visibility. Moderate significant effects would occur during construction and decommissioning, and operation within approximately 20km of the Windfarm Site, reducing with distance beyond this range, to moderate-minor not significant in parts of the seascape to the east towards Lundy up to approximately 35km from the Windfarm Site. Minor not significant effects would occur from parts of MCA 51 beyond these ranges.
655. Limited significant effects on MCA 43: Lundy and Outer Bristol Channel have been assessed as occurring within the western extents of this seascape. Moderate significant effect during construction and decommissioning at the closest point of the MCA at approximately 20.18km from the Windfarm Site, reducing with distance beyond this range, to moderate-minor not significant in parts of the seascape to the east towards Lundy at approximately 35km from the Windfarm Site. Significant

effects are notably avoided within the seascape area that is coincidental with SCA 15: Lundy, which is most associated with the island itself.

- 656. Not significant effects have been assessed for all remaining MCAs within English and Welsh waters within the study area.
- 657. Not significant effects on landscape character have been assessed for LCT 6: Lundy Island.
- 658. Not significant effects have been assessed for landscape planning designations within the SLVIA study area, the Pembrokeshire Coast National Park, North Devon Coast Area of Outstanding Natural Beauty, and Cornwall Area of Outstanding Natural Beauty.
- 659. In respect of visual effects, not significant effects have been assessed from the 10 representative viewpoint locations, from the Pembrokeshire Coast Path (part of the Wales Coast Path), and from the South West Coast Path (part of the England Coast Path).
- 660. It has been assessed that there would be not significant cumulative effects as a result of the addition of the Offshore Project to a context containing operational, under construction, consented, application or scoping stage cumulative development, namely Erebus Offshore Windfarm, The Llyr Projects offshore windfarm, and Valorous Offshore Windfarm.

#### 20.11.1.1 Construction and Decommissioning Effects – Landscape Character, Landscape Designations and Defined Areas

- 661. In relation to potential cumulative interactions between impacts of the Onshore Infrastructure on offshore seascape, offshore MCAs will principally be impacted only by the construction and operation of the Offshore Project. Short term, temporary, inter-related effect would only occur on MCA 42: Bideford Bay and Taw-Torridge Estuary, where the construction of the onshore infrastructure will potentially influence areas that may also be susceptible to change resulting from views of the construction of the offshore infrastructure, namely the WTGs and OSP within the Windfarm Site.
- 662. During the construction and decommissioning of the Offshore Export Cables the only effect on the seascape and landscape resource would be the influence of a small number of vessels out at sea, or moored close to Landfall to MLWS, which are a common occurrence as part of the baseline character and views. It is considered

that, even taking into account the designated status of the landscapes along the coastline closest to the Offshore Export Cable Corridor and at the Landfall to MLWS (**Chapter 19: Offshore Seascape Landscape and Visual Amenity** of the Offshore Project ES, **Figure 19.1**) such temporary, short duration effects are not likely to give rise to significant effects.

663. The landscape designations in the SLVIA study area have limited potential for inter-related (or combined) effects to occur on their Special Qualities, since they would have limited / distant visibility of the construction of the Offshore Project.
664. Inter-related effects during construction are assessed as most likely to occur in a localised area of the North Devon Coast Area of Outstanding Natural Beauty within close proximity to the Landfall to MLWS, and Onshore Export Cable Corridor. At these locations, construction of the onshore infrastructure will occur in areas that may also be susceptible to changes resulting from very distant views of the construction of the offshore infrastructure, over a short-term period when their periods may potentially overlap.
665. In reality, the programming would mean there would likely be a degree of separation between the construction of the onshore infrastructure and construction of the offshore infrastructure. The period over which cumulative effects on the Special Qualities occur is therefore limited to the short-term with inter-related effects being temporary and are predicted to have a not significant effects on the North Devon Coast Area of Outstanding Natural Beauty.

#### 20.11.1.2 Construction and Decommissioning – Visual Effects

666. The majority of viewpoints and visual receptors in the LVIA study area will not experience cumulative effects, since they have either no visibility, or limited/distant visibility, of both the construction of the Onshore Infrastructure or the Offshore Project, and therefore have limited potential for cumulative interactions to occur.
667. As above, effects during construction are assessed as most likely to occur in a localised area of the North Devon Coast Area of Outstanding Natural Beauty within close proximity to Landfall to MLWS and the Onshore Export Cable Corridor, where the construction of the Onshore Infrastructure will occur in areas that may also be susceptible to changes resulting from very distant views of the construction of the offshore infrastructure, the WTGs and OSP within the Windfarm Site, over a short-term period when their periods may potentially overlap.

668. During the construction and decommissioning of the Offshore Export Cables the only effect on the landscape and visual resource would be the visibility of a small number of vessels out at sea, or moored close to Landfall to MLWS, which are a common occurrence as part of the baseline character and views. It is considered that, even taking into account the designated status of the landscapes along the coastline closest to the Offshore Export Cable Corridor and at the Landfall to MLWS. Such temporary, short duration effects are not likely to give rise to significant effects.

#### 20.11.1.3 Operation and Maintenance – Cumulative Effects

669. Based on the assessments undertaken in **Chapter 19: Offshore Seascape Landscape and Visual Amenity** of the Offshore Project ES, due to the substantial geographic separation of the offshore WTGs and OSP within the Windfarm Site, and the Onshore Substation, it is predicted that cumulative effects on landscape and visual amenity would be not significant, resulting from the operation of the Offshore Project and Onshore Infrastructure.

### 20.11.2 Cumulative Landscape Effects

#### 20.11.2.1 LCT 4A - Estuaries

##### 20.11.2.1.1 Baseline and Sensitivity

670. Please refer to **Section 20.9**. The sensitivity of the receptor is considered to be **medium-high**.

##### 20.11.2.1.2 Magnitude of Impact: Construction and Decommissioning

671. The construction of the East Yelland Quay cumulative scheme within this LCT could potentially occur within the same time period as the construction of a section of the Onshore Export Cable Corridor between Instow Barton Marsh and the Onshore Substation, and construction of the Onshore Substation itself. The location of the East Yelland Quay scheme, together with its extent and scale, are considered more likely to influence the estuary and seascape characteristics of the LCT, described in the baseline (**Section 20.5**).

672. The Onshore Infrastructure would result in an increase to the geographic extent of construction activity within this LCT; to the south of the Tarka Trail / NCR 3, in very close proximity to the East Yelland Quay cumulative scheme; and to the west, across parts of this LCT as far as Instow Barton Marsh. The Onshore Infrastructure would, therefore, add further construction activities and features in the context of East

Yelland Quay, which would slightly intensify their influence on character and views. However, in the context of East Yelland Quay, aside from the construction of the Onshore Substation, the Onshore Infrastructure would be of noticeably smaller scale.

673. The cumulative change would occur within an already established baseline context at Sandbanks Business Park / Yelland Terminal, electricity infrastructure, and settlement at Yelland, which would moderate the change. Considering the close proximity of the Onshore Infrastructure and East Yelland Quay scheme, there would be a cumulative interaction from construction activity within a similar part of the landscape and views, however the incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be moderate. Overall, the magnitude of cumulative impact during construction is considered to be **medium**.

#### 20.11.2.1.3 Magnitude of Impact: Operation and Maintenance

674. The introduction of East Yelland Quay would increase the presence of built form within this LCT, in a part of the landscape that is already characterised by industrial developments at Sandbanks Business Park / Yelland Terminal, East Yelland substation, and overhead pylon lines. The East Yelland Quay cumulative scheme would itself become an influential component of this LCT, intensifying the influence of built form along the estuary margins.
675. The Onshore Substation would result in a slight intensification to the influence of industrial development and built form characteristics within a part of the LCT already influenced by similar features. Owing to the close proximity of the Onshore Substation, the cumulative increase in the geographic extent of change would be small, and its influence would largely be perceived in the same context as East Yelland Quay in the landscape and views; although as described in **Section 20.9**, with increasing distance the influence of this change would diminish as a result of intervening screening vegetation in the wider landscape.
676. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the magnitude of cumulative impact during operation and maintenance is considered to be **low**, at year 0 and in year 15.

#### 20.11.2.1.4 Significance of effect: Construction and Decommissioning

677. The significance of cumulative effect during construction would, therefore, be **moderate significant adverse**. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure

would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.2.1.5 Further Mitigation

678. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.2.1.6 Residual Effect

679. The residual effect would remain **moderate significant adverse** during construction.

#### 20.11.2.1.7 Significance of effect: Operation and Maintenance

680. The significance of cumulative effect during operation would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.2.1.8 Further Mitigation

681. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.2.1.9 Residual Effect

682. The residual effect would be **minor not significant adverse** within the extents described above. Effects during operation and maintenance are long term and reversible.

### 20.11.2.2 LCT 3A – Upper Farmed and Wooded Slopes

#### 20.11.2.2.1 Baseline and Sensitivity

683. Please refer to **Section 20.9**. The sensitivity of the receptor is considered to be **medium**.

#### 20.11.2.2.2 Magnitude of Impact: Construction and Decommissioning

684. The construction of the East Yelland Quay scheme would occur at a minimum range of approximately 0.6km from this LCT. The Onshore Infrastructure would result in



an increase the geographic extent of construction activity, bringing its influence closer to this LCT, to the south and west of the East Yelland Quay scheme. While the Onshore Infrastructure would add further construction activities and features in the context of East Yelland Quay, intensifying their influence on character and views, it would be of noticeably smaller scale.

685. The cumulative change would occur within an already established baseline context at Sandbanks Business Park / Yelland Terminal, electricity infrastructure, and settlement at Yelland, which would moderate the change. Considering the close proximity of the Onshore Infrastructure and East Yelland Quay scheme, there would be a cumulative interaction from construction activity experienced across a localised part of LCT 3A; however, the incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the magnitude of cumulative impact during construction is considered to be **medium-low**.

#### 20.11.2.2.3 Magnitude of Impact: Operation and Maintenance

686. The introduction of the East Yelland Quay cumulative scheme would intensify the influence of built form within an adjacent LCT, in part of the landscape characterised by industrial developments at Sandbanks Business Park / Yelland Terminal, East Yelland substation, and overhead pylon lines. The Onshore Substation would add to the influence of similar characteristics within an established built context which exerts influence on LCT 3A – Farmed and Wooded Slopes. Owing to the close proximity of the Onshore Substation, the cumulative increase in the geographic extent of change would be small, and its influence would largely be perceived in the same context as East Yelland Quay in the landscape and views across a localised part of LCT 3A.

687. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the magnitude of cumulative impact during construction is considered to be **low**, at year 0 and in year 15.

#### 20.11.2.2.4 Significance of effect: Construction and Decommissioning

688. The significance of cumulative effect during construction would, therefore, be **moderate-minor not significant adverse**. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.2.2.5 Further Mitigation

689. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.2.2.6 Residual Effect

690. The residual effect would remain **moderate-minor not significant adverse** during construction.

#### 20.11.2.2.7 Significance of effect: Operation and Maintenance

691. The significance of cumulative effect during operation would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.2.2.8 Further Mitigation

692. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.2.2.9 Residual Effect

693. The residual effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

### 20.11.3 Cumulative Visual Effects

#### 20.11.3.1 Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh

##### 20.11.3.1.1 Baseline and Sensitivity

694. Please refer to **Section 20.10.4.1**. The sensitivity of the viewpoint is considered to be **medium**.

##### 20.11.3.1.2 Magnitude of Impact: Construction and Decommissioning

695. Only the taller components of the construction activities associated with the East Yelland Quay cumulative scheme would potentially be visible from this location. The screening influence of intervening vegetation surrounding the existing East Yelland Substation and along the Tarka Trail / NCR 3 would restrict potential visibility of

ground-based construction activities. Visible features would appear within a small extent of the view, along part of the skyline influenced by components of the existing East Yelland Substation, overhead pylon lines, pole mounted transmission, and distant wind turbines.

696. The Onshore Infrastructure would bring construction activity in close proximity to this location. The Onshore Infrastructure would increase the horizontal extent of construction activity in the view; at the Onshore Substation immediately to the south of East Yelland Quay, and as a result of the Onshore Export Cable Corridor construction which would be visible across much of the foreground to the east and north.
697. Overall, owing to the limited scale and extent of visible construction features attributable to East Yelland Quay, the cumulative magnitude of impact is considered no greater than that of the Onshore Infrastructure seen in isolation which is **medium-high**.

#### 20.11.3.1.3 Magnitude of Impact: Operation and Maintenance

698. The under-construction East Yelland Quay scheme would be visible in combination with the Onshore Substation. However, it is predicted that only the tops of taller three to six storey buildings within the East Yelland Quay cumulative scheme would be seen above the woodland enclosing the existing East Yelland Substation to the north-east of the view.
699. The Onshore Substation would not introduce built form to this part of the view but would be adding to it. These features are a component of the baseline and would be made only slightly more apparent following the introduction of the East Yelland Quay scheme. The Onshore Substation would appear notably larger in scale and more prominent than the cumulative scheme, owing to its more open location. The addition of the Onshore Substation would result in a small increase (approximately 10 degrees) in the horizontal extent of built form seen in the midground.
700. As shown in the visualisation (**Figure 20.14**), at year 15, mitigation planting will have established and would provide screening of all but the top of the Onshore Substation Worst Case Scenario maximum parameter, reducing its prominence in the view and integrating it with the existing landscape setting; further moderating the cumulative interaction.
701. The alteration to the cumulative situation attributable to the Onshore Infrastructure would be incremental. Overall, the cumulative magnitude of impact is considered to

be **medium** in year 0 of the operation and maintenance phase, reducing to **medium-low** in year 15 once mitigation planting matures.

#### 20.11.3.1.4 Significance of effect: Construction and Decommissioning

702. During construction and decommissioning the cumulative effect would be **moderate significant adverse**. This is not an additional significant effect but has already been identified in relation to the Onshore Substation alone. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.1.5 Further Mitigation

703. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.1.6 Residual Effect

704. The residual effect would remain **moderate significant adverse** during construction.

#### 20.11.3.1.7 Significance of effect: Operation and Maintenance

705. During operation and maintenance at year 0, the cumulative effect would be **moderate significant adverse**.

#### 20.11.3.1.8 Further Mitigation

706. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.1.9 Residual Effect

707. At year 15, the cumulative effect would reduce to **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

### 20.11.3.2 Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay

#### 20.11.3.2.1 Baseline and Sensitivity

708. Please refer to **Section 20.10.4.2**. The sensitivity of the viewpoint is considered to be **medium**.

#### 20.11.3.2.2 Magnitude of Impact: Construction and Decommissioning

709. Parts of the under-construction East Yelland Quay cumulative scheme would be situated to the north and south of this location. Visibility of construction activity to the north would be situated beyond retained woodland and scrub vegetation along the Tarka Trail / NCR 3 and is predicted to be screened to varying degrees from this location. Within the open view to the south, vehicle movements to and from the cumulative scheme, and construction of a new access road and car parking area along with landscape planting along the boundaries of the foreground marshy grassland field, would be visible at close range. This would alter the view, such that construction activity would be a defining component of its baseline character and composition.

710. Owing to the close proximity of the Onshore Substation, the cumulative increase of construction activity would be visible in combination with the foreground construction works for East Yelland Quay. Taller components involved in the construction of the Onshore Substation would be more apparent, but not discordant in the presence of similar features seen in successive, partially screened, views to the north. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the magnitude of cumulative impact during construction is considered to be **low**, at year 0 and in year 15.

#### 20.11.3.2.3 Magnitude of Impact: Operation and Maintenance

711. The built form within the East Yelland Quay scheme to the north would be screened to varying degrees by intervening vegetation, slightly increasing the influence of development in successive views to the north. Based on the information available, to the south, at year 0, the existing field would include a boundary of wildflower meadow with occasional trees and Devon hedgebanks, which at this point would not have matured, leaving relatively open views of a new access road and parking area. At year 15 the landscape planting will have matured, offering slightly greater screening and enclosure of the view south.

712. The Onshore Substation would slightly increase the horizontal extent of built form to the south of that within the East Yelland Quay scheme, adding to the developed nature of the view. The Onshore Substation would not be introducing built form to the view but would be adding to it, and these features would not be entirely uncharacteristic. The separating effect of the foreground landscape and screening vegetation would assist in moderating the cumulative change in the long-term.
713. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be limited. Taking this into account, at year 0 and year 15 the magnitude of impact would be **low**.

#### 20.11.3.2.4 Significance of effect: Construction and Decommissioning

714. During construction and decommissioning the cumulative effect would be **minor not significant adverse**. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.2.5 Further Mitigation

715. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.2.6 Residual Effect

716. The residual effect would remain **minor not significant adverse** during construction.

#### 20.11.3.2.7 Significance of effect: Operation and Maintenance

717. During operation and maintenance at year 0 the cumulative effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.2.8 Further Mitigation

718. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.2.9 Residual Effect

719. At year 15, the cumulative effect would remain **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.3 Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland

##### 20.11.3.3.1 Baseline and Sensitivity

720. Please refer to **Section 20.10.4.3**. The sensitivity of the viewpoint is considered to be **medium**.

##### 20.11.3.3.2 Magnitude of Impact: Construction and Decommissioning

721. Parts of the under-construction East Yelland Quay cumulative scheme would be situated to the north-west and west of this location. Visibility of construction activity to the north-west would be situated beyond retained woodland and scrub vegetation along the Tarka Trail / NCR 3 and is predicted to be screened to varying degrees from this location. Within the open view to the west, vehicle movements to and from the cumulative scheme, and construction of a new access road and car parking area along with landscape planting along the boundaries of the fore-to-midground marshy fields may be visible. This would alter the view, such that construction activity would be a component of its character and composition.

722. Owing to the close proximity of the Onshore Substation, the cumulative increase of construction activity would be visible in combination and succession with the construction works for East Yelland Quay. Taller components involved in the construction of the Onshore Substation would be more apparent, but not discordant in the presence of similar features seen in successive, partially screened, views to the north. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the magnitude of cumulative impact during construction is considered to be **low**.

##### 20.11.3.3.3 Magnitude of Impact: Operation and Maintenance

723. The built form within the East Yelland Quay scheme to the north would be screened to varying degrees by intervening vegetation, increasing the influence of these features in successive views to the north. Based on the information available, to the west, at year 0, the existing field would include a boundary of wildflower meadow with occasional trees and Devon hedgebanks, which at this point would not have matured, leaving relatively open views of a new access road and parking area. At

year 15 the landscape planting will have matured, offering slightly greater screening and enclosure of the view west.

724. The Onshore Substation would slightly increase the horizontal extent of built form to the south of that within the East Yelland Quay scheme, adding to the developed nature of the view. The Onshore Substation would not be introducing built form to the view but would be adding to it, and these features would not be entirely uncharacteristic. The separating effect of the foreground landscape and screening vegetation would assist in moderating the cumulative change in the long-term.

725. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be limited. Taking this into account, at year 0 the magnitude of impact would be **medium-low**, reduced at year 15 to be **low**.

#### 20.11.3.3.4 Significance of effect: Construction and Decommissioning

726. During construction and decommissioning the cumulative effect would be **minor not significant adverse**. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.3.5 Further Mitigation

727. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.3.6 Residual Effect

728. The residual effect on users of the route would remain **minor not significant adverse** during construction.

#### 20.11.3.3.7 Significance of effect: Operation and Maintenance

729. During operation and maintenance at year 0 the cumulative effect would be **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.



#### 20.11.3.3.8 Further Mitigation

730. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.3.9 Residual Effect

731. At year 15, the residual effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.4 Viewpoint 4: B3233, east of Instow

##### 20.11.3.4.1 Baseline and Sensitivity

732. Please refer to **Section 20.10.4.4**. The sensitivity of the viewpoint is considered to be **medium-high** for people in settlement, and **medium** for road users.

##### 20.11.3.4.2 Magnitude of Impact: Construction and Decommissioning

733. Construction activities associated with the East Yelland Quay cumulative scheme would be visible from this location, within the midground of the view. The screening influence of intervening vegetation surrounding the existing East Yelland Substation and along the Tarka Trail / NCR 3 would provide some screening of ground-based construction activity. The East Yelland Quay construction works would be visible across a wide horizontal extent within the view, seen in the context of overhead pylon lines, the existing East Yelland Substation, and backclothed by settlement at Braunton in the far distance.

734. The Onshore Infrastructure would bring construction activity in close proximity to this location. The Onshore Infrastructure would result in a notable increase to the horizontal extent of construction activity in the view as a result of the Onshore Export Cable Corridor construction, which would be visible to the south of the East Yelland Substation and to the west at Instow Barton Marsh. The construction of the Onshore Substation would appear to the south, in front of, that within the East Yelland scheme. Taller components involved in the construction of the Onshore Substation would be more apparent, but not discordant in the presence of similar features seen across the midground immediately to the north. The alteration to the cumulative situation attributable to the Onshore Infrastructure would be incremental. Taking this into account, the cumulative magnitude of impact is considered to be **medium**.

#### 20.11.3.4.3 Magnitude of Impact: Operation and Maintenance

735. The under-construction East Yelland Quay scheme would be visible in combination with the Onshore Substation. However, it is predicted that only the upper storeys of taller three to six storey buildings within the East Yelland Quay cumulative scheme would be seen above the woodland enclosing the existing East Yelland Substation to the north-east of the view.
736. The Onshore Substation would not introduce built form to this part of the view but would be adding to it. These features are a component of the baseline and would be made slightly more apparent following the introduction of the East Yelland Quay scheme. The industrial character of the Onshore Substation, seen in a more open part of the view, would appear to bring built form slightly closer to this location than previously experienced.
737. As shown in the visualisation (**Figure 20.14**), at year 15, mitigation planting will have established and would provide screening of all but the top of the Onshore Substation Worst Case Scenario maximum parameter, reducing its prominence in the view and integrating it with the existing landscape setting; further moderating the cumulative interaction.
738. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be moderate. Overall, the cumulative magnitude of impact is considered to be **medium** in year 0 of the operation and maintenance phase, reducing to **medium-low** in year 15 once mitigation planting matures.

#### 20.11.3.4.4 Significance of effect: Construction and Decommissioning

739. During construction and decommissioning the cumulative effect on settlement would be **moderate significant adverse** and **moderate not significant adverse** for road users. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.4.5 Further Mitigation

740. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.4.6 Residual Effect

741. During construction and decommissioning the residual cumulative effect on settlement would remain **moderate significant adverse** and **moderate not significant adverse** for road users. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.4.7 Significance of effect: Operation and Maintenance

742. During operation and maintenance at year 0, the cumulative effect on residential receptors would be **moderate significant adverse**. At year 15, the effect would reduce to **moderate not significant adverse**.

743. At year 0, cumulative effects on road users on this section of the B3233 would be **moderate not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.4.8 Further Mitigation

744. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.4.9 Residual Effect

745. At year 15, the residual effect on residential receptors would reduce to **moderate not significant adverse**.

746. At year 15, the residual effect on road users would reduce to **moderate-minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

### 20.11.3.5 Viewpoint 5: PRow (Instow Footpath, No. 16), north of properties on B3233

#### 20.11.3.5.1 Baseline and Sensitivity

747. Please refer to **Section 20.10.4.5**. The sensitivity of the viewpoint is considered to be **medium**.

#### 20.11.3.5.2 Magnitude of Impact: Construction and Decommissioning

748. Only the taller components of the construction activities associated with the East Yelland Quay cumulative scheme would potentially be visible from this location. The screening influence of intervening vegetation surrounding the existing East Yelland Substation and along the Tarka Trail / NCR 3 would restrict potential visibility of ground-based construction activities. Visible features would appear within a relatively wide extent of the view, along part of the skyline influenced by components of the existing East Yelland Substation, overhead pylon lines, pole mounted transmission, and distant wind turbines.
749. The Onshore Infrastructure would result in a notable increase to the horizontal extent of construction activity in the view as a result of the Onshore Export Cable Corridor construction, which would be visible to the south of the East Yelland Substation and to the west at Instow Barton Marsh. The construction of the Onshore Substation would appear to the south, in front of, that within East Yelland scheme. Taller components involved in the construction of the Onshore Substation would be more apparent, but not discordant in the presence of tall overhead pylons seen in across the midground and would add to the concentration of these features within the same portion of the view. The alteration to the cumulative situation attributable to the Onshore Infrastructure would be incremental.
750. Overall, in the context of the scale and extent of construction features attributable to East Yelland Quay, the cumulative magnitude of impact of the Onshore Infrastructure is **medium**.

#### 20.11.3.5.3 Magnitude of Impact: Operation and Maintenance

751. The under-construction East Yelland Quay scheme would be visible in combination with the Onshore Substation. However, it is predicted that only the upper storeys of taller three to six storey buildings within the East Yelland Quay cumulative scheme would be seen above the woodland enclosing the existing East Yelland Substation to the north-east of the view.
752. The Onshore Substation would not introduce built form to this part of the view but would be adding to it. These features are a component of the baseline and would be made slightly more apparent following the introduction of the East Yelland Quay scheme. The industrial character of the Onshore Substation, seen in a more open part of the view, would appear to bring built form slightly closer to this location than previously experienced.

753. As shown in the visualisation (**Figure 20.14**), at year 15, mitigation planting will have established and would provide screening of all but the top of the Onshore Substation Worst Case Scenario maximum parameter, reducing its prominence in the view and integrating it with the existing landscape setting; further moderating the cumulative interaction.

754. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the cumulative magnitude of impact is considered to be **low** in year 0, remaining so at year 15.

#### 20.11.3.5.4 Significance of effect: Construction and Decommissioning

755. During construction and decommissioning the cumulative effect would be **moderate significant adverse**. This is not an additional significant effect but has already been identified in relation to the Onshore Substation alone. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.5.5 Further Mitigation

756. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.5.6 Residual Effect

757. The residual effect on users of the route would remain **moderate significant adverse** during construction.

#### 20.11.3.5.7 Significance of effect: Operation and Maintenance

758. During operation and maintenance at year 0 the cumulative effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.5.8 Further Mitigation

759. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.5.9 Residual Effect

760. At year 15, the residual effect would remain **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.6 Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)

##### 20.11.3.6.1 Baseline and Sensitivity

761. Please refer to **Section 20.10.4.6**. The sensitivity of road users is considered to be **medium-low**, and the sensitivity of pedestrians **medium**.

##### 20.11.3.6.2 Magnitude of Impact: Construction and Decommissioning

762. Parts of the under-construction East Yelland Quay cumulative scheme would be situated to the north-west of this location, on the estuary margins in the midground of the view. Because this is an elevated location, visibility of construction activity would be possible beyond retained woodland and scrub vegetation along the Tarka Trail / NCR 3. Construction traffic movements to and from the cumulative scheme, and construction of a new access road and car parking area along with landscape planting would be visible in the open fields to the east of the Sandbanks Business Park / Yelland Terminal.

763. The addition of the Onshore Export Cable Corridor and Onshore Substation would extend construction activities slightly closer to this location, within the mid-ground of the developed estuary margins to the north. Construction of the Onshore Export Cable Corridor would result in an increase in the horizontal extent of these features to the west, south of the existing East Yelland Substation, to Instow Barton Marsh. More distant construction activities to the north of the River Taw would appear very small scale and are likely to be screened in part by intervening vegetation. The construction of the Onshore Substation would appear to the south, in front of, that within the East Yelland scheme. Taller components involved in the construction of the Onshore Substation would be more apparent, but not discordant in the presence of tall overhead pylons seen in across the midground and would add to the concentration of these features within the same portion of the view. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor.

