



# White Cross Offshore Windfarm Environmental Statement

## Chapter 15: Land Use



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### **Appendix 15.A: Public Right of Way Strategy**

## Glossary of Acronyms

<b>Acronym</b>	<b>Definition</b>
<b>ALC</b>	Agricultural Land Classification
<b>ALO</b>	Agricultural Liaison Officer
<b>AONB</b>	Area of Outstanding Natural Beauty
<b>BMV</b>	Best and Most Versatile
<b>CBS</b>	Cement Bound Sand
<b>CEA</b>	Cumulative Effect Assessment
<b>CRoW</b>	Countryside and Rights of Way
<b>CSS</b>	Countryside Stewardship Scheme
<b>CWS</b>	County Wildlife Sites
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>DESNZ</b>	Department for Energy Security and Net Zero
<b>DMRB</b>	Design Manual for Roads and Bridges
<b>EIA</b>	Environmental Impact Assessment
<b>ELMS</b>	Environment Land Management Schemes
<b>ELS</b>	Entry Level Stewardship
<b>EMF</b>	Electromagnetic Frequency
<b>ES</b>	Environmental Statement
<b>ESS</b>	Environmental Stewardship Schemes
<b>EU</b>	European Union
<b>FRA</b>	Flood Risk Assessment
<b>ha</b>	Hectare
<b>HDD</b>	Horizontal Directional Drilling
<b>HLS</b>	Higher Level Stewardship
<b>IDB</b>	Internal Drainage Board
<b>IEMA</b>	Institute of Environmental Management and Assessment
<b>IES</b>	Institution of Environmental Sciences
<b>IQ</b>	Institute of Quarrying
<b>Km</b>	Kilometre
<b>LPA</b>	Local Planning Authority
<b>LWS</b>	Local Wildlife Site
<b>m</b>	Metre
<b>m<sup>2</sup></b>	Square metre
<b>MAFF</b>	Ministry of Agriculture, Fisheries and Food
<b>MHWS</b>	Mean High Water Springs
<b>MLWS</b>	Mean Low Water Springs
<b>MW</b>	Megawatts
<b>NDC</b>	North Devon Council
<b>NG</b>	National Grid
<b>NPPF</b>	National Planning Policy Framework
<b>NPS</b>	National Policy Statement
<b>NSIP</b>	Nationally Significant Infrastructure Projects

<b>Acronym</b>	<b>Definition</b>
<b>OELS</b>	Organic Entry Level Stewardship
<b>OWF</b>	Offshore Wind Farm
<b>WCOWL</b>	White Cross Offshore Windfarm Limited
<b>PDE</b>	Project Design Envelope
<b>PRoW</b>	Public Right of Way
<b>SAC</b>	Special Area of Conservation
<b>SMP</b>	Soil Management Plan
<b>SocEnv</b>	Society for the Environment
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest
<b>TCPA</b>	Town and Country Planning Act
<b>TJB</b>	Transition Joint Bay
<b>UK</b>	United Kingdom
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>WTG</b>	Wind Turbine Generator

## Glossary of Terminology

Defined Term	Description
<b>Applicant</b>	White Cross Offshore Windfarm Limited.
<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 Effects are those that result from changes caused by other past, present or reasonably foreseeable actions together with the Project.
<b>Environmental Impact Assessment (EIA)</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, either from the Offshore Substation or the inter-array cable junction box (if no offshore substation), to the NG Onshore Substation comprising both the Offshore Export Cable Corridor and Onshore Export Cable Corridor.
<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>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</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.

Defined Term	Description
<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 effects, 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 effects. Additional mitigation is therefore subsequently adopted by OWL as the EIA process progresses.</li> </ul>
<b>National Grid Onshore Substation</b>	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of the electrical transformers.
<b>National Grid Connection Point</b>	The point at which the White Cross Offshore Windfarm connects into the distribution network at East Yelland substation and the distributed electricity network. From East Yelland substation electricity is transmitted to Alverdiscott where it enters the national transmission network.
<b>Onshore Development Area</b>	The onshore area above MLWS including the underground onshore export cables connecting to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland. The onshore development area will form part of a separate Planning application to the Local Planning Authority (LPA) under the Town and Country Planning Act 1990.
<b>Onshore Export Cables</b>	The cables which bring electricity from MLWS at the Landfall to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland.
<b>Onshore Export Cable Corridor</b>	The proposed onshore area in which the export cables will be laid, from MLWS at the Landfall to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland.
<b>Onshore Infrastructure</b>	The combined name for all infrastructure associated with the Project from MLWS at the Landfall to the NG grid connection point at East Yelland. The onshore infrastructure will form part of a separate planning application to the Local Planning Authority (LPA) under the Town and Country Planning Act 1990
<b>Onshore Transmission Assets</b>	The aspects of the project related to the transmission of electricity from MLWS at the Landfall to the NG grid connection point at East Yelland including the Onshore Export Cable, the White Cross Onshore Substation and onward connection to the NG grid connection point at East Yelland.



<b>Defined Term</b>	<b>Description</b>
<b>the Onshore Project</b>	The Onshore Project for the onshore TCPA application includes all elements onshore of MLWS. This includes the infrastructure associated with the offshore export cable (from MLWS), Landfall, onshore export cable and associated infrastructure and new Onshore Substation (if required).
<b>White Cross Offshore Windfarm Ltd</b>	White Cross Offshore Windfarm Ltd (WCOWL) is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd.
<b>Project Design Envelope</b>	A description of the range of possible elements that make up the Project design options under consideration. The Project Design Envelope, or 'Rochdale Envelope' is used to define the Project for Environmental Impact Assessment (EIA) purposes when the exact parameters are not yet known but a bounded range of parameters are known for each key project aspect.
<b>Transition joint bay</b>	Underground structures at the Landfall 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>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 NG electrical requirements at the grid connection point at East Yelland.
<b>Wind Turbine Generators (WTG)</b>	The wind turbine generators convert wind energy into electrical power. Key components include the rotor blades, nacelle (housing for electrical generator and other electrical and control equipment) and tower. The final selection of project wind turbine model will be made post-consent application.
<b>Windfarm Site</b>	The area within which the wind turbines, Offshore Substation Platform and inter-array cables will be present.
<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.

## 15. Land Use

### 15.1 Introduction

1. This chapter of the Environmental Statement (ES) presents the potential impacts on Land Use of the White Cross Offshore Windfarm Project (the Onshore Project). 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 Mean High Water Springs (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 15.2** 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 15.3** of this chapter and **Chapter 6: EIA Methodology**.
6. This assessment has been informed by impacts assessed in Land Use and impacts assessed in this chapter informs the following linked ES chapters:
  - Chapter 12: Ground Conditions and Contamination
  - Chapter 14: Water Resources and Flood Risk
  - Chapter 16: Onshore Ecology and Ornithology
  - Chapter 21: Socioeconomics (including Tourism and Recreation)
  - Chapter 22: Human Health.
7. Inter-relationships with these chapters are further described in **Section 15.10**.

8. Additional information to support the Land Use assessment includes a Public Rights of Way Strategy undertaken for the Onshore Project, as presented in **Appendix 15.A**.
9. This ES chapter:
  - Presents the existing environmental baseline established from desk studies, and consultation
  - Presents the potential environmental effects on Land Use 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.

## 15.2 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 Land Use for the Onshore Project are outlined in this section.

### 15.2.1 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 15.1**.

*Table 15.1 Summary of NPPF Policy relevant to Land Use*

Summary	How and where this is considered in the ES
<p>“Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails”. <b>NPPF, paragraph 100.</b></p>	<p>Public Rights of Way, footways and bridleways that have been identified as being located within the Onshore Project Area are outlined in <b>Section 15.4.1.5</b>.</p> <p>The potential impacts, and potential mitigation measures, from the Onshore Project on Public Rights of Way and other access rights are discussed within <b>Section 15.5.6</b> and <b>Section 15.6.5</b>. A Public Rights of Way Strategy is also</p>

Summary	How and where this is considered in the ES
	included as an appendix to this chapter ( <b>Appendix 15.A</b> ).
“Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances”. <b>NPPF, paragraph 147.</b>	No designated areas of Green Belt will be affected by the Onshore Project. Therefore, this topic is not considered further within this chapter.
“Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); 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”. <b>NPPF paragraph 174.</b>	Soil types present within the Onshore Project Area are outlined in <b>Section 15.4.1.2</b> and <b>Table 15.18</b> . Potential impacts, and potential mitigation measures, on soil resources in relation to degradation and erosion are discussed in <b>Section 15.5.3</b> .  Best and most versatile agricultural land located within the Onshore Project is outlined in <b>Section 15.4.1.1</b> and <b>Table 15.17</b> . Potential impacts, and potential mitigation measures, on best and most versatile agricultural land during construction and operation are discussed in <b>Sections 15.5.2</b> and <b>15.6.2</b> .

## 15.2.2 Local Policies

12. This section considers the North Devon and Torridge Local Plan (2018) as well as the Braunton Parish Neighbourhood Plan (2022), and their relevance to the Land Use assessment. A summary of the local policies is provided in **Table 15.2**.

*Table 15.2 Summary of Local Policies relevant to Land Use*

Policy Name	Summary	How and where this is considered in the ES
<b>North Devon and Torridge Local Plan</b>		
<b>Policy ST09: Coast and Estuary Strategy</b>	...(2) Priority will be given to employment uses and waterside infrastructure requiring a coastal location. Such uses will be directed to previously developed sites around the coastline and the Taw-Torridge estuary with existing jetties and wharves. These sites should be safeguarded for employment uses requiring a waterside location. Facilities at Appledore and Yelland Quay will be protected for their value as landing stages	Public Rights of Way, footways and bridleways that have been identified as being located within the Onshore Project Area are outlined in <b>Section 15.4.1.5</b> .  The potential impacts, and potential mitigation measures, from the Onshore Project on Public Rights of

Policy Name	Summary	How and where this is considered in the ES
	<p>for marine aggregates and for other marine employment uses. Loss of traditional boating facilities that are part of the fabric of coastal communities will be discouraged.</p> <p>...(11) The continuity of the South West Coast Path and the Tarka Trail will be protected and a network of connecting routes will be improved. Improvements to coastal and estuarine access will be sought where rundown waterfront areas are regenerated. The Tarka Trail link between Ilfracombe and Braunton will be completed.</p>	<p>Way and other access rights are discussed within <b>Section 15.5.6</b> and <b>Section 15.6.5</b>. A Public Rights of Way Strategy is also included as an appendix to this chapter (<b>Appendix 15.A</b>).</p> <p>Potential impacts on employment as a result of the Onshore Project are discussed in <b>Chapter 21 Socioeconomics (including Tourism and Recreation)</b>.</p>
<p><b>Policy ST10: Transport Strategy</b></p>	<p>.... 2 (d) developing quality strategic recreational routes and local pedestrian, cycle and bridleway networks and further integration and enhancement of the public rights of way network.</p>	
<p><b>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>....</p> <p>b. protecting the hierarchy of designated sites in accordance with their status;</p> <p>....</p> <p>d. conserving northern Devon’s geodiversity and its best and most versatile agricultural land</p> <p>...</p> <p>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>Designated sites located within the Onshore Project Area are discussed in <b>Section 15.4.1.4.1</b>. Additional details, in relation to ecologically designated sites are discussed in <b>Chapter 16: Onshore Ecology and Ornithology</b>.</p> <p>Details on the Best and Most Versatile (BMV) agricultural land within the Onshore Project Area are included in <b>Section 15.4.1.1</b>. Potential impacts and potential mitigation measures, from the Onshore Project on BMV land are discussed in <b>Sections 15.5.2</b> and <b>15.6.2</b>.</p>
<p><b>Policy DM02: Environmental Protection</b></p>	<p>Development will be supported where it does not result in unacceptable impacts to:</p> <p>....</p> <p>d) light pollution (sky glow, light intrusion and light spillage), where light overflows on to areas not intended to be lit. Areas particularly sensitive to light pollution include tranquil areas of open</p>	<p>There are no designated areas of dark skies located within the Onshore Project Area. The closest Dark Sky Discovery site is Wimbleball</p>

Policy Name	Summary	How and where this is considered in the ES
	countryside, in particular areas of nature conservation value and Exmoor National Park's Dark Sky Reserve.	<p>Lake, located approximately 50km east of the Onshore Project.</p> <p>Potential impacts on the visual amenity of the Onshore Project Area are discussed separately in <b>Chapter 20: Onshore Landscape and Visual Amenity.</b></p>
<b>Policy DM05: Highways</b>	All development shall protect and enhance existing public rights of way, footways, cycleways and bridleways and facilitate improvements to existing or provide new connections to these routes where practical to do so.	<p>Public Rights of Way, footways and bridleways that have been identified as being located within the Onshore Project Area are outlined in <b>Section 15.4.1.5.</b></p> <p>The potential impacts, and potential mitigation measures, from the Onshore Project on Public Rights of Way and other access rights are discussed within <b>Section 15.5.6</b> and <b>Section 15.6.5.</b> A Public Rights of Way Strategy is also included as an appendix to this chapter (<b>Appendix 15.A</b>).</p>
<b>Braunton Parish Neighbourhood Plan 2018-2031</b>		
<b>Policy NE5: Protecting the Footpath, Bridlepath and Cycle Path Networks</b>	<p>Development proposals which result in the loss of public footpaths, bridleways and cycle paths or reduce permeability will not normally be supported.</p> <p>Proposals affecting existing or creation of new rights of way and other non-vehicular routes should, where relevant:</p> <ul style="list-style-type: none"> <li>i) Better link existing areas of green infrastructure and local green space.</li> <li>ii) Help to retain and enhance safe and easy pedestrian and cycling access to local amenities.</li> <li>iii) Have no significant impact on landscape or seascape.</li> </ul>	<p>Public Rights of Way, footways and bridleways that have been identified as being located within the Onshore Project Area are outlined in <b>Section 15.4.1.5.</b></p> <p>The potential impacts, and potential mitigation measures, from the Onshore Project on Public Rights of Way and other access rights are discussed within <b>Section 15.5.6</b> and <b>Section 15.6.5.</b> A Public Rights of Way Strategy is also included as</p>

Policy Name	Summary	How and where this is considered in the ES
		an appendix to this chapter ( <b>Appendix 15.A</b> ).
<b>Policy BE14: Protect and Promote Dark Skies</b>	<ol style="list-style-type: none"> <li>1. Any proposals which require planning permission should avoid light pollution and protect the night-time environment of the intrinsically dark areas across the Parish given its proximity to the North Devon AONB [Area of Outstanding Natural Beauty], location within the UNESCO Biosphere [United Nations Educational, Scientific and Cultural Organization] and the natural environment's night time wildlife.</li> <li>2. External lighting levels should be designed to minimise light pollution and only used where lighting is required to:               <ol style="list-style-type: none"> <li>i. Ensure road safety in areas where there is a risk to pedestrians and cyclists</li> <li>ii. Deter criminal activity</li> <li>iii. Light entrances to buildings used after dark</li> <li>iv. Provide lighting for evening sporting activities</li> <li>v. Support the night-time economy including lighting for farmers needing to work at night.</li> </ol> </li> <li>3. All new development should demonstrate how it has been designed to avoid light pollution by providing a Light Impact Assessment and adherence to the Braunton Parish Design Code 07(g). Proposals that use unscreened external and internal lighting will not be supported.</li> </ol>	<p>There are no designated areas of dark skies located within the Onshore Project Area. The closest Dark Sky Discovery site is Wimbleball Lake, located approximately 50km east of the Onshore Project.</p>

### 15.2.3 National Policy Statement

13. National Policy Statements (NPS) 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. The assessment requirements for Land Use are set out within the overarching NPS for Energy (EN-1) (Department for Energy Security and Net Zero (DESNZ), 2023a) and NPS for Electricity Networks Infrastructure (EN-5) (DESNZ, 2023b) and summarised in **Table 15.3**. NPS EN-3 is only relevant to offshore components and is not discussed further.
15. Although the Onshore 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.