764. Overall, in the context of the scale and extent of construction features attributable to East Yelland Quay, the cumulative magnitude of impact of the Onshore Infrastructure is **medium-low**.

#### 20.11.3.6.3 Magnitude of Impact: Operation and Maintenance

765. The under-construction East Yelland Quay scheme would be visible in combination with the Onshore Substation. It is predicted that from this elevated vantage, much of the East Yelland Quay cumulative scheme would be seen above the woodland enclosing the existing East Yelland Substation and Tarka Trail / NCR 3, to the north-west of the view.

766. The Onshore Substation would not introduce built form to this part of the view but would be adding to it. These features are a component of the baseline and would be made more noticeable following the introduction of the East Yelland Quay scheme, which itself would introduce built form close to the estuary margins. In this context, the Onshore Substation would add slightly to the concentration of built features in the midground of the view. As shown in the visualisation (**Figure 20.14**), at year 15, mitigation planting will have established and would provide screening of all but the top of the Onshore Substation Worst Case Scenario maximum parameter, reducing its prominence in the view and integrating it with the existing landscape setting; further moderating the cumulative interaction.

767. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor. Overall, the cumulative magnitude of impact is considered to be **low** in year 0, remaining so at year 15.

#### 20.11.3.6.4 Significance of effect: Construction and Decommissioning

768. During construction and decommissioning the cumulative effect on pedestrians would be **moderate-minor not significant adverse** and **minor not significant adverse** for road users. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.6.5 Further Mitigation

769. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.6.6 Residual Effect

770. The residual cumulative effect on pedestrians would remain **moderate-minor not significant adverse** and **minor not significant adverse** for road users.

#### 20.11.3.6.7 Significance of effect: Operation and Maintenance

771. During operation and maintenance at year 0 the cumulative effect on pedestrians would be **minor not significant adverse**. And for road users **minor-negligible not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.6.8 Further Mitigation

772. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.6.9 Residual Effect

773. At year 15, the cumulative effect on pedestrians would remain **minor not significant adverse**. And for road users it would remain **minor-negligible not significant adverse**. Effects during operation and maintenance are long term and reversible.

### 20.11.3.7 Viewpoint 9: Broad Sands Car Park, on SWCP

#### 20.11.3.7.1 Baseline and Sensitivity

774. Please refer to **Section 20.10.4.9**. The sensitivity of the viewpoint is considered to be **medium-high**.

#### 20.11.3.7.2 Magnitude of Impact: Construction and Decommissioning

775. The under-construction East Yelland Quay cumulative scheme will be located to the south-east, on the southern banks of the River Taw, at a range of approximately 1km. Ground level and taller construction activities would be openly visible because of the lack of intervening screening features in the view. Construction activities associated with the East Yelland Quay scheme would appear relatively small scale and distant, across a relatively wide extent (approximately 30 degrees) of the view.

776. The Onshore Infrastructure would extend construction activities in very close proximity to this location in successive views to the north, where the Onshore Export



Cable Corridor construction would be visible on the fringes of the Braunton Marshes. This part of the Onshore Infrastructure would introduce construction into a part of the view not influenced by development. To the south, construction activity associated with the Onshore Substation would be situated beyond, to the south of, the East Yelland Quay works, and therefore difficult to discern in isolation. Construction of the Onshore Export Cable Corridor within the estuary margins at Instow Barton Marsh would be screened to varying degrees by the embankment on the river's edge, and woodland at East Yelland Substation and, though apparent, would be of comparatively small scale, distant, and separated from construction at East Yelland Quay.

777. Overall, primarily as a result of the incremental change to the cumulative situation as a result of the Onshore Export Cable Corridor construction at close range to the north of this location, the cumulative magnitude of impact is considered to be **medium-high**.

#### 20.11.3.7.3 Magnitude of Impact: Operation and Maintenance

778. The East Yelland Quay scheme would introduce a variety of mixed-use residential built forms on to the estuary margins to the south of the River Taw. The Onshore Substation would not introduce built form to this part of the view but would be adding to it. The Onshore Substation would be located to the south, behind, the intervening buildings, such that it would be difficult to discern in isolation amid the variety of forms seen in the closer and more prominent East Yelland Quay scheme.

779. The incremental alteration to the cumulative situation attributable to the Onshore Infrastructure would be minor at most. Overall, the cumulative magnitude of impact is considered to be **negligible** in year 0, remaining so at year 15.

#### 20.11.3.7.4 Significance of effect: Construction and Decommissioning

780. During construction and decommissioning the cumulative effect on receptors would be **major-moderate significant adverse**. This is not an additional significant effect but has already been identified in relation to the Onshore Substation alone. This effect would occur for a short duration during which the 28 months construction programme for the Onshore Infrastructure would potentially overlap with that of East Yelland Quay. Effects during construction and decommissioning are short term and reversible.

#### 20.11.3.7.5 Further Mitigation

781. Embedded mitigation and good-practice construction phase mitigation practices as set out in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.7.6 Residual Effect

782. The residual cumulative effect on users of the route would remain **major-moderate significant adverse**.

#### 20.11.3.7.7 Significance of effect: Operation and Maintenance

783. During operation and maintenance at year 0 the cumulative effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

#### 20.11.3.7.8 Further Mitigation

784. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.4**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.11.3.8 Residual Effect

785. At year 15, the residual effect on users of the route would remain **minor not significant adverse** during construction.

## 20.12 Potential transboundary impacts

786. The Scoping Report identified that there was no potential for significant transboundary effects regarding Onshore Landscape and Visual Amenity from the Project upon the interests of other EEA States and this is not discussed further.

## 20.13 Inter-relationships

787. Inter-relationship impacts are covered as part of the assessment and consider impacts from the construction, operation or decommissioning of the Project on the same receptor (or group). A description of the process to identify and assess these effects is presented in **Chapter 6: EIA Methodology**. The potential inter-relationship effects that could arise in relation to Onshore Landscape and Visual Amenity include both:

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

788. Table 20.20 serves as a signposting for inter-relationships.

*Table 20.20 Onshore Landscape and Visual Amenity Inter-relationships*

Topic and description	Related chapter	Where addressed in this Chapter	Rationale
<b>Construction and Decommissioning</b>			
<b>Onshore Ecology and Ornithology</b>	Chapter 16	<b>Section 20.9.1</b> and <b>20.9.2</b> consider potential effects on physical landscape elements.	Both chapters consider the potential effects of impacts on physical landscape features e.g., hedgerow and tree removals, the LVIA considering the impact as landscape elements, and the Onshore Ecology assessment considering the impact on as ecological assets. Both chapters consider the mitigation of loss in respect of planting proposed as outline landscape mitigation principles ( <b>Figure 20.13</b> ).
<b>Onshore Archaeology and Cultural Heritage</b>	Chapter 17	<b>Section 20.5.1.1</b> and <b>20.9</b> consider the setting of cultural heritage assets insofar as they relate to Onshore Landscape and Visual Amenity, including Registered Historic Parks and Gardens (RPGs), Conservation Areas (CAs), and defined areas of Heritage Coasts.	Both chapters consider the potential effects of the Onshore Infrastructure on cultural heritage assets and their setting within the landscape.

Topic and description	Related chapter	Where addressed in this Chapter	Rationale
<b>Socio-Economics (including Tourism and Recreation)</b>	Chapter 21	<b>Section 20.10</b> considers the potential effects of the Onshore Infrastructure on the visual amenity of recreational receptors in the local area.	Both chapters consider the potential effects of the Onshore Infrastructure on recreational receptors in the local area.

## 20.14 Interactions

789. The impacts identified and assessed in this chapter have the potential to interact with each other, which could give rise to synergistic impacts as a result of that interaction. The areas of interaction between impacts are presented in **Table 20.21**, **Table 20.22** and **Table 20.23**, along with an indication as to whether the interaction may give rise to synergistic impacts. This provides a screening tool for which impacts have the potential to interact.

790. **Table 20.24** then provides an assessment for each receptor (or receptor group) related to these impacts in two ways. Firstly, the impacts are considered within a development phase (i.e., construction, operation, maintenance, or decommissioning) to see if, for example, multiple construction impacts could combine. Secondly, a lifetime assessment is undertaken which considers the potential for impacts to affect receptors across development phases. The significance of each individual impact is determined by the sensitivity of the receptor and the magnitude of effect; the sensitivity is constant whereas the magnitude may differ. Therefore, when considering the potential for impacts to be additive it is the magnitude of effect which is important – the magnitudes of the different effects are combined upon the same sensitivity receptor. If minor impact and minor impact were added this would effectively double count the sensitivity.

## 20.15 Summary

791. This chapter has assessed the potential effects on onshore landscape and visual amenity receptors arising from the Onshore Project. The range of potential impacts and associated effects considered has been informed by the Scoping Opinion, consultation, and agreed through ETG Meetings, as well as reference to existing

policy and guidance. The impacts considered include those brought about directly as well as indirectly.

792. The Onshore Infrastructure is situated within North Devon, from the coast at Saunton Sands, through Braunton Marshes, to the Taw-Torridge estuary. It covers a varied landscape from sandy beaches and extensive dune systems at the coast, to a predominantly farmed and settled landscape inland and on the estuary margins.
793. **Table 20.25** presents a summary of the impacts assessed within this ES chapter, any commitments made, and the residual effects.

#### 20.15.1.1 Landscape

794. Embedded mitigation in respect of the Onshore Infrastructure has involved the sensitive siting of the Onshore Infrastructure during the search area selection process, to avoid / reduce likely significant impacts. Readers should refer to **Chapter 4: Site Selection and Assessment of Alternatives**.
795. The search area selection process considered constraints relating to physical landscape elements, such as woodlands, trees and hedgerows, landscape character, visual amenity, and other environmental and technical constraints. The sensitivity of the surrounding landscape and of residents, road-users, and recreational users of the landscape and path network, was also a consideration.

*Table 20.21 Interaction between impacts during construction*

<b>Construction</b>					
	<b>Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor</b>	<b>Impact 2: Physical Landscape - Onshore Substation</b>	<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas - Onshore Substation</b>	<b>Impact 4: Visual Effect of Landfall to MLWS and Onshore Export Cable Corridor</b>	<b>Impact 5: Visual Effect of Onshore Substation</b>
<b>Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor</b>		Yes	Yes	Yes	Yes
<b>Impact 2: Physical Landscape - Onshore Substation</b>	Yes		Yes	Yes	Yes
<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas -</b>	Yes	Yes		Yes	Yes

Construction					
Onshore Substation					
Impact 4: Visual Effect of Landfall to MLWS and Onshore Export Cable Corridor	Yes	Yes	Yes		Yes
Impact 5: Visual Effect of Onshore Substation	Yes	Yes	Yes	Yes	

*Table 20.22 Interaction between impacts during operation and maintenance*

Operation and Maintenance		
	Impact 3: Landscape Character, Landscape Designation and Defined Areas - Onshore Substation	Impact 5: Visual Effect of Onshore Substation
Impact 3: Landscape Character, Landscape Designation and Defined Areas - Onshore Substation		Yes
Impact 5: Visual Effect of Onshore Substation	Yes	



*Table 20.23 Interaction between impacts during decommissioning*

<b>Decommissioning</b>					
	<b>Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor</b>	<b>Impact 2: Physical Landscape - Onshore Substation</b>	<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas - Onshore Substation</b>	<b>Impact 4: Visual Effect of Landfall to MLWS and Onshore Export Cable Corridor</b>	<b>Impact 5: Visual Effect of Onshore Substation</b>
<b>Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor</b>		Yes	Yes	Yes	Yes
<b>Impact 2: Physical Landscape - Onshore Substation</b>	Yes		Yes	Yes	Yes
<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas -</b>	Yes	Yes		Yes	Yes

Decommissioning					
<b>Onshore Substation</b>					
<b>Impact 4: Visual Effect of Landfall to MLWS and Onshore Export Cable Corridor</b>	Yes	Yes	Yes		Yes
<b>Impact 5: Visual Effect of Onshore Substation</b>	Yes	Yes	Yes	Yes	

*Table 20.24 Potential interactions between impacts on Onshore Landscape and Visual Amenity*

<b>Highest level significance</b>				
<b>Receptor</b>	Construction and Decommissioning	Operation and Maintenance	Phase Assessment	Lifetime Assessment
<b>Physical landscape receptors</b>	Not significant	Not significant	<p>No greater than individually assessed impact</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect in one way (visually) not via multiple pathways simultaneously.</p>	<p>No greater than individually assessed impact</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect one way (visually), at one point in time, and will not experience the construction and decommissioning, operation and maintenance phases simultaneously.</p>
<b>Landscape character receptors – changes to perceived character and special qualities of designated</b>	Significant	Significant	<p>No greater than individually assessed impact.</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and</p>	<p>No greater than individually assessed impact</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the</p>

Highest level significance				
<b>and defined landscapes</b>			views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect in one way (visually) not via multiple pathways simultaneously.	actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect one way (visually), at one point in time, and will not experience the construction and decommissioning, operation and maintenance phases simultaneously.
<b>Visual receptors – changes to views experienced by people from specific and representative viewpoints and visual receptors</b>	Significant	Significant	<p>No greater than individually assessed impact</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect in one way (visually) not via multiple pathways simultaneously.</p>	<p>No greater than individually assessed impact</p> <p>Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect one way (visually), at one point in time, and will not experience the construction and decommissioning, operation and maintenance phases simultaneously.</p>

*Table 20.25 Summary of potential impacts for Onshore Landscape and Visual Amenity during construction, operation, maintenance and decommissioning of the Onshore Infrastructure*

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Construction and Decommissioning</b>						
<b>Impact 1: Physical Landscape - Landfall to MLWS and Onshore Export Cable Corridor</b>	Coastal land	Medium-high	Low	<b>Moderate-minor not significant adverse</b>	Embedded mitigation and good-practice construction phase mitigation practices as set out in <b>Section 20.4.4.</b>	<b>Moderate-minor not significant adverse</b>
	Agricultural land / grassland	Medium-low	Medium	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
	Hedgerows and hedgerow trees	Medium	Medium-low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
<b>Impact 2: Physical Landscape - Onshore Substation</b>	Agricultural land / grassland	Medium-low	Low	<b>Minor-negligible not significant adverse</b>		<b>Minor-negligible not significant adverse</b>
<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas -</b>	LCT 4A - Estuaries	Medium-high	Medium-high within a localised from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to	<b>Major-moderate significant adverse</b> within a localised area from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation,		<b>Major-moderate significant adverse</b> within a localised area from Instow Barton Marsh approximately 0.5km to the west

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Onshore Substation</b>			<p>the north of Yelland and the B3233 approximately 0.3km to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be medium-low.</p>	<p>and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the effects would be <b>moderate not significant adverse</b>.</p> <p>Construction and decommissioning effects are short term and temporary, and reversible.</p>		<p>of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the effects would be <b>moderate not significant adverse</b>.</p> <p>Construction and decommissioning effects are short term and temporary, and reversible.</p>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Impact 4: Visual Effect of Landfall to MLWS and</b>	LCT 3A – Upper Farmed and Wooded Slopes	Medium	Medium	<b>Moderate not significant adverse</b> within a very localised area on open, north facing slopes between Instow Town and Yelland, up to approximately 1km, dropping noticeably with distance in other parts of the LCT.		<b>Moderate not significant adverse</b> within a very localised area on open, north facing slopes between Instow Town and Yelland, up to approximately 1km, dropping noticeably with distance in other parts of the LCT.
	NDCAONB Special Quality 1: Distinctive Coastal Scenery	High	Low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
	NDCAONB Special Quality 2: A Landscape and Seascape of High Visual Quality	High	Low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
	Saunton Sands beach	High	Medium-high across approximately 0.8km of the SWCP to the	<b>Major significant adverse</b> across approximately 0.8km		<b>Major significant adverse</b> across approximately

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Onshore Export Cable Corridor</b>	and users of the SWCP		south of the Saunton Sands Hotel, Saunton Sands beach car park, and B3233.  Medium for visitors to the beach within approximately 0.5km.	of the SWCP, reducing rapidly with distance.  <b>Major-moderate significant adverse</b> for users of the beach within approximately 0.5km.		0.8km of the SWCP, reducing rapidly with distance.  <b>Major-moderate significant adverse</b> for users of the beach within approximately 0.5km.
	Saunton settlement and beach cabin holiday homes	High	Medium-high	<b>Major significant adverse</b>		<b>Major significant adverse</b>
	Properties at Burrows Close Lane and Sandy Lane	High	Medium	<b>Major-moderate significant adverse</b>		<b>Major-moderate significant adverse</b>
	Crow Beach House	High	Medium-high	<b>Major significant adverse</b>		<b>Major significant adverse</b>
	SWCP at Broad Sands, north of the River Taw	High	Medium-high between Broad Sands car park and up to approximately 0.7km	<b>Major significant adverse</b> between Broad Sands car park and up to approximately 0.7km		<b>Major significant adverse</b> between Broad Sands car park and up to approximately



Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
			to the east of Crow Beach House.	to the east of Crow Beach House.		0.7km to the east of Crow Beach House.
	SWCP south of the River Taw	Medium	Medium-high across approximately 1km from Instow Cricket Club eastwards to the north of the existing East Yelland Substation.	<b>Moderate significant adverse</b> across approximately 1km from Instow Cricket Club eastwards to the north of the existing East Yelland Substation.		<b>Moderate significant adverse</b> across approximately 1km from Instow Cricket Club eastwards to the north of the existing East Yelland Substation.
<b>Impact 5: Visual Effect of Onshore Substation</b>	Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh	Medium	Medium-high	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>
	Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay	Medium	Medium	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
	Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland	Medium	Medium	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
	Viewpoint 4: B3233, east of Instow	Medium-high (People in settlement)	Medium	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>
		Medium (Road users)		<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
	Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B3233	Medium	Medium	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>
	Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)	Medium (Pedestrians)	Medium	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
		Medium-low (Road users)		<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
	Viewpoint 7: Northam Burrows Country Park, on SWCP	Medium-high	Medium-low	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
	Viewpoint 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP	Medium-high	Medium-low	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
	Viewpoint 9: Broad Sands Car Park, on SWCP	Medium-high	Medium-low	<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
	Viewpoint 10: Crow Point	Medium-high	Low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
	Viewpoint 11: Flagpole Dune, Braunton Burrows	High	Low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
<b>Operation and Maintenance</b>						
<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas -</b>	LCT 4A - Estuaries	Medium-high	At year 0 and year 15, medium within a localised from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation,	At year 0 and year 15, <b>moderate significant adverse</b> within a localised from Instow Barton Marsh approximately 0.5km to the west of	Landscape mitigation planting as outlined in the OLEMP ( <b>Figure 20.13</b> ) and	At year 0 and year 15, <b>moderate significant adverse</b> within a localised from Instow Barton Marsh

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Onshore Substation</b>			<p>and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3 to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be low.</p>	<p>the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be <b>moderate-minor not significant adverse</b>.</p>	described in <b>Section 20.4.4.</b>	<p>approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south.</p> <p>In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the magnitude of change would be <b>moderate-minor not significant adverse</b>.</p>
	LCT 3A – Upper Farmed	Medium	At year 0, medium-low.	At year 0, <b>moderate-minor</b>		At year 15, <b>minor not significant</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
	and Wooded Slopes		At year 15, low.	<b>not significant adverse</b>		
	NDCAONB Special Quality 1: Distinctive Coastal Scenery	High	Low at year 0 and 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	NDCAONB Special Quality 2: A Landscape and Seascape of High Visual Quality	High	Low at year 0 and 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
<b>Impact 5: Visual Effect of Onshore Substation</b>	Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh	Medium	At year 0, medium. At year 15, medium-low.	At year 0, <b>Moderate not significant adverse</b>		At year 15, <b>Moderate-minor not significant adverse</b>
	Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay	Medium	Medium-low at year 0 and 15.	At year 0, <b>Moderate-minor not significant adverse</b>		At year 15, <b>Moderate-minor not significant adverse</b>
	Viewpoint 3: Footpath near Tarka Trail /	Medium	Medium-low at year 0 and 15.	At year 0, <b>Moderate-minor</b>		At year 15, <b>Moderate-minor</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
	NCR 3 / SWCP, north of Yelland			<b>not significant adverse</b>		<b>not significant adverse</b>
	Viewpoint 4: B3233, east of Instow	Medium-high (People in settlement)	At year 0, medium. At year 15, medium-low	At year 0, <b>Moderate not significant adverse</b>		At year 15, <b>Moderate-minor not significant adverse</b>
		Medium (Road users)		At year 0, <b>Moderate not significant adverse</b>		At year 15, <b>Moderate-minor not significant adverse</b>
	Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B3233	Medium	Low at year 0 and year 15.	At year 0, <b>minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
	Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)	Medium (Pedestrians)	At year 0, medium-low. At year 15, low.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
		Medium-low (Road users)		At year 0, <b>minor not significant adverse</b>	At year 15, <b>minor-negligible not significant adverse</b>	

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
	Viewpoint 7: Northam Burrows Country Park, on SWCP	Medium-high	Low at year 0 and year 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	Viewpoint 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP	Medium-high	Low at year 0 and year 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	Viewpoint 9: Broad Sands Car Park, on SWCP	Medium-high	Low at year 0 and year 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	Viewpoint 10: Crow Point	Medium-high	Low at year 0 and year 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	Viewpoint 11: Flagpole Dune, Braunton Burrows	High	Low at year 0 and year 15.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
<b>Cumulative – Construction and Decommissioning</b>						

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Impact 3: Landscape Character, Landscape Designation and Defined Areas - Onshore Substation</b>	LCT 4A - Estuaries	Medium-high	Medium	<b>Moderate significant adverse</b>	Embedded mitigation and good-practice construction phase mitigation practices as set out in <b>Section 20.4.4.</b>	<b>Moderate significant adverse</b>
	LCT 3A – Upper Farmed and Wooded Slopes	Medium	Medium-low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
<b>Impact 5: Visual Effect of Onshore Substation</b>	Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh	Medium	Medium-high	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>
	Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay	Medium	Low	<b>Minor not significant adverse</b>		<b>Minor not significant adverse</b>
	Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland	Medium	Low	<b>Minor not significant adverse</b>		<b>Minor not significant adverse</b>
	Viewpoint 4: B3233, east of Instow	Medium-high (People in settlement)	Medium	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>



Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
		Medium (Road users)		<b>Moderate not significant adverse</b>		<b>Moderate not significant adverse</b>
	Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B3233	Medium	Medium	<b>Moderate significant adverse</b>		<b>Moderate significant adverse</b>
	Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)	Medium (Pedestrians)	Medium-low	<b>Moderate-minor not significant adverse</b>		<b>Moderate-minor not significant adverse</b>
		Medium-low (Road users)		<b>Minor not significant adverse</b>		<b>Minor not significant adverse</b>
	Viewpoint 9: Broad Sands Car Park, on SWCP	Medium-high	Medium-high	<b>Major-moderate significant adverse</b>		<b>Major-moderate significant adverse</b>
<b>Cumulative – Operation and Maintenance</b>						
<b>Impact 3: Landscape Character,</b>	LCT 4A - Estuaries	Medium-high	Low	At year 0, <b>minor not significant adverse</b>	Landscape mitigation planting as	At year 15, <b>minor not significant adverse</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
<b>Landscape Designation and Defined Areas - Onshore Substation</b>	LCT 3A – Upper Farmed and Wooded Slopes	Medium	Low	At year 0, <b>minor not significant adverse</b>	outlined in the OLEMP ( <b>Figure 20.13</b> ) and described in <b>Section 20.4.4.</b>	At year 15, <b>minor not significant adverse</b>
<b>Impact 5: Visual Effect of Onshore Substation</b>	Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh	Medium	At year 0, medium. At year 15, medium-low.	At year 0, <b>moderate significant adverse</b>		At year 15, <b>moderate-minor significant adverse</b>
	Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay	Medium	Low at year 0 and year 15.	At year 0, <b>minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
<b>Impact 5: Visual Effect of Onshore Substation (Cont)</b>	Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland	Medium	At year 0, medium-low. At year 15, low.	At year 0, <b>moderate-minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
	Viewpoint 4: B3233, east of Instow	Medium-high (People in settlement)	At year 0, medium. At year 15, medium-low	At year 0, <b>moderate significant adverse</b>		At year 15, <b>moderate not significant adverse</b>

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation Measures	Residual Effect
		Medium (Road users)		At year 0, <b>moderate not significant adverse</b>		At year 15, <b>moderate-minor not significant adverse</b>
	Viewpoint 5: PRow (Instow Footpath, No. 16), north of properties on B3233	Medium	Low at year 0 and year 15.	At year 0, <b>minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
	Viewpoint 6: Minor road, east of Instow Town, near PRow (Fremington Footpath, No. 43)	Medium (Pedestrians)	Low at year 0 and year 15.	At year 0, <b>minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>
		Medium-low (Road users)		At year 0, <b>minor-negligible not significant adverse</b>		At year 15, <b>minor-negligible not significant adverse</b>
	Viewpoint 9: Broad Sands Car Park, on SWCP	Medium-high	Negligible at year 0 and year 15.	At year 0, <b>minor not significant adverse</b>		At year 15, <b>minor not significant adverse</b>

796. The landscape would be directly impacted by the Onshore Infrastructure. The siting and design of the Onshore Infrastructure has, however, sought to minimise the removal of landscape elements across the study area. As a result of this, physical landscape effects would be kept to a minimum to ensure that the character of the area is retained for future benefit. However, likely significant effects are found within localised areas related to the removal of higher sensitivity landscape elements such as taller hedgerows and hedgerow trees along the Onshore Export Cable Corridor and hedgerow trees and individual trees within the Onshore Substation site area. Sections of hedgerow lost through the construction process would be replanted in-situ. Restrictions to planting over cable easements will, however, prevent hedgerow trees from being replanted over the Onshore Export Cable Corridor, although they may be planted elsewhere in the corridor.
797. Significant landscape character effects during construction and in year 0, are found for LCA 4A - Estuaries as a result of the proposed Onshore Substation, which is located within it. The LVIA found **major-moderate significant adverse** landscape character effects during construction within a highly localised area; from Instow Barton Marsh approximately 0.5km to the west of the Onshore Substation, and within open parts of the landscape to the north of Yelland and the B3233 approximately 0.3km to the east and south. During the operation and maintenance phase, effects within the same area would reduce to **moderate significant adverse**, where the Onshore Substation would be a readily apparent feature but in the context of existing built form and electricity infrastructure. In parts of the LCT beyond this localised area, to the west as far as Instow, east as far as East Yelland Farm, and to the north across parts of Isley Marsh, the effects would be not significant.
798. No significant effects on landscape character are found as a result of the construction of the Onshore Export Cable Corridor or at Landfall to MLWS. At the Landfall to MLWS there would be temporary disruption to the beach area (if the open trench option is pursued), however, the key characteristics of the wider landscape in the area would remain intact with only a very localised level of disruption. The Landfall to MLWS and Onshore Export Cable Corridor construction compound is located in a discrete part of the coastal and dunes landscape at Saunton Beach car park, where the introduction of installation features would be contained by surrounding landform and perceived in the context of a high number of vehicle movements and the influence of man-made elements and features in nearby settlement. Trenchless (trenchless technique) crossing of the Braunton Burrows would avoid significant effects on the character of this valued landscape.

799. To the east of the Braunton Burrows, and south of the River Taw, the Onshore Export Cable Corridor crosses a predominantly agricultural landscape within LCT 4B Marine levels and coastal plains, and 4A Estuaries, respectively (**Figure 20.3**). The landform is low-lying and level. Tree cover is limited to scattered stands of trees, with some riparian and secondary woodland. However, hedgerows provide a layered screening effect within the flat landscape, particularly high hedgerows which typically line roads. As a working, farmed landscape, the movement of large agricultural machinery and seasonal change to crops and ground cover is commonplace. The installation activities would introduce uncharacteristic features into the landscape which would have slightly apparent influence on the landscape and views, for example signage, temporary fences, stockpiles, and temporary construction compounds. However, the introduction of vehicle movements, spoil heaps, management of hedgerows, and changes to ground cover would be perceived in the context of influence from similar characteristics in the farmed landscape. The Worst Case Scenario for the length of time for installation of the Landfall to MLWS and Onshore Export Cable Corridor is 18 months. In reality, construction will occur over relatively short periods of time as the construction of the Onshore Export Cable Corridor will follow a 'rolling programme.' The duration of the change would therefore be short-term and temporary. As the proposed cables are to be buried underground there would be little or no character effects resulting from the Landfall to MLWS and Onshore Export Cable Corridor once operational. Whilst some permanent vegetation removal would occur as a result of the Onshore Export Cable Corridor, during operation the effects will be limited owing to their localised extents, which within the broader context of the LCTs will not redefine landscape character.
800. For the reasons above, no significant effects are found on the Special Qualities of the North Devon Coast Area of Outstanding Natural Beauty, or the North Devon Heritage Coast, as a result of the construction of the Onshore Export Cable Corridor or at Landfall to MLWS.
801. As a result of the sensitive siting of the Onshore Substation, the separating distance from the NDCAONB and Heritage Coast, and screening effect of intervening landscape features, there would be no significant effects on these valued designated and defined areas of landscape as a result of either construction or operational effects associated with the Onshore Substation.

### 20.15.1.2 Visual

802. The Onshore Infrastructure may impact on existing views experienced by people within the LVIA study area. However, sensitive siting, existing vegetation in the landscape and built features within the surrounding context of the Onshore Substation restrict and limit the degree to which it is visible.
803. Significant visual effects as a result of the installation of the Landfall to MLWS and Onshore Export Cable Corridor are identified for very localised section of the South West Coast path at Saunton Downs and Saunton, across approximately 0.8km of the SWCP to the south of the Saunton Sands Hotel, Saunton Sands beach car park, and B3233. Significant effects during the installation of the Onshore Export Cable Corridor have also been identified on a short section of the SWCP to the north of the River Taw, between Broad Sands car park and up to approximately 0.7km to the east of Crow Beach House, and on a section of the route to the south of the river across approximately 1km from Instow Cricket Club eastwards to the north of the existing East Yelland Substation. Significant visual effects during the installation of the Landfall to MLWS and Onshore Export Cable Corridor are also found for properties and holiday cabins at Saunton, properties along Burrows Lane / Sandy Lane, and Crow Beach House, largely owing to their very close proximity and / or visibility of construction compounds. Effects during installation / construction would be short term and reversible.
804. Potential significant visual effects as a result of the construction of the Onshore Substation are found for Viewpoint 1, Viewpoint 4 (residential), and Viewpoint 5. At these locations, the Onshore Export Cable Corridor installation contributes to the significant effects identified for the construction of the Onshore Substation, notably at Viewpoints 1 and 5. Effects during installation / construction would be short term and reversible.
805. Significant visual effects are also found during operation in year 0 once construction activity is completed, for Viewpoint 1. In year 15, once mitigation planting has matured, there would be no residual significant effects on views from any of the eleven representative viewpoints.

### 20.15.1.3 Cumulative

806. The assessment of cumulative impacts from the Onshore Infrastructure and other developments and activities concluded that their cumulative interactions with the Offshore Project would be limited because of the substantial separating distances

involved. Consequently, the LVIA finds no significant cumulative effects between the Onshore Infrastructure and Offshore Project.

807. Significant cumulative landscape character effects during construction are found for LCA 4A - Estuaries as a result of the additional intensification and increase in the geographic extent of construction activities because of the Onshore Substation and Onshore Export Cable Corridor, to the south and west of the East Yelland Quay under-construction scheme. **Moderate significant adverse effects** arising from cumulative interactions would be perceived within a very localised part of this LCT.
808. Significant cumulative visual effects as a result of the construction activities associated with the Onshore Substation and Onshore Export Cable Corridor have been identified from Viewpoint 1, Viewpoint 4 (residential), Viewpoint 5, and Viewpoint 9. The incremental cumulative change arising from the Onshore Infrastructure would increase the influence of construction activities within these views and would bring construction in closer proximity to these locations. These are not additional significant effects as they have already been identified in relation to the Onshore Substation alone. These effects would be short term and reversible.
809. Significant cumulative visual effects are also found during operation in year 0 once construction activity is completed, for Viewpoint 4 (residential). In year 15 once mitigation planting has matured, there would be no residual significant cumulative effects.

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# White Cross Offshore Windfarm Environmental Statement

## Appendix 20.A: Methodology



## Appendix 20.A: Methodology

1. This appendix sets out the detailed methodology for **Chapter 20: Landscape and Visual Amenity**.

### 20.1 Landscape Assessment Methodology

#### 20.1.1 Landscape Sensitivity of Receptor

2. The sensitivity of a landscape character receptor is a combination of the judgements made about the value associated with that receptor and the susceptibility of the receptor to the development proposed.

##### 20.1.1.1 Value of the landscape receptor

3. The value of a landscape character receptor is a reflection of the value that society attaches to that landscape. The assessment of the landscape value is classified as high, medium-high, medium, medium-low, or low and the basis for this assessment is made clear using evidence and professional judgement, based on the following range of factors.
4. **Landscape designations:** A receptor that lies within the boundary of a recognised landscape related planning designation is of increased value, depending on the proportion of the receptor that is impacted and the level of importance of the designation which may be international, national, regional, or local. The absence of designations does not however preclude value, as an undesignated landscape character receptor may be valued as a resource in the local or immediate environment.
5. **Landscape quality:** The quality of a landscape character receptor is a reflection of its attributes, such as scenic quality, sense of place, rarity and representativeness and the extent to which its valued attributes have remained intact. A landscape with consistent, intact, well-defined, and distinctive attributes is considered to be of higher quality and, in turn, higher value, than a landscape where the introduction of elements has detracted from its character.
6. **Landscape experience:** The experiential qualities that can be evoked by a landscape receptor can add to its value and relates to a number of factors including:
  - the perceptual responses it evokes

- the cultural associations that may exist in literature or history, or the iconic status of the landscape in its own right
- the recreational value of the landscape
- the contribution of other values relating to the nature conservation or archaeology of the area.

#### 20.1.1.2 Landscape susceptibility to change

7. The susceptibility of a landscape character receptor to change reflects its ability to accommodate the changes that will occur as a result of the addition of the Onshore Infrastructure. Some landscape receptors are better able to accommodate change as a result of the development than others due to certain characteristics that are indicative of capacity to accommodate change. These characteristics may or not also be special landscape qualities that underpin designated landscapes.
8. The assessment of the susceptibility of the landscape receptor to change is classified as high, medium-high, medium, medium-low, or low and the basis for this assessment has been made clear using evidence and professional judgement. The following indicators of landscape susceptibility are considered in the context of the development proposed:
9. **Overall strength and robustness:** Collectively the overall characteristics and qualities of a particular landscape result in a strong and robust landscape that is capable of reasonably accommodating the influence of the Onshore Infrastructure without undue adverse effects on the special landscape qualities (in the case of a designated landscape) or the key characteristics.
10. **Landscape scale and topography:** The scale and topography are large enough to physically accommodate the influence of the Onshore Infrastructure. Topographical features such as more complex, distinctive, or small-scale coastal landforms are likely to be more susceptible than simple, broad, and homogenous coastal landforms.
11. **Openness and enclosure:** Openness in the landscape may increase susceptibility to change because it can result in wider visibility, however an open landscape may also be larger scale and simple, which would decrease susceptibility. Conversely, enclosed landscapes can offer more screening potential, limiting visibility to a smaller area, however they may also be smaller scale and more complex which would increase susceptibility.

12. **Skyline:** Prominent and distinctive skylines and horizons with important landmark features that are identified in the landscape character assessment, are generally considered to be more susceptible to development in comparison to broad, simple skylines which lack landmark features or contain other infrastructure features.
13. **Relationship with other development and landmarks:** Contemporary landscapes where there are existing similar developments or other forms of development (industry, mineral extraction, masts, urban fringe / large settlement, major transport routes) that already have a characterising influence result in a lower susceptibility to development in comparison to areas characterised by limited development or smaller scale, historic development, and landmarks.
14. **Perceptual qualities:** Notable landscapes that are acknowledged to be particularly scenic, wild, or tranquil are generally considered to be more susceptible to development in comparison to ordinary, cultivated or farmed / developed landscapes where perceptions of 'wildness' and tranquillity are less tangible. Landscapes which are either remote or appear natural may vary in their susceptibility to development.
15. **Landscape context and association:** the extent to which the Onshore Infrastructure will influence the character of landscape receptors across the study area relates to the associations that exist between the landscape receptor within which the Onshore Infrastructure is located and the landscape receptor from which it is experienced. In some situations, this association is strong, where the landscapes are directly related, and in other situations weak, where the landscape association is weak. The context and visual connection to areas of adjacent landscape character or designations has a bearing on the susceptibility to development.

#### 20.1.1.3 Landscape sensitivity rating

16. An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The evaluation of landscape sensitivity has been applied for each landscape receptor – high, medium-high, medium, medium-low, and low – by combining individual assessments of the value of the receptor and its susceptibility to change.

#### 20.1.1.4 Landscape Magnitude of Impact

17. The magnitude of impact affecting landscape receptors is an expression of the scale of the change that will result from the Onshore Infrastructure and is dependent on

a number of variables regarding the size or scale of the change and the geographical extent over which the change would be experienced.

#### 20.1.1.5 Size or scale of change

18. This criterion relates to the size or scale of change to the landscape that will arise as a result of the Onshore Infrastructure, based on the following factors.
19. **Landscape elements:** The degree to which the pattern of elements that makes up the landscape character is altered by the Onshore Infrastructure, by removal or addition of components in the landscape. The magnitude of impact will generally be higher if the features that make up the landscape character are extensively removed or altered, and/or if many new components are added to the landscape.
20. **Landscape characteristics:** The extent to which the effect of the Onshore Infrastructure changes, physically or perceptually, the key characteristics of the landscape that may be important to its distinctive character. This may include, for example, the scale of the landform, its relative simplicity or irregularity, the nature of the landscape context, the grain or orientation of the landscape, the degree to which the receptor is influenced by external features and the juxtaposition of the Onshore Infrastructure in relation to these key characteristics. If the Onshore Development Area is located in a landscape receptor that is already influenced by other similar development, this may reduce the magnitude of impact, particularly if there is a high level of integration and the developments form a unified and cohesive feature in the landscape.
21. **Landscape designation:** In the case of designated landscapes, the degree of change is considered in light of the impacts on the special landscape qualities which underpin the designation and the impact on the integrity of the designation. All landscapes change over time and much of that change is managed or planned. Often landscapes will have management objectives for 'protection' or 'accommodation' of development. The scale of change may be localised, or occurring over parts of an area, or more widespread affecting whole landscape receptors and their overall integrity.
22. **Distance:** The size and scale of change is also strongly influenced by the proximity of the Onshore Infrastructure to the receptor. Distance may be an influential factor to the extent that over a long range the scale of the influence on landscape receptors may be small or very limited. Conversely, landscapes closest to the development are likely to be most impacted. Where the development is located within a 'host'

landscape character area this would be directly impacted whilst adjacent areas of landscape character would be indirectly impacted.

23. **Amount and nature of change:** The amount of the Onshore Infrastructure that is seen. Generally, the greater the amount of the Onshore Infrastructure that can be seen, the higher the scale of change. Generally, the magnitude of impact is likely to be lower where the Onshore Infrastructure is largely perceived to be at a distance, rather than 'within' the landscape being considered.

#### 20.1.1.6 Geographical extent

24. The geographic extent over which the landscape impacts are experienced is also assessed, which is distinct from the size or scale of impact. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of impact and therefore the geographical extents of the significant and non-significant effects.
25. The extent of the impact will vary depending on the specific nature of the Onshore Infrastructure and is principally assessed through analysis of the extent of perceived changes to the landscape character through visibility of the Onshore Infrastructure.

#### 20.1.1.7 Duration and reversibility

26. The duration and reversibility of landscape impacts is based on the period over which the Onshore Infrastructure are likely to exist (during construction and operation) and the extent to which these elements are removed (during decommissioning) and its impacts reversed at the end of that period. Long-term, medium-term, and short-term landscape impacts are defined as follows:
- long-term – more than 10 years (may be defined as permanent or reversible)
  - medium-term – 6 to 10 years
  - short-term – 1 to 5 years.
27. This evaluation is not combined in the assessment of the level of magnitude, but instead is expressed and considered in relation to the significant and non-significant effects.

#### 20.1.1.8 Landscape magnitude of impact rating

28. The 'magnitude' or 'degree of change' resulting from the Onshore Infrastructure is described as 'High', 'Medium-high', 'Medium', 'Medium-low' 'Low' or 'Negligible'. In assessing magnitude of impact, the assessment focuses on the size or scale of

change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects, for example as short / medium / long-term and temporary / permanent.

29. Where the assessment identifies that there is no loss or alteration of characteristics, features or elements, or no observable impact in either direction upon a given receptor or group of receptors from an Impact, for example due to implication of embedded mitigation or through an assessment of the potential pathway, then the assessment for that Impact upon those receptor(s) will be **No Change**.
30. Impacts assessed as **No Change** have no potential for a significance of effect and therefore are not assessed further.

#### 20.1.1.9 Landscape Evaluation of Significance of Effect

31. The level of landscape effect is evaluated primarily through the combination of landscape sensitivity and magnitude of impact. Once the level of effect has been assessed, a judgement is then made as to whether the level of effect is 'significant' or 'not significant' as required by the EIA Regulations. This process is assisted by the matrix in **Table 20.26** which is used to guide the assessment. Geographical extent and duration and reversibility are considered relevant in drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.
32. Further information is also provided about the nature of the effects (whether these would be direct / indirect; temporary / permanent / reversible; beneficial / neutral / adverse or cumulative).
33. A significant effect occurs where the combination of the variables results in the Onshore Infrastructure having a defining effect on the landscape receptor, or where changes of a lower magnitude impact upon a landscape receptor that is of particularly high sensitivity. A major loss or irreversible effect over an extensive area or landscape character, affecting landscape elements, characteristics and / or perceptual aspects that are key to a nationally valued landscape are likely to be significant, particularly if they are of long duration and irreversible.
34. A non-significant effect would occur where the effect of the Onshore Infrastructure is not defining, and the landscape character of the receptor continues to be characterised principally by its baseline characteristics. Equally a small-scale change experienced by a receptor of high sensitivity may not significantly impact the special



landscape quality or integrity of a designation. Reversible effects, on elements, characteristics and character that are of small-scale or geographical extent or affecting lower value receptors, are unlikely to be significant.

## 20.2 Visual Assessment Methodology

35. Visual effects are concerned wholly with the impact of the Onshore Infrastructure on views, and the general visual amenity. Visual effects are defined by the Landscape Institute in GLVIA 3, paragraphs 6.1 as follows "*An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity. The concern ... is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the context and character of views.*"
36. Visual effects are identified for different receptors (people) who would experience the view at their place of residence, within their community, during recreational activities, at work, or when travelling through the area. The visual effects may include the following:
- **Visual effect:** a change to an existing static view, sequential views, or wider visual amenity as a result of development or the loss of particular landscape elements or features already present in the view
  - **Cumulative visual effects:** the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.
37. The level of visual effect (and whether this is significant) is determined through consideration of the sensitivity of the visual receptor and their view and the magnitude of impact that would be brought about by the Onshore Infrastructure.

### 20.2.1 Zone of Theoretical Visibility (ZTV)

38. Plans mapping the ZTV are used to analyse the extent of theoretical visibility of the Onshore Substation. The ZTVs provide a starting point in the assessment process and tend towards giving a 'worst case' or greatest calculation of the theoretical visibility. ZTV production for the LVIA, including limitations, is described in **Section 20.6**.

### 20.2.2 Viewpoint Analysis

39. Viewpoint analysis is used to assist the assessment and is conducted from selected viewpoints within the study area. The purpose of this is to assess both the level of

visual effect for particular receptors and to help guide the design process and focus of the assessment. A range of viewpoints are examined in detail and analysed to determine whether a significant visual effect would occur.

40. The assessment involves visiting the viewpoint location and viewing visualisations prepared for each viewpoint location. The fieldwork is generally conducted in periods of fine weather with good visibility and considers seasonal changes such as reduced leaf cover or hedgerow maintenance. The viewpoint analysis is used to assist in the assessment of effects on visual receptor locations as well as landscape character effects reported in the LVIA.

### 20.2.3 Visual Sensitivity of Receptor

41. In accordance with paragraphs 6.31 to 6.37 of GLVIA3, the sensitivity of visual receptors is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change likely to result from the Onshore Infrastructure on the view and visual amenity.

#### 20.2.3.1 Value of the View

42. The value of a view or series of views reflects the recognition and the importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s). The value of a view has been classified as high, medium-high, medium, medium-low, or low and the basis for this assessment has been made clear using evidence and professional judgement, based on the following criteria.
  - **Formal recognition** – The value of views can be formally recognised through their identification on Ordnance Survey (OS) or tourist maps as formal viewpoints, sign-posted and with facilities provided to add to the enjoyment of the viewpoint such as parking, seating, and interpretation boards. Specific views may be afforded protection in local planning policy and recognised as valued views. Specific views can also be cited as being of importance in relation to landscape or heritage planning designations, for example the value of a view has been increased if it presents an important vista from a designed landscape or lies within or overlooks a designated area, which implies a greater value to the visible landscape
  - **Informal recognition** – Views that are well-known at a local level and/or have particular scenic qualities can have an increased value, even if there is no formal recognition or designation. Views or viewpoints are sometimes informally

recognised through references in art or literature, and this can also add to their value. A viewpoint that is visited or appreciated by a large number of people will generally have greater importance than one gained by very few people.

### 20.2.3.2 Susceptibility to Change

43. Susceptibility relates to the nature of the viewer experiencing the view and how susceptible they are to the potential impacts of the Onshore Infrastructure. A judgement to determine the level of susceptibility therefore relates to the nature of the viewer and their experience from that particular viewpoint or series of viewpoints, classified as high, medium-high, medium, medium-low, or low and based on the following criteria:

- **Nature of the viewer** – The nature of the viewer is defined by the occupation or activity of the viewer at the viewpoint or series of viewpoints. The most common groups of viewers considered in the visual assessment include residents, motorists, and people taking part in recreational activity or working. Viewers, whose attention is focused on the landscape, or with static long-term views, are likely to have a higher susceptibility. Viewers travelling in cars or on trains will tend to have a lower susceptibility as their view is transient and moving. The least sensitive viewers are usually people at their place of work as they are generally less susceptible to changes in views
- **Experience of the viewer** – The experience of the visual receptor relates to the extent to which the viewer's attention or interest may be focused on the view and the visual amenity they experience at a particular location. The susceptibility of the viewer to change arising from the Onshore Infrastructure may be influenced by the viewer's attention or interest in the view, which may be focused on a particular direction, from a static or transitory position, over a long or short duration, and with high or low clarity. For example, if the principal outlook from a settlement is aligned directly towards the Onshore Development Area, the experience of the visual receptor is altered more notably than if the experience relates to a glimpsed view seen at an oblique angle from a car travelling at high speed. The visual amenity experienced by the viewer varies depending on the presence and relationship of visible components, features or patterns experienced in the view and the degree to which the landscape in the view may accommodate the influence of the Onshore Infrastructure.

### 20.2.3.3 Visual Sensitivity Rating

44. An overall level of sensitivity is applied for each visual receptor or view – high, medium-high, medium, medium-low, or low by combining individual assessments of the value of the view and the susceptibility of the visual receptor to change. Each visual receptor, meaning the particular person or group of people likely to be impacted at a specific viewpoint, is assessed in terms of their sensitivity.

## 20.2.4 Visual Magnitude of impact

45. The visual magnitude of impact is an expression of the scale of the change that will result from the Onshore Infrastructure and is dependent on a number of variables regarding the size or scale of the change and the geographical extent over which the change would be experienced. A separate assessment is also made of the duration and reversibility of visual effects.

### 20.2.4.1 Size or Scale of Change

46. An assessment is made regarding the size or scale of change in the view that is likely to be experienced as a result of the Onshore Infrastructure, based on the following criteria:
- **Distance:** the distance between the visual receptor/viewpoint and the Onshore Development Area. Generally, the greater the distance, the lower the magnitude of impact, as the Onshore Infrastructure will constitute a smaller scale component of the view
  - **Size:** the amount and size of the Onshore Infrastructure that is seen. Visibility may range from small or partial visibility of the Onshore Infrastructure to all of the onshore components being visible. Generally, the larger and greater number of the Onshore Infrastructure that appear in the view, the higher the magnitude of impact. This is also related to the degree to which the Onshore Infrastructure or partly screened by landform, vegetation (seasonal) and / or built form. Conversely open views are likely to reveal more of the Onshore Infrastructure, particularly where this is a key characteristic of the landscape context
  - **Scale:** the scale of the change in the view, with respect to the loss or addition of features in the view and changes in its composition. The scale of the Onshore Infrastructure may appear larger or smaller relative to the scale of the receiving landscape
  - **Field of view:** the vertical / horizontal field of view (FoV/HFoV) and the proportion of the view that is impacted by the Onshore Infrastructure. Generally,

the more of the proportion of a view that is impacted, the higher the magnitude of impact. If the Onshore Infrastructure extend across the whole of the open part of the outlook, the magnitude of impact is higher as the full view has been impacted. Conversely, if the Onshore Infrastructure cover just a narrow part of an open, expansive, and wide view, the magnitude of impact is likely to be reduced as it will not affect the whole open part of the outlook. This can in part be described objectively by reference to the horizontal / vertical FoV impacted, relative to the extent and proportion of the available view

- **Contrast:** the character and context within which the Onshore Infrastructure are seen and the degree of contrast or integration of any new features with existing landscape elements, in terms of scale, form, mass, line, height, colour, luminance and motion. Developments which contrast or appear incongruous in terms of colour, scale and form are likely to be more visible and have a higher magnitude of impact
- **Consistency of image:** the consistency of image of Onshore Infrastructure in relation to other developments. The magnitude of impact of the Onshore Infrastructure is likely to be lower if its layout design is broadly similar to other developments in the landscape, in terms of its scale, form and general appearance. New development is more likely to appear as logical components of the landscape with a strong rationale for their location
- **Skyline / background:** Whether the Onshore Infrastructure would be viewed against the skyline, or a background landscape may affect the level of contrast and magnitude. If the Onshore Infrastructure add to an already developed skyline the magnitude of impact would tend to be lower
- **Number:** generally, the greater the number of separate Onshore Infrastructure element seen simultaneously or sequentially, the higher the magnitude of impact. Further effects would occur in the case of separate developments and their spatial relationship to each other would affect the magnitude of impact. For example, development that appears as an extension to an existing development would tend to result in a lower magnitude of impact than a separate, new development
- **Nature of visibility:** the nature of visibility is a further factor for consideration. The Onshore Development Area may be subject to various phases of development change and the manner in which the Onshore Infrastructure may be viewed could be intermittent or continuous and / or vary seasonally, due to periodic management or leaf fall.

#### 20.2.4.2 Geographical Extent

47. The geographic extent over which the visual impact has been experienced is also assessed, which is distinct from the size or scale of impact on the view itself and is described in terms of the physical area or location over which it is experienced (described as a linear or area measurement). The extent of the impact varies according to the specific nature of the Onshore Infrastructure and is principally assessed through ZTV, field survey and viewpoint analysis of the extent of visibility likely to be experienced by visual receptors. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of impact and therefore the geographical extents of the significant and non-significant effects.

#### 20.2.4.3 Duration and Reversibility

48. The duration and reversibility of landscape impacts is based on the period over which Onshore Infrastructure are likely to exist (during construction and operation) and the extent to which these components are removed (during decommissioning) and its effects reversed at the end of that period. Long-term, medium-term, and short-term landscape effects are defined as follows:

- long-term – more than 10 years (may be defined as permanent or reversible)
- medium-term – 6 to 10 years
- short-term – 1 to 5 years.

49. This evaluation is not combined in the assessment of the level of magnitude, but instead is expressed and considered in relation to the significant and non-significant effects.

#### 20.2.4.4 Visual Magnitude of Impact Rating

50. The 'magnitude' or 'degree of change' resulting from the Onshore Infrastructure is described as 'High', 'Medium-high', 'Medium', 'Medium-low', 'Low' and 'Negligible'. In assessing the magnitude of impact the assessment focuses on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e., as short / medium / long-term, and temporary / permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement.

51. Where the assessment identifies that there is no loss or alteration of characteristics, features or elements, or no observable impact in either direction upon a given

receptor or group of receptors from an Impact, for example due to implication of embedded mitigation or through an assessment of the potential pathway, then the assessment for that Impact upon those receptor(s) will be **No Change**.

52. Impacts assessed as **No Change** have no potential for a significance of effect and therefore are not assessed further.

### 20.2.5 Visual Evaluation of Significance of Effect

53. The level of visual effect is evaluated through the combination of visual sensitivity and magnitude of impact. Once the level of effect has been assessed, a judgement is then made (using professional judgement) as to whether the level of effect is "significant" or "not significant" as required by the relevant EIA Regulations. This process is assisted by the matrix in Table 20.25 which is used to guide the assessment. Geographical extent and duration and reversibility are considered as part of drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.
54. Further information is also provided about the nature of the effects (whether these would be direct / indirect; temporary / permanent / reversible; beneficial / neutral / adverse or cumulative).
55. A significant effect is more likely to occur where a combination of the variables results in the Onshore Infrastructure having a defining effect on the view or visual amenity or where changes affect a visual receptor that is of high sensitivity.
56. A non-significant effect is more likely to occur where a combination of the variables results in the Onshore Infrastructure having a non-defining effect on the view or visual amenity or where changes affect a visual receptor that is of low sensitivity.