*Table 15.3 Summary of NPS EN-1, EN-3 and EN-5 provisions relevant to Land Use*

Summary	How and where this is considered in the ES
<p><b>EN-1 NPS for Energy (2023)</b></p> <p>“The ES (see Section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan” – <b>EN-1, paragraph 5.11.8.</b></p>	<p>Details on existing or proposed land uses can be found in <b>Section 15.4</b> and new developments or proposed projects are assessed for potential cumulative effects in <b>Section 15.8.</b></p>
<p>“During any pre-application discussions with the applicant the LPA should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements” - <b>EN-1, paragraph 5.11.11.</b></p>	<p>Consultation will include discussion regarding the works associated with the Onshore Project and will allow the local authority to comment on the project design.</p> <p>Further details are provided in <b>Section 15.3.8. Chapter 7 Consultation</b> summarises the consultation approach undertaken.</p>
<p>“Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of</p>	<p>Sterilisation of future mineral resources has been assessed, as</p>



Summary	How and where this is considered in the ES
<p>the land use after any future decommissioning has taken place” - <b>EN-1, paragraph 5.11.19.</b></p>	<p>discussed in <b>Chapter 12: Ground Conditions and Contamination.</b></p>
<p>“The Secretary of State should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. It should give little weight to the loss of poorer quality agricultural land (in grades 3b, 4 and 5), except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy” - <b>EN-1, paragraph 5.11.32.</b></p>	<p>The Onshore Project will be determined by North Devon Council and not the Secretary of State.</p> <p>Impacts on the BMV agricultural land and soil quality are assessed in <b>Section 15.5.2.</b> Potential mitigation measures to reduce the significance of effect are also discussed in <b>Section 15.5.2.</b></p> <p>More widely, impacts due to any existing contaminated land are discussed in <b>Chapter 12: Ground Conditions and Contamination.</b></p>
<p>“Although in the case of much energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project” - <b>EN-1, paragraph 5.11.32.</b></p>	<p>The Onshore Projects’ configuration, routing and layout will take into account the multiple environmental criteria including land use (see <b>Chapter 4: Site Selection and Assessment of Alternatives</b>).</p>
<p>“Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations.</p>	<p>Impacts on the BMV agricultural land and soil quality are assessed in <b>Section 15.5.2.</b> Potential</p>

Summary	How and where this is considered in the ES
<p>Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination, and where contamination is present, applicants should consider opportunities for remediation where possible.</p> <p>Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination” - <b>EN-1, paragraphs 5.11.12 – 5.11.14.</b></p>	<p>mitigation measures to reduce the significance of effect are also discussed in <b>Section 15.5.2.</b></p> <p>More widely, impacts due to any existing contaminated land are discussed in <b>Chapter 12: Ground Conditions and Contamination.</b></p>
<p>“Public Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The Secretary of State should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve or create new access. In considering revisions to an existing right of way, consideration should be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements or other provisions in respect of these measures should be included in any grant of development consent” - <b>EN-1, paragraph 5.11.30.</b></p>	<p>The potential impacts from the Onshore Projects on Public Rights of Way and other access rights are discussed within <b>Section 15.5.6</b> and <b>Section 15.6.5.</b></p>
<p>“Development of land will affect soil resources, including physical loss of and damage to soil resources, through land contamination and structural damage. Indirect impacts may also arise from changes in the local water regime, organic matter content, soil biodiversity and soil process”. - <b>EN-1, paragraph 5.11.4</b></p>	<p>Soil types identified within the Onshore Project area are outlined in <b>Table 15.18.</b></p> <p>Impacts on soil quality during the construction phase are assessed in <b>Sections 15.5.3.</b> Potential mitigation measures to reduce the significance of effect are also discussed in <b>Section 15.5.3.</b></p>

Summary	How and where this is considered in the ES
<p><b>EN-5 NPS for Electricity Networks Infrastructure (2023)</b></p> <p>"There is little evidence that exposure of crops, farm animals or natural ecosystems to transmission line EMFs has any agriculturally significant consequences" - <b>EN-5, paragraph 2.13.8.</b></p>	<p>No impacts associated with electric and magnetic fields (EMF) on land use and agriculture are anticipated and so are not discussed within this chapter. For impacts associated with health, please refer to <b>Chapter 22: Human Health.</b></p>
<p>"...the developer's commitment, as set out in their ES, to mitigate the potential detrimental effects of undergrounding works on any relevant agricultural land and soils, particularly regarding Best and Most Versatile land. Such a commitment must guarantee appropriate handling of soil, backfilling, and return of the land to the baseline Agricultural Land Classification (ALC), this ensuring no loss or degradation of agricultural land. Such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code" - <b>EN-5, paragraph 2.9.25.</b></p>	<p>Impacts on BMV agricultural land and soil quality are assessed in <b>Section 15.5.2.</b> Potential mitigation measures to reduce the significance of effect are also discussed in <b>Section 15.5.2.</b></p>

### 15.2.4 Other

16. In addition to the NPS, there a number of pieces of legislation, policy and guidance applicable to the assessment of Land Use. These include:

- Legislation – the following UK legislation is considered the most relevant to this chapter:
  - Road Traffic Regulation Act 1984
  - Countryside and Rights of Way Act (CRoW) 2000
  - The Environmental Stewardship (England) Regulations 2005
  - The Commons Act 2006
  - Planning Act 2008
  - Marine and Coastal Access Act 2009
  - Environment Act 2021.
- Policy and guidance – Relevant best practice guidance for Land Use is listed below:
  - Ministry of Agriculture, Fisheries and Food (MAFF) (1988) Agricultural Land Classification of England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land (Revised Guidelines)
  - MAFF (2000) Good Practice Guide for Handling Soils
  - Department for Communities and Local Government (2002) Planning Policy Guidance 17: Planning for open space, sport and recreation
  - Department for Environment, Food and Rural Affairs (Defra) (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites
  - Natural Environment White Paper 2011
  - Natural England (2012) Agricultural Land Classification: Protecting the Best and Most Versatile Agricultural land
  - A Green Future: Our 25 Year Plan to Improve the Environment 2018
  - Highways Agency (2019) Design Manual for Roads and Bridges (DMRB) LA 109 (Geology and Soils) and LA 112 (Population and human health)
  - Highways Agency (2020) Design Manual for Roads and Bridges (DMRB) LA 112, Revision 1 (Population and human health)
  - Institution of Environmental Sciences (IES) (2020) Sustainable, healthy, and resilient: Practice-based approaches to land and soil management
  - British Society of Soil Science (2021) Guidance Document 3 Working with Soil Guidance Note: Benefitting from soil management in development and construction
  - Society for the Environment (SocEnv) (2021) Soils and Stones Report

- The Institute of Quarrying (IQ) (2021) Good Practice Guide for Handling Soils in Mineral Workings
- National Planning Policy Framework (NPPF) 2021
- Institute of Environmental Management and Assessment (IEMA) (2022) A New Perspective on Land and Soil in Environmental Impact Assessment.

17. Further detail is provided in **Chapter 3: Policy and Legislation**.

## 15.3 Assessment Methodology

### 15.3.1 Study Area

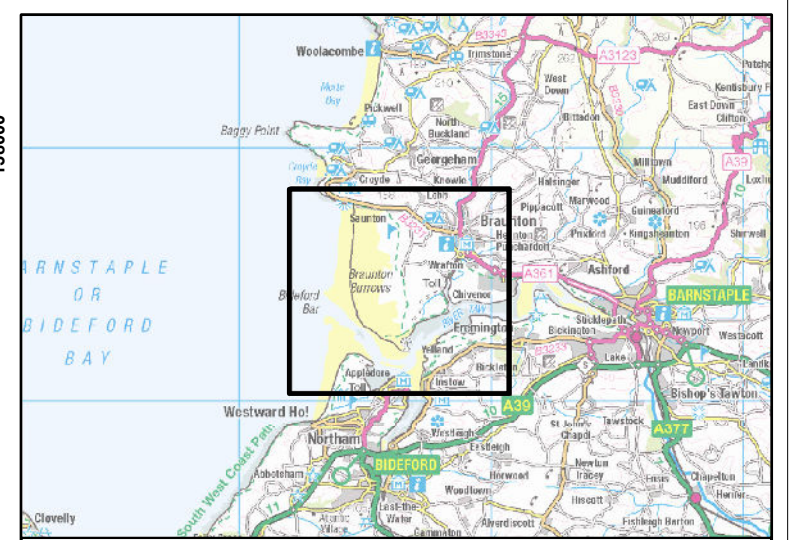
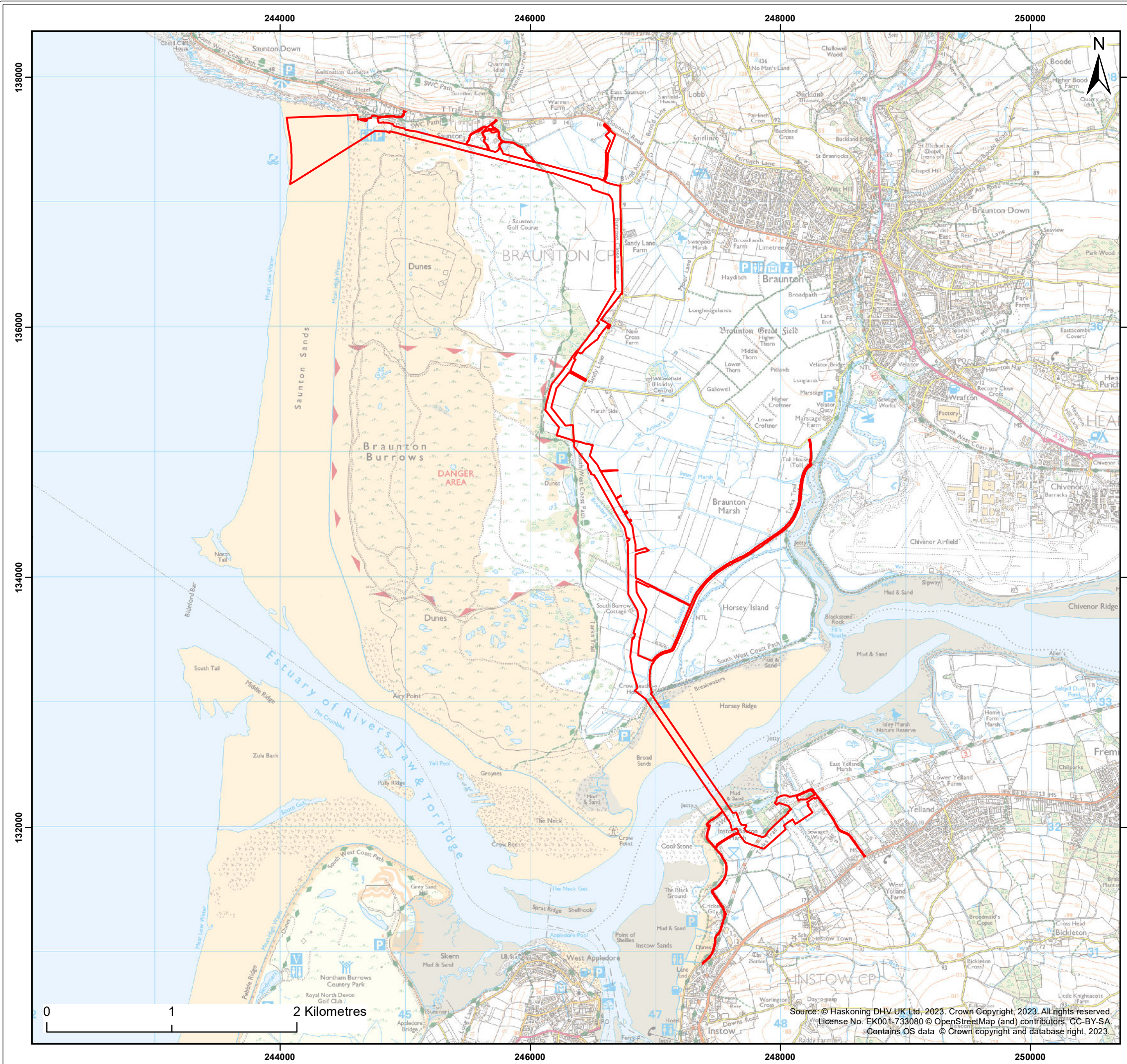
18. Details of the location of the Onshore Project are set out within **Chapter 5: Project Description**.
19. The Land Use study area is defined by land that may be directly, or indirectly, by the construction and operation of the Onshore Project. Both direct and indirect impacts may be temporary (e.g. closure of a Public Right of Way during construction) or permanent (e.g. loss of agricultural land at the onshore substation).
20. It is assumed that direct impacts to Land Use will occur wholly within the Onshore Development Area. The study area for indirect impacts has been defined on the basis of parish, district and county boundaries. **Figure 15.1** illustrates the Land Use study area.

### 15.3.2 Approach to Assessment

21. **Chapter 6: EIA Methodology** provides a summary of the general impact assessment methodology applied to the Onshore Project. The following sections outline the methodology used to assess the potential effects on Land Use.

#### 15.3.2.1 Definitions of magnitude of impact

22. For each of the impacts assessed in this ES, a magnitude has been assigned. In doing so the spatial extent, duration, frequency and reversibility of the impact from the construction, operation and maintenance, or decommissioning phase of the Onshore Project have been considered, where applicable.



**Legend:**  
 Onshore Development Area

Client: <b>Offshore Wind Ltd.</b>	Project: <b>White Cross Offshore Windfarm</b>
--------------------------------------	--

Title:  
**Land Use Study Area**

Figure: 15.1      Drawing No: PC2978-RHD-ZZ-XX-DR-Z-0698

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	01/08/2023	AB	KD	A3	1:30,000

Co-ordinate system: British National Grid






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 Contains OS data © Crown copyright and database right, 2023.