## 20.3 Defining Effect Significance – Cumulative Effect Assessment

57. GLVIA3 (Landscape Institute and IEMA, 2013, p120) defines cumulative landscape and visual effects as those that “result from additional changes to the landscape and visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.”
58. The projects and plans selected as relevant to the Cumulative Effect Assessment (CEA) are based upon the results of a screening exercise which is explained further in **Chapter 6: EIA Methodology** and also in **Section 20.5.2** and **20.11** of this chapter. Each project or plan has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.
59. Other proposed developments that have the potential for cumulative effects in combination with the Onshore Infrastructure are typically considered to be those developments that are found within the LVIA study area (see **Figure 20.12**). Beyond the LVIA study area cumulative effects are limited by distance and a lack of intervisibility with other proposed developments.
60. Adjacent developments may complement one another, or may be discordant with one another, and it is the increased or reduced level of significance of effects which arises as a result of this change that is assessed. Where this occurs, the magnitude of impact varies according to cumulative effect factors such as its consistency of image and degree of contrast or integration with the Onshore Infrastructure, as well as other 'non-cumulative' factors, such as its distance, lateral spread, and amount of visibility.
61. NatureScot's guidance, *Assessing the Cumulative Impact of Onshore Wind Energy Developments* (NatureScot 2021) is widely used across the UK to inform the specific assessment of the cumulative effects of windfarms. Both GLVIA3 and NatureScot's guidance provide the basis for the methodology for the CEA undertaken in the LVIA. NatureScot's guidance highlights that:
62. “The purpose of a Cumulative Landscape and Visual Impact Assessment (CLVIA) is to describe, visually represent and assess the ways in which a proposed wind farm would have additional impacts when considered with other consented or proposed wind farms. It should identify the significant cumulative impacts arising from the proposed wind farm. The assessment should be proportionate to the likely impacts



and all CLVIA should accord with the guidelines within GLVIA3. The emphasis should be on the production of relevant and useful information, highlighting why the proposals assessed have been included and why others have been excluded, rather than the provision of a large volume of information.” (NatureScot 2021, p8);

63. “Cumulative impacts can change either the physical fabric or character of the landscape, or any special values attached to it” (NatureScot 2021, p7); and
64. “Cumulative impacts on visual amenity can be caused by ‘combined visibility’ and/or ‘sequential impacts’” (NatureScot 2021, p7).
65. GLVIA3, p120 also highlights that “the focus of the cumulative assessment will be on the additional effect of the project in conjunction with other developments of the same type (as for example, in the case of wind farms).”
66. In line with NatureScot guidance and GLVIA3, cumulative effects are assessed in this LVIA as the additional changes caused by the Onshore Infrastructure in conjunction with other similar developments (not the totality of the cumulative effect). The CEA assesses the cumulative effect of the Onshore Infrastructure with other projects against the baseline, with the assessment of significance apportioning the amount of the effect that is attributable to the Onshore Infrastructure. Adjacent developments may complement one another, or may be discordant with one another, and it is the increased or reduced level of significance of effects which arises because of this change that is assessed in the CEA, such as through design discordance or proliferation of multiple developments affecting characteristics or new geographic areas, and ultimately if characteristic changes occur because of multiple developments becoming a prevailing characteristic of the landscape / seascape or view.
67. In accordance with NatureScot guidance and GLVIA3 (para 7.13), existing projects and under-construction are included in the LVIA baseline and described as part of the baseline conditions, including the extent to which these have altered character and views, and sensitivity to electrical infrastructure development. These developments have an existing influence on the baseline landscape and visual environment. The adjacent Sandbanks Business Park / Yelland Terminal includes commercial and industrial built form that exert a development influence on the character of the LVIA study area, particularly in close proximity. Electrical infrastructure is a common feature of the landscape in close proximity to the Onshore Infrastructure and includes large-scale overhead power lines and an existing electrical substation. A mixed-use residential scheme at East Yelland Quay

is currently under-construction immediately to the north of the Onshore Substation site. The application documents suggest that the development proposals would be undertaken in 10 phases with an approximate 13-year build programme. The construction programme for the Onshore Substation is anticipated to be complete by October 2025, which would therefore be complete before there are any residential receptors at Yelland Quay. For these reasons, the East Yelland Quay scheme is considered in the CEA.

68. A comprehensive list of projects that have the potential to contribute to the cumulative effects of the Onshore Infrastructure has been compiled and this 'long list' and the approach to compiling this list is described in **Chapter 6: EIA Methodology**, with the long list presented in **Section 20.5.2** and shown on **Figure 20.12**. In order to focus the cumulative assessment on the potential for significant cumulative effects the LVIA has undertaken a further preliminary assessment of the shortlisted cumulative projects based on professional judgement, assessment rationale and guidance relevant to landscape and visual impacts. The results of this are presented in **Section 20.11**.

## 20.4 Evaluation of Significance of Effect

69. The matrix presented in **Table 20.26** is used as a guide to help inform the threshold of significance when combining receptor sensitivity and magnitude of impact to assess significance. On this basis potential effects are assessed as Negligible, Minor, Moderate-Minor, Moderate, Moderate-Major, and Major. In those instances where the magnitude has been assessed as 'no change' and the level of effect is recorded as 'No effect.'
70. For the purposes of this assessment, any effects with a significance level of **Major and Moderate-Major** have been deemed significant in line with EIA requirements. 'Moderate' levels of effect have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of impact factors evaluated. These assessments are explained as part of the assessment, where they occur. Significance can therefore occur at a range of levels depending on the magnitude and sensitivity, however in all cases, a significant effect is considered more likely to occur where a combination of the variables results in Onshore Infrastructure having a defining effect on the landscape/seascape character or view. Definitions are not provided for the individual categories of significance shown in the matrix and the reader should refer to the

detailed definitions provided for the factors that combine to inform sensitivity and magnitude.

71. Effects assessed as being either Moderate-Minor, Minor or Negligible level are assessed as not-significant.
72. In line with the emphasis placed in GLVIA3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone.
73. The LVIA, unavoidably, involves a combination of quantitative and qualitative assessment and wherever possible cross reference has been made to objective evidence, baseline figures and / or to photomontage visualisations to support the assessment conclusions. Often a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach. Importantly, each effect results from its own unique set of circumstances and has been assessed on a case by case basis. The matrix as presented in **Table 20.26** should therefore be considered as a guide and any deviation from this guide has been clearly explained in the assessment. The nature of the effect, whether adverse, neutral, or beneficial is discussed in **Section 20.5**.

## 20.5 Nature of Effects

74. The EIA Regulations 2017 state that the ES should define 'the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development'.
75. In accordance with the EIA Regulations 2017, in this assessment the nature of effects refers to whether the landscape and / or visual effect of the Onshore Infrastructure is positive or negative (herein referred to as 'beneficial' / 'neutral' or 'adverse').
76. Guidance provided in GLVIA3 on the nature of effect states that 'in the LVIA, thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity', but it does not provide guidance as to

how that may be established in practice. The nature of effect is therefore one that requires interpretation and, where applied, this involves reasoned professional opinion.

*Table 20.26 Significance of an impact - resulting from each combination of receptor sensitivity and the magnitude of the effect upon it*

<b>Magnitude Sensitivity</b>	<b>High</b>	<b>Medium-high</b>	<b>Medium</b>	<b>Medium-low</b>	<b>Low</b>	<b>Negligible</b>
<b>High</b>	Major	Major	Major-moderate	Moderate	Moderate-minor	Moderate-minor
<b>Medium-high</b>	Major	Major-moderate	Moderate	Moderate	Moderate-minor	Minor
<b>Medium</b>	Major-moderate	Moderate	Moderate	Moderate-minor	Minor	Minor-Negligible
<b>Medium-low</b>	Moderate	Moderate	Moderate-minor	Minor	Minor-Negligible	Negligible
<b>Low</b>	Moderate-minor	Moderate-minor	Minor	Minor-Negligible	Negligible	Negligible

77. In this LVIA a precautionary approach has been adopted, which assumes that significant landscape and visual effects are weighed on the adverse side of the planning balance, unless otherwise stated. Beneficial or neutral effects may, however, arise in certain situations and are stated in the assessment where relevant, based on the following definitions.
- **Beneficial effects** - contribute to the landscape and visual resource through the enhancement of desirable characteristics or the introduction of new, beneficial attributes. The development contributes to the landscape by virtue of good design or the introduction of new landscape planting. The removal of undesirable existing elements or characteristics can also be beneficial, as can their replacement with more appropriate components
  - **Neutral effects** - occur where the development fits with the existing landscape character or visual amenity. The development neither contributes to nor detracts from the landscape and visual resource and can be accommodated with neither beneficial or adverse effects, nor where the effects are so limited that the change is hardly noticeable. A change to the landscape and visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation
  - **Adverse effects** - are those that detract from the landscape character or quality of visual attributes experienced, through the introduction of elements that contrast, in a detrimental way, with the existing characteristics of the landscape and visual resource, or through the removal of elements that are key in its characterisation.

## 20.6 Onshore Substation Theoretical Visibility Analysis

78. The ZTVs (**Figure 20.7 and Figure 20.8**) have been generated using Geographic Information Systems software to demonstrate the extent to which the Onshore Substation may theoretically be seen from any point in the study area.
79. The finished ground level of the Onshore Substation has been established using a balanced cut and fill in order to determine the ground level across the Onshore Substation platform. ZTV analysis has been carried out for a maximum parameter model based on the maximum Worst Case Scenario Onshore Substation building height of 10m above a finished floor level of 6.73m AOD giving a maximum building roof height parameter of 16.73m AOD.
80. It should also be noted that the Onshore Substation is based on the Worst Case Scenario of the tallest option within the largest AIS platform area and that as such

the ZTV represents an unrealistic worst case position in terms of theoretical or likely actual visibility of GIS or AIS structures.

81. ZTVs are primarily calculated based on the visibility at 2m above the height of the landform relative to the height of the Onshore Substation (i.e., viewer height of 2m). The ZTV shown in **Figure 20.7** reflects bare ground theoretical visibility. The ZTV shown in **Figure 20.8** also factors in the potential screening effect of areas of woodland within the study area. Woodland heights have been derived from 1m LiDAR Digital Surface Model (DSM) data. The resolution of the ZTVs does not consider the screening effect of smaller groups of trees, hedgerows, hedgerow trees, buildings, or other local features. As a result, the ZTVs present a conservative worst case assumption in respect of theoretical visibility.
82. There are limitations in the production of the ZTV, and these should be borne in mind in its consideration and use:
  - The ZTVs are based on 1m DSM LiDAR data with a viewer height of 2m above ground level
  - The bare ground ZTV does not take into account the screening effects of woodlands, vegetation, buildings, or other local features that may prevent or reduce visibility
  - The screened ZTV illustrates the bare ground situation with major woodland blocks reflected, but does not take into account the screening effects of other vegetation, buildings, or other local features that may prevent or reduce visibility
  - The ZTV does not indicate the decrease in visibility that occurs with increased distance from the Onshore Substation. The nature of what is visible from 1km away would differ markedly from what is visible from 3km away, although both are indicated on the ZTV as having the same level of visibility
  - There is a wide range of variation within the visibility shown on the ZTV. For example, an area shown as having visibility of the Onshore Substation may only gain views of the smallest extremity rather than all of it as may be the case elsewhere.
83. These limitations mean that while the ZTV is used as a starting point in the assessment, providing an indication of where the Onshore Substation would theoretically be visible, the information drawn from the ZTV is not completely relied upon to assess visibility of the Onshore Substation.

## 20.7 Visualisations

84. The viewpoint assessment of the Onshore Substation is illustrated by a range of visualisations, including photographs and block model photomontages, which are in line with current best practice and the guidance provided in Landscape Institute – Visual Representation of Development Proposals (2019). Visualisations have a number of limitations when using them to form a judgement on a development. These include:

- The images provided give a reasonable impression of the scale of and distance to the Onshore Substation, but can never be 100% accurate
- The viewpoints illustrated are representative of views in the area but cannot represent visibility at all locations
- To form the best impression of the visual impacts of the Onshore Substation these images are best viewed at the viewpoint location shown
- The visualisations must be printed at the right size to be viewed properly (A1 width) and viewed at a comfortable viewing distance
- The first visualisation sheet for each of the viewpoints illustrates the existing view with a baseline photograph. The second visualisation sheet includes a photomontage view of the Onshore Substation at year 0 of the operation and maintenance phase once construction is completed. And the third visualisation sheet includes proposed mitigation planting at year 15
- The Onshore Substation Worst Case Scenario is a building height of 10m above a finished floor level of 6.73m AOD giving a maximum building roof height parameter of 16.73m AOD. This shows the tallest option within the largest AIS platform area and that as such is an overestimation of the footprint of the block model in parts of the Onshore Substation maximum parameter but represents the worst case LVIA Rochdale Envelope in terms of assessment
- The configuration of the 3D model and location within the Onshore Substation platform is considered to represent a realistic arrangement for LVIA. For viewpoints where the example 3D block model is not visible, or is partially visible, the screened extents are illustrated as a dashed line to indicate its location is within the view, beyond intervening obstructions
- The proposed mitigation planting has also been shown on viewpoints representing a conservative estimate of the approximate height of mitigation planting after 15 years (estimated to be 7.5m as shown on the year 15 visualisations)
- For Viewpoint 1 (**Figure 20.14**), Viewpoint 3 (**Figure 20.16**), and Viewpoint 4 (**Figure 20.17**) a second set of illustrative photomontages have been produced



to show a more detailed impression of how the proposed Onshore Substation may look in views and the landscape based on the principles of the **Design Code (Design and Access Statement: Appendix B)**. It is important to note that these visualisations are illustrative only and not used as the basis of the assessment, described in **Section 20.4.3**.

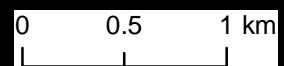
85. The photographs used to produce the photomontages have been taken using Canon EOS 5D / 6D Digital SLR cameras, with a fixed lens and a full-frame (35 mm negative size) CMOS sensor. The photographs are taken on a tripod with a pano-head at a height of approximately 1.5m above ground. To create the baseline panorama, the frames are individually cylindrically projected and then digitally joined to create a planar projected panorama with a 53.5-degree field of view. Tonal alterations are made using Adobe software to create an even range of tones across the photographs once joined.
86. The photographs and photomontages used in this assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessments are carried out from observations in the field and therefore may include elements that are not visible in the photographs.



# White Cross Offshore Windfarm Environmental Statement

**Appendix 20.B: LVIA Figures and Visualisations**





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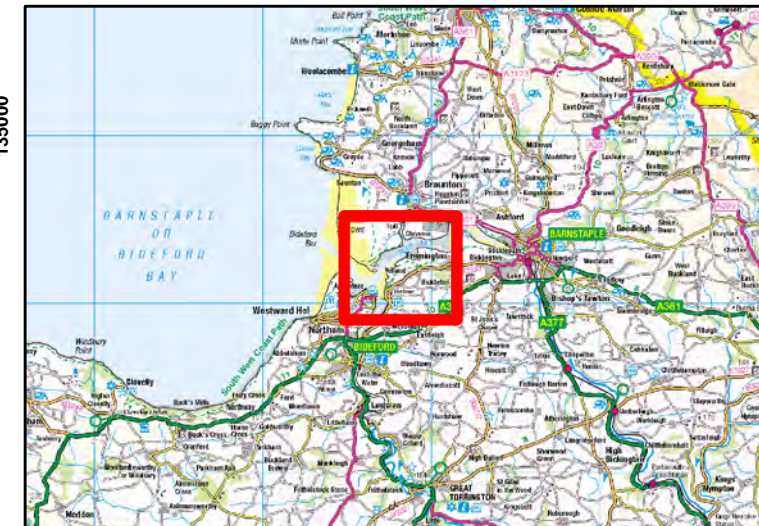


245000

250000

135000

135000



Legend:

- Onshore Substation Operational Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- Properties Within 100m of Cable Corridor

Client:

Offshore Wind Ltd.

Project:

White Cross  
Offshore Windfarm

Title:

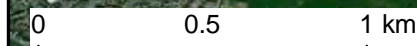
Figure 20-2a: Aerial Mapping with Onshore Development Area

Figure: 20-2a

Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0626

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	25/07/2023	NL	CW	A3	1:23,000

Co-ordinate system: British National Grid



245000

250000

130000

130000

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 Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community







- Legend:
- Onshore Substation Operational Compound
  - 1 km Radii
  - Onshore Substation 3 km Study Area
  - Onshore Development Area
  - Onshore Export Cable Corridor and Landfall 1 km Study Area
  - Properties Within 100m of Cable Corridor

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title:  
Figure 20-2b: Aerial Mapping with Onshore Development Area

Figure: 20-2b      Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0626

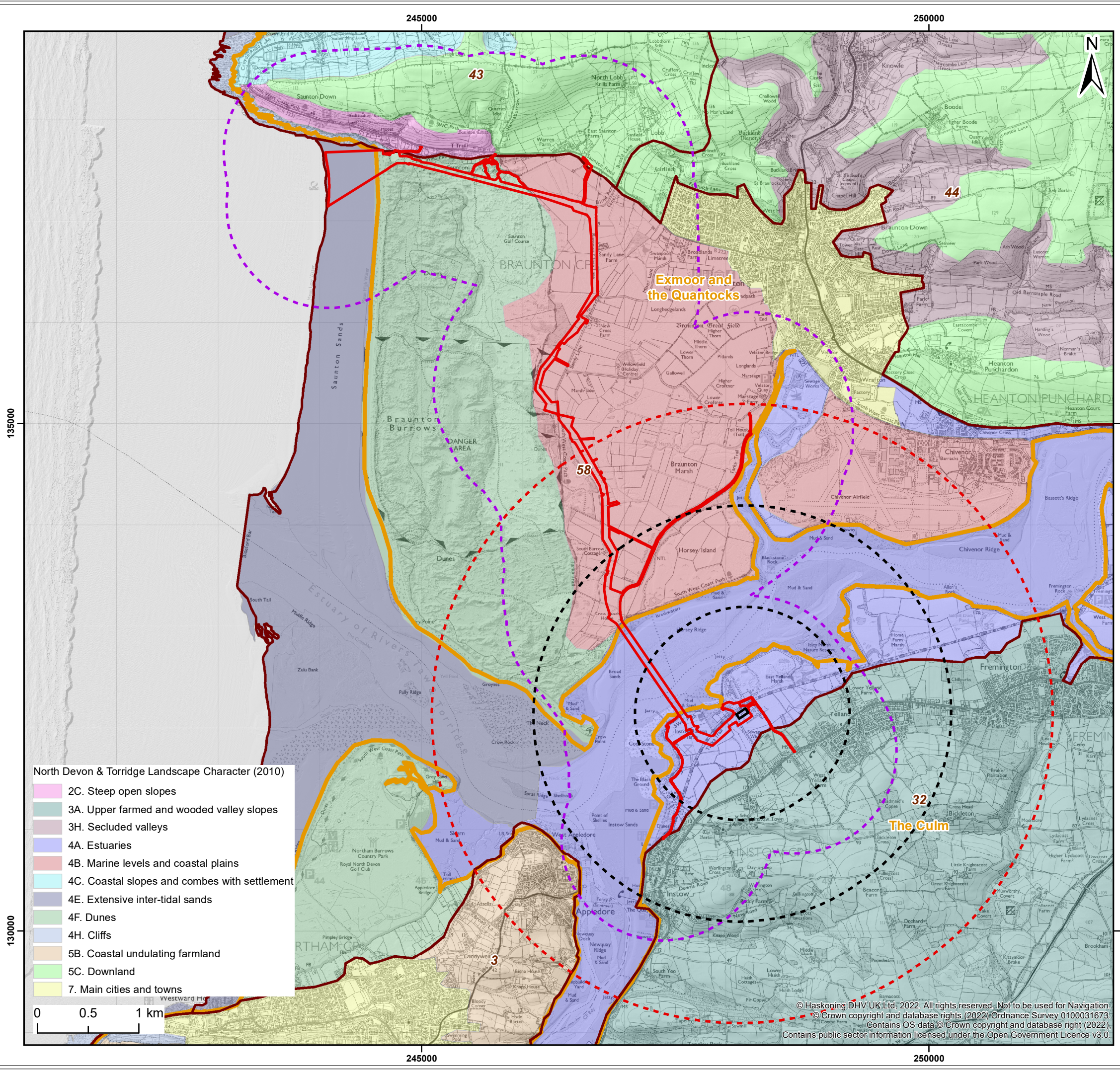
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P01	25/07/2023	NL	CW	A3	1:23,000

Co-ordinate system: British National Grid

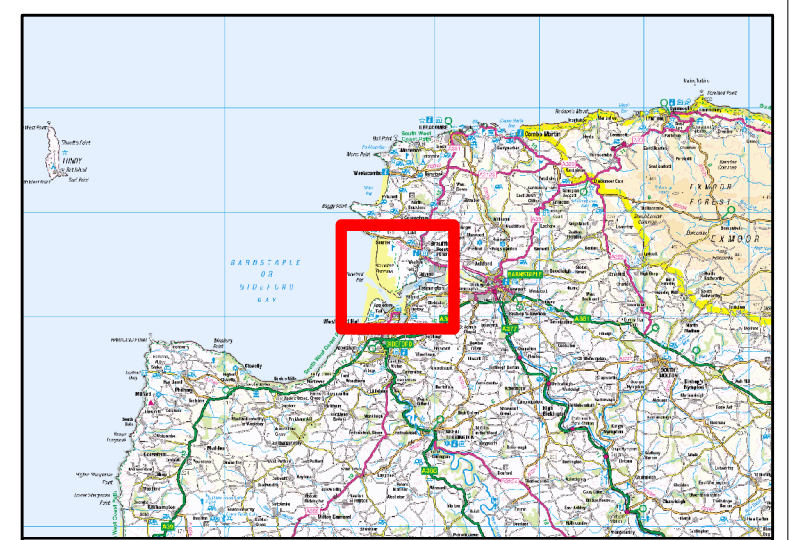


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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community





- North Devon & Torridge Landscape Character (2010)
- 2C. Steep open slopes
  - 3A. Upper farmed and wooded valley slopes
  - 3H. Secluded valleys
  - 4A. Estuaries
  - 4B. Marine levels and coastal plains
  - 4C. Coastal slopes and combes with settlement
  - 4E. Extensive inter-tidal sands
  - 4F. Dunes
  - 4H. Cliffs
  - 5B. Coastal undulating farmland
  - 5C. Downland
  - 7. Main cities and towns



**Legend:**

- Onshore Substation Operation Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- Natural England National Character Area
- Devon Landscape Character (2017)

- 3 - Bideford Bay Coast
- 32 - High Culm Ridges
- 43 - North Devon Coastal Downs
- 44 - North Devon Downs
- 58 - Taw-Torridge Estuary

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title: Figure 20-3: Landscape Character

Figure: 20-3 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0627

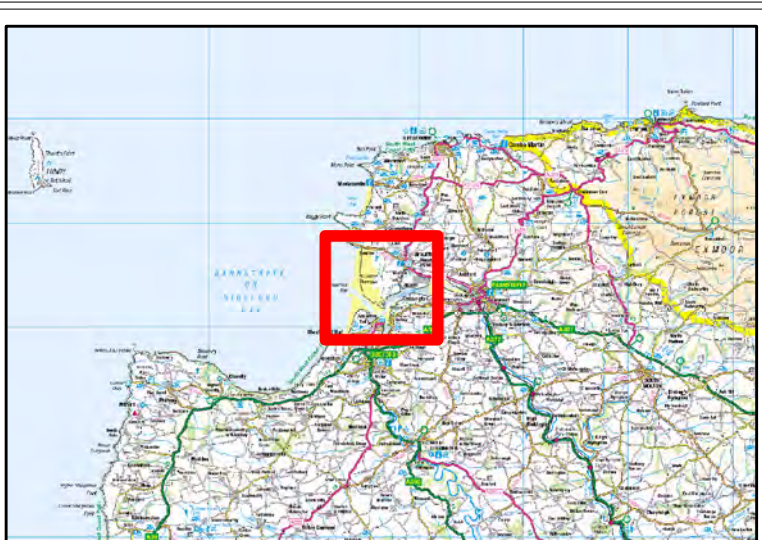
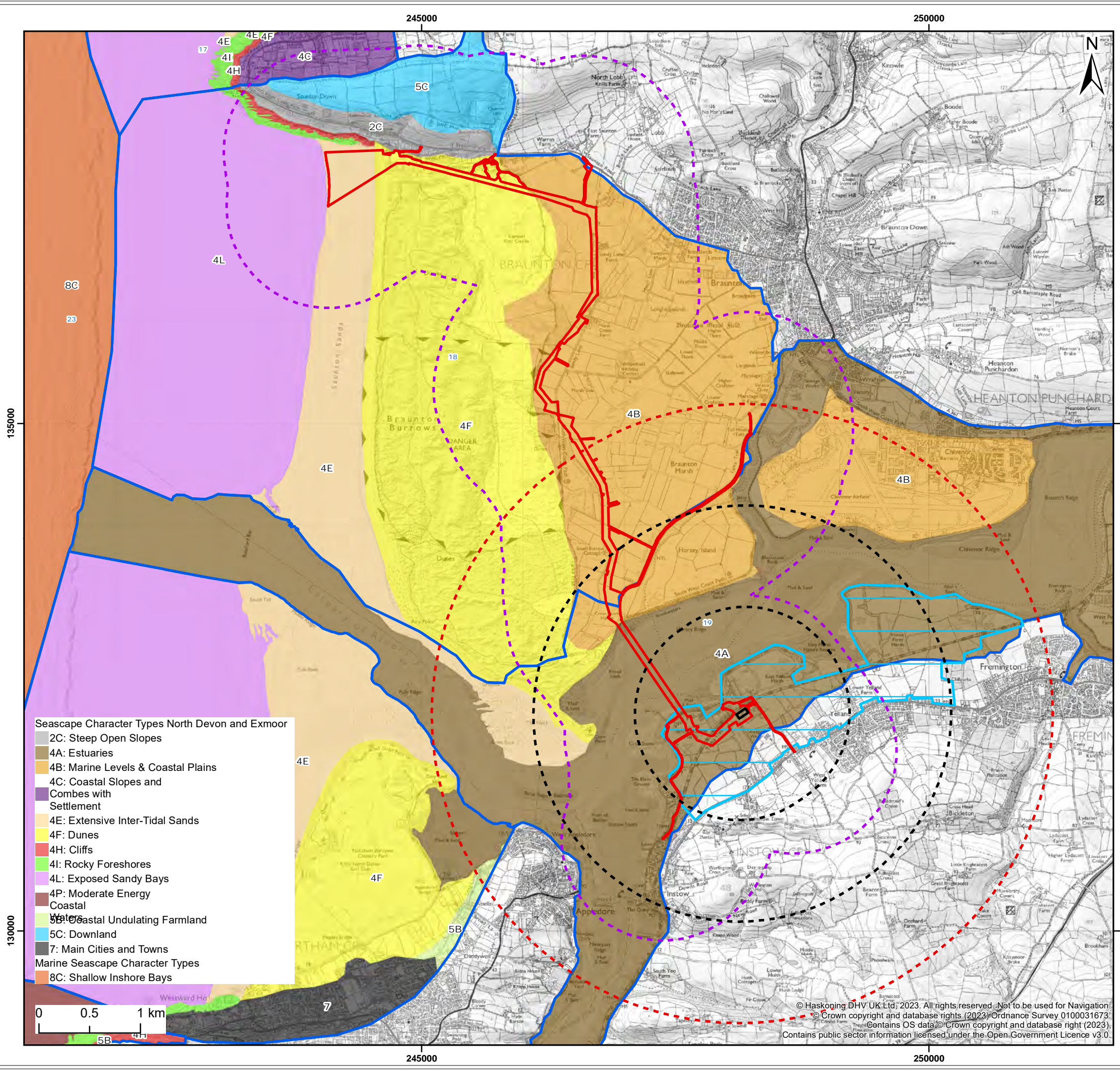
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	25/07/2023	NL	CW	A3	1:37,000

Co-ordinate system: British National Grid




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- Legend:**
- Onshore Substation Operational Compound
  - 1 km Radii
  - Onshore Substation 3 km Study
  - Onshore Development
  - Onshore Export Cable Corridor and Landfall 1 km Study Area
  - Assessment of Landscape Coastal Characteristics, and Landscape Value Coast and Estuarine Zone (2016) – Zone R: Yelland Marshes
  - Seascape Character Area North Devon and
    - 17: Croyde Bay & Baggy Point
    - 18: Branton Burrows and Saunton Coast
    - 19: Taw-Torridge Estuary
    - 20: Northam Burrows and Westward Ho!
    - 21: Abbotsham
    - 23: Inner Bideford Bay

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title:

Figure 20-4: Seascape and Estuary Character

Figure: 20-4      Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0628

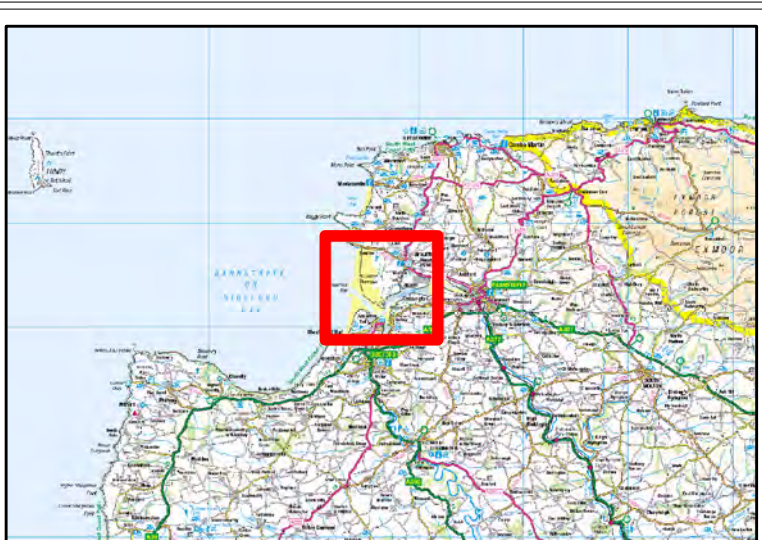
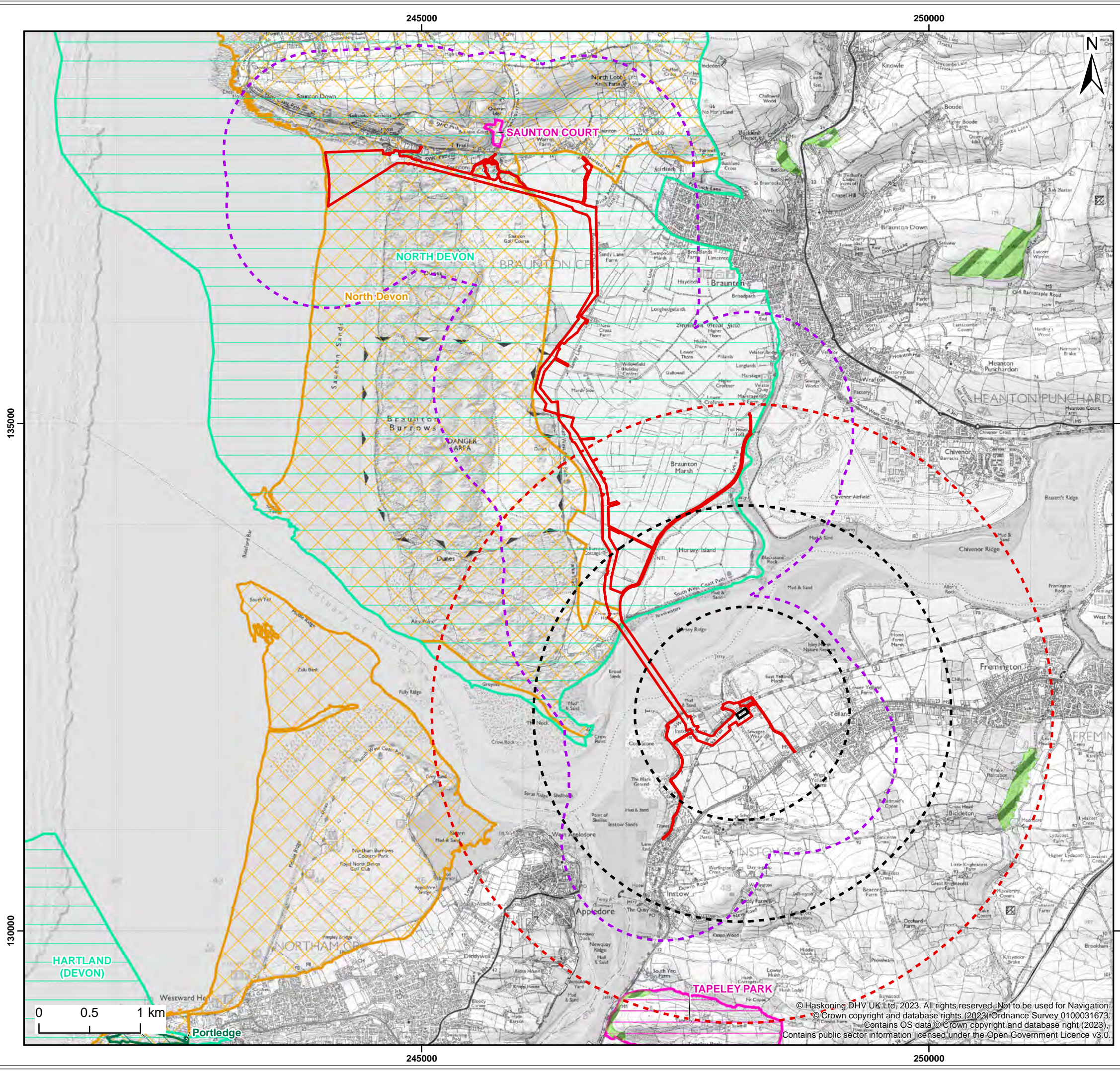
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	25/07/2023	NL	CW	A3	1:37,000

Co-ordinate system: British National Grid



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**Legend:**

- Onshore Substation Operational Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- National Trust Land
- Ancient Woodland
- Registered Park and Garden
- Heritage Coast
- Area of Outstanding Natural Beauty

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title: **Figure 20-5: Landscape Planning Designations and Defined Areas**

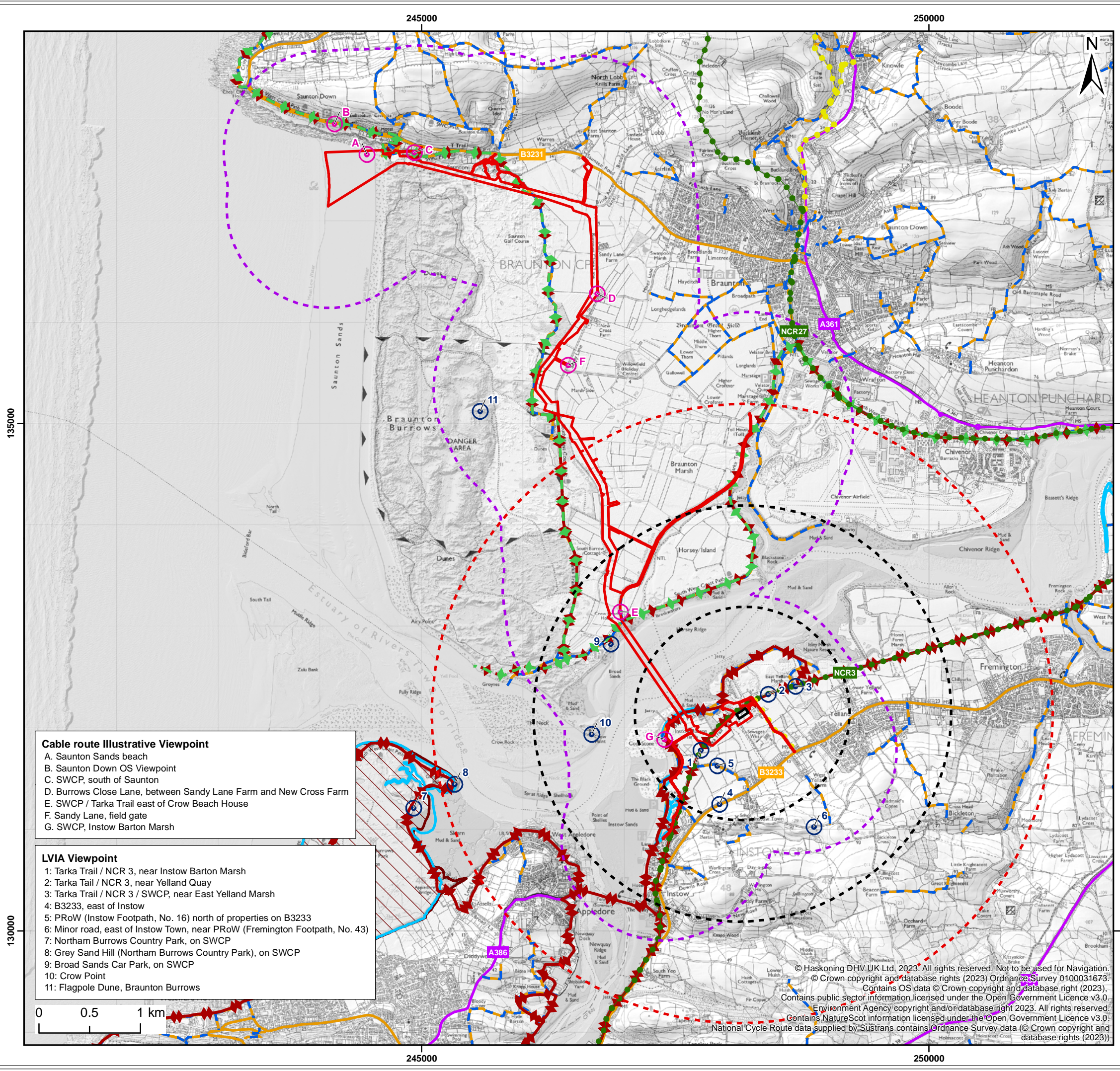
Figure: 20-5 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0629

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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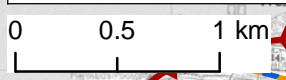


**Cable route Illustrative Viewpoint**

- A. Saunton Sands beach
- B. Saunton Down OS Viewpoint
- C. SWCP, south of Saunton
- D. Burrows Close Lane, between Sandy Lane Farm and New Cross Farm
- E. SWCP / Tarka Trail east of Crow Beach House
- F. Sandy Lane, field gate
- G. SWCP, Instow Barton Marsh

**LVIA Viewpoint**

- 1: Tarka Trail / NCR 3, near Instow Barton Marsh
- 2: Tarka Tail / NCR 3, near Yelland Quay
- 3: Tarka Trail / NCR 3 / SWCP, near East Yelland Marsh
- 4: B3233, east of Instow
- 5: PRoW (Instow Footpath, No. 16) north of properties on B3233
- 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)
- 7: Northam Burrows Country Park, on SWCP
- 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP
- 9: Broad Sands Car Park, on SWCP
- 10: Crow Point
- 11: Flagpole Dune, Braunton Burrows



- Legend:**
- Onshore Substation Operational Compound
  - 1 km Radii
  - Onshore Substation 3 km Study Area
  - Onshore Development Area
  - Onshore Export Cable Corridor and Landfall 1 km Study Area
  - LVIA Viewpoint
  - Cable Route Illustrative Viewpoint
  - National Cycle Network
  - National Cycle Network Link
  - Tarka Trail
  - South West Coast Path
  - Public Rights of Way
  - A Road
  - B Road
  - Open Access Land
  - Country Park

Client: Offshore Wind Ltd. Project: White Cross Offshore Windfarm

Title: Figure 20-6: Principal Visual Receptors

Figure: 20-6 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0630

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 National Cycle Route data supplied by Sustrans contains Ordnance Survey data (© Crown copyright and database rights (2023)).



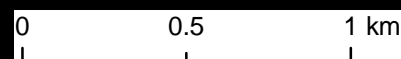




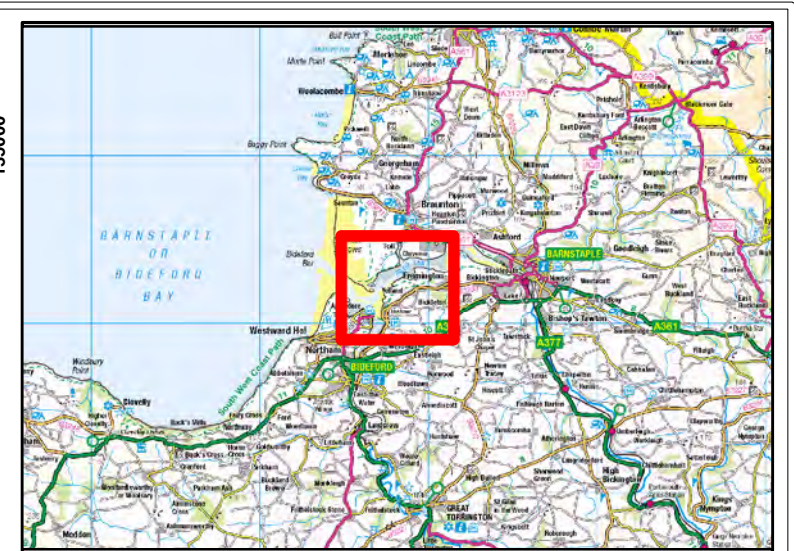
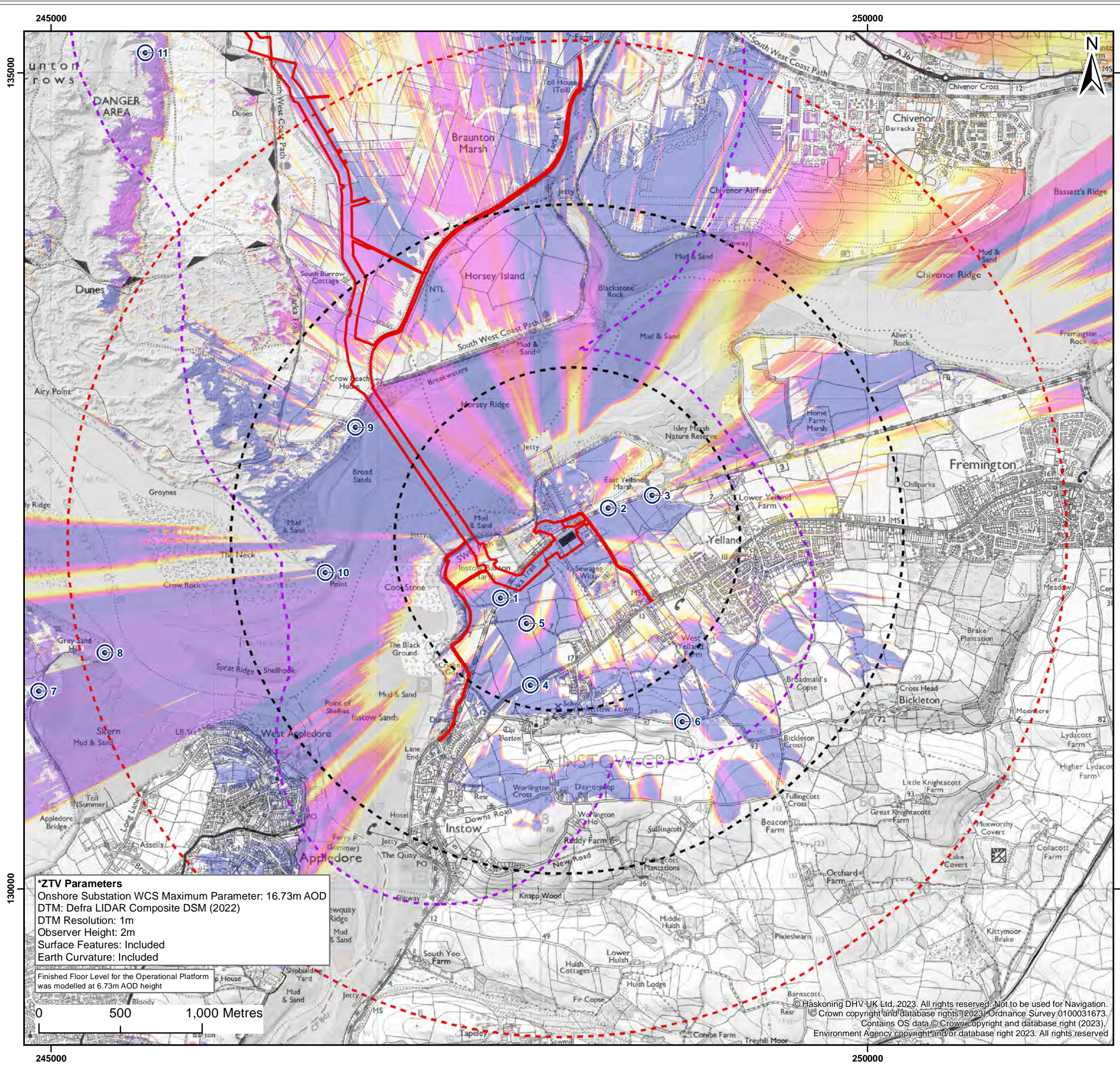
- 1 - Tarka Trail / NCR 3, near Instow Barton Marsh
- 2 - Tarka Trail / NCR 3, near Yelland Quay
- 3 - Tarka Trail / NCR 3 / SWCP, near East Yelland Marsh
- 4 - B3233, east of Instow
- 5 - PRoW (Instow Footpath, No. 16) north of properties on B3233
- 6 - Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)
- 7 - Northam Burrows Country Park, on SWCP
- 8 - Grey Sand Hill (Northam Burrows Country Park), on SWCP
- 9 - Broad Sands Car Park, on SWCP
- 10 - Crow Point
- 11 - Flagpole Dune, Braunton Burrows

**\*ZTV Parameters**  
Onshore Substation WCS Maximum Parameter: 16.73m AOD  
DTM: Defra LIDAR Composite DTM (2022)  
DTM Resolution: 1m  
Observer Height: 2m  
Surface Features: Excluded  
Earth Curvature: Included

Finished Floor Level for the Operational Platform  
was modelled at 6.73m AOD height







- Legend:**
- Onshore Substation Operational Compound
  - 1 km Radii
  - Onshore Substation 3 km Study Area
  - Onshore Development Area
  - Onshore Export Cable Corridor and Landfall 1 km Study Area
- Zone of Theoretical Visibility\***
- High Visibility
  - Low Visibility
- Viewpoints Location
- 1 - Tarka Trail / NCR 3, near Instow Barton Marsh
  - 2 - Tarka Trail / NCR 3, near Yelland Quay
  - 3 - Tarka Trail / NCR 3 / SWCP, near East Yelland Marsh
  - 4 - B3233, east of Instow
  - 5 - PRoW (Instow Footpath, No. 16) north of properties on B3233
  - 6 - Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)
  - 7 - Northam Burrows Country Park, on SWCP
  - 8 - Grey Sand Hill (Northam Burrows Country Park), on SWCP
  - 9 - Broad Sands Car Park, on SWCP
  - 10 - Crow Point
  - 11 - Flagpole Dune, Braunton Burrows

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title:  
 Figure 20-8: Substation Screened ZTV with Viewpoints

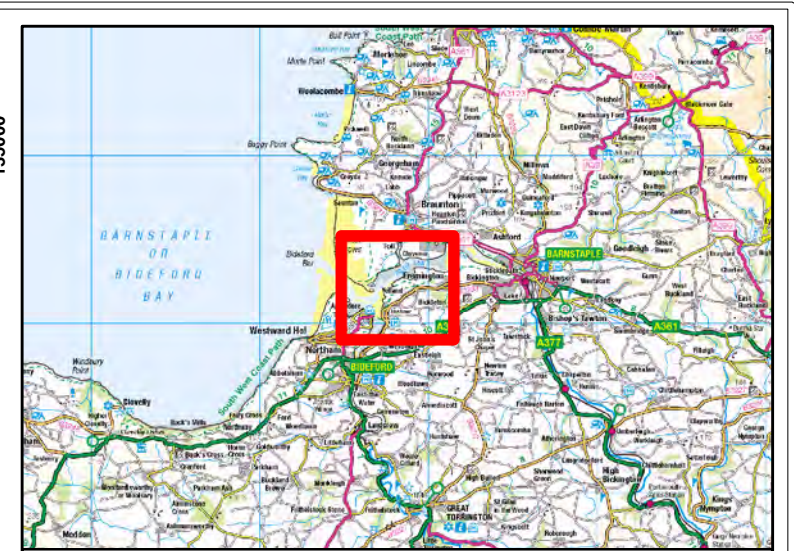
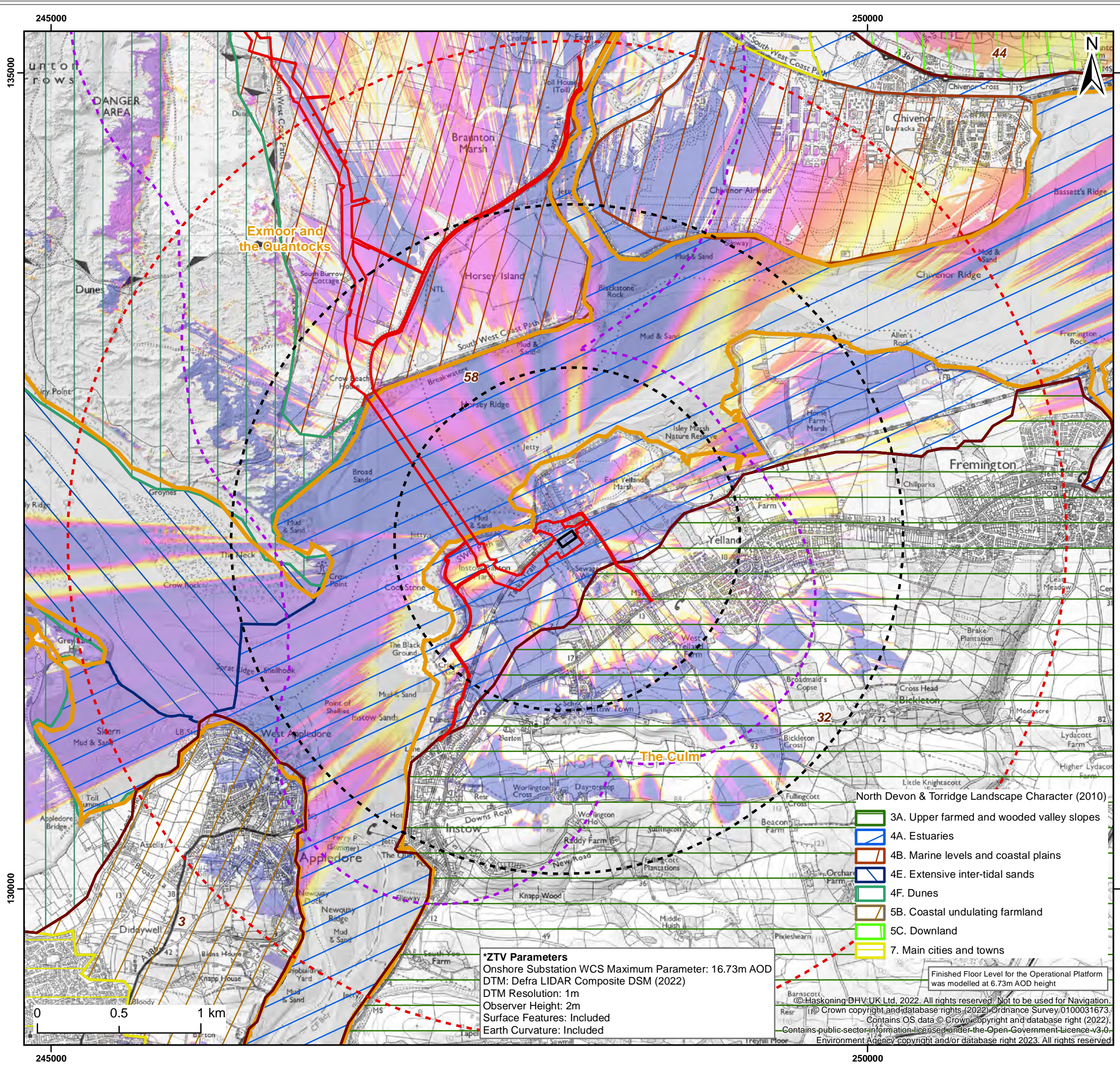
Figure: 20-8 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0632

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	25/07/2023	NL	CW	A3	1:23,000

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**Legend:**

- Onshore Substation Operation Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- Natural England National Character Area
- Devon Landscape Character (2017)
  - 3 - Bideford Bay Coast
  - 32 - High Culm Ridges
  - 44 - North Devon Downs
  - 58 - Taw-Torridge Estuary
- Zone of Theoretical Visibility\***
  - High Visibility
  - Low Visibility

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title:  
Figure 20-9: Landscape Character with Screened ZTV

Figure: 20-9	Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0633				
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	15/08/2023	NL	CW	A3	1:23,000