23. For the purpose of defining receptor sensitivity and magnitude, three key groups of impacts have been identified:

- Land use: the potential impacts of the Onshore Project on the continuation of the current land use (agricultural, environmental stewardship, planning policy etc)
- Agriculture and soils: the potential impacts on the soil as a receptor itself, including the bio-physical elements of soils, the surrounding environment, and the agricultural productivity of the land. Recreational: the potential impacts of the Onshore Project on Public Rights of Way, National Trails, Cycleways etc.

24. The terms used to define magnitude of impact are outlined in **Table 15.4**.

*Table 15.4 Definition of terms relating to magnitude of an impact*

Magnitude	Definition	Agriculture	Recreation
<b>High</b>	<p>Permanent / irreversible changes, over the whole receptor (e.g. designated sites) , affecting usability, risk, value over a wide area, or certain to affect compliance with, for example, compliance with an Environmental Stewardship Scheme); or</p> <p>Existing land use would not be able to continue on &gt;5ha of land or the entire landowner / occupiers available land (where smaller) where the land would be rendered unviable for agricultural purposes or permanent changes to land management would be required.</p>	<p>Permanent loss of &gt;20ha of Grade 1, 2 or 3 agricultural land (Natural England, 2012); or</p> <p>Full land recovery in excess of 10 years.</p>	<p>Permanent closure of a recreational feature.</p>
<b>Medium</b>	<p>Moderate, permanent or long-term reversible changes, over the majority of the receptor, affecting</p>	<p>Medium to long-term loss of between 5 and 20ha of Grade 1,2 or 3 agricultural land;</p>	<p>Temporary closure or disruption to a recreational feature.</p>

Magnitude	Definition		
	Land use	Agriculture	Recreation
	usability, risk, value over the local area, possibly affecting compliance; Existing land use would not be able to continue on <5ha of land; or Noticeable changes to the existing land use.	Permanent loss of >10ha of Grade 3 agricultural land; Full land recovery expected within 5 -10 years; or <10ha of any agricultural land permanently lost from agriculture.	
<b>Low</b>	Temporary change affecting usability, risk or value over the short-term; or Temporary change affecting usability within the site boundary; measurable permanent change with minimal effect on usability, risk or value; no effect on regulatory compliance.	Short term loss of >20ha, or permanent loss of >10ha of Grade 4 land; Full land recovery expected within 5 years; or <20ha of soil is temporarily unsuitable for agriculture or <5ha is permanently lost from agriculture.	No direct impact to feature.
<b>Negligible</b>	Minor permanent or temporary change, undiscernible over the medium to short-term, with no effect on usability, risk or value.	No identifiable material changes to the soil resource; or Small area <1,000m <sup>2</sup> is permanently lost from agriculture.	No direct impact to feature.

25. 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**.
26. Impacts assessed as **No Change** have no potential for a significance of effect and therefore are not assessed further.

#### 15.3.2.2 Definitions of receptor sensitivity/value

27. The sensitivity level of Land Use to each impact is justified within the assessment and is dependent on the following factors:



- Adaptability – the degree to which a receptor can avoid or adapt to an effect
- Tolerance – the ability of a receptor to accommodate temporary or permanent change without a significant adverse effect
- Recoverability – the temporal scale over and extent to which a receptor will recover
- Value – a measure of the receptor importance and rarity.

28. The terms used to define sensitivity/value are outlined in **Table 15.5**.

*Table 15.5 Definition of terms relating to receptor sensitivity/value*

Sensitivity	Definition		
	Land Use	Agriculture	Recreation
<b>High</b>	Receptor has no or very limited capacity to accommodate changes such as loss of recreational activity / area, loss of land area, soil degradation etc.		
	Planning policy areas designated at national and international scale; Higher level environmental stewardship farms; Future large-scale planning use applications; or Regionally distinctive and rare land uses that cannot be replaced or adapted.	Land at ALC Grade 1 or 2; Land at ALC Grade 3 with respect to permanent land take; Land with Injurious Weeds or Notifiable Scheduled Diseases that are at risk of spreading; Soil which is susceptible to structural damage and erosion; or Unrecoverable or unadaptable soil.	Recreational feature of national value; National trails or paths; European protected sites; or Nationally important landscapes e.g. AONB.
<b>Medium</b>	Receptor has limited capacity to accommodate changes such as loss of recreational activity / area, loss of land area, soil degradation etc.		
	Locally designated planning policy areas; Entry level environmental stewardship farms; or Land used for specific and regionally important agriculture or horticulture.	Land at ALC Grade 3 with respect to temporary land take; or Soil which is vulnerable to seasonal structural damage or erosion.	Recreational feature of regional value; Public Rights of Way e.g. footpaths, bridleways and byways; or Stewardship bridleways (a public footpath that has been granted bridleway status under a stewardship scheme, courtesy of the landowners.
<b>Low</b>	Receptor has moderate capacity to accommodate changes such as loss of recreational activity / area, loss of land area, soil degradation etc.		

Sensitivity	Definition		
	Land Use	Agriculture	Recreation
	No impact on designated planning policy areas; Not under environmental stewardship scheme, but is subject to other environmental management schemes; Large agricultural holdings; or Land used for ordinary agriculture or horticulture.	Land at ALC Grade 4; Arable or pasture grassland; or Medium to coarse soil with some resistance to structural damage.	Recreational asset of local value; Local permissive pathways; or Open access land.
<b>Negligible</b>	Receptor generally tolerant of changes such as loss of recreational activity / area, loss of land area, soil degradation etc.		
	No environmental stewardship schemes or other environmental management schemes.	Land at ALC Grade 5 or Urban; Land which is not agricultural, arable or pasture grassland; or Soil with a greater resistance to structural damage.	Recreational feature with limited or no recreational value.

29. The ALC grades and descriptions following the Ministry of Agriculture, Fisheries and Food (MAFF) (1988) Agricultural Land Classification of England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land (Revised Guidelines) are shown in **Table 15.6**.

*Table 15.6 ALC Grades and Descriptions (MAFF, 1988)*

Grade	Description
Grade 1: Excellent quality agricultural land	Land with little or no limitations to agricultural use. Land can support a very wide range of agricultural and horticultural crops with consistently high yields. Crops commonly include top fruit, soft fruit, salad crops and winter harvested vegetables.
Grade 2: Very good quality agricultural land	Land with minor limitations which can affect crop yields, cultivations or harvesting. This land can support a wide range of agricultural and horticultural crops. Reduced flexibility can lead to difficulties in the production of more demanding crops such as winter harvested vegetables and arable root crops. Whilst the yield is high, it may be lower or more variable than Grade 1 land.

Grade	Description
Grade 3: Good to Moderate quality agricultural land	Land with moderate limitations which can affect the type of crops to be grown, timing and method of cultivation, harvesting or the level of yield. More demanding crops generally have a lower or more variable yield than on Grades 1 and 2 land.
Grade 4: Poor quality agricultural land	Land with significant limitations that considerably restrict the type and yield of crops that can be grown. Grass with occasional arable crops (e.g. cereals and forage crops) are predominantly suited to this land and produce variable yields.
Grade 5: Very poor quality agricultural land	Land with very severe limitations, restricting use to permanent pasture or rough grazing, with the exception of occasional pioneer forage crops.
Urban	Built-up urban areas with 'hard' uses such as housing, industry, commerce, education etc. with little potential to restore land after use.
Non-agricultural	'Soft' use areas such as golf courses, private parklands, public open spaces and sports field that can be returned to agriculture relatively easily.

30. The ALC ranks land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. It provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system, and in turn, underpinning the principles of sustainable development. The ALC system classifies land into the five grades outlined above. Grade 3 land can be subdivided into 3a (good) and 3b (moderate).
31. BMV land is the land which is most flexible, productive and efficient which can best deliver future crops for food and non-food uses such as biomass, fibres and pharmaceuticals. It is defined as Grades 1, 2 and 3a by policy guidance. However, national datasets no longer subdivide Grade 3 land. For the purpose of this assessment, and taking into consideration a worst-case scenario, all Grade 3 land subject to permanent land take will be classified as BMV.

#### 15.3.2.1 Significance of effect

32. The potential significance of effect for a given impact, is a function of the sensitivity of the receptor and the magnitude of the impact (see **Chapter 6 EIA Methodology** for further details). A matrix is used (**Table 15.7**) as a framework to determine the significance of an effect. Definitions of each level of significance are provided in **Table 15.8**. Impacts and effects may be deemed as being either positive (beneficial) or negative (adverse).

33. In all cases, the evaluation of receptor sensitivity, impact magnitude and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.

*Table 15.7 Significance of an effect - resulting from each combination of receptor sensitivity and the magnitude of the impact upon it*

		Negative Magnitude				Beneficial Magnitude			
		High	Medium	Low	Negligible	Negligible	Low	Medium	High
Sensitivity	High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
	Medium	Major	Moderate	Minor	Minor	Minor	Minor	Moderate	Major
	Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
	Negligible	Minor	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor

*Table 15.8 Example definitions of effect significance*

Magnitude	Definition
<b>Major</b>	Very large or large change in receptor condition, which is likely to be an important consideration at a regional or district level because they contribute to achieving national, regional or local objectives, or could result in exceedance of statutory objectives and / or breaches of legislation.
<b>Moderate</b>	Intermediate change in receptor condition, which is likely to be an important consideration at a local level.
<b>Minor</b>	Small change in receptor condition, which may be raised as localised issues but are unlikely to be important in the decision-making process.
<b>Negligible</b>	No discernible change in receptor condition.
<b>No change</b>	No impact, therefore, no change in receptor condition.

34. Potential effects are described, followed by a statement of whether the effect is significant in terms of the EIA regulations. Potential effects identified within the assessment as major or moderate are regarded as significant in terms of the EIA regulations. Whilst minor effects (or below) are not significant in EIA terms in their own right, it is important to distinguish these, as they may contribute to significant effects cumulatively or through interactions.
35. Following initial assessment, if the effect does not require additional mitigation (or none is possible), the residual effect will remain the same. If, however, additional mitigation is proposed, there will be an assessment of the post-mitigation residual effect.

### 15.3.3 Worst-Case Scenario

36. In accordance with the assessment approach to the 'Rochdale Envelope' set out in **Chapter 6: EIA Methodology**, the impact assessment for Land Use has been undertaken based on a realistic worst-case scenario of predicted impacts. The Project Design Envelope for the Onshore Project is detailed in **Chapter 5: Project Description**.
37. Using the project design envelope approach means that receptor-specific potential effects draw on the options from within the wider envelope that represent the most realistic worst-case-scenario. It is also worth noting that under this approach the combination of project options constituting the realistic worst-case scenario may differ from one receptor to another and from one effect to another.
38. **Table 15.9** presents the realistic worst-case scenario considered for the assessment of Land Use.

*Table 15.9 Definition of realistic worst-case scenario details relevant to the assessment of impacts in relation to Land Use*

Impact	Realistic worst-case scenario	Rationale
<b>Construction</b>		
<b>Landfall (to MLWS)</b>	<ul style="list-style-type: none"> <li>Horizontal Directional Drill (HDD) horizontal length: 680m</li> <li>Number of HDDs: 1</li> <li>HDD compound works area: 4,500m<sup>2</sup></li> <li>Indicative HDD depth: 1.2m</li> <li>Number of transition joint bays (TJB): 1</li> <li>TJB area: 20 (l) x 8 (w) x 2m (h)</li> <li>Duration: 4.5 months</li> </ul>	These parameters represent the maximum footprint and duration of disturbance within the Onshore Development Area, which has the potential to impact on land use receptors. The potential impacts identified are discussed in <b>Section 15.5</b> .
<b>Onshore export cable route</b>	<ul style="list-style-type: none"> <li>Construction corridor width: 30m</li> <li>Construction corridor width at pinch points: 12m</li> <li>Construction corridor width at trenchless crossings: 15m</li> <li>Corridor length: 6km</li> <li>Number of trenches: 2</li> <li>Cable trench width: 3m</li> </ul>	

Impact	Realistic worst-case scenario	Rationale
	<ul style="list-style-type: none"> <li>• Cable trench approximate depth: 1.9m</li> <li>• Approximate depth to top of duct / tile: 1.2m</li> <li>• Number of jointing bays: 30</li> <li>• Jointing bay construction dimensions: 12 (l) x 4 (w) x 1.5m (h)</li> <li>• No. of link box locations: 30</li> <li>• Link box construction dimensions: 2(h) x 3(w) x 3m (l)</li> <li>• Indicative HDD depth: 1.2m</li> <li>• HDD compound area: 2,500m<sup>2</sup></li> <li>• Total onshore cable corridor works area: yet to be determined</li> <li>• Access routes: 1 main access</li> <li>• Haul road: 6.5km in length, 5m width</li> <li>• Main construction compound: 2,500m<sup>2</sup> (50 x 50m)</li> <li>• Secondary construction compounds: 1,800m<sup>2</sup> (three compounds each 20 x 30m - 600m<sup>2</sup>)</li> <li>• Material storage areas: yet to be determined</li> <li>• Duration: 18 months</li> </ul>	
<b>Onshore Substation</b>	<ul style="list-style-type: none"> <li>• Access road length: 250m</li> <li>• Access road width: 7.5m</li> <li>• Construction compound area: 5,000m<sup>2</sup></li> <li>• Total construction area: yet to be determined</li> <li>• Duration: 16 months</li> </ul>	
<b>Operation</b>		
<b>Onshore export cable route</b>	<ul style="list-style-type: none"> <li>• Operational corridor width: 14m</li> <li>• Number of trenches: 2</li> <li>• Route length: 6km</li> </ul>	These parameters represent the maximum footprint of White Cross

Impact	Realistic worst-case scenario	Rationale
<b>Onshore Substation</b>	<ul style="list-style-type: none"> <li>Operational compound area: 4,880m<sup>2</sup></li> <li>Permanent land-take associated with access roads, drainage solutions and landscaping: yet to be determined</li> <li>Duration: Project life</li> </ul>	that would interact with the baseline environment. Potential impacts to land use receptors during the operational phase of the Onshore Project are discussed in <b>Section 15.6</b> .
<b>Decommissioning</b>		
<b>Landfall (to MLWS)</b>	<p>The anticipated design life for the Onshore Project is 50 years. 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.</p> <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>Onshore 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>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 those identified for the construction phase.</p>
<b>Onshore export cable route</b>		
<b>Onshore Substation</b>		

### 15.3.4 Summary of Mitigation

39. This section outlines the mitigation relevant to the Land Use assessment, which has been incorporated into the design of the Onshore Project. Further information is detailed in **Chapter 5: Project Description**.

#### 15.3.4.1 Embedded Mitigation

40. The embedded mitigation measures are those defined in the IEMA guidance as either primary or tertiary mitigation. Those measures relevant to the Land Use assessment are summarised in **Table 15.10**.

41. 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 15.10 Embedded mitigation measures relevant to the Land Use assessment*

Component/Activity/Impact	Mitigation embedded into the design of the Onshore Project
<b>Site selection</b>	The Onshore Project has undergone an extensive site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements (for more information see <b>Chapter 4: Site Selection and Assessment of Alternatives</b> ). Land take has been minimised where possible, reducing sterile land parcels and aligning with field boundaries.
<b>Haul road</b>	The Applicant has included a haul road to deliver equipment to the installation site from construction compounds. This will limit physical disturbance to a specific area.
<b>Construction corridor</b>	As well as a working easement, the construction corridor will have sufficient space allowed to ensure appropriate soil management and pre-construction drainage.
<b>Impacts on soils</b>	Topsoil stripping; appropriate storage and handling of soils according to their characteristics and in appropriate weather conditions; restrict movements of heavy plan vehicles; minimising excavation footprints; Soil Management Plan (SMP); construction method statements for soil handling; private agreements.
<b>Impacts to agricultural land</b>	Landowner consultation; maintain access for farm vehicles; plan timing of works; implement private agreements.
<b>Impacts on agricultural drainage</b>	Implementation of the final CEMP and SMP.

#### 15.3.4.1 Additional Mitigation

42. In addition to the embedded mitigation measures as outlined above, the Applicant has also committed to the following further mitigation measures summarised in **Table 15.11**. These are those identified within the IEMA guidance as secondary mitigation, and includes measures identified where potentially significant effects have been assessed.



*Table 15.11 Further mitigation measures relevant to the Land Use assessment*

<b>Component/ Activity/ Impact</b>	<b>Additional Mitigation</b>
<b>Impacts on agricultural drainage</b>	Maintaining / reinstating land drainage systems; provision of an Agricultural Liaison Officer (ALO) and / or local specialised drainage contractor.
<b>Impacts to users of recreational routes</b>	Appropriately fenced (unmanned) crossing points; manned crossing points; and temporary alternative routes.

### 15.3.5 Baseline Data Sources

#### 15.3.5.1 Desktop Study

43. A desk study was undertaken to obtain information on Land Use. 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 Land Use are fit for the purpose of the EIA.
44. The sources of information presented in **Table 15.12** were consulted to inform the Land Use assessment.

*Table 15.12 Data sources used to inform the Land Use assessment*

<b>Source</b>	<b>Summary</b>
<b>Ordnance Survey</b>	Road maps, railway lines and urban areas.
<b>Defra</b>	Datasets on the structure of the agricultural industry.
<b>National Soil Resources Institute, Cranfield University</b>	Soil types.
<b>Natural England</b>	Environmental Stewardship Schemes
	Countryside Stewardship Schemes
	Agricultural Land Classifications*
<b>Devon County Council</b>	Common land
	Public Rights of Way Utilities

\*Observations made on site specific surveys may not always align with those recorded on the Agricultural Land Classification data set. However, this is the best publicly available data source and any changes in classification since the publication of the data set will not be significant in terms of the EIA assessment.

#### 15.3.5.2 Site Specific Survey

45. To inform the EIA, site-specific surveys were undertaken, as agreed with the statutory consultees. A summary of surveys is outlined in **Table 15.13**.

*Table 15.13 Summary of site-specific survey data*

Survey name and year	Summary
<b>Extended Phase 1 Habitat Survey, 2022</b>	Although information from this survey has been used within this chapter, the main focus was to assess the ecological baseline for the Onshore Project – see <b>Chapter 16: Onshore Ecology and Ornithology</b> for full details of the survey.
<b>Landowner site visits, 2023</b>	Numerous site visits have been undertaken to consult with landowners on land use including agricultural operations.

### 15.3.6 Data Limitations

46. Potential effects to assets are based on a quantitative assessment where possible in order to predict the effect on land use and agricultural activities, particularly during the construction phase. It is however, accepted that the perceptions, particularly for receptor sensitivity, may differ between individuals. Therefore, the most likely perception is chosen where possible and it is assumed that differences in opinion would balance on average.
47. The baseline environment in terms of agricultural land cover, includes the crops grown and agricultural practices adopted where these are known. It should be noted that this assessment is based on high level datasets which are only accurate at the time of data collection, and therefore should only be considered indicative of the land uses found within the study areas.
48. Impacts on soil resources are not predicted to extend beyond the direct study area. Therefore, any impacts to the wider area are not discussed here. The published soil data used to undertake this assessment only provides a general characteristic of the area and are only indicative of the soil type present. The specific characteristics may differ on the ground and can vary between individual fields.

### 15.3.7 Scope

49. Upon consideration of the baseline environment, the project description outlined in **Chapter 5: Project Description**, and Scoping Opinion, potential impacts upon Land Use 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 15.14** and **Table 15.15** respectively. In scoping potential impacts in or out reference is made to the embedded mitigation measures outlined above in **Table 15.10**.

*Table 15.14 Summary of impacts scoped in relating to Land Use*

Potential Impact	Justification
<b>Agricultural drainage</b>	The Project has the potential to impact on existing agricultural drainage located within the development area.
<b>Loss of agricultural land</b>	The Project has the potential to temporarily reduce the area of land available for agriculture during construction. The Project also has the potential to result in permanent loss of agricultural land during the operational phase.
<b>Soil degradation and loss of soil to erosion</b>	The Project has the potential to lead to soil degradation and erosion of soil resources during the construction phase.
<b>Impact to Environmental Stewardship Schemes</b>	The Project has the potential to impact on existing Environmental Stewardship Schemes or to areas that may be considered suitable candidates for the incentive.
<b>Disruption to existing utilities</b>	The Project has the potential to impact upon existing utilities located within the development area.
<b>Disruption to users of recreational routes</b>	The Project has the potential to lead to temporary closures and diversions to recreation routes located within the development area.
<b>Soil heating</b>	The presence of the onshore export cables has the potential to result in localised areas of soil heating.

*Table 15.15 Summary of impacts scoped out relating to Land Use*

Potential Impact	Justification
<b>Transboundary impacts</b>	The Project does not cross international borders and so the potential for transboundary impacts has been scoped out of the Land Use assessment.

### 15.3.8 Consultation

50. Consultation has been a key part of the development of the Onshore Project. Consultation regarding Land Use has been conducted throughout the EIA. An overview of the project consultation process is presented within **Chapter 7: Consultation**.
51. **Table 15.16** provides a summary of how the consultation responses received to date have influenced the approach that has been taken.

*Table 15.16 Consultation Responses*

North Devon Council	
Permanent loss of access to land at any point of the project including along the cable route screened out at construction/operation/decommissioning phases of	Potential impacts associated with access to agricultural land and PRoW during the operational phase are

development. Will there not be any requirement for key maintenance points at strategic junctions along the onshore cable route where public access and agricultural activity would be restricted?

discussed in **Sections 15.6.2** and **15.6.5** respectively.

### Natural England

Soils are a valuable, finite natural resource and should also be considered for the ecosystem services they provide, including for food production, water storage and flood mitigation, as a carbon store, reservoir of biodiversity and buffer against pollution. It is therefore important that the soil resources are protected and sustainably managed. Impacts from the development on soils and best and most versatile (BMV) agricultural land should be considered in line with paragraphs 174 and 175 of the NPPF.

The following issues should be considered and, where appropriate, included as part of the Environmental Statement (ES):

- The degree to which soils would be disturbed or damaged as part of the development.
- The extent to which agricultural land would be disturbed or lost as part of this development, including whether any best and most versatile (BMV) agricultural land would be impacted. This may require a detailed Agricultural Land Classification (ALC) survey if one is not already available.
- Where an ALC and soil survey of the land is required, this should normally be at a detailed level, e.g. one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres. The survey data can inform suitable soil handling methods and appropriate reuse of the soil resource where required (e.g. agricultural reinstatement, habitat creation, landscaping, allotments and public open space).
- The ES should set out details of how any adverse impacts on BMV agricultural land

Soil types present within the Onshore Project Area are outlined in **Section 15.4.1.2** and **Table 15.18**. Potential impacts, and potential mitigation measures, on soil resources in relation to degradation and erosion are discussed in **Section 15.5.3**.

Best and most versatile agricultural land located within the Onshore Project is outlined in **Section 15.4.1.1** and **Table 15.17**. Potential impacts, and potential mitigation measures, on best and most versatile agricultural land during construction and operation are discussed in **Sections 15.5.2** and **15.6.2**.

<p>can be minimised through site design/masterplan.</p> <ul style="list-style-type: none"> <li>The ES should set out details of how any adverse impacts on soils can be avoided or minimised and demonstrate how soils will be sustainably used and managed, including consideration in site design and master planning, and areas for green infrastructure or biodiversity net gain. The aim will be to minimise soil handling and maximise the sustainable use and management of the available soil to achieve successful after-uses and minimise off-site impacts.</li> </ul>	
<b>Landowners</b>	
<p>Extensive landowner consultation has been undertaken throughout the EIA process. Key concerns have related to impacts to agricultural land, impacts to Environmental Stewardship Schemes and disruption to tourism assets.</p>	<p>Potential impacts associated with access to agricultural land and Environmental Stewardship Schemes during the construction and operational phases are discussed in <b>Sections 15.5 and 15.6</b>.</p> <p>Disruption to tourism assets is considered in <b>Chapter 21: Socioeconomics (including Tourism and Recreation)</b>.</p>

## 15.4 Existing Environment

52. This section describes the existing environment in relation to Land Use associated with the White Cross study area. It has been informed by a review of the sources listed in **Table 15.12**.
53. To aid the characterisation of the existing environment, a description of the baseline has been made using the following classifications:
- Agriculture** identifies the agricultural land cover and where applicable describes the crop being grown. This baseline also includes details of ALC which provides a description of the grades of land found within the study area in the context of its versatility and suitability for growing crops
  - Soil Types and Distribution** identifies the soil found within the study area, including texture, type and fertility
  - Stewardship Schemes** identifies and describes any land or agri-environment schemes present within the study area

- **Land Use** identifies high level land use within the study area
- **Public Rights of Way (PRoW) and Cycle Routes** identifies all such designated routes within the study area
- **Utilities** identifies and describes (at a high level) utilities present within the study area.

54. The description of the baseline environment provided within the subsequent sections has been divided into the following three development footprint areas:

- Landfall down to MLWS (including accesses)
- Onshore Export Cable Corridor (including compounds and access)
- Onshore Substation.

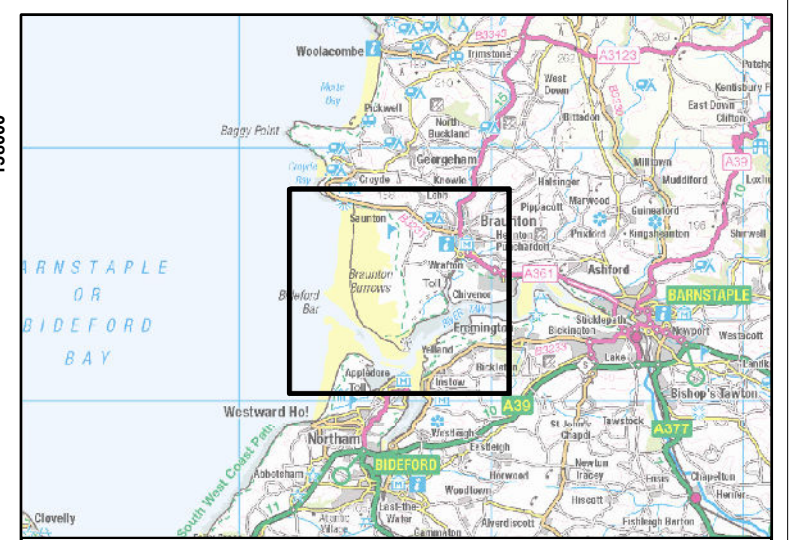
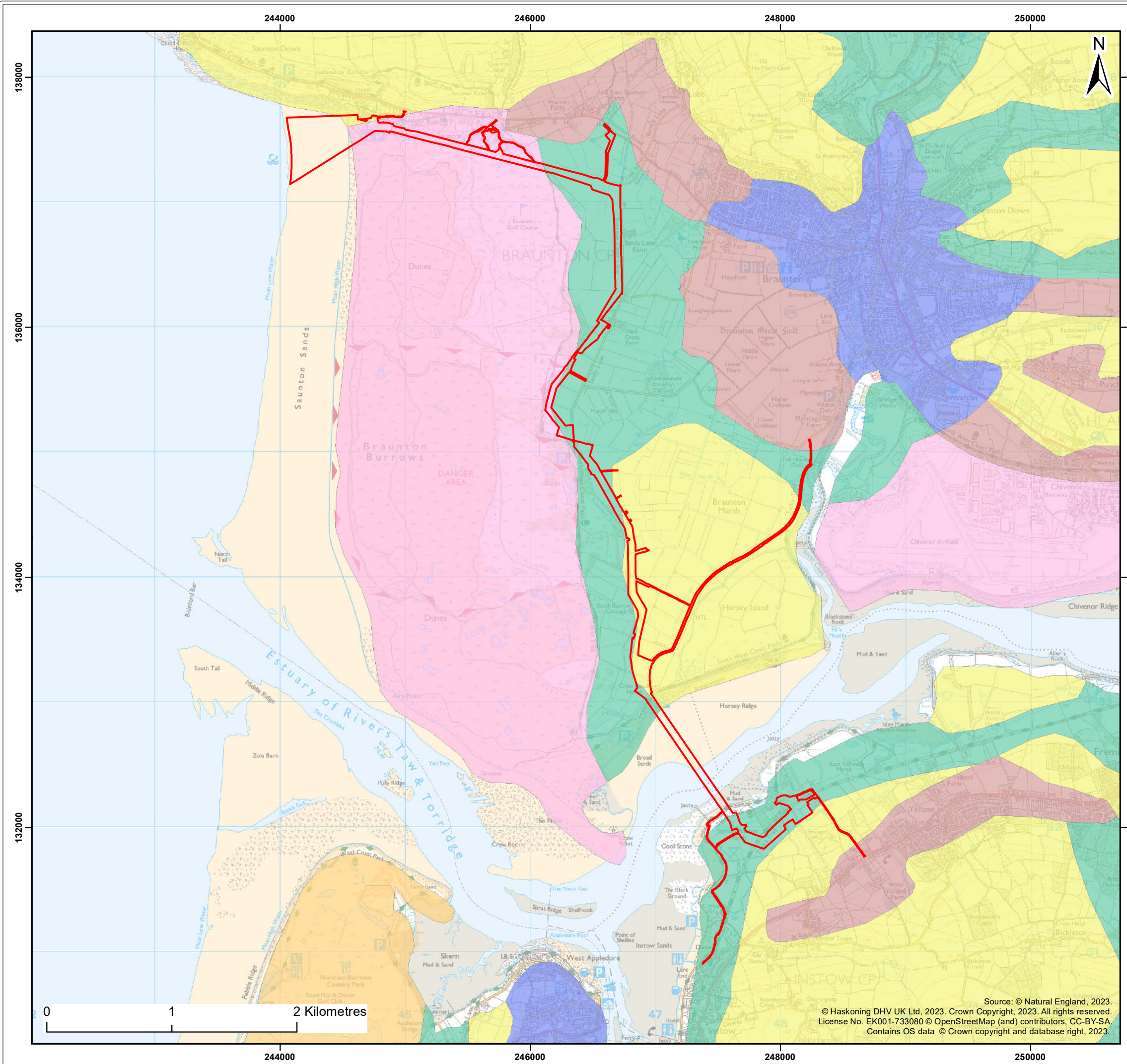
## 15.4.1 Current Baseline