Co-ordinate system: British National Grid

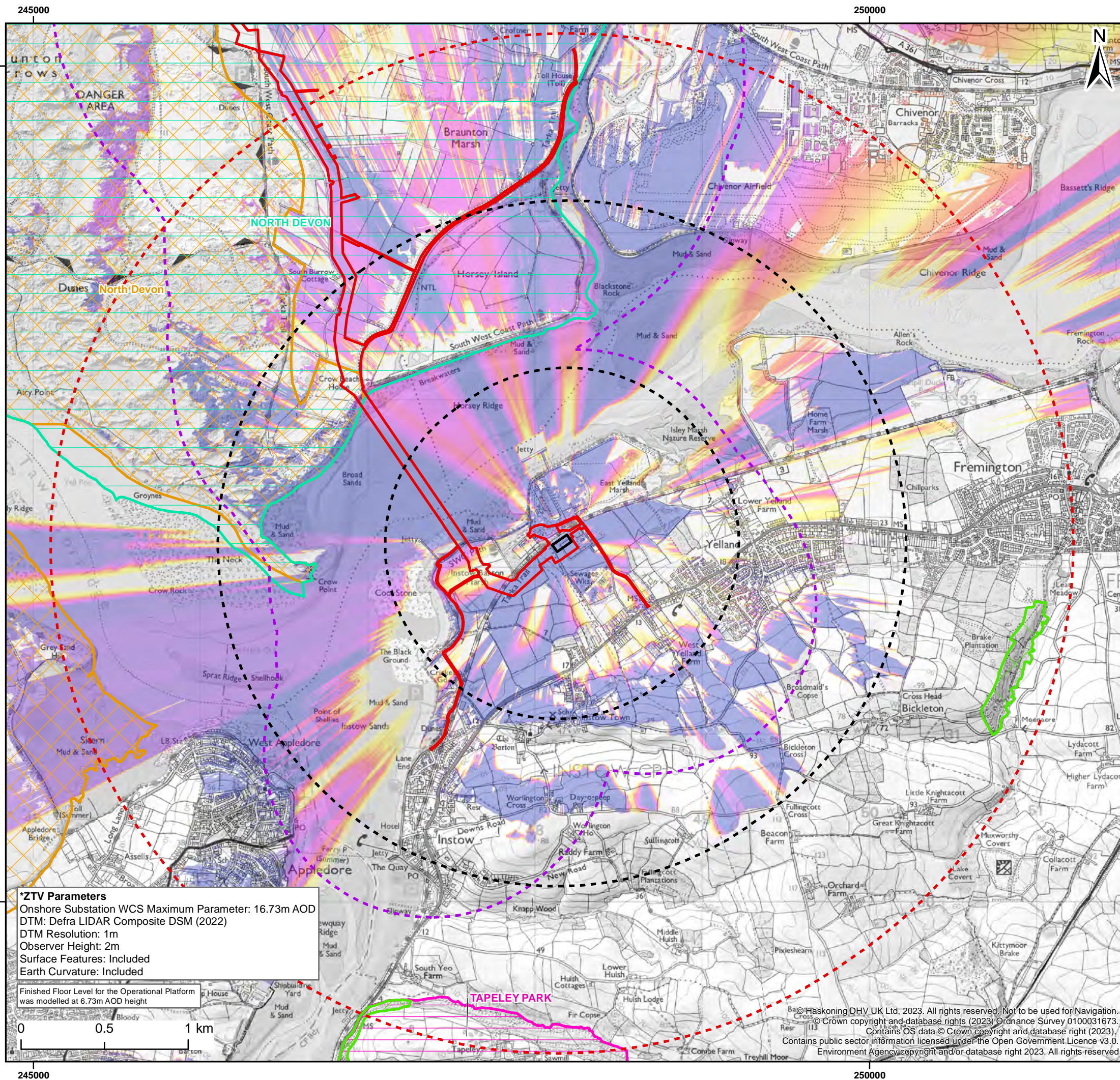
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**\*ZTV Parameters**  
 Onshore Substation WCS Maximum Parameter: 16.73m AOD  
 DTM: Defra LIDAR Composite DSM (2022)  
 DTM Resolution: 1m  
 Observer Height: 2m  
 Surface Features: Included  
 Earth Curvature: Included

- North Devon & Torridge Landscape Character (2010)**
- 3A. Upper farmed and wooded valley slopes
  - 4A. Estuaries
  - 4B. Marine levels and coastal plains
  - 4E. Extensive inter-tidal sands
  - 4F. Dunes
  - 5B. Coastal undulating farmland
  - 5C. Downland
  - 7. Main cities and towns

Finished Floor Level for the Operational Platform was modelled at 6.73m AOD height





**Legend:**

- Onshore Substation Operational Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- Ancient Woodland
- Registered Park and Garden
- Heritage Coast
- Area of Outstanding Natural Beauty

**Zone of Theoretical Visibility\***

- High Visibility
- Low Visibility

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title: Figure 20-10: Landscape Planning Designations and Defined Areas with Screened ZTV

Figure: 20-10 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0634

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	25/07/2023	NL	CW	A3	1:23,000

Co-ordinate system: British National Grid

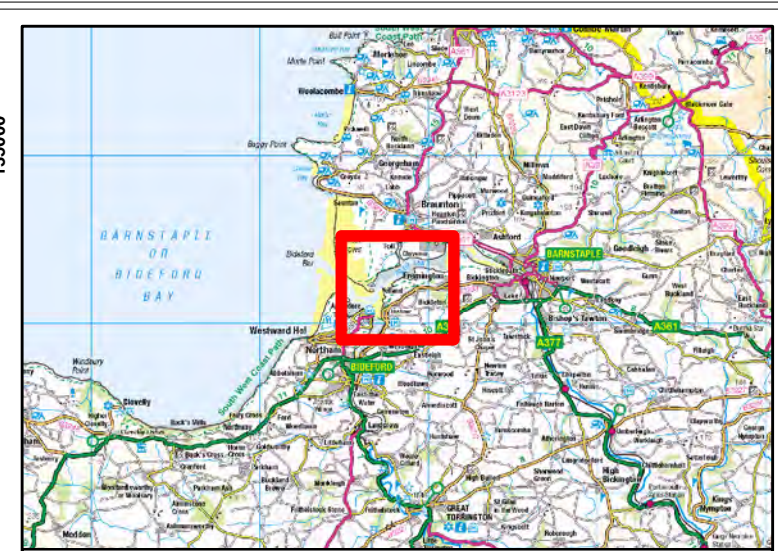
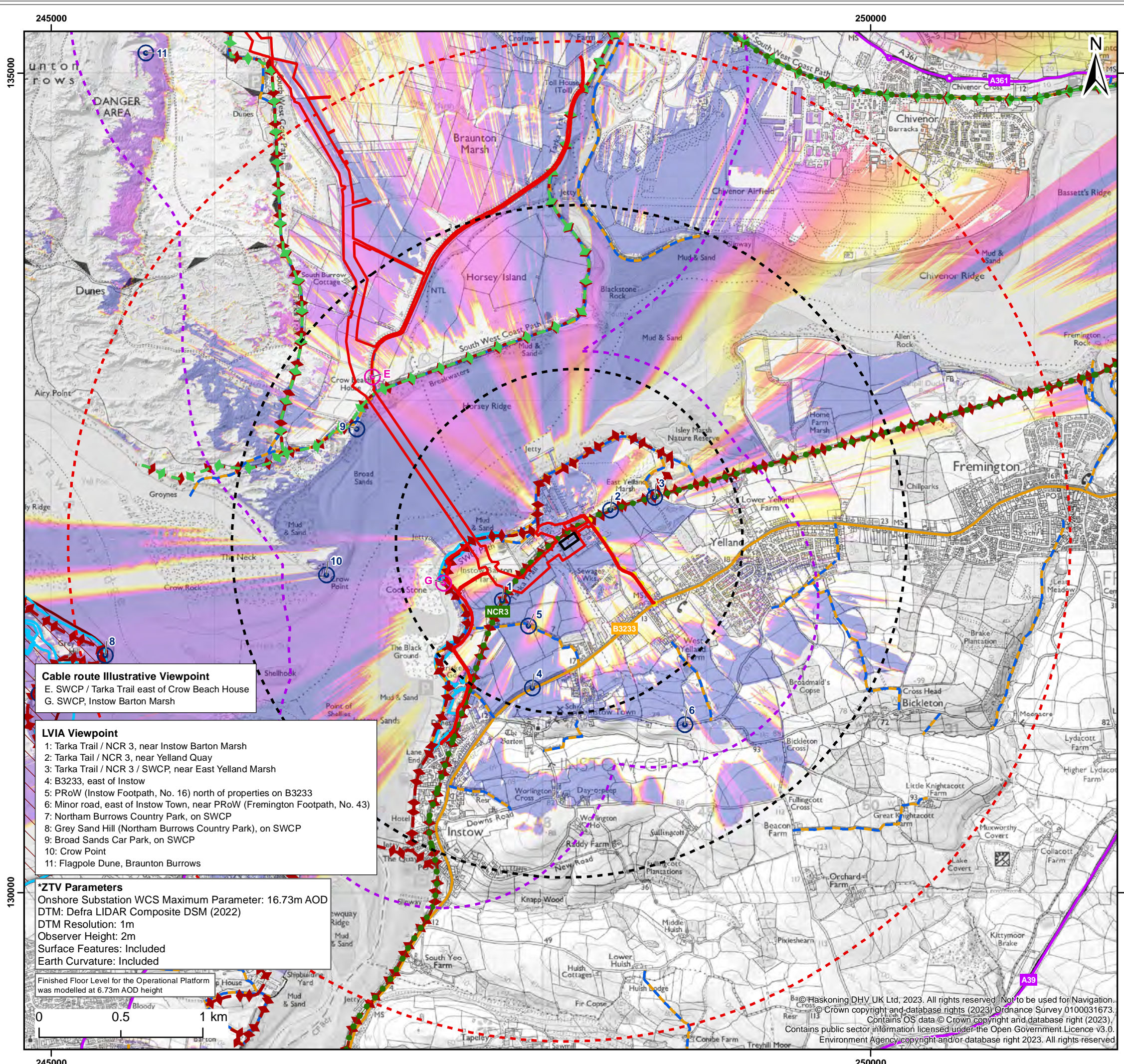
**\*ZTV Parameters**  
 Onshore Substation WCS Maximum Parameter: 16.73m AOD  
 DTM: Defra LIDAR Composite DSM (2022)  
 DTM Resolution: 1m  
 Observer Height: 2m  
 Surface Features: Included  
 Earth Curvature: Included

Finished Floor Level for the Operational Platform was modelled at 6.73m AOD height

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**Legend:**

- Onshore Substation Operational Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area
- LVIA Viewpoint
- Cable Route Illustrative Viewpoint
- National Cycle Network
- National Cycle Network Link
- Tarka Trail
- South West Coast Path
- Public Rights of Way
- A Road
- B Road
- Open Access Land
- Country Park
- Zone of Theoretical Visibility\*
  - High Visibility
  - Low Visibility

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title: **Figure 20-11: Principal Visual Receptors and Representative Viewpoints with Screened ZTV**

Figure: 20-11 Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0635

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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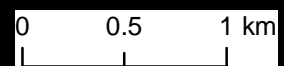
**Cable route Illustrative Viewpoint**  
 E. SWCP / Tarka Trail east of Crow Beach House  
 G. SWCP, Instow Barton Marsh

- LVIA Viewpoint**
- 1: Tarka Trail / NCR 3, near Instow Barton Marsh
  - 2: Tarka Trail / NCR 3, near Yelland Quay
  - 3: Tarka Trail / NCR 3 / SWCP, near East Yelland Marsh
  - 4: B3233, east of Instow
  - 5: PRoW (Instow Footpath, No. 16) north of properties on B3233
  - 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)
  - 7: Northam Burrows Country Park, on SWCP
  - 8: Grey Sand Hill (Northam Burrows Country Park), on SWCP
  - 9: Broad Sands Car Park, on SWCP
  - 10: Crow Point
  - 11: Flagpole Dune, Branton Burrows

**\*ZTV Parameters**  
 Onshore Substation WCS Maximum Parameter: 16.73m AOD  
 DTM: Defra LIDAR Composite DSM (2022)  
 DTM Resolution: 1m  
 Observer Height: 2m  
 Surface Features: Included  
 Earth Curvature: Included



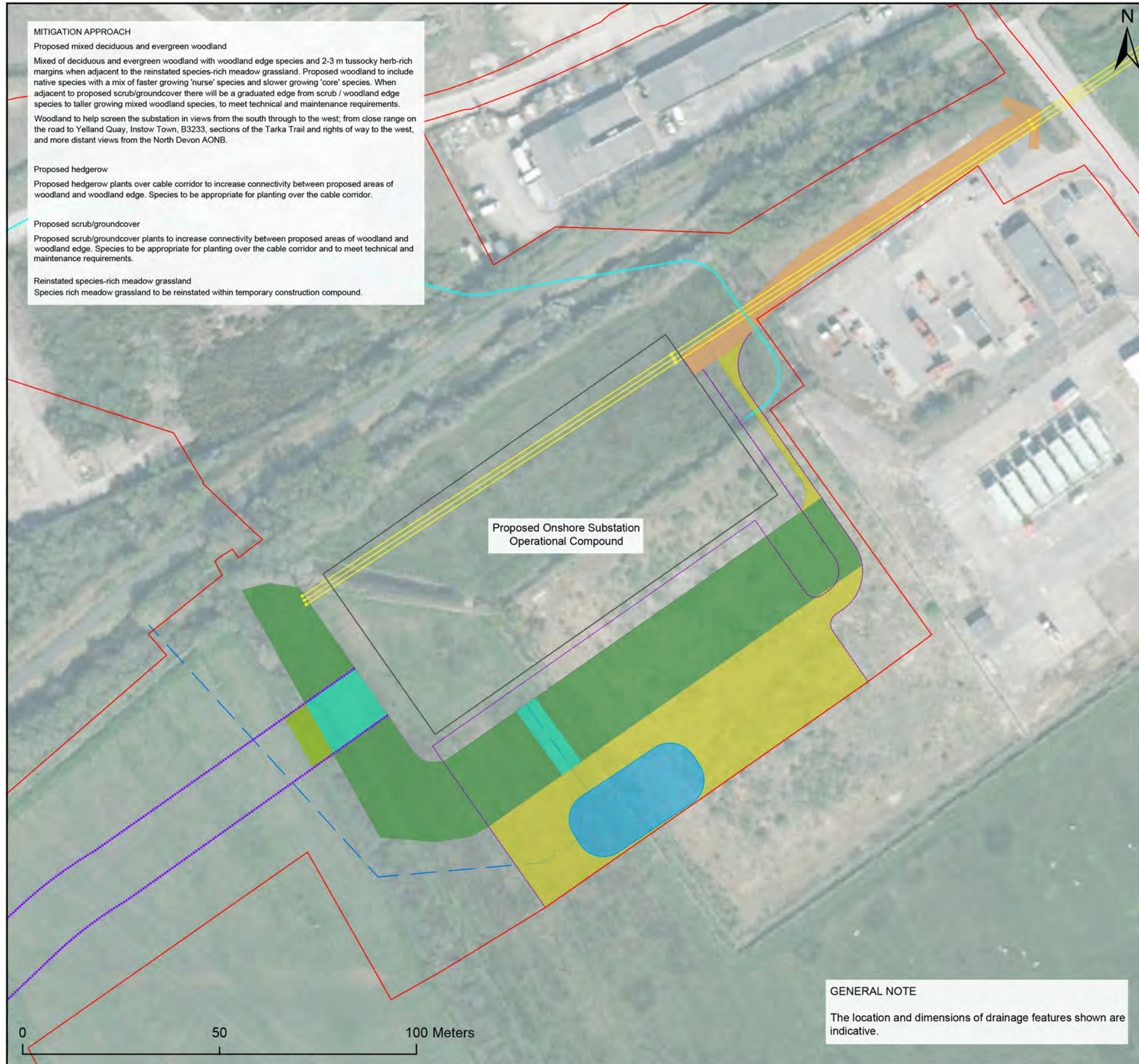




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**MITIGATION APPROACH**

**Proposed mixed deciduous and evergreen woodland**  
 Mixed of deciduous and evergreen woodland with woodland edge species and 2-3 m tussocky herb-rich margins when adjacent to the reinstated species-rich meadow grassland. Proposed woodland to include native species with a mix of faster growing 'nurse' species and slower growing 'core' species. When adjacent to proposed scrub/groundcover there will be a graduated edge from scrub / woodland edge species to taller growing mixed woodland species, to meet technical and maintenance requirements.

Woodland to help screen the substation in views from the south through to the west; from close range on the road to Yelland Quay, Instow Town, B3233, sections of the Tarka Trail and rights of way to the west, and more distant views from the North Devon AONB.

**Proposed hedgerow**  
 Proposed hedgerow plants over cable corridor to increase connectivity between proposed areas of woodland and woodland edge. Species to be appropriate for planting over the cable corridor.

**Proposed scrub/groundcover**  
 Proposed scrub/groundcover plants to increase connectivity between proposed areas of woodland and woodland edge. Species to be appropriate for planting over the cable corridor and to meet technical and maintenance requirements.

**Reinstated species-rich meadow grassland**  
 Species rich meadow grassland to be reinstated within temporary construction compound.

Proposed Onshore Substation Operational Compound

**GENERAL NOTE**

The location and dimensions of drainage features shown are indicative.



**Legend:**

- Proposed mixed deciduous and evergreen woodland
- Proposed hedgerow
- Proposed scrub/groundcover
- Reinstated species-rich meadow grassland
- Proposed 66 kV cable corridor
- Proposed indicative 132 kV cable corridor
- Proposed detention basin
- Proposed drainage route
- Indicative location of proposed permanent access track
- Proposed onshore substation - temporary access track and construction compound
- Existing overhead transmission lines to be re-routed and undergrounded
- Onshore Development Area

<b>Client:</b> Offshore Wind Ltd.	<b>Project:</b> White Cross Offshore Windfarm
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**Title:**  
 Outline Landscape and Ecological Mitigation Plan (OLEMP)

Figure: 20-13      Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0637

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
1	03/05/2023	SN	CW	A3	1:1250
2	31/05/2023	SN	CW	A3	1:1250
3	13/07/2023	SN	CW	A3	1:1000

Co-ordinate system: British National Grid







Baseline photograph



Wireline drawing

OS reference: 247753E 131783N  
 Eye level: 7.36 m AOD  
 Direction of view: 49°  
 Distance to site: 0.49 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14a / PC2978-OPN-ZZ-XX-DR-Z-0638a - Existing  
 Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
 White Cross Offshore Wind





OS reference: 247753E 131783N  
Eye level: 7.36 m AOD  
Direction of view: 49°  
Distance to site: 0.49 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14b / PC2978-OPN-ZZ-XX-DR-Z-0638b - Existing  
Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
White Cross Offshore Wind





OS reference: 247753E 131783N  
Eye level: 7.36 m AOD  
Direction of view: 49°  
Distance to site: 0.49 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14c / PC2978-OPN-ZZ-XX-DR-Z-0638c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
White Cross Offshore Wind





OS reference: 247753E 131783N  
Eye level: 7.36 m AOD  
Direction of view: 49°  
Distance to site: 0.49 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14d / PC2978-OPN-ZZ-XX-DR-Z-0638 - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
White Cross Offshore Wind





OS reference: 247753E 131783N  
Eye level: 7.36 m AOD  
Direction of view: 49°  
Distance to site: 0.49 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14e / PC2978-OPN-ZZ-XX-DR-Z-06## - Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (0 Years Growth)  
Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
White Cross Offshore Wind





OS reference: 247753E 131783N  
Eye level: 7.36 m AOD  
Direction of view: 49°  
Distance to site: 0.49 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

Figure 20:14f / PC2978-OPN-ZZ-XX-DR-Z-06## - Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (15 Years Growth)  
Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

<p><b>OS reference:</b> 248413E 132335N  <b>Eye level:</b> 7.55 m AOD  <b>Direction of view:</b> 233°  <b>Distance to site:</b> 0.26 km</p>	<p><b>Horizontal field of view:</b> 90° (cylindrical projection)  <b>Principal distance:</b> 522 mm  <b>Paper size:</b> 841 x 297 mm (half A1)  <b>Correct printed image size:</b> 820 x 260 mm</p>	<p><b>Camera:</b> Canon EOS 6D  <b>Lens:</b> Canon EF 50mm f/1.4  <b>Camera height:</b> 1.5 m  <b>Date and time:</b> 08/03/2023, 15:27:06</p>	<p><b>Enlargement Factor:</b> 150% @A1</p>	<p>Figure 20:15a / PC2978-OPN-ZZ-XX-DR-Z-0639a - Existing          Viewpoint 2: Tarka Tail / NCR 3, near Yelland Quay  <b>White Cross Offshore Wind</b></p>
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OS reference: 248413E 132335N  
Eye level: 7.55 m AOD  
Direction of view: 233°  
Distance to site: 0.26 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

Enlargement Factor: 150% @A1

Figure 20:15b / PC2978-OPN-ZZ-XX-DR-Z-0639b - Existing  
Viewpoint 2: Tarka Tail / NCR 3, near Yelland Quay  
White Cross Offshore Wind





OS reference: 248413E 132335N  
Eye level: 7.55 m AOD  
Direction of view: 233°  
Distance to site: 0.26 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

Enlargement Factor: 150% @A1

Figure 20:15c / PC2978-OPN-ZZ-XX-DR-Z-0639c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 2: Tarka Tail / NCR 3, near Yelland Quay  
White Cross Offshore Wind





OS reference: 248413E 132335N  
Eye level: 7.55 m AOD  
Direction of view: 233°  
Distance to site: 0.26 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

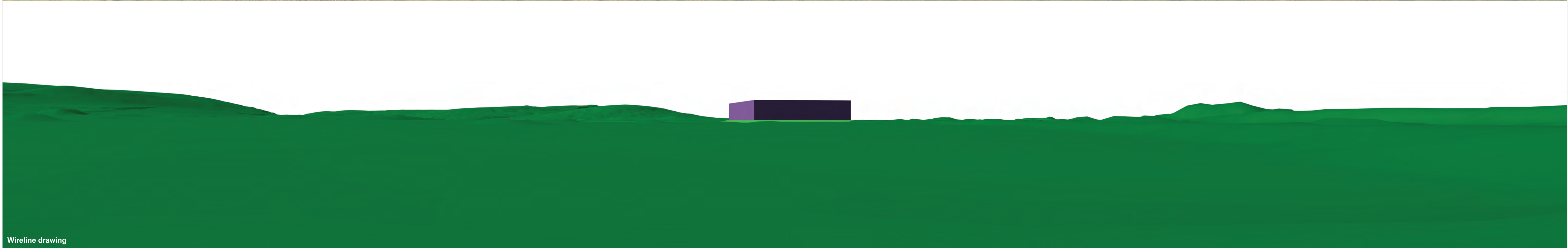
Enlargement Factor: 150% @A1

Figure 20:15d / PC2978-OPN-ZZ-XX-DR-Z-0639d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 2: Tarka Tail / NCR 3, near Yelland Quay  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

OS reference: 248682E 132412N  
 Eye level: 6.44 m AOD  
 Direction of view: 243°  
 Distance to site: 0.53 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16a / PC2978-OPN-ZZ-XX-DR-Z-0640a - Existing  
 Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
 White Cross Offshore Wind





OS reference: 248682E 132412N  
Eye level: 6.44 m AOD  
Direction of view: 243°  
Distance to site: 0.53 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16b / PC2978-OPN-ZZ-XX-DR-Z-0640b - Existing  
Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
White Cross Offshore Wind





OS reference: 248682E 132412N  
Eye level: 6.44 m AOD  
Direction of view: 243°  
Distance to site: 0.53 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16c / PC2978-OPN-ZZ-XX-DR-Z-0640c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
White Cross Offshore Wind





OS reference: 248682E 132412N  
Eye level: 6.44 m AOD  
Direction of view: 243°  
Distance to site: 0.53 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16d / PC2978-OPN-ZZ-XX-DR-Z-0640d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
White Cross Offshore Wind





OS reference: 248682E 132412N  
Eye level: 6.44 m AOD  
Direction of view: 243°  
Distance to site: 0.53 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16e / PC2978-OPN-ZZ-XX-DR-Z-06## - Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (0 Years Growth)  
Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
White Cross Offshore Wind





OS reference: 248682E 132412N  
Eye level: 6.44 m AOD  
Direction of view: 243°  
Distance to site: 0.53 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

Figure 20:16f / PC2978-OPN-ZZ-XX-DR-Z-06## - Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (15 Years Growth)  
Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

OS reference: 247935E 131250N  
 Eye level: 18.65 m AOD  
 Direction of view: 14°  
 Distance to site: 0.86 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17a / PC2978-OPN-ZZ-XX-DR-Z-0641a - Existing  
 Viewpoint 4: B3233, east of Instow  
 White Cross Offshore Wind





OS reference: 247935E 131250N  
Eye level: 18.65 m AOD  
Direction of view: 14°  
Distance to site: 0.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17b / PC2978-OPN-ZZ-XX-DR-Z-0641b - Existing  
Viewpoint 4: B3233, east of Instow  
White Cross Offshore Wind





OS reference: 247935E 131250N  
Eye level: 18.65 m AOD  
Direction of view: 14°  
Distance to site: 0.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17c / PC2978-OPN-ZZ-XX-DR-Z-0641c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 4: B3233, east of Instow  
White Cross Offshore Wind





OS reference: 247935E 131250N  
Eye level: 18.65 m AOD  
Direction of view: 14°  
Distance to site: 0.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17d / PC2978-OPN-ZZ-XX-DR-Z-0641d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 4: B3233, east of Instow  
White Cross Offshore Wind





OS reference: 247935E 131250N  
Eye level: 18.65 m AOD  
Direction of view: 14°  
Distance to site: 0.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17e / PC2978-OPN-ZZ-XX-DR-Z-06##- Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (0 Years Growth)  
Viewpoint 4: B3233, east of Instow  
White Cross Offshore Wind





OS reference: 247935E 131250N  
Eye level: 18.65 m AOD  
Direction of view: 14°  
Distance to site: 0.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:04:06

Enlargement Factor: 150% @A1

Figure 20:17f / PC2978-OPN-ZZ-XX-DR-Z-06##- Proposed Onshore Substation Illustrative Visualisations with Mitigation Planting (15 Years Growth)  
Viewpoint 4: B3233, east of Instow  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

**OS reference:** 247913E 131629N  
**Eye level:** 6.49 m AOD  
**Direction of view:** 26°  
**Distance to site:** 0.51 km

**Horizontal field of view:** 90° (cylindrical projection)  
**Principal distance:** 522 mm  
**Paper size:** 841 x 297 mm (half A1)  
**Correct printed image size:** 820 x 260 mm

**Camera:** Canon EOS 6D  
**Lens:** Canon EF 50mm f/1.4  
**Camera height:** 1.5 m  
**Date and time:** 07/03/2023, 17:30:00

**Enlargement Factor:** 150% @A1

Figure 20:18a / PC2978-OPN-ZZ-XX-DR-Z-0642a - Existing  
Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B323  
**White Cross Offshore Wind**





OS reference: 247913E 131629N  
Eye level: 6.49 m AOD  
Direction of view: 26°  
Distance to site: 0.51 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:30:00

Enlargement Factor: 150% @A1

Figure 20:18b / PC2978-OPN-ZZ-XX-DR-Z-0642b - Existing  
Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B323  
White Cross Offshore Wind





OS reference: 247913E 131629N  
Eye level: 6.49 m AOD  
Direction of view: 26°  
Distance to site: 0.51 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:30:00

Enlargement Factor: 150% @A1

Figure 20:18c / PC2978-OPN-ZZ-XX-DR-Z-0642c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B323  
White Cross Offshore Wind





OS reference: 247913E 131629N  
Eye level: 6.49 m AOD  
Direction of view: 26°  
Distance to site: 0.51 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:30:00

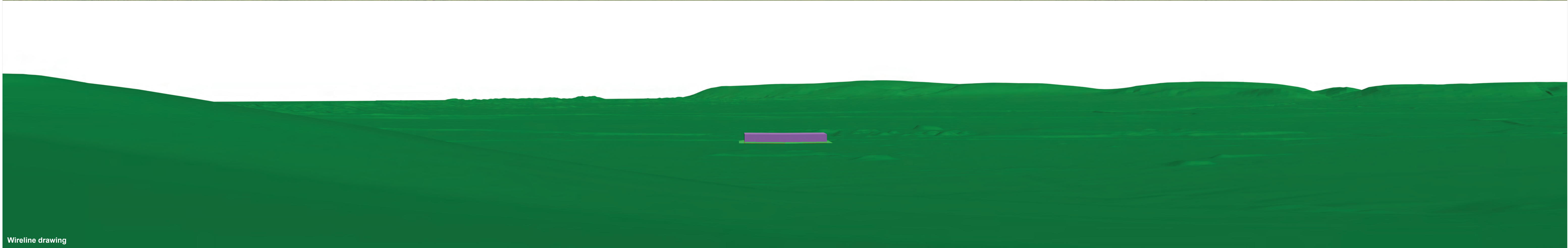
Enlargement Factor: 150% @A1

Figure 20:18d / PC2978-OPN-ZZ-XX-DR-Z-0642d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 5: PRoW (Instow Footpath, No. 16), north of properties on B323  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

OS reference: 248866E 131027N  
 Eye level: 74.66 m AOD  
 Direction of view: 328°  
 Distance to site: 1.29 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 07/03/2023, 10:01:19

Enlargement Factor: 150% @A1

Figure 20:19a / PC2978-OPN-ZZ-XX-DR-Z-0643a - Existing  
 Viewpoint 6: Minor road, east of Instow Town, near PRow (Fremington Footpath, No. 43)  
 White Cross Offshore Wind





OS reference: 248866E 131027N  
Eye level: 74.66 m AOD  
Direction of view: 328°  
Distance to site: 1.29 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 10:01:19

Enlargement Factor: 150% @A1

Figure 20:19b / PC2978-OPN-ZZ-XX-DR-Z-0643b - Existing  
Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)  
White Cross Offshore Wind





OS reference: 248866E 131027N  
Eye level: 74.66 m AOD  
Direction of view: 328°  
Distance to site: 1.29 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 10:01:19

Enlargement Factor: 150% @A1

Figure 20:19c / PC2978-OPN-ZZ-XX-DR-Z-0643c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 6: Minor road, east of Instow Town, near PRow (Fremington Footpath, No. 43)

White Cross Offshore Wind





OS reference: 248866E 131027N  
Eye level: 74.66 m AOD  
Direction of view: 328°  
Distance to site: 1.29 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 10:01:19

Enlargement Factor: 150% @A1

Figure 20:19d / PC2978-OPN-ZZ-XX-DR-Z-0643d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 6: Minor road, east of Instow Town, near PRoW (Fremington Footpath, No. 43)

White Cross Offshore Wind





Baseline photograph



Wireline drawing

OS reference: 244924E 131213N  
 Eye level: 7.17 m AOD  
 Direction of view: 74°  
 Distance to site: 3.31 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 07/03/2023, 16:40:02

Enlargement Factor: 150% @A1

Figure 20:20a / PC2978-OPN-ZZ-XX-DR-Z-0644a - Existing  
 Viewpoint 7: Northam Burrows Country Park, on SWCP  
 White Cross Offshore Wind





OS reference: 244924E 131213N  
Eye level: 7.17 m AOD  
Direction of view: 74°  
Distance to site: 3.31 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 16:40:02

Enlargement Factor: 150% @A1

Figure 20:20b / PC2978-OPN-ZZ-XX-DR-Z-0644a - Existing  
Viewpoint 7: Northam Burrows Country Park, on SWCP  
White Cross Offshore Wind





OS reference: 244924E 131213N  
Eye level: 7.17 m AOD  
Direction of view: 74°  
Distance to site: 3.31 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 16:40:02

Enlargement Factor: 150% @A1

Figure 20:20c / PC2978-OPN-ZZ-XX-DR-Z-0644c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 7: Northam Burrows Country Park, on SWCP  
White Cross Offshore Wind





OS reference: 244924E 131213N  
Eye level: 7.17 m AOD  
Direction of view: 74°  
Distance to site: 3.31 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 16:40:02

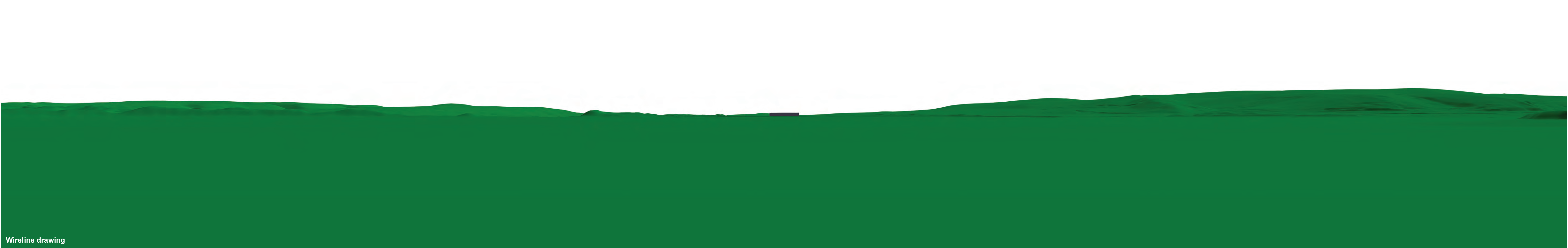
Enlargement Factor: 150% @A1

Figure 20:20d / PC2978-OPN-ZZ-XX-DR-Z-0644d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 7: Northam Burrows Country Park, on SWCP  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

**OS reference:** 245329E 131449N  
**Eye level:** 5.54 m AOD  
**Direction of view:** 76°  
**Distance to site:** 2.86 km

**Horizontal field of view:** 90° (cylindrical projection)  
**Principal distance:** 522 mm  
**Paper size:** 841 x 297 mm (half A1)  
**Correct printed image size:** 820 x 260 mm

**Camera:** Canon EOS 6D  
**Lens:** Canon EF 50mm f/1.4  
**Camera height:** 1.5 m  
**Date and time:** 07/03/2023, 16:23:14

**Enlargement Factor:** 150% @A1

Figure 20:21a / PC2978-OPN-ZZ-XX-DR-Z-0645a - Existing  
Viewpoint 8: Greysands Hill (Northam Burrows Country Park), on SWCP  
**White Cross Offshore Wind**





OS reference: 245329E 131449N  
Eye level: 5.54 m AOD  
Direction of view: 76°  
Distance to site: 2.86 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 16:23:14

Enlargement Factor: 150% @A1

Figure 20:21b / PC2978-OPN-ZZ-XX-DR-Z-0645b - Existing  
Viewpoint 8: Greysands Hill (Northam Burrows Country Park), on SWCP  
White Cross Offshore Wind





OS reference: 245329E 131449N      Horizontal field of view: 53.5° (planar projection)      Camera: Canon EOS 6D      Enlargement Factor: 150% @A1      Figure 20:21c / PC2978-OPN-ZZ-XX-DR-Z-0645c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Eye level: 5.54 m AOD      Principal distance: 812.5 mm      Lens: Canon EF 50mm f/1.4      Viewpoint 8: Greysands Hill (Northam Burrows Country Park), on SWCP  
Direction of view: 76°      Paper size: 841 x 297 mm (half A1)      Camera height: 1.5 m      Date and time: 07/03/2023, 16:23:14      White Cross Offshore Wind  
Distance to site: 2.86 km      Correct printed image size: 820 x 260 mm



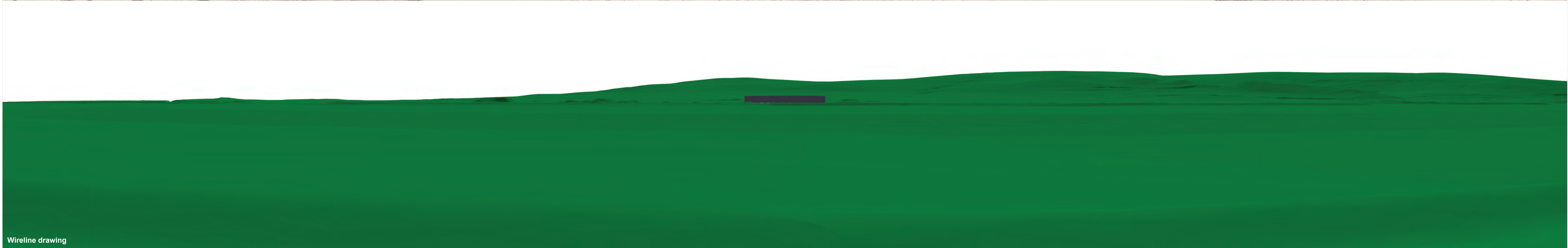


OS reference: 245329E 131449N      Horizontal field of view: 53.5° (planar projection)      Camera: Canon EOS 6D      Enlargement Factor: 150% @A1      Figure 20:21d / PC2978-OPN-ZZ-XX-DR-Z-0645d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Eye level: 5.54 m AOD      Principal distance: 812.5 mm      Lens: Canon EF 50mm f/1.4      Viewpoint 8: Greysands Hill (Northam Burrows Country Park), on SWCP  
Direction of view: 76°      Paper size: 841 x 297 mm (half A1)      Camera height: 1.5 m      Date and time: 07/03/2023, 16:23:14      White Cross Offshore Wind  
Distance to site: 2.86 km      Correct printed image size: 820 x 260 mm





Baseline photograph



Wireline drawing

**OS reference:** 246865E 132829N  
**Eye level:** 8.04 m AOD  
**Direction of view:** 118°  
**Distance to site:** 1.42 km

**Horizontal field of view:** 90° (cylindrical projection)  
**Principal distance:** 522 mm  
**Paper size:** 841 x 297 mm (half A1)  
**Correct printed image size:** 820 x 260 mm

**Camera:** Canon EOS 6D  
**Lens:** Canon EF 50mm f/1.4  
**Camera height:** 1.5 m  
**Date and time:** 07/03/2023, 12:21:58

**Enlargement Factor:** 150% @A1

Figure 20:22a / PC2978-OPN-ZZ-XX-DR-Z-0646a - Existing  
 Viewpoint 9: Broad Sands Car Park, on SWCP  
**White Cross Offshore Wind**





OS reference: 246865E 132829N  
Eye level: 8.04 m AOD  
Direction of view: 118°  
Distance to site: 1.42 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 12:21:58

Enlargement Factor: 150% @A1

Figure 20:22b / PC2978-OPN-ZZ-XX-DR-Z-0646b - Existing  
Viewpoint 9: Broad Sands Car Park, on SWCP  
White Cross Offshore Wind





OS reference: 246865E 132829N  
Eye level: 8.04 m AOD  
Direction of view: 118°  
Distance to site: 1.42 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 12:21:58

Enlargement Factor: 150% @A1

Figure 20:22c / PC2978-OPN-ZZ-XX-DR-Z-0646c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 9: Broad Sands Car Park, on SWCP  
White Cross Offshore Wind





OS reference: 246865E 132829N  
Eye level: 8.04 m AOD  
Direction of view: 118°  
Distance to site: 1.42 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 12:21:58

Enlargement Factor: 150% @A1

Figure 20:22d / PC2978-OPN-ZZ-XX-DR-Z-0646d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 9: Broad Sands Car Park, on SWCP  
White Cross Offshore Wind









OS reference: 246679E 131940N  
Eye level: 4.67 m AOD  
Direction of view: 82°  
Distance to site: 1.43 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 11:50:24

Enlargement Factor: 150% @A1

Figure 20:23b / PC2978-OPN-ZZ-XX-DR-Z-0647b - Existing  
Viewpoint 10: Crow Point  
White Cross Offshore Wind





OS reference: 246679E 131940N  
Eye level: 4.67 m AOD  
Direction of view: 82°  
Distance to site: 1.43 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 11:50:24

Enlargement Factor: 150% @A1

Figure 20:23c / PC2978-OPN-ZZ-XX-DR-Z-0647c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 10: Crow Point  
White Cross Offshore Wind





OS reference: 246679E 131940N  
Eye level: 4.67 m AOD  
Direction of view: 82°  
Distance to site: 1.43 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 11:50:24

Enlargement Factor: 150% @A1

Figure 20:23d / PC2978-OPN-ZZ-XX-DR-Z-0647d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 10: Crow Point  
White Cross Offshore Wind





Baseline photograph



Wireline drawing

OS reference: 245577E 135124N  
 Eye level: 32.91 m AOD  
 Direction of view: 139°  
 Distance to site: 3.91 km

Horizontal field of view: 90° (cylindrical projection)  
 Principal distance: 522 mm  
 Paper size: 841 x 297 mm (half A1)  
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
 Lens: Canon EF 50mm f/1.4  
 Camera height: 1.5 m  
 Date and time: 07/03/2023, 13:07:26

Enlargement Factor: 150% @A1

Figure 20:24a / PC2978-OPN-ZZ-XX-DR-Z-0648a - Existing  
 Viewpoint 11: Flagpole Dune, Branton Burrows  
 White Cross Offshore Wind





OS reference: 245577E 135124N  
Eye level: 32.91 m AOD  
Direction of view: 139°  
Distance to site: 3.91 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 13:07:26

Enlargement Factor: 150% @A1

Figure 20:24b / PC2978-OPN-ZZ-XX-DR-Z-0648b - Existing  
Viewpoint 11: Flagpole Dune, Branton Burrows  
White Cross Offshore Wind





OS reference: 245577E 135124N  
Eye level: 32.91 m AOD  
Direction of view: 139°  
Distance to site: 3.91 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 13:07:26

Enlargement Factor: 150% @A1

Figure 20:24c / PC2978-OPN-ZZ-XX-DR-Z-0648c - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (0 Years Growth)  
Viewpoint 11: Flagpole Dune, Branton Burrows  
White Cross Offshore Wind





OS reference: 245577E 135124N  
Eye level: 32.91 m AOD  
Direction of view: 139°  
Distance to site: 3.91 km

Horizontal field of view: 53.5° (planar projection)  
Principal distance: 812.5 mm  
Paper size: 841 x 297 mm (half A1)  
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 13:07:26

Enlargement Factor: 150% @A1

Figure 20:24d / PC2978-OPN-ZZ-XX-DR-Z-0648d - Proposed Onshore Substation WCS Maximum Parameter with Mitigation Planting (15 Years Growth)  
Viewpoint 11: Flagpole Dune, Branton Burrows  
White Cross Offshore Wind





# White Cross Offshore Windfarm Environmental Statement

**Appendix 20.C: Illustrative Viewpoint Photographs**







OS reference: 247753E 131783N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0649  
Illustrative Viewpoint A: Saunton Sands beach  
White Cross Offshore Wind





OS reference: 247753E 131783N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0650  
Illustrative Viewpoint B: Saunton Down OS Viewpoint  
White Cross Offshore Wind





OS reference: 247753E 131783N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 07/03/2023, 17:20:51

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0651  
Illustrative Viewpoint C: SWCP, south of Saunton  
White Cross Offshore Wind





OS reference: 248413E 132335N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0652  
Illustrative Viewpoint D: Burrows Close Lane, between Sandy Lane Farm and New Cross Farm  
White Cross Offshore Wind





OS reference: 248413E 132335N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0653  
Illustrative Viewpoint E: SWCP / Tarka Trail east of Crow Beach House  
White Cross Offshore Wind





OS reference: 248413E 132335N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 08/03/2023, 15:27:06

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0654  
Illustrative Viewpoint F: Sandy Lane, field gate  
White Cross Offshore Wind





OS reference: 248667E 132380N

Horizontal field of view: 90° (cylindrical projection)  
Principal distance: 522 mm  
Paper size: 841 x 297 mm (half A1)

Camera: Canon EOS 6D  
Lens: Canon EF 50mm f/1.4  
Camera height: 1.5 m  
Date and time: 09/03/2023, 12:57:51

Enlargement Factor: 150% @A1

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Appendix 20.1.C / PC2978-OPN-ZZ-XX-DR-Z-0655  
Illustrative Viewpoint G: SWCP, Instow Barton Marsh  
White Cross Offshore Wind





# White Cross Offshore Windfarm Environmental Statement

**Appendix 20.D: Lighting Impact Assessment**





<b>Document Code:</b>		FLO-WHI-REP-0016-24	
<b>Contractor Number:</b>	<b>Document</b>	PC2978-RHD-ZZ-XX-RP-Z-0415	
<b>Version Number:</b>		00	
<b>Date:</b>		18/08/2023	
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<b>Checked by:</b>		TM	<i>Electronic Signature</i>
<b>Owned by:</b>		PT	<i>Electronic Signature</i>
<b>Approved by Client :</b>		OG	<i>Electronic Signature</i>

<b>Version Number</b>	<b>Reason for Issue / Major Changes</b>	<b>Date of Change</b>
00	For issue	18/08/2023



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## Glossary of Acronyms

Acronym	Definition
<b>CPRE</b>	Campaign to Protect Rural England
<b>ILP</b>	Institute of Lighting Professionals
<b>LED</b>	Light Emitting Diode
<b>LVIA</b>	Landscape and Visual Amenity
<b>NCR</b>	National Cycle Route
<b>NDCAONB</b>	North Devon Coast Area of Outstanding Natural Beauty
<b>OLEMP</b>	Outline Landscape and Ecological Mitigation Plan
<b>SWCP</b>	South West Coast Path
<b>ULR</b>	Upward Light Ratio



## 20. Night Lighting Impact Assessment – Onshore Landscape and Visual Amenity

### 20.1 Introduction

1. This Night Lighting Impact Assessment considers the existing environmental and lighting conditions in the immediate surroundings of the Onshore Substation, identifies potential receptors, and considers the likely impacts on onshore landscape and visual amenity based on the preliminary information and proposed mitigation principles available at this early stage in the design development of the Onshore Substation.

### 20.2 Guidance

2. GLVIA3 (page 103) provides the following guidance on the assessment of lighting effects: *'For some types of development the visual effects of lighting may be an issue. In these cases it may be important to carry out night-time 'darkness' surveys of the existing conditions in order to assess the potential effects of lighting and these effects need to be taken into account in generating the 3D model of the scheme. Quantitative assessment of illumination levels, and incorporation into models relevant to visual effects assessment, will require input from lighting engineers, but the visual effects assessment will also need to include qualitative assessments of the effects of the predicted light levels on night-time visibility.'*
3. GLVIA3 (page 60) also provides the following guidance with regards to mitigation of obtrusive light: *'lighting for safety or security purposes may be unavoidable and may give rise to significant adverse effects; in such cases, consideration should be given to different ways of minimising light pollution and reference should be made to appropriate guidance, such as that provided by the Institution of Lighting Professionals (ILP, 2011).'*
4. Guidance produced by the Institute of Lighting Professionals (ILP) (2011) (GN01:2011) is useful in setting out some key lighting terminology that relates to potential visual effects.
5. *'Obtrusive Light, whether it keeps you awake through a bedroom window or impedes your view of the night sky, is a form of pollution, which may also be a nuisance in law and which can be substantially reduced without detriment to the lighting task. Skyglow - the brightening of the night sky; Glare - the uncomfortable brightness of a light source when viewed against a darker background; and Light*



*Intrusion - the spilling of light beyond the boundary of the property or area being lit, are all forms of obtrusive light which may cause nuisance to others.'*

6. The following relevant guidance within the ILP GN01:2011 is noted as follows:
  - *'The most sensitive/critical zones for minimising sky glow are those between 90° and 100° (note that this equates to 0-10° above the horizontal).*
  - *Keep glare to a minimum by ensuring that the main beam angle of all lights directed towards any potential observer is not more than 70°.*
  - *In rural areas the use of full horizontal cut off luminaires installed at 0° uplift will, in addition to reducing sky glow, also help to minimise visual intrusion within the open landscape.*
  - *Upward Light Ratio (ULR) of the Installation is the maximum permitted percentage of luminaire flux that goes directly into the sky.'*
7. Campaign to Protect Rural England (CPRE) also identifies these same broad terms as the three types of light pollution:
  - *'skyglow – the pink or orange glow we see for miles around towns and cities, spreading deep into the countryside, caused by a scattering of artificial light by airborne dust and water droplets.*
  - *glare – the uncomfortable brightness of a light source.*
  - *light intrusion – light spilling beyond the boundary of the property on which a light is located, sometimes shining through windows and curtains.'*

### 20.3 Assessment Methodology

8. The methodology broadly follows the methodology set out in **Appendix 20.A: Methodology** of the LVIA.
9. The visual assessment of the lighting of the Onshore Substation is intended to determine the likely effects that the Proposed Development will have on the visual resource i.e., it is an assessment of the effects of visible aviation lighting on views experienced by people at night.
10. The assessment of the Onshore Substation lighting in this Appendix does not consider effects of the lighting on landscape character (i.e., landscape effects). Lighting at the Onshore Substation would not be used during the day. It is considered that the lighting will therefore not affect the perception of landscape character, which is not readily perceived at night in darkness. The assessment of visible lighting is therefore considered solely as a visual effect.

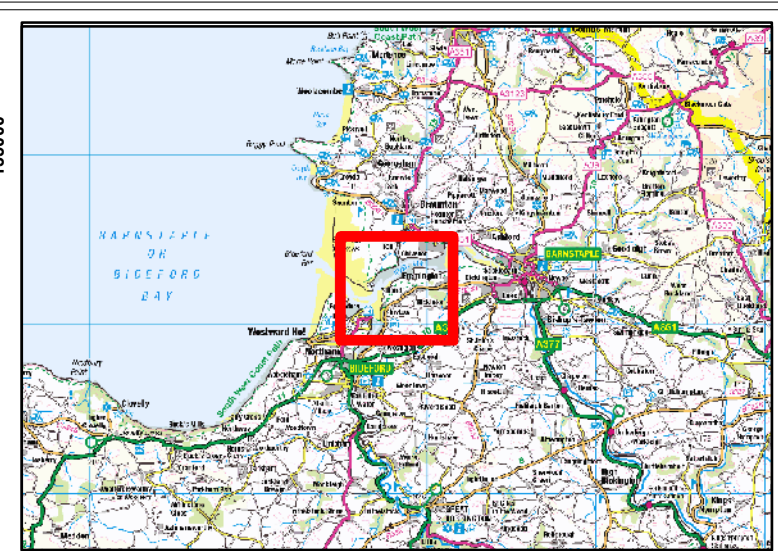
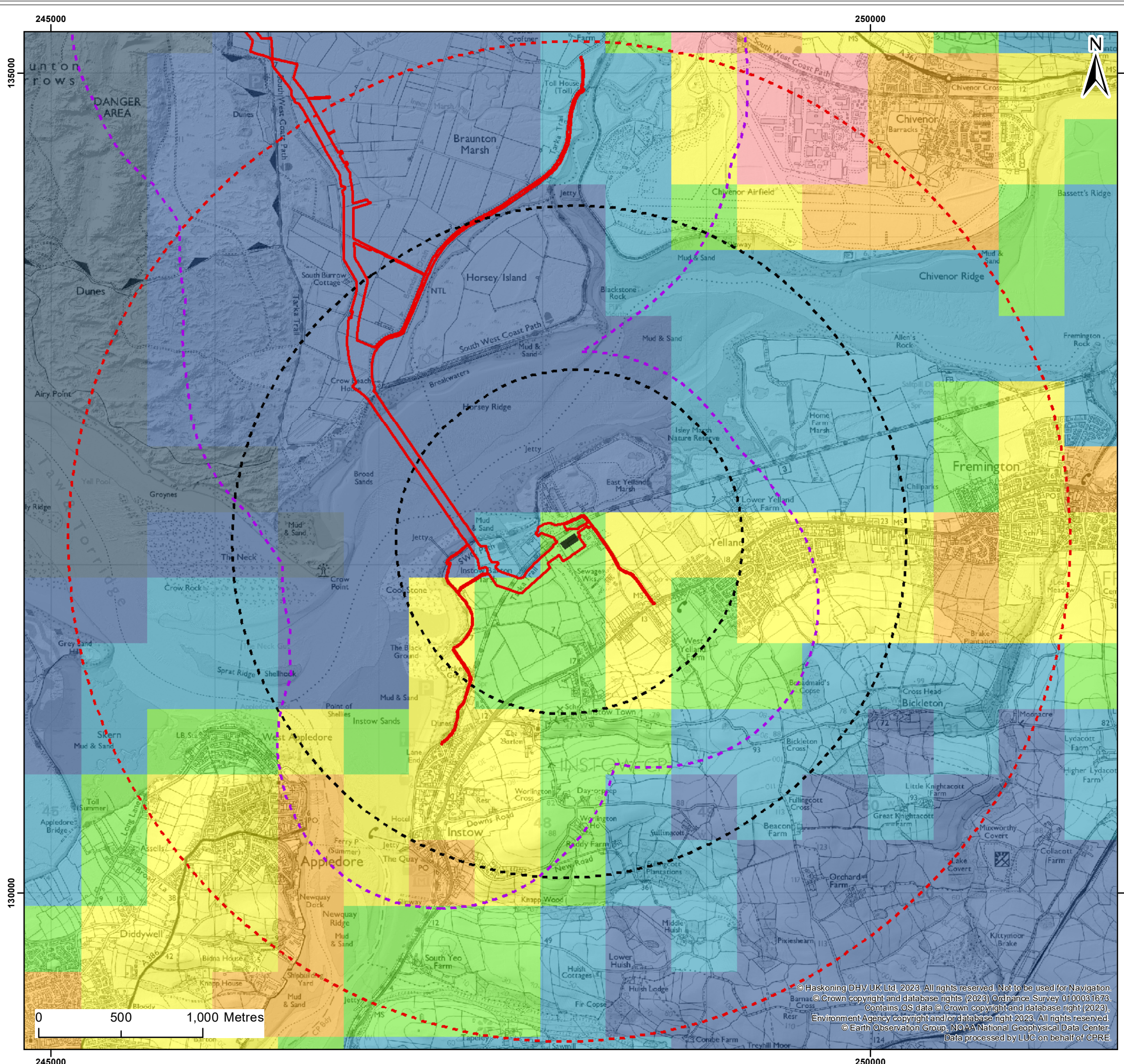


11. The sensitivity of the visual receptors to the proposed change in their night time views is not reassessed. The value and visual susceptibility of receptors at night may differ when compared to the assessment carried out for daytime conditions. During the night, the landscape has a diminished scenic quality and receptors would not have the same appreciation of the landscape which is dark and muted compared with the landscape scenery evident during the day. However, the position of the viewpoints and other receptors in relation to the Onshore Substation is such that the susceptibility to change in this instance remains at a similar level or would be reduced e.g., people using the Tarka Trail are less likely to be doing so with the intention of enjoying the landscape at night and would therefore be less susceptible to the proposed changes.
12. The above factors may reduce the overall sensitivity to the proposed change, rather than increasing sensitivity, therefore making significant effects less likely.

#### 20.4 Existing Environment

13. The baseline lighting conditions across the LVIA Study area vary considerably and there is no single data source that serves to provide a detailed or quantitative evidence base of the existing night-time lighting levels. The CPRE has produced interactive maps of the UK's light pollution and dark skies as part of a national mapping project (LUC / CPRE, 2016). The maps are divided into pixels, 400 metres x 400 metres, to show the amount of light shining up into the night sky from that area.
14. The CPRE map shown in **Figure 20.25** shows that the Onshore Substation is located in colour band 4 (Brightness values 1-2 (in  $\text{nw}/\text{cm}^2/\text{sr}$ )). According to the accompanying CPRE report, Figure 9, North Devon is in the top 20 darkest districts in England (Rank of average brightness value (mean) placing it at 19), with an average brightness value (linked to the colour bands shown on **Figure 20.25**) of 0.62. Therefore, the Onshore Substation site is in brighter location than typically found elsewhere across the district.





**Legend:**

- Onshore Substation Operational Compound
- 1 km Radii
- Onshore Substation 3 km Study Area
- Onshore Development Area
- Onshore Export Cable Corridor and Landfall 1 km Study Area

**Night Lights\***  
(NanoWatts / cm2 /sr)

- >32 - Brightest
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 - Darkest

\*Source: CPRE Night Lights Data June 2016

Client:	Project:
Offshore Wind Ltd.	White Cross Offshore Windfarm

Title:  
Figure 20-25: Campaign to Protect Rural England (CPRE) - Light Pollution and Dark Skies

Figure: 20-25      Drawing No: PC2978-OPN-ZZ-XX-DR-Z-0742

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	17/08/2023	NL	CW	A3	1:23,000

Co-ordinate system: British National Grid

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 Data processed by LUC on behalf of CPRE.