### 15.4.1.1 Agriculture

55. Agriculture in the South West region is primarily pastoral in nature. The average farm size of 67ha is slightly less than the English average of 85ha. Livestock farming dominates, with sheep, pig and poultry farming also present. Alongside pastoral farming, cereal farming is also present within the region, with wheat, barley and oil seed rape as common crops. Alongside cereal farming, root crops, potatoes and field vegetables are also grown.
56. Agricultural land in England and Wales has been defined according to the ALC which measures the quality and versatility of soil in a grading system, and is based on factors including climate, nature of the soil and site-based factors (MAFF, 1988). The grading system is described in **Table 15.6**.
57. The BMV agricultural land is classified as Grades 1, 2 and 3a. These comprise land that is most flexible, productive and efficient in response to inputs and can best deliver future crops for food and non-food uses such as biomass, fibres and pharmaceuticals. ALC Grades 3b, 4 and 5 are considered less productive, although land designated as such may hold value in relation to nature conservation and landscape interests.
58. The ALC underpins the principles of sustainable development, and is used by Defra, and others, for determining the quality of farmland and providing advice to local planning authorities, developers and the public if a development is proposed on agricultural land or other 'greenfield' sites that could grow crops.
59. Using data from Natural England, **Figure 15.2** shows the ALC grades within the study area. No differentiation is made within this data set between ALC Grades 3a

and 3b. This chapter has assumed that all ALC Grade 3 land is classified as 3a, therefore conforming to the description of BMV agricultural land.

60. The study area is characterised by a series of contrasting ALC grades. The assessment presented in this chapter focuses only on direct effects to ALC land within the study area.



**Legend:**

- Onshore Development Area
- Agricultural Land Classification Grade**
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Non Agricultural
- Urban

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Title:  
**ALC Distribution within the Study Area**

Figure: 15.2	Drawing No: PC2978-RHD-ZZ-XX-DR-Z-0699				
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	01/08/2023	AB	KD	A3	1:30,000

Co-ordinate system: British National Grid

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61. The percentage of land of different ALC grades within the study area is presented in **Table 15.17**.

*Table 15.17 ALC grades within the study area*

ALC grade	Landfall to MLWS (including accesses) Ha	Onshore cable corridor (including compounds and accesses) Ha	Onshore Substation Ha	Study area Ha
<b>1</b>	N/A	N/A	N/A	N/A
<b>2</b>	N/A	0.05	0.08	0.13
<b>3</b>	1.71	13.92	2.58	18.21
<b>4</b>	N/A	28.45	4.86	33.31
<b>5</b>	N/A	N/A	N/A	N/A
<b>Urban</b>	N/A	N/A	N/A	N/A
<b>Non-agricultural</b>	2.57	36.18	N/A	38.75
<b>Total</b>	4.28	78.6	7.52	90.40

Note: The grey shaded rows (ALC Grades 1-3) denote the BMV agricultural land with an assumption that all Grade 3 land is 3a and not 3b. This is highly conservative and protective approach which over estimates the area of BMV land.

#### 15.4.1.2 Soil Types and Distribution

62. This section describes the soils found within the onshore Project area, including the type, drainage, texture, fertility and moisture. The National Soils Map (National Soil Resources Institute, undated) classification has been used to determine the types of soil that exist within the onshore Project area.
63. It should be noted that the published soil data provide generic characteristics and is indicative of the soil type present. The precise soil type and characteristics will differ between and within individual fields and will be captured within a SMP.
64. Reference should be made to **Chapter 14: Water Resources and Flood Risk** for further details on soils in relation to flood risk and water. Any impact on the soil resource is not predicted to extend beyond the onshore Project area.
65. **Table 15.18** provides additional detail on the characteristics of the soil types found within the Onshore Development Area (Cranfield University, 2020).

*Table 15.18 Soil types within the Onshore Development Area*

Soilscapes definition	Texture	Drainage	Natural fertility	Typical habitats	Landcover	General cropping	General area within Onshore Project Area
Freely draining slightly acid loamy soils	Loamy	Freely draining	Low	Neutral and acid pastures and deciduous woodlands; acid communities such as bracken and gorse in the uplands	Arable and grassland	Suitable for range of spring and autumn sown crops; under grass the soils have a long grazing season. Free drainage reduces the risk of soil damage from grazing animals or farm machinery. Shortage of soil moisture most likely limiting factor on yields, particularly where stony or shallow	Present throughout the northern extent of the onshore cable corridor.
Sand dune soils	Sandy	Freely draining	Lime-rich	Sand dune vegetation ranging from pioneer dune systems through to low shrub	Natural vegetation	Not normally cropped	Present at Landfall and within the onshore cable corridor at the northern edge of the River Taw.
Loamy and sandy soils with naturally high groundwater and a peaty surface	Peaty	Naturally wet	Low to high	Wet meadows	Mostly arable	Cereals, roots, potatoes and field vegetables provided groundwater is controlled. Ease of working and winter harvesting, which can be damaging to structure, dependent on texture and drainage of subsoil. Irrigation needed on lighter soils	Present throughout the northern extent of the onshore cable corridor.
Loamy and clayey soils of coastal flats with naturally high groundwater	Loamy and clayey	Naturally wet	Lime-rich to moderate	Wet brackish coastal flood meadows	Arable some grassland	Lighter soils support a wide range of crops and are highly productive as they contain much available water and are stoneless and flat. Heavier soils are less easily worked and favour grass	
Slowly permeable seasonally wet acid loamy and clayey soils	Loamy and clayey	Impeded drainage	Low	Seasonally wet pastures and woodlands	Grassland with some arable and forestry	Mostly suited to grass production for dairying or beef; some cereal production often for feed. Timeliness of stocking and fieldwork is important, and wet ground conditions should be avoided at the beginning and end of the growing season to prevent damage to soil structure. Land is tile drained and periodic moling or subsoiling will assist drainage	Present to the south of the River Taw in the area of the proposed Onshore Substation.

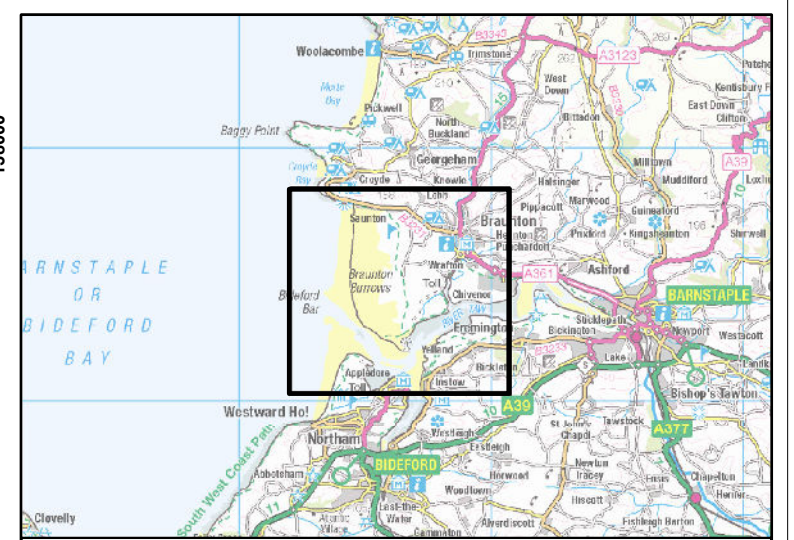
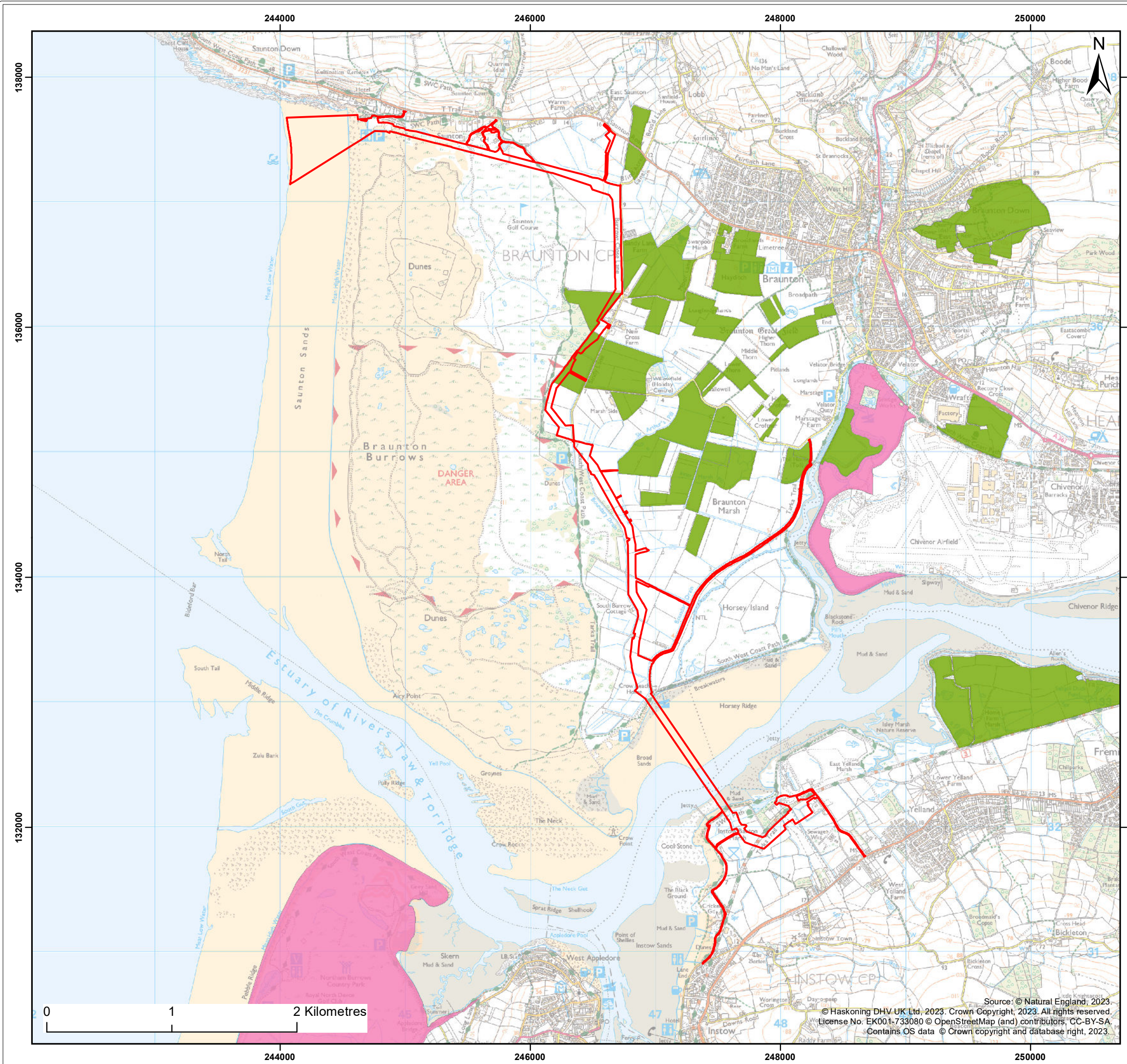
### 15.4.1.3 Stewardship Schemes

66. Environmental Stewardship Schemes (ESS) allow farmers, tenants and other land managers to receive payment for their environmental land management. The scheme is an agri-environmental scheme that aims to:
- Conserve wildlife and biodiversity
  - Maintain and enhance landscape quality and character
  - Protect natural resources
  - Promote public access.
  - Provide flood management (Defra, 2019).
67. The scheme was launched in March 2005 to build on the Environmentally Sensitive Area Scheme, the Countryside Stewardship Scheme and the Organic Farming Scheme. The ESS are administered by Natural England on behalf of Defra.
68. The scheme has been built into the following three levels:
- Entry Level Stewardship (ELS): simple and effective environmental management open to all farmers and land managers
  - Organic Entry Level Stewardship (OELS): as ESS, but open to farmers of land managers whose land is either wholly or partially managed organically
  - Higher Level Stewardship (HLS): more complex types of management and agreements which aims to provide significant environmental benefits to priority areas and is tailored to local circumstances.
69. Environmental stewardship directly covers 3.57ha within the study area (see **Figure 15.3**).
70. The Countryside Stewardship Scheme (CSS) has replaced the ESS. The overarching aim of the scheme is to look after and improve the environment by conserving and restoring wildlife habitats, managing flood risk, creating and managing woodland, and reducing agricultural water pollution.
71. Similar to the previous ESS, CSS is divided into a number of elements, including:
- Mid-Tier – these are multi-year agreements that focus on widespread environmental issues, such as reducing water pollution or improving the farmed environment for farmland birds and wild pollinators
  - Wildlife Offers – these multi-year agreements with a range of highly targeted and effective options which include creating sources of nectar and pollen, winter food for seed-eating birds and improved habitats. The offers are tailored to specific farming practices

- Higher-Tier – these are multi-year agreements for the most environmentally important sites, including commons and woodlands. These are usually in places that need complex management, such as restoring habitats, and improving woodland
  - Capital Grants – these are typically for two years with four different options available:
    - hedgerows and boundaries – capital grant to restore existing farm boundaries
    - Woodland Management Plans – one-off payment to support the production of UK Forestry Standard compliant 10-year woodland management plan
    - Woodland Tree Health – one-off payment to restock or improve woodland due to tree health problems
    - Woodland creation Grant – two-year capital grant to plant and protect young trees.
72. Countryside stewardship directly covers 23.02ha within the study area (see **Figure 15.3**).
73. New Environment Land Management Schemes (ELMS) are planned. Three new schemes have been developed to support and reward environmental land management and the rural economy, whilst also contributing to government targets and commitments to net zero emissions by 2050. These schemes include:
- Sustainable Farming Incentive
  - Countryside Stewardship
  - Landscape Recovery.
74. The locations and areas of the various agri-environmental schemes within the study area are shown on **Figure 15.3** and **Table 15.19**.

#### 15.4.1.4 Land Use

75. The land use within the Onshore Development Area primarily comprises of agricultural land, some of which is enrolled in agri-environment schemes (**Figure 15.3**). The Project area overlaps with nationally and internationally important designations and landscapes. This section also considers utilities that intersect the Onshore Development Area.



**Legend:**

- Onshore Development Area
- Stewardship Scheme Agreements**
- Entry Level plus Higher Level Stewardship
- Higher Level Stewardship

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Title:  
**Agri-Environment Stewardship Schemes**

Figure: 15.3	Drawing No: PC2978-RHD-ZZ-XX-DR-Z-0700				
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P01	01/08/2023	AB	KD	A3	1:30,000

Co-ordinate system: British National Grid

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*Table 15.19 Agri-Environment Stewardship Schemes*

Stewardship scheme	Count	Landfall (including accesses)	Onshore cable corridor (including compounds and accesses)	Onshore Substation	Study area
		Ha	Ha	Ha	Ha
<b>Environmental Stewardship</b>					
<b>ELS and HLS Schemes</b>	1	N/A	3.57	N/A	3.57
<b>HLS</b>	0	N/A	N/A	N/A	N/A
<b>OELS Schemes</b>	0	N/A	N/A	N/A	N/A
<b>Total</b>	1	N/A	3.57	N/A	3.57
<b>Countryside Stewardship</b>					
<b>CSS Mid-Tier</b>	3	N/A	16.35	2.07	18.42
<b>CSS Higher Tier</b>	1	0.83	3.77	N/A	4.6
<b>Total</b>	4	0.83	20.12	2.07	23.02

#### 15.4.1.4.1 Land use designations

15.4.1.4.1.1 European sites, national designations and nationally important landscapes

76. The study area overlaps with the Braunton Burrows which is designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) and Taw-Torridge Estuary SSSI. The features of these designated sites along with Ancient Woodland are discussed in **Chapter 16: Onshore Ecology and Ornithology and Habitats Regulations Assessment**.
77. The study area also crosses through the North Devon AONB. Landscape designations are discussed further in **Chapter 20 Onshore Landscape and Visual Amenity**.

15.4.1.4.1.2 Country Wildlife Sites

78. There are no County Wildlife Sites (CWS) located within the study area.

15.4.1.4.1.3 Local Wildlife Sites

79. There are no Local Wildlife Sites (LWS) located within the study area.

15.4.1.4.1.4 Site Allocations

80. A review of the North Devon and Torridge Local Plan was undertaken to identify any areas of land that are allocated for future development or change of use. This included a review of the site allocation maps.

81. The review indicated that the Onshore Project is located within the following allocated areas:
- Biosphere Reserve (as per Policy ST14, see **Table 15.2**)
  - Heritage Coast North Devon (as per Policy ST14, see **Table 15.2**)
  - Biosphere Transition Buffer (as per Policy ST14, see **Table 15.2**)
  - Coast and Estuary Zone North (as per Policy ST09, see **Table 15.2**).

#### 15.4.1.4.2 Land Use and Recreation

##### 15.4.1.4.2.1 Open Access and Common Land

82. Under the CRoW Act 2000, the public are not restricted to paths, but can freely walk on mapped areas of mountain, moor, heath, downland and registered common land, known as open access land. Common land, however, is privately owned land which the public may access subject to certain defined restrictions.
83. An area of registered common land is located within the Onshore Project area. The registered common land is located on the south east banks of the River Taw, adjacent to East Yelland Substation. The land comprises of sands, sandhills and grass areas above the high water mark.

##### 15.4.1.4.2.2 Dark Sky Areas

84. The International Dark Sky Association officially recognises 12 Dark Sky Places in the UK, none of which are located within the onshore Project area. The closest Dark Sky Place to the Onshore Project is the Exmoor Dark Sky Reserve, located approximately 40km north east of the Onshore Project.
85. The Dark Sky Discovery Partnership also lists a significant number of sites across the UK, none of which are located within the onshore Project area. The closest Dark Sky Discovery site is Wimbleball Lake, located approximately 50km east of the Onshore Project.

#### 15.4.1.5 Public Rights of Way and cycle routes

##### 15.4.1.5.1 Public Rights of Way

86. There are 12 PRoW affected by the project. These comprise of nine footpaths, two bridleways and an additional marked way not associated with a designated footpath or bridleway. An extension of the England Coastal Path crosses the Onshore Project area, although it should be noted that the section that may be affected is approved in part but not yet open. **Table 15.20** identifies all PRoW, their reference and description. No PRoWs will be temporarily closed during construction. However, crossing points will require marshals when construction traffic is crossing. The locations of these crossing points are shown on **Figure 15.4**.

*Table 15.20 PRow located within the study area*

<b>PRoW Name</b>	<b>Description</b>
Braunton Footpath 5	Footpath
Braunton Footpath 23	Footpath
Braunton Footpath 58	Footpath
Braunton Footpath 60	Footpath
Braunton Footpath 66	Footpath
Instow Footpath 9	Footpath
Instow Footpath 8	Footpath
Instow Footpath 7	Footpath
Instow Footpath 16	Footpath
Braunton Bridleway 19	Bridleway
Braunton Bridleway 24	Bridleway
Tarka Trail (Long Distance Walkers Route)	Marked Route
England Coastal Path (Combe Martin to Marsland Mouth)	Approved (in part) extension of the England Coastal Path – not yet open.

#### 15.4.1.5.2 National Trails and Long Distance Paths

87. The South West Coast Path is designated as a nation trail and broadly follows the route of the Onshore Export Cable Corridor, extending beyond the Onshore Development Area to the north, east and south. The onshore cable route corridor bisects the Coast Path at four locations along its route.

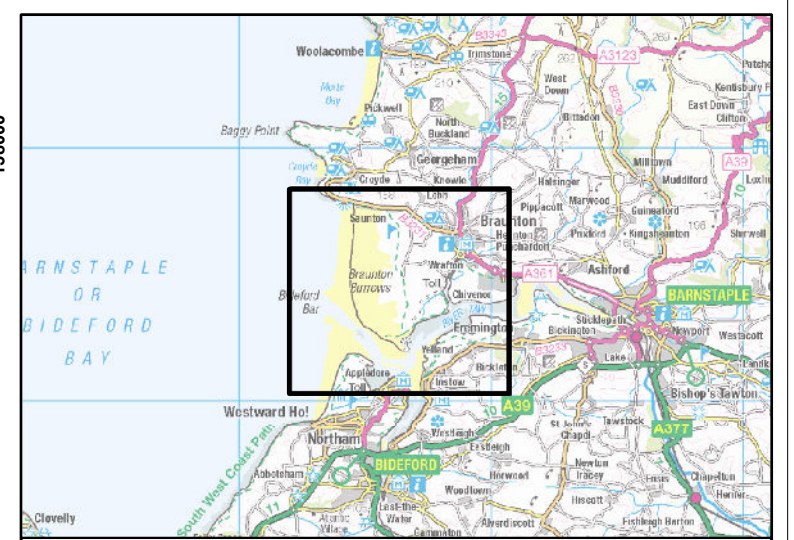
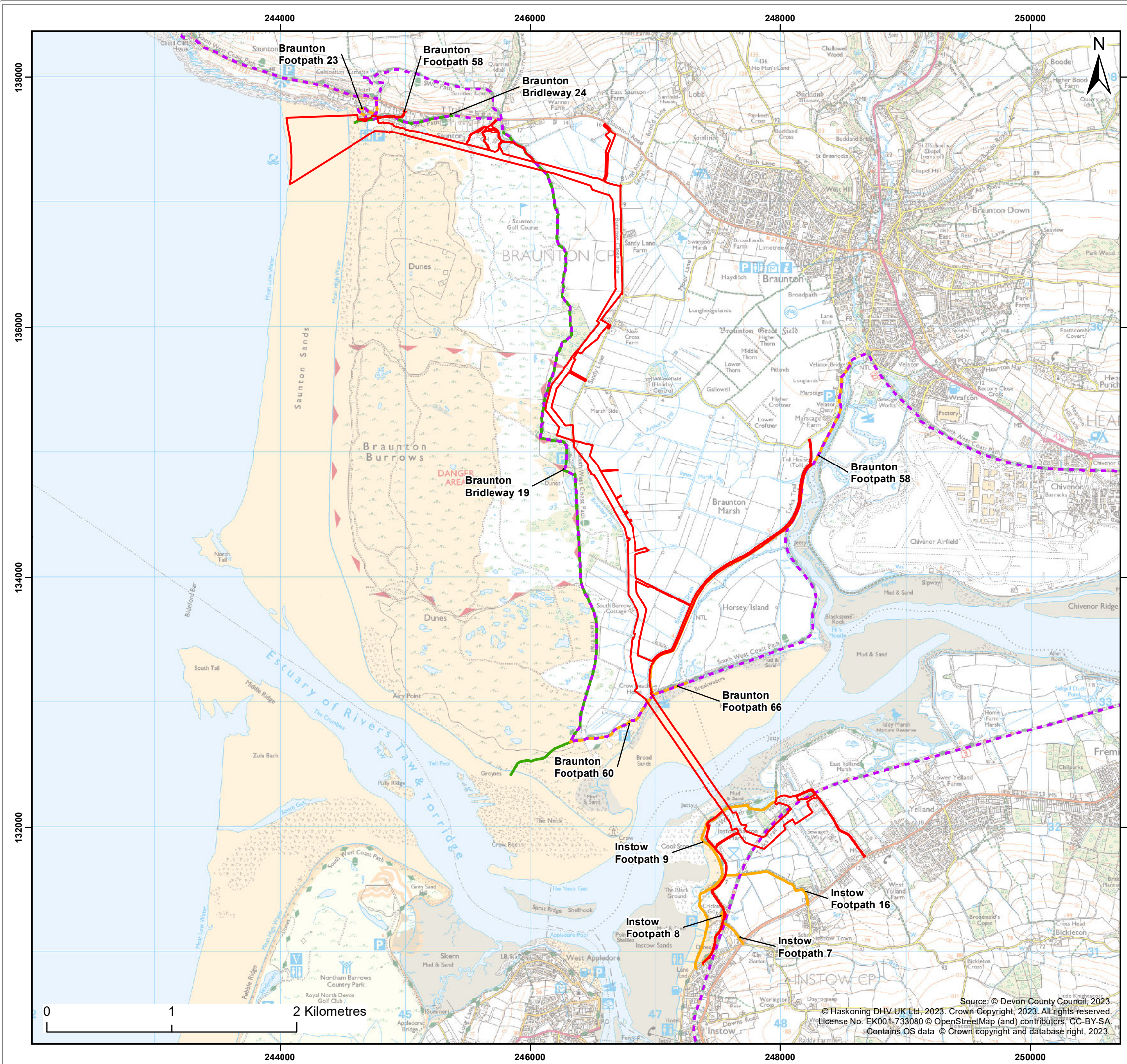
#### 15.4.1.5.3 Cycle Routes

88. There are no National Cycle Network Routes located within the study area.

#### 15.4.1.6 Utilities

89. The majority of identified utilities crossing the study area are for domestic services that include telecommunications, electricity, water, gas, sewage and street lighting. Electricity and gas transmission infrastructure is also present within the Onshore Development Area, with Wales and West Utilities and Western Power Distribution infrastructure bisecting the Onshore Development Area at multiple locations.





**Legend:**

- Onshore Development Area
- Tarka Trail / South West Coastal Path

**Public Right of Way**

- Bridleway
- Footpath

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Title:  
**Public Rights of Way, National Trails and Long Distance Paths**

Figure: 15.4      Drawing No: PC2978-RHD-ZZ-XX-DR-Z-0700

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### 15.4.2 Do Nothing Scenario

90. 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 50 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 Land Use.
91. The baseline conditions presented within this chapter will be subject to change over the duration of the Onshore Project. In the long-term, land use and cover are continually evolving and being modified given their close interlink with natural processes and are further driven through climate forcing and change (Wu et al., 2013). However, over the duration of the Onshore Project, it would be anthropogenic drivers that are more likely to drive macro-scale land use change (i.e. through population growth or changes in distribution, changes in land use management and development practices, and responding to economics – especially those pertaining to agriculture).
92. An increase in population, increasing urbanisation and improvement in living standards, may increase pressure for more productive agriculture and could lead to the loss of grassland areas and a continued increase in the use of agri-chemicals and industrial fertiliser to ensure continued high crop yields. Such changes in land cover and associated agricultural practice may modify and alter natural ecosystem functions and processes, including the underground water table, associated water quality, as well as the area, distribution and quality of dependent wildlife habitats and their biodiversity (Sohl et al., 2012).
93. Between 2013 and 2020, the population of North Devon has steadily increased from 93,800 to 97,145 and this is projected to increase to 103,400 by 2033 (Devon County Council, undated). Given the current baseline environment within the land use study area, it is likely the demand from population growth will drive expansion of the urban areas and result in the loss of some agricultural land replaced, for example, by small housing developments.

94. Further to this, agricultural land use patterns are linked to agricultural policy and available subsidy / farm payment structures. Future changes to UK agricultural policy outside the EU are unknown at the time of writing but are likely to influence agricultural practise in the area in future years.

## 15.5 Potential Impacts During Construction

95. The potential impacts during construction of the Onshore Project have been assessed for Land Use. A description of the potential effect on Land Use receptors caused by each identified impact is given in this section.

### 15.5.1 Impact 1: Agricultural Drainage

96. There is the potential for the groundworks associated with the onshore export cable installation and Onshore Substation construction to impact natural and artificial field drainage systems. These systems, both natural and artificial, play an important role by ensuring soils remain aerated and reduce the risks associated with surface water flooding to the agricultural land itself and surrounding environment.
97. Existing field drains are expected to be made of ceramic or plaster and are typically found at a depth between 0.5 to 1.5m. As such, it is likely that the drains would be impacted by any excavation works through agricultural fields. More information regarding the local drainage system is provided in **Chapter 14: Water Resources and Flood Risk**.
98. During construction of the substation, any existing field drainage will be permanently impacted (see **Section 15.6.1**).

#### 15.5.1.1 Magnitude of impact

99. In relation to both the onshore export cable installation and Onshore Substation, without mitigation the magnitude of impact on agricultural drainage is considered to be **medium**. Agricultural drainage within an area >20ha would be temporarily unsuitable for agriculture during the construction phase.

#### 15.5.1.2 Sensitivity of the receptor

100. Field drainage networks have a limited capacity to accommodate changes such as degradation or poor reinstatement. Therefore, they are considered to have a **medium** sensitivity overall.

#### 15.5.1.3 Significance of effect

101. The medium adverse magnitude of impact, on a medium sensitivity receptor represents a **moderate adverse** significance of effect without mitigation.

#### 15.5.1.4 Further Mitigation

102. An ALO and/or land drainage consultant will be appointed to develop pre- and post-construction drainage plans.
103. Pre-construction drainage will be installed to manage water coming from existing underground land drainage pipes which will be affected by the installation of the new export cables. Following installation of the export cables, the post-construction drainage program will commence to ensure that soils affected by the Onshore Export Cable Corridor are left in a condition that enables a return within the affected fields to full agricultural production. Where necessary, post-construction drains may be installed, typically parallel to the Onshore Export Cable Corridor.
104. In addition to the above, minor watercourses / ditches located within the study area will be subject to temporary damming and diversion during the construction phase to mitigate potential impacts. Installation of ducts below the channel bed may be undertaken, where necessary, as part of the diversion process.
105. Introducing pre-construction drainage and reinstating land drainage as soon as reasonably practicable following the completion of the works reduces both the duration soil is unavailable and the amount of soil affected by poor drainage.

#### 15.5.1.5 Residual Effect

106. Implementation of the further mitigation measures outlined above will reduce the magnitude of impact from **medium** to **low** therefore the residual effect is **minor adverse**, which is deemed **not significant** in EIA terms.

### 15.5.2 Impact 2: Temporary Loss of Agricultural Land

107. The majority of the construction footprint is located within areas currently associated with agricultural production. The footprint of the Onshore Export Cable Corridor, including temporary construction compounds and construction access would all contribute to the temporary loss of land for agriculture, as well as the temporary compounds associated with any trenchless crossings.
108. Construction activities also have the potential to isolate land outside of the Onshore Development Area which would effectively take it out of agricultural use. This would result in the loss of growing seasons in the area affected with associated loss of agricultural related outcome.
109. Construction activities also have the potential to cause compaction of soils and hinder future agricultural productivity through the use of heavy machinery and disturbance.

110. Agricultural land take associated with the Onshore Substation is considered to be permanent, and as such, is assessed as an operational impact in **Section 15.6.2**.

#### 15.5.2.1 Magnitude of impact

111. Based on the worst-case parameters set out in **Table 15.9**, the total construction footprint within agricultural land would be >20ha. Construction works, however, would not be operating continuously at the same location during the whole construction phase with land being reinstated to its original condition. Therefore, the works are deemed temporary and the magnitude of impact is considered to be **low**.

#### 15.5.2.2 Sensitivity of the receptor

112. The quality of the agricultural land affected by the project primarily consists of ALC Grade 2, Grade 3 and 4 agricultural land, as well as non-agricultural land. As mentioned previously, all ALC Grade 3 agricultural land is assumed to be Grade 3a and consequently has been included within the BMV banding. Due to the presence of ALC Grade 2 land, the sensitivity of the receptor in accordance with **Table 15.5**, is considered to be **high**.

#### 15.5.2.3 Significance of effect

113. Without mitigation, the potential impact as a result of the temporary loss of agricultural land associated with construction is low magnitude on a high sensitivity receptor. Therefore, the potential significance of effect is considered **moderate adverse** without mitigation.

#### 15.5.2.4 Further Mitigation

114. Access to severed land for farm vehicles will be maintained subject to individual agreements with landowners and occupiers. Where necessary, crossing points will be agreed pre-construction.

115. In order to reduce conflicts, appropriate planning and timings of works will be discussed with landowners and occupiers.

116. Private agreements (or compensation in line with the compulsory purchase completion code) will be sought with relevant landowners / occupiers and the land will be reinstated to its pre-construction condition.

117. By consulting with landowners and occupiers, maintaining access to severed land, appropriate timings of works and reinstatement of land to pre-construction conditions as soon as reasonably practicable, it is likely that the amount of land temporarily unsuitable for agriculture will be reduced.

#### 15.5.2.5 Residual Effect

118. Even with the further mitigation measures outlined above to be implemented, the area of land temporarily affected would be more than 20ha. Therefore the magnitude of impact would remain **low** and so the residual significance of effect would remain **moderate adverse**. This is deemed to be **significant**.

### 15.5.3 Impact 3: Soil Degradation and Loss of Soil to Erosion

119. There is the potential for soils to become compacted and for soil structure to deteriorate during construction works. Degradation is most likely to occur at temporary compound locations and along access routes where heavy materials and equipment are stored. Similarly, changes to soil structure can affect local drainage (this is described in **Chapter 14: Water Resources and Flood Risk**).

120. Deterioration of the soil structure can lead to reduced biological activity, water infiltration, soil porosity and permeability. Deterioration can also lead to an increased soils strength and risk of erosion (European Commission, 2008). These impacts can lead to reduced fertility and crop yields.

121. Soil quality can also be adversely affected by the drying and decomposition of peaty layers during stockpiling.

122. There is also the potential for soil erosion to occur during construction works, with some types of soils being more susceptible to erosion than others. Additional factors that influence the risk of erosion include the soil texture, landscape position/slope, weather and land use.

123. Excavation, storage and reinstatement exposes the soils and creates an opportunity for erosion to occur. Loss of soil via erosion, may lead to a reduction in the quality of soils and therefore impact on the value of the agricultural land within the study area.

124. The following activities proposed during the onshore construction works have the potential to degrade and erode the existing soil resource:

- Intrusive pre-construction surveys
- Removal of trees / vegetation
- Topsoil stripping and earthworks within the construction footprint
- Use of haul roads and mobilisation areas
- Stockpiling and reinstatement of soil.

#### 15.5.3.1 Magnitude of impact

125. Soil within construction areas will be subject to earthworks including initial stockpiling and movement between stockpiles. It is considered that >20ha of soil will potentially be affected temporarily. Therefore, the magnitude of impact is considered to be **medium**.

#### 15.5.3.2 Sensitivity of the receptor

126. The soils within the study area are mostly loamy and clayey. Clayey soils have few sand grains and a lot of very small particles. Loamy soils have a mix of sand, silt and clay-sized particles and are therefore susceptible to compaction.

127. The cohesive nature of clayey and loamy soils results in a low vulnerability in relation to erosion. They are also difficult to handle during wet periods using machinery, without causing structural degradation. Given these characteristics, the soil resource within the study area is assigned a conservative value of **medium** sensitivity with respect to the potential for degradation and erosion during the construction period.

#### 15.5.3.3 Significance of effect

128. Without mitigation, the greatest impact arising from all construction is medium magnitude, on a medium sensitivity receptor, representing a **moderate adverse** significance of effect without mitigation.

#### 15.5.3.4 Further Mitigation

129. Measures set out in the MAFF (2000) Good Practice Guide for Handling Soils and Defra's (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites will be adopted. Additionally, guidance from IES (2020) Sustainable, Healthy and Resilient: Practice-Based Approaches to Land and Soil Management will also be used. A SMP outlining the mitigation measures and best practice techniques, which contractors will be obliged to comply with will also be produced. Mitigation measures included within the SMP will include:

- Consideration of weather conditions where it is appropriate to work for each soil type, e.g. not working in an area of poorly draining soils following a period of heavy rain
- Storing soils appropriately
- Ensuring effective drainage systems are used during construction
- Employing reinstatement and planting vegetation following completion of construction works to reduce the risk of erosion.

130. The SMP will set out procedures for the appropriate handling of soils during the works, including:

- Using a competent contractor for soil handling, storage and reinstatement under Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites
- Storing topsoil adjacent to where it is stripped, wherever practicable
- Storing excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation
- Restricting movements of heavy plant and vehicles to specified routes
- Minimising the footprint of excavation works as much as reasonably possible.

#### 15.5.3.5 Residual Effect

131. The implementation of the further mitigation measures outlined above would reduce the magnitude of impact from **medium** to **low**. Therefore, the residual effect is **minor adverse** which is deemed **not significant** in EIA terms.

### 15.5.4 Impact 4: Impact to Environmental Stewardship Schemes (ESS)

132. During the construction period there would be the potential for impacts to ESS within the study area. The effect on individual landowners / occupiers with agreements in place would depend on the extent and duration of construction works within the land parcels managed, in addition to the terms and conditions attached to the agreement in place.

133. Two potential connected impacts on ESS are anticipated as a result of construction:

- Ecological – loss of agreements and the substantive agri-environmental objectives of the scheme (i.e., loss of field margins). Ecological losses associated with the impacts to agri-environmental schemes are discussed within **Chapter 16: Onshore Ecology and Ornithology**
- Financial – loss of the agreement and the impact in overall farming income.

134. The study area interacts with one ESS classified at Entry Level plus Higher-Level Stewardship, which covers 3.57 ha of the study area. The study area also interacts with three CSS classified at Mid-Tier covering an area of 18.42 ha and one Higher-Tier covering an area of 4.6 ha of the study area.

135. In some instances, it may not be possible to avoid land managed under an agri-environment scheme, resulting in a landowner / occupier being potentially unable to meet the terms of the agreement. The level of impact could range from no impact,



- a minor or temporary change such as the need to make changes to grazing or cropping requirements or the termination of the agreement.
136. For the purposes of this assessment, the impact on specific agreements will only be known once the final Project area at the time of submission of the Onshore Application has been established, and landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels.
137. The significance of effect on landowners / occupiers with agri-environment agreements in place will depend on the extent and duration of construction works within land parcels managed, and the terms and conditions attached to the agreement in place.
138. Landowner engagement has formed a key part of the Onshore Development Area refinement, during which information relating to the location, extent and content of the agreements has been gathered and fed back into the refinement process. This includes gathering information from landowners on any ecological constraints or opportunities associated with existing agreements.

#### **15.5.5 Impact 5: Disruption to existing utilities**

139. The majority of the identified utilities crossing the Onshore Development Area are for domestic services that include telecommunications, electricity, water, gas, sewage and street lighting. The Project area will undertake utility crossings in accordance with industry standard practice as agreed with the utilities owners.
140. At this stage it has been identified that there will be a requirement to relocate an existing small distribution pole line within the Onshore Substation area. The pole needs to be relocated to allow an access route to the Onshore Substation with the works funded by the Applicant. No additional features have been identified for relocation, therefore, no impacts associated with existing utilities are anticipated as a result of the Onshore Project.

#### **15.5.6 Impact 6: Disruption to users of Recreational Routes**

141. The Project area crosses numerous recreational routes such as PRowS (including bridleways and footpaths), the Tarka Trail (long distance walkers' route) and the South West Coast Path (National Trail), as shown on **Figure 15.4**. The Project also crosses the proposed extension of the England Coastal Path between Combe Martin and Marsland Mouth.
142. The Project interacts with a total of 12 recreational routes as outlined in **Table 15.20**, however, the degree to which the routes will be impacted will not be uniform

across the Project and will be associated with factors such as the crossing methodologies. However, it should be noted that the crossing methodology for each of these features is yet to be determined.

143. Potential interactions with recreational routes are limited to works along the Onshore Export Cable Corridor and Onshore Substation. The Landfall works would not require closures of any recreational routes, although some activities may require brief periods of restricted access.

#### 15.5.6.1 Magnitude of impact

144. The onshore cable duct would be installed in sections up to 1km at a time, with a typical construction presence of up to four weeks along each 1km section (please see **Chapter 5: Project Description**). Where the Onshore Export Cable Corridor crosses any of the recreational routes there would be a construction presence and open excavations. In the absence of mitigation, this would prevent public access and in effect would represent a temporary closure until the works along that stretch of the Onshore Export Cable Corridor are complete. Whilst there would be no permanent closures, any temporary closure to a recreational route is assessed as **medium** magnitude of impact.

#### 15.5.6.2 Sensitivity of the receptor

145. PRoWs are considered to be regionally important receptors and are assessed as medium sensitivity, whereas National Trails are considered nationally important receptors and are assessed as **high** sensitivity.

#### 15.5.6.3 Significance of effect

146. In relation to PRoWs, the magnitude of impact is medium for a medium sensitivity receptor, representing a **moderate adverse** significance of effect in the absence of mitigation.
147. In relation to the National Trail, the magnitude of impact is medium and a high sensitivity receptor, representing a **major adverse** significance of effect in the absence of mitigation.

#### 15.5.6.4 Further Mitigation

148. Disruption to any recreational routes will be appropriately managed to ensure safe access to alternative routes for members of the public, and all efforts will be made to minimise any disruption. The exact management methods will be agreed in advance with the local authority for that stage of works. Mitigation measures available include:

- Appropriately fenced (unmanned) crossing points
- Manned crossing points.
- Temporary alternative routes.

149. There would be no permanent closures of any recreational routes.

150. Safety measures will be implemented where haul roads cross PRoW including raising awareness of the feature to construction workers and PRoW users of the hazards associated with the haul road. Where a recreational route is used as part of a construction access point, an alternative route for the PRoW will be provided.

151. After the completion of construction works, all recreational routes will be reinstated to their original condition or otherwise as agreed with the local authority.

152. For all temporary alternative routes required, the following measures will be followed:

- A pre- and post-construction survey (including identification of surface conditions and street furniture) of the route affected will be undertaken. Surveys will be undertaken by an experienced surveyor with the scope of coverage and methodology agreed with the local authority
- A qualified ALO will be employed to ensure that information on existing land conditions is obtained, recorded and verified during these surveys
- Where impacted by the works, the surveyed recreational route will be restored to its original condition or otherwise as agreed with the local authority
- All alternative routes would be advertised following local authority standards for advertising temporary closure of the route.

153. A Public Rights of Way Strategy which discusses the potential mitigation measures in further detail is provided as **Appendix 15.A**.

#### 15.5.6.5 Residual Effect

154. With the implementation of the mitigation measures outlined above, the magnitude of impact would be reduced to **negligible**. Therefore, the significance of effect would be reduced to **minor adverse** for both PRoWs, Tarka Trail (and National Cycle Network route), and the National Trail which is deemed **not significant** in EIA terms.

## 15.6 Potential Impacts During Operation and Maintenance

155. The potential impacts of the operation and maintenance of the Onshore Project have been assessed on Land Use receptors. A description of the potential effect on Land Use receptors caused by each identified impact is given in this section.

### 15.6.1 Impact 7: Disruption to field drainage

156. The Project would primarily be located on rural, agricultural land where there are limited existing formal surface water drainage systems. There are, however, a number of agricultural land drains, ordinary watercourses and Internal Drainage Board (IDB) maintained watercourses also present.

157. Permanent above ground infrastructure and hard standing at the Onshore Substation, as well as the presence of buried cables has the potential to affect field/land drainage during operation (see **Chapter 14: Water Resources and Flood Risk**).

158. Field drainage along the cable corridor would be reinstated following the construction phase in order to maintain the level of field drainage in place pre-construction. All cable construction compounds, and temporary haul roads would be fully reinstated following construction and would have no operational use.

159. The presence of the buried cable ducting along the Onshore Export Cable Corridor may impact upon subsurface flow corridors as it will introduce an impermeable barrier which may change subsurface flow patterns. An increase in the impermeable area in a catchment may result in a reduced rate of infiltration and therefore a potential increase in surface runoff. However, given the very small percentage area of each catchment affected, it is unlikely that changes in surface water runoff and subsurface flows will be sufficient to impact upon the hydrology of the surface water system.

160. Whilst there would be a permanent change to field drainage at the Onshore Substation site during operation, this would be compliant with the Flood Risk Assessment (FRA) as presented in **Appendix 14.A**. This would ensure that any water discharged from the Onshore Substation into the surrounding drainage network would be at the existing greenfield runoff rate.

161. Given that all drainage would be reinstated and drainage requirements at the Onshore Substation would be compliant with any flood risk assessment, it is considered that there would be **no impact** upon field drainage during operation.

## 15.6.2 Impact 8: Permanent Loss of Land for Agriculture

162. The onshore cables would be buried to an indicative depth of 1.9m and following reinstatement, normal agricultural activities would be able to continue following completion of the construction works.
163. Joint bays would be required along the route of the onshore export cables to connect sections of cable. Routine maintenance is anticipated as consisting of one annual visit to each jointing bay to carry out routine integrity tests with periodic testing of cables likely required every two to five years. Access would typically be via manhole covers and possible non-intrusive checking of the cable in between jointing bays with, for instance, ground penetrating radar.
164. Link boxes would also be present above ground for routine maintenance along the cable corridor (link boxes would be present approximately every 1km along the cable route). These will be below ground and accessed via manhole covers at ground level (with an above ground marker at each location). Link boxes would be located adjacent to field boundaries and roads as far as reasonably practicable.
165. Link boxes are required in proximity (assumed to be within 10m) to the jointing bay locations to allow the cables to be bonded to earth to maximise cable ratings. Link boxes may not be required at all jointing bay locations but as a worst case it is assumed that they could be required up to a frequency of one every 1km.
166. The footprint of the Onshore Substation (for assessment assumed to cover an area of 4,880m<sup>2</sup>) and associated flood attenuation and landscaping would represent permanent land take for the duration of the operational phase. The footprint of these areas is yet to be defined and will be subject to further design.

### 15.6.2.1 Magnitude of impact

167. The Project will require the installation of link boxes at 30 locations, located up to every 1km along the Onshore Export Cable Corridor. It is proposed that all link boxes would be located below ground with an above ground marker post at each location. This is not considered to represent a significant loss of agricultural land.
168. The worst-case total permanent land take for the footprint of the Onshore Substation is 4,880m<sup>2</sup> (exclusive of landscaped areas and drainage requirements). Therefore, the magnitude of impact is considered to be **low**.

#### 15.6.2.2 Sensitivity of the receptor

169. The sensitivity of the receptor is considered to be **high** to reflect the permanent loss of ALC Grade 2 and 3 land (which has conservatively all been considered to be Grade 3 BMV agricultural land).

#### 15.6.2.3 Significance of effect

170. Without mitigation, the magnitude of impact is low on a high sensitivity receptor. Therefore, the potential significance of effect is considered to be **moderate adverse**.

#### 15.6.2.4 Further Mitigation

171. Private agreements (providing financial compensation) will be sought between the Applicant and relevant landowners / occupiers regarding any permanent loss of land incurred as a direct consequence of the operation of the Onshore Project.

#### 15.6.2.5 Residual Effect

172. With the implementation of the above mitigation measures, the magnitude of impact would be reduced from **low** to **negligible**. Therefore, the residual effect is minor adverse, which is deemed **not significant** in EIA terms.

### 15.6.3 Impact 9: Environmental Stewardship Schemes

173. Following construction, all land under an agri-environmental scheme within the Onshore Export Cable Corridor will be reinstated to its original condition (noting that it may take time for the area to return to its former condition), with the exception of the link boxes. Given the size of each link box, they are expected to have a negligible impact on the management requirements under an agri-environmental scheme.

174. Impacts associated with the duration required for the area under agri-environmental schemes to return to their former condition, may result in the need for financial compensation to landowners/occupiers should the sites not meet the terms of the agri-environmental scheme agreement. The impact on specific agreements will only be known once the final Project area at the time of submission of the Onshore TPCA Application has been established, and landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels.

175. The Onshore Substation will not be located within an area under an existing agri-environmental scheme and so there would be **no impact** during the operational phase within this area of the Project.

#### 15.6.4 Impact 10: Disruption to Existing Utilities

176. The majority of planned and emergency maintenance activities along the Onshore Export Cable Corridor would typically be undertaken at joint locations. The cables would be installed in ducts and sections can be removed at joint locations without the need for extensive excavations elsewhere along the corridor. There however remains the potential that some repair activities may be required to the ducts themselves that could require intrusive works between joint locations.
177. Utilities are considered to be highly sensitive, in particular electricity, gas and water mains, due to the potential disruption that could be caused should the services be disrupted. The majority of the identified utilities crossing the Onshore Development Area are for domestic services that include telecom, electricity, water, gas, sewage and street lighting.
178. Any maintenance undertaken would involve contacting potentially affected utility providers and the location of existing services would be identified prior to maintenance works to ensure no impact to these utilities.
179. The Project will undertake utility crossings in accordance with industry standard practice as agreed with the utility owners. The Onshore TPCA application will also include protective provisions in favour of the utilities providers to provide protection for their assets. Therefore, **no impacts** on existing utilities are anticipated during the operational phase of the Onshore Project.

#### 15.6.5 Impact 11: Disruption to Users of Recreational Routes

180. Routine and ad hoc maintenance activities are not anticipated to require disruption to or closure of any paths or non-motorised routes and will not interfere with local recreation activities such as walking or cycling.
181. Any alternative routes proposed for the construction phase would be removed and the original routes reinstated post-construction. Where recreational routes cross the footprint of permanent infrastructure (e.g., Onshore Substation, access roads) appropriate safety measures would be introduced to protect users. There would be no permanent closures of any recreational routes. Therefore, **no impacts** are predicted during the operational phase of the Onshore Project.

#### 15.6.6 Impact 12: Soil Heating

182. The transmission of electricity results in small energy losses in the form of heat dissipation. However, the design of the onshore cable system would seek to minimise any energy losses. Depending on the thermal resistivity of the soil and the

height of the water table, it is likely that a stabilised backfill such as cement bound sand (CBS) would be required to encase the cable ducts. This is commonly used to ensure that the thermal conductivity of the material around the cables is of a known consistent value for the length of the installation. CBS has a low thermal resistance to conduct the heat produced during electricity transmission.

183. The effects of soil heating are only likely to occur directly above the onshore export cables. Therefore there is the potential for >20ha of agricultural land to be affected along the full 6km length of the onshore cable corridor. The potential impact of any potential soil heating on agricultural production may negatively affect crop growth.

#### 15.6.6.1 Magnitude of impact

184. Heat dissipation modelling indicates that the soil temperature at the surface directly above the buried cables would be no higher than ambient temperature during operation. This is based on the maximum current rating requirements. Temperatures would increase as you approach the depth of the buried cables. Under a maximum current rating, soil temperature would typically increase by 1°C for every 50mm of depth.
185. Any impacts on soil heating would be highly localised to the area immediately surrounding the cable system. Where laid in trenches, cables would be buried to a indicative depth of 1.9m, with the principal root growth zone generally accepted to be within the top 50mm of the soil, where any increase in temperature would be less than 1°C.
186. The installation of the onshore export cable will result in no change in the temperature at the ground surface, and very small increases in topsoil temperature (less than 1°C in the principal root growth zone). Overall, the magnitude of impact is assessed as **negligible**.

#### 15.6.6.2 Sensitivity of the receptor

187. Given these characteristics, the soil resources within the Onshore Development Area are considered susceptible to soil heating. However, the thermal resistivity of the material immediately surrounding the cables has a much greater bearing on heat dissipation and the backfill used to reinstate the land following the completion of construction will be selected for its properties in this respect. It is therefore considered that the sensitivity of the receptor is **medium**.

#### 15.6.6.3 Significance of effect

188. The magnitude of impact is negligible on a medium sensitivity receptors. Therefore the significance of effect is considered **minor adverse**.



#### 15.6.6.4 Further Mitigation

189. The significance of effect is **minor adverse** which is deemed **not significant** in EIA terms. Therefore, no additional mitigation is required.

### 15.7 Potential Impacts During Decommissioning

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

191. The anticipated decommissioning activities are outlined in **Section 15.3.3**. The potential impacts of the decommissioning of the Onshore Project have been assessed for Land Use 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:

- Impact 1: Agricultural Drainage
- Impact 2: Temporary Loss of Agricultural Land
- Impact 3: Soil Degradation and Loss of Soil to Erosion
- Impact 4: Impact to Environmental Stewardship Schemes
- Impact 5: Disruption to Existing Utilities
- Impact 6: Disruption to Users of Recreational Routes.

192. The magnitude of impacts would be comparable to or less than those identified for the construction phase. Accordingly, given the construction phase assessments concluded “no effect” or “moderate adverse effect” for Land Use receptors, it is anticipated that the same would be valid for the decommissioning phase regardless of the final decommissioning methodologies.

### 15.8 Potential cumulative effects

193. The approach to cumulative effect 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 Onshore Project have been considered as part of the baseline for the EIA. Where possible the Applicant 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 established on a topic-by-topic basis with the relevant consultees.

194. The cumulative effect assessment for Land Use was undertaken in two stages. The first stage was to consider the potential for the effects assessed as part of the project to lead to cumulative effects in conjunction with other projects. The first stage of the assessment is detailed in **Table 15.21**.
195. Only potential impacts assessed in **Section 15.5, Section 15.6** and **Section 15.7** as negligible or above are included in the CEA (i.e. those assessed as 'no impact' are not taken forward as there is no potential for them to contribute to a cumulative effect).

*Table 15.21 Potential cumulative effects considered for Land Use*

<b>Impact</b>	<b>Potential for cumulative effect</b>	<b>Rationale</b>
<b>Impact 1: Agricultural drainage</b>	Yes	Impacts may occur to individual field drains in any area of overlap or those with an extent which intersects two or more proposed development boundaries (where groundworks are anticipated).
<b>Impact 2: Temporary loss of agricultural land</b>	Yes	Impacts may occur where project boundaries overlap spatially or temporally on the same landowner/occupier's land. Such impacts have the potential to affect local productivity.
<b>Impact 3: Soil degradation and loss of soil to erosion</b>	Yes	Impacts may occur where the project boundaries overlap spatially or temporally on the same landowner/occupier's land. Such impacts have the potential to affect local productivity.
<b>Impact 4: Impact to Environmental Stewardship Schemes</b>	Yes	Impacts may occur where project boundaries overlap spatially or temporally on land subject to the same ESS. Such impacts have the potential to affect land under ESS (e.g. loss of earnings from ESS or failure to achieve environmental objectives).
<b>Impact 5: Disruption to existing utilities</b>	No	Potentially affected utility providers would be contacted and the location of existing services would be identified prior to the commencement of construction works to ensure there would be no impact.
<b>Impact 6: Disruption to users of recreational routes</b>	Yes	Cumulative effects may occur depending on the timing of works relative to other projects.
<b>Impact 7: Disruption to field drainage</b>	No	It is considered that there would be no direct cumulative effects in relation to field drainage. Therefore, cumulative effects to field drainage are not taken forward.

Impact	Potential for cumulative effect	Rationale
<b>Impact 8: Permanent loss of land for agriculture</b>	Yes	Cumulative effects may occur at both a local and/or county scale where impacts to productivity affect the agriculture industry.
<b>Impact 9: Environmental Stewardship Schemes</b>	Yes	Following completion of works, land located within ESS will be reinstated, however following reinstatement it may take some time for the area under the agri-environmental scheme to return to its former condition. Therefore, cumulative effects to ESS are taken forward.
<b>Impact 10: Disruption to existing utilities</b>	No	Potentially affected utility providers would be contacted and the location of any existing services would be identified prior to works ensuring that there would be no impact. Therefore, cumulative effects on existing utilities are not taken forward.
<b>Impact 11: Disruption to users of recreational routes</b>	Yes	There is the potential for recreational routes to be impacted by other projects that also require closure and/or diversion to the routes. Therefore, potential cumulative effects are taken forward.
<b>Impact 12: Soil heating</b>	No	It is considered that there would be no direct cumulative effects in relation to soil heating. Therefore, potential cumulative effects are not taken forward.
The detail and scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. As such, cumulative effects during the decommissioning stage are assumed to be the same as those identified during the construction stage.		

196. The second stage of the CEA is to evaluate the projects considered for the CEA to determine whether a cumulative effect is likely to arise. The list of considered projects (identified in **Chapter 6: EIA Methodology**) and their anticipated potential for cumulative effects are summarised in **Table 15.22**.

*Table 15.22 Projects considered in the cumulative effect assessment on Land Use*

Project	Status	Distance from Onshore Development Area (km)	Included in the CEA?	Rationale
<b>White Cross Offshore Project</b>	Consent application submitted	0.00	Yes	Overlap in spatial extent and timing of works.

Project	Status	Distance from Onshore Development Area (km)	Included in the CEA?	Rationale
<b>The Red Bunker Sandhills Instow Bideford</b>	Approved	<0.20	No	Project is located outside the Land Use Zone of Influence and so there is no potential spatial overlaps between the projects.
<b>Sandy Lane Farm Lane Over Swanpool Bridge</b>	Approved	>1.00	No	
<b>The Stables South Hole Farm</b>	Approved	>1.00	No	
<b>Orchard Lodges Lower Yelland Farm</b>	Approved	0.73	No	
<b>20 West Yelland Barnstaple</b>	Pending	0.18	No	
<b>Saunton Heath Saunton</b>	Pending	0.23	No	
<b>Braunton Burrows Braunton</b>	Approved	>1.00	No	
<b>Long Overdune Lane to Saunton Sands Saunton</b>	N/A	0.10	No	

197. 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 a separate element to 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.

### 15.8.1 Cumulative Impact 1: Agricultural drainage

198. Following the proposed mitigation outlined in **Section 15.5.1**, the residual effect for the Onshore Project in relation to agricultural drainage is assessed as minor adverse significance.

199. The White Cross Offshore Project will overlap the Onshore Project at the Landfall location and access routes and so there is the potential for direct cumulative effects upon drainage systems to occur during construction.

#### 15.8.1.1 Significance of effect

200. The mitigation measures applicable to the Onshore Project would also be applied to the Offshore Project, therefore the significance of effect in relation to potential for cumulative effects effect is considered **minor adverse**.

#### 15.8.1.2 Further Mitigation

201. The cumulative effects are not considered to be greater than the **minor adverse** significance of effect for the Onshore Project alone. Therefore, this is considered not significant in EIA terms and so no further mitigation measures would be required.

### 15.8.2 Cumulative Impact 2: Temporary loss of agricultural land

202. Following the proposed mitigation outlined in **Section 15.5.2**, the residual effect for the Onshore Project in relation to temporary loss of agricultural land is assessed as moderate adverse significance.

203. The White Cross Offshore Project will overlap the Onshore Project at the Landfall location and access routes and so there is the potential for direct cumulative effects associated with the temporary loss of agricultural land during construction.

#### 15.8.2.1 Significance of effect

204. The