15. In the immediate context, adjacent to the site is the FloGas Yelland Terminal which has building mounted lights on the white fascia below the roof of the northernmost building and multiple tall pole-mounted floodlights within the surrounding compound (see **Figure 20-15b** of the LVIA). The Sandbanks Business Park is to the south of the FloGas Yelland Terminal, and it too has building mounted lights on elevations facing south (see **Plate 1**). These light sources would, at certain times of day, during parts of the year, influence the immediate environment of the Onshore Substation.

*Plate 1: Sandbanks Business Park*



16. The areas of brighter lighting radiance are focused on settlement to the south, including: Appledore, Instow, Yelland, and Fremington, which include lit sections of the B3233. The majority of the coastal urbanised areas fall within the 'brighter' light radiance categories of 2-4 and 4-8 (the greatest, light-influenced end of the spectrum). Lighting kept on for longer than it is needed or units that spill light upwards, rather than to where it is most needed, contribute to sky glow, light intrusion, and add to light pollution. Light sources at these location are considered likely to be present in views on most days during the year when natural light levels are low and during hours of darkness.
17. In respect of other notably dark locations, the darker areas of the North Devon Coast Area of Outstanding Natural Beauty (NDCAONB) (at Braunton Burrows and Northam Burrows), Braunton grazing marshes, and Culm farmland, are typically undeveloped, coastal hinterland, rural, or agricultural landscapes with minimal



artificial lighting that might impact on night skies. In the NDCAONB Management Plan (2019-2024), the Summary of Objectives and Policies 'Landscape and Seascape' Policy A2 states: '*Preserve the dark skies, peace and tranquillity of the AONB*'. The North Devon and Torridge Local Plan 2011-2031, Policy DM08A: Landscape and Seascape Character, states '*Development must take into account and respect the sensitivity and capacity of the landscape/seascape asset, considering cumulative impact and the objective to maintain dark skies [...] in areas that are relatively undisturbed*'. As a consequence, much of the designated landscape along the coast falls within the two darkest night sky categories. In most cases, existing sources of light at the coast tend to be limited to point sources from infrequent settlement, isolated coastal dwellings. Notably the CPRE mapping does not show light sources in the wider area that may be influential in views but only identifies light occurring in geographical areas.

18. On the closest parts of the Taw-Torridge estuary area there is a transition from brighter to darker skies with increasing distance from settlement to the south, described above, and north at Braunton, towards the estuary.
19. The likely future baseline will include the consented East Yelland Quay scheme, located in very close proximity to the north of the Onshore Substation. The East Yelland Quay Scheme would be located largely within the area currently identified in the CBRE data (**Figure 20.25**) as colour band 2 (Brightness values 0.25 – 0.5 (in  $\text{nw}/\text{cm}^2/\text{sr}$ )), which is currently a darker location.
20. Based on the Proposed Lighting Plan submitted with the Appeal (CD 1.2h Drawing Number Y029 18 207 F), the scheme would introduce varied light sources into the landscape on the fringes of the Taw-Torridge estuary, including:
  - Street lighting to be designed with a dark zone at a crossing point on the Tarka Trail. Levels of illuminance to be  $<0.5$  lux.
  - 5m column mounted luminaires to light car parks to 5 lux average illuminance with a uniformity of 0.25.
  - 5m column mounted luminaires to be provided to light the car park to 5 lux average illuminance with a uniformity of 0.25. Light spill on to the dark corridor to be maintained by offsetting luminaires as required and providing back shields to luminaires.
  - Private vehicular access, pedestrian routes, and Social Hub 2 & 3 car parking to be lit by low level bollard luminaires.
  - The Jetty will remain unlit, as current conditions, with temporary lighting used when required for deliveries. Lay down area also to remain un-lit except for temporary light used when required for deliveries.



- Wall mounted lighting to entrances/exits and perimeter.
21. The introduction of the East Yelland Quay scheme would, therefore, fundamentally change the light levels within the generally dark landscape of the River Taw fringes to the north. In addition to the above source, it is reasonable to assume that the residential use of the development would introduce light sources from dwellings and vehicle movements during hours of darkness throughout the year.



## 20.5 Design Parameters

22. It is anticipated that construction lighting will predominantly be required during working hours in the winter months, the lights of construction vehicles will also add to the levels of lighting and a lower level of lighting will remain overnight for security purposes.
23. External lighting of the construction site will be of a low intensity and designed / positioned to provide the necessary levels for safe working; minimise light spillage or pollution; and avoid disturbance to adjoining residents and occupiers.
24. Construction working hours are proposed to be from 0700-1900 Monday to Friday and 0700-1300 Saturday. The use of construction lighting would therefore be largely limited to morning or early evening during winter months during the construction period, which is relatively short in duration.
25. A detailed description of the proposed lighting design parameters is contained in the Substation Design Code (**Design and Access Statement: Appendix B**).
26. The final design of the lighting for the Onshore Substation will be completed as part of the detailed design for the substation, therefore at this stage the full details are not known. However, the following guidance will be followed in the design of the external lighting in order to mitigate the potential effects of the lighting, with the final design of all exterior lighting completed in accordance with the Institution of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light.
27. Notably the duration of lights being on at the Onshore Substation site would be extremely limited.
28. Typically, there would be a weekly routine visit of a few hours once a week (undertaken during normal daytime working hours). Therefore, the lights may be on over the short periods when working hours and the hours of darkness coincide, predominantly in the Winter months.
29. There would be an annual servicing of equipment, typically lasting a few days, up to a maximum of one week. This would be undertaken during daytime and typically would be programmed during the summer months, and consequently there would no need for lighting as there would be sufficient natural light.
30. Major servicing/maintenance would be required on average every 4 years, these works would take one week and typically, would also be programmed during the summer months.



31. The assumed worst-case scenario is that there might be a maximum of one week a year where external lighting would be needed, that would be if the servicing (either annual or the major) had to take place in the winter. In this instance the lights may be on over the short periods when working hours and the hours of darkness coincide at the start and end of each working day.

## 20.6 Mitigation

32. Internal lighting will be designed to allow safe movement of personnel and safe operation of equipment, where practicable all of the lights will be LED type with the lighting levels in accordance with British Standard EN12464-1:2021. They will be operated by wall switches positioned adjacent to doorways, including outside at the entrance to rooms and/or at more than one doorway if appropriate, and will incorporate a 4-hour timer manual override switch. All emergency lighting will be designed in accordance with British Standard EN5266-1:2016.
33. Exterior lighting, including perimeter and site lighting, will be required to allow safe access and emergency egress for personnel (including from buildings) and safe operation of equipment during the winter months. A lower level of lighting will also be required to remain overnight for security purposes.
  - Maintained average illuminance 6.0 lux at ground level.
  - Minimum maintained point illuminance 2.5 lux at ground level.
34. For the perimeter lighting the luminaires shall, where practicable, be LED type with directable light output to minimise light pollution. Exterior site lighting to buildings shall incorporate IP65 wall mounted LED luminaires which will be controlled via integral PIR motion detectors.
35. Based on the baseline conditions, proposed lighting for the development shall be designed such that:
  - Proposed exterior lighting provision is in accordance with the limitations mandated by ILP GN01/21 corresponding with Environmental Zone E2 and principles recommended in ILP GN08/23 Bats and Artificial Lighting at Night Guidance Note 8 Bats and Artificial Lighting | Institution of Lighting Professionals (theilp.org.uk)
  - Proposed lighting design delivers the right amount of light in the right place and at the right time.
  - A sensitive and robust lighting design is provided that looks to current standards, good practice, and involves selection of equipment such that the impact of any permanent lighting is mitigated.



- Luminaires shall be sited away from the northern boundary of the proposed development to maintain a dark corridor for potential bats.
- Recommended lighting unit shall be Light Emitting Diodes (LEDs) which are fundamentally –
- A directional light source with right and good optical distribution (no light spill above horizontal),
- Have good colour rendition.
- Proposed luminaire shall be capable of being fitted with shields, hood, cowl, or louvres to limit obtrusive light.
- Low mounting height not more than 5m height.
- Luminaire shall be capable of dimming, energy efficient and compatible with effective lighting control system.
- Lighting installation to ensure that the main beam angle directed towards any potential observer is no greater than 70 degrees to limit glare.

## 20.7 Assessment of Night-time Visual Effects on Onshore Landscape and Visual Amenity

36. This section provides an assessment of the likely impacts arising from the visible lighting requirements of the Onshore Substation.
37. The assessment of night-time visual impacts is based on the description of proposed lighting set out in **Substation Design Code (Design and Access Statement: Appendix B)** and standards described above along with the embedded mitigation.
38. The study area for the lighting assessment is shown in **Figure 20.25** and is coincident with the 3 km LVIA Study area.
39. The proposed lighting will **not have significant effects** on the perception of landscape or seascape character, which is not readily perceived at night in darkness, particularly in rural areas. The matter of visible lighting assessment is wholly a visual concern and the assessment presented focusses on that premise.
40. Taking into consideration the baseline conditions, receptors within the settled coastline to the south, including: Appledore, Instow, Yelland, and Fremington, which include lit sections of the B3233, are typically within areas of greater light pollution. **Section 20.10.4** of the LVIA, and the ZTVs (**Figures 20.7** and **20.8** of the LVIA) demonstrate that there is very limited visibility of the Onshore Substation site from these locations. The views and visual amenity of these receptors are influenced to varying degrees by artificial light sources within adjacent settlement and in the wider landscape. On this basis, it is not considered that receptors in these settlements



would have the potential to experience significant effects as a result of the introduction of lighting at the Onshore Substation and they are not considered further.

41. At its closest point, the NDCAONB is located approximately 1.38 km to the west of the Onshore Substation. The Special Qualities primary relate to the views and visual characteristics of the NDCAONB. The detailed assessment of the NDCAONB Special Qualities in **Section 20.13.3** of the LVIA finds that effects during daytime hours would be no greater than **moderate-minor not significant**. During hours of darkness, the introduction of lighting at the Onshore Substation seen at distance and in the context of the settled and urban areas to the south of the River Taw, where it is predicted to be barely distinguishable from the variety of light sources in this part of the study area. Night time lighting effects on the NDCAONB are **not** considered likely to result in **significant effects** and are therefore not assessed further in this section.
42. Considering the existing environment of the Onshore Substation, the key consideration is the views and visual amenity of close-range receptors in the areas of transition from brighter to darker skies, notably users of the Tarka Trail / NCN 3, and a small number of residential receptors at Instow Town and a section of the B3233 between Yelland and Instow. This assessment has therefore focussed on receptors at Viewpoints 1-4 identified in the LVIA, **see Table 1**:

*Table 1: Receptors considered in the night-time assessment*

ID	Name	OS Grid Reference		Receptor Types
		Easting	Northing	
1	Tarka Trail / National Cycle Route (NCR) 3, near Instow Barton Marsh	247753	131783	Walkers / cyclists, within LCT 4a: Estuaries.
2	Tarka Trail / NCR 3, near Yelland Quay	248413	132335	Walkers / cyclists, within LCT 4a: Estuaries.
3	Footpath near Tarka Trail / NCR 3 / South West Coast Path (SWCP), north of Yelland	248667	132380	Walkers / cyclists, within LCT 4a: Estuaries.
4	B3233, east of Instow	247935	131250	Road users, settlement, within LCT 3a: Upper farmed and wooded valley slopes.



## 20.7.1 Impact 1: Night-time Visual Effects – Viewpoint 1: Tarka Trail / NCR 3, near Instow Barton Marsh:

### 20.7.1.1 Baseline and Sensitivity:

43. Column mounted floodlights at the FloGas Yelland Terminal and light sources within buildings at Sandbanks business park are likely to be visible above intervening vegetation, as would distant light sources at Braunton in the background of the view.
44. Refer to Viewpoint 1 (**Section 20.10.4.1**) of the LVIA. The sensitivity of the receptors is considered to be **medium**.

### 20.7.1.2 Magnitude of Impact: Construction and Decommissioning

45. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Construction vehicles will also add to the level of lighting. The light sources from construction would be seen in the midground of the view. Some lower-level task lighting and ambient lighting during construction would be screened by intervening vegetation surrounding the existing East Yelland Substation and along the Tarka Trail / NCR 3. Visible features would appear within a small extent of the view.
46. There would be a perceptible increase in visible lighting from Viewpoint 1, seen at relatively close range, but within part of the view containing other light sources. Overall, the magnitude of impact during construction and decommissioning is considered to be **medium-low**.

### 20.7.1.3 Magnitude of Impact: Operation and Maintenance

47. The magnitude of impact to the view resulting from the introduction of the Onshore Substation lighting at year 0 and year 15 is assessed as **low**, for the reasons set out below.
48. During operation and maintenance, the primary objective of lighting is to ensure safe operation and a safe working environment in the absence of natural light. As described above, in the worst-case scenario, perimeter lighting will be directable, and wall mounted luminaries will be controlled by motion detectors. Typically, A lower level of lighting will also be required to remain overnight for security purposes.
49. There would be a perceptible increase in visible lighting from Viewpoint 1, seen at relatively close range, but within part of the view containing other light sources.



50. At Year 15, the proposed landscape mitigation planting would reach a height of approximately 7.5 m, which would have the potential to provide some screening of lower-level light sources. However, luminaries on walls and perimeter lighting are considered likely to be visible above the intervening vegetation.

#### 20.7.1.4 Significance of effect: Construction and Decommissioning

51. During construction and decommissioning the effect of lighting would be **moderate-minor not significant** adverse. The geographic extent of the effect would occur over approximately 0.3km of the route, from the viewpoint location at Instow Barton Marsh in the west to the existing East Yelland Substation. The level of effect would reduce with distance further to the west, towards Instow. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.7.1.5 Further Mitigation

52. Embedded mitigation and good-practice construction phase mitigation practices as set out above. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.1.6 Residual Effect

53. During construction and decommissioning the effect of lighting would be **moderate-minor not significant** adverse. This effect would occur for a short duration during the 16 months construction programme for the Onshore Substation. Effects during construction and decommissioning are short term and reversible.

#### 20.7.1.7 Significance of effect: Operation and Maintenance

54. During operation and maintenance at year 0 and year 15, the effect would be **minor not significant** adverse. The geographic extent of the effect would occur over approximately 0.3km of the route, from the viewpoint location at Instow Barton Marsh in the west to the existing East Yelland Substation. The level of effect would reduce with distance further to the west, towards Instow. Effects during operation and maintenance are long term and reversible.

#### 20.7.1.8 Further Mitigation

55. Landscape mitigation planting as outlined in the Outline Landscape and Ecological Mitigation Plan (OLEMP) (**Figure 20.13**) and described in **Section 20.4.10**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.



#### 20.7.1.9 Residual Effect

56. At year 0 and year 15, the residual effect would be **minor not significant** adverse. Effects during operation and maintenance are long term and reversible.



## 20.7.2 Impact 2: Visual Effects – Viewpoint 2: Tarka Trail / NCR 3, near Yelland Quay

### 20.7.2.1 Baseline and Sensitivity:

57. Column mounted floodlights at the FloGas Yelland Terminal and light sources within buildings at Sandbanks business park are likely to be visible above intervening vegetation, as would distant light sources at Appledore in the background of the view to the west, and within Yelland to the south.
58. Refer to Viewpoint 2 (**Section 20.10.4.2**) of the LVIA. The sensitivity of the receptors is considered to be **medium**.

### 20.7.2.2 Magnitude of Impact: Construction and Decommissioning

59. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Construction vehicles will also add to the level of lighting. The light sources from construction would be seen in the midground of the view. Some lower-level task lighting and ambient lighting during construction would be screened by intervening built form at the FloGas Yelland Terminal and vegetation along the Tarka Trail / NCR 3. Visible features would appear within a small extent of the view.
60. There would be a perceptible increase in visible lighting from Viewpoint 2, seen at relatively close range, but within part of the view containing other light sources. Overall, The magnitude of impact during construction and decommissioning is considered to be **low**.

### 20.7.2.3 Magnitude of Impact: Operation and Maintenance

61. The magnitude of impact to the view resulting from the introduction of the Onshore Substation lighting at year 0 and year 15 is assessed as **low**, for the reasons set out below.
62. During operation and maintenance, the primary objective of lighting is to ensure safe operation and a safe working environment in the absence of natural light. As described above, in the worst-case scenario, perimeter lighting will be directable, and wall mounted luminaries will be controlled by motion detectors. Typically, A lower level of lighting will also be required to remain overnight for security purposes.
63. There would be a perceptible increase in visible lighting from Viewpoint 2, seen at relatively close range, but within part of the view containing similar light sources at a similar distance.



#### 20.7.2.4 Significance of effect: Construction and Decommissioning

64. During construction and decommissioning the effect of lighting would be **minor not significant** adverse. The geographic extent of this effect would occur on a section of the route from Yelland Quay road up to approximately 0.3km further east. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.7.2.5 Further Mitigation

65. Embedded mitigation and good-practice construction phase mitigation practices as set out above. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.2.6 Residual Effect

66. During construction and decommissioning the effect of lighting would be **minor not significant** adverse. This effect would occur for a short duration during the 16 months construction programme for the Onshore Substation. Effects during construction and decommissioning are short term and reversible.

#### 20.7.2.7 Significance of effect: Operation and Maintenance

67. During operation and maintenance at year 0 and year 15, the effect would be **minor not significant** adverse. The geographic extent of this effect would occur on a section of the route from Yelland Quay road up to approximately 0.3km further east. Effects during operation and maintenance are long term and reversible.

#### 20.7.2.8 Further Mitigation

68. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.10**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.2.9 Residual Effect

69. At year 0 and year 15, the residual effect would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.



### 20.7.3 Impact 3: Visual Effects – Viewpoint 3: Footpath near Tarka Trail / NCR 3 / SWCP, north of Yelland

#### 20.7.3.1 Baseline and Sensitivity:

70. Column mounted floodlights at the FloGas Yelland Terminal and light sources within buildings at Sandbanks business park are likely to be visible across the intervening open marshy grassland, as would distant light sources at Appledore in the background of the view to the west, and within Yelland to the south.
71. Refer to Viewpoint 3 (**Section 20.10.4.3**) of the LVIA. The sensitivity of the receptors is considered to be **medium**.

#### 20.7.3.2 Magnitude of Impact: Construction and Decommissioning

72. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Construction vehicles will also add to the level of lighting. The light sources from construction would be seen in the midground of the view. Some lower-level task lighting and ambient lighting during construction would be screened by intervening built form at the FloGas Yelland Terminal. Visible features would appear within a small extent of the view.
73. There would be a perceptible increase in visible lighting from Viewpoint 3, seen at mid-range, but within part of the view containing other light sources. Overall, The magnitude of impact during construction and decommissioning is considered to be **low**.

#### 20.7.3.3 Magnitude of Impact: Operation and Maintenance

74. The magnitude of impact to the view resulting from the introduction of the Onshore Substation lighting at year 0 and year 15 is assessed as **low**, for the reasons set out below.
75. During operation and maintenance, the primary objective of lighting is to ensure safe operation and a safe working environment in the absence of natural light. As described above, in the worst-case scenario, perimeter lighting will be directable, and wall mounted luminaries will be controlled by motion detectors. Typically, A lower level of lighting will also be required to remain overnight for security purposes.
76. There would be a perceptible increase in visible lighting from Viewpoint 3, seen at relatively close range, but within part of the view containing similar light sources at a similar distance.



#### 20.7.3.4 Significance of effect: Construction and Decommissioning

77. During construction and decommissioning the effect of lighting would be **minor not significant** adverse. The geographic extent of this effect would be limited to isolated sections of the route at approximately 0.5km from the Onshore Substation site. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.7.3.5 Further Mitigation

78. Embedded mitigation and good-practice construction phase mitigation practices as set out above. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.3.6 Residual Effect

79. During construction and decommissioning the effect of lighting would be **minor not significant** adverse. This effect would occur for a short duration during the 16 months construction programme for the Onshore Substation. Effects during construction and decommissioning are short term and reversible.

#### 20.7.3.7 Significance of effect: Operation and Maintenance

80. During operation and maintenance at year 0 and year 15, the effect would be **minor not significant** adverse. The geographic extent of this effect would be limited to isolated sections of the route at approximately 0.5km from the Onshore Substation site. Effects during operation and maintenance are long term and reversible.

#### 20.7.3.8 Further Mitigation

81. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.10**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.3.9 Residual Effect

82. At year 0 and year 15, the residual effect would be **minor not significant** adverse. Effects during operation and maintenance are long term and reversible.



## 20.7.4 Impact 4: Visual Effects – Viewpoint 4, B3233, east of Instow.

### 20.7.4.1 Baseline and Sensitivity:

83. Distant light sources at Braunton and Chivenor would be visible in the background of the view to the north, and at closer range within Yelland and Instow Town to the east and Instow to the west.
84. Refer to Viewpoint 4 (**Section 20.10.4.3**) of the LVIA. The sensitivity of the viewpoint is considered to be **medium-high** for people in settlement, and **medium** for road users.

### 20.7.4.2 Magnitude of Impact: Construction and Decommissioning

85. Construction lighting would be evident in winter months when working days would extend into hours of darkness. Construction vehicles will also add to the level of lighting. The light sources from construction would be seen in the midground of the view. Some lower-level task lighting and ambient lighting during construction would be screened by intervening vegetation. Visible features would appear within a small extent of the view.
86. There would be a perceptible increase in visible lighting from Viewpoint 4, seen at mid-range, within a part of the view influenced by existing, though more distant, light sources. Overall, The magnitude of impact during construction and decommissioning is considered to be **medium-low**.

### 20.7.4.3 Magnitude of Impact: Operation and Maintenance

87. The magnitude of impact to the view resulting from the introduction of the Onshore Substation lighting at year 0 and year 15 is assessed as **low**, for the reasons set out below.
88. During operation and maintenance, the primary objective of lighting is to ensure safe operation and a safe working environment in the absence of natural light. As described above, in the worst-case scenario, perimeter lighting will be directable, and wall mounted luminaries will be controlled by motion detectors. Typically, A lower level of lighting will also be required to remain overnight for security purposes.
89. There would be a perceptible increase in visible lighting from Viewpoint 3, seen at relatively close range, but within part of the view containing similar light sources at a similar distance.



90. At Year 15, the proposed landscape mitigation planting would reach a height of approximately 7.5 m, which would have the potential to provide some screening of lower-level light sources. However, luminaries on walls and perimeter lighting are considered likely to be visible above the intervening vegetation.

#### 20.7.4.4 Significance of effect: Construction and Decommissioning

91. During construction and decommissioning the effect of lighting on a small number of residential receptors at Instow Town would be **moderate not significant** adverse.

92. Effects on road users would be **moderate-minor not significant** adverse. The geographic extent of this effect would occur across approximately 0.6km of the B3233 between Instow and Yelland.

93. Effects during construction and decommissioning are adverse, short term and reversible.

#### 20.7.4.5 Further Mitigation

94. Embedded mitigation and good-practice construction phase mitigation practices as set out above. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.

#### 20.7.4.6 Residual Effect

95. Residual effects on a small number of residential receptors at Instow Town would be **moderate not significant** adverse. Residual effects on road users would be **moderate-minor not significant adverse**. Effects during construction and decommissioning are short term and reversible.

#### 20.7.4.7 Significance of effect: Operation and Maintenance

96. During operation and maintenance at year 0 and year 15, the effect on residential receptors would be **moderate-minor not significant** adverse.

97. Effects on road users on this section of the B3233 would be **minor not significant** adverse. The geographic extent of this effect would occur across approximately 0.6km of the B3233 between Instow and Yelland. Effects during operation and maintenance are long term and reversible.

#### 20.7.4.8 Further Mitigation

98. Landscape mitigation planting as outlined in the OLEMP (**Figure 20.13**) and described in **Section 20.4.10**. No further mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.



#### 20.7.4.9 Residual Effect

99. The residual effect on residential receptors would be **moderate-minor not significant adverse**. The residual effect on road users on this section of the B3233 would be **minor not significant adverse**. Effects during operation and maintenance are long term and reversible.

### 20.8 Summary

100. The Onshore Substation site lies within the settled and developed coastal margins, to the south of the River Taw. Embedded mitigation has involved the sensitive siting of the Onshore Substation during the search area selection process, to avoid / reduce likely significant impacts by siting the development adjacent to other commercial buildings which have some lighting associated with them.
101. In the immediate context, adjacent to the site is the FloGas Yelland Terminal which has building mounted lights on the white fascia below the roof of the northernmost building and multiple tall pole-mounted floodlights within the surrounding compound (see **Figure 20-15b**). The Sandbanks Business Park is to the south of the FloGas Yelland Terminal, and it too has building mounted lights on elevations facing south (see **Plate 1**).
102. The areas of brighter lighting radiance are focused on settlement to the south, including: Appledore, Instow, Yelland, and Fremington, which include lit sections of the B3233. The majority of the coastal urbanised areas fall within the 'brighter' light radiance categories of 2-4 and 4-8 (the greatest, light-influenced end of the spectrum). Lighting kept on for longer than it is needed or units that spill light upwards, rather than to where it is most needed, contribute to sky glow, light intrusion, and add to light pollution.
103. The context of the Onshore Substation is considered to be typical of an 'urban fringe' environment, where the presence and visibility of artificial lighting is a common influence on views and visual amenity during hours of darkness.
104. The introduction of lighting as a result of the Onshore Substation would **not** result in **significant effects** on the Special Qualities of the NDCAONB.
105. The proposed lighting will **not** result in **significant effects** on the perception of landscape or seascape character, which is not readily perceived at night in darkness, particularly in rural areas. The matter of visible lighting assessment is wholly a visual concern and the assessment presented focusses on that premise.



106. The key consideration is the views and visual amenity of close-range receptors at the transition from brighter to darker skies, notably users of the Tarka Trail / NCN 3, and a small number of residential receptors at Instow Town and a section of the B3233 between Yelland and Instow. This assessment considers that effects on receptors at these locations would be greatest during the construction and decommissioning phase, principally as a result of the duration of activities, over 16 months, during which there would be a perceptible increase in task lighting and ambient lighting. **No significant effects** are identified.
107. During operation and maintenance, the primary objective of lighting is to ensure safe operation and a safe working environment in the absence of natural light. As described above, in the worst-case scenario, perimeter lighting will be directable, and wall mounted luminaries will be controlled by motion detectors. Typically, a lower level of lighting will also be required to remain overnight for security purposes. The assumed worst-case scenario during operation and maintenance is that there might be a maximum of one week a year where lighting would be needed, that would be if the servicing (either annual or the major) had to take place in the winter. Given the proposed mitigation of the external lighting during this phase, and the infrequent and short duration over which it would be seen, **no significant effects** are identified.



## 20.9 References

Landscape Institute with the Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3).

Institute of Lighting Professionals (ILP) – Guidance Notes for the Reduction of Obtrusive Light GN01:2011

CPRE – ‘What is Light Pollution’ found at webpage - <https://www.nightblight.cpre.org.uk/what-is-light-pollution> (accessed 6 March 2023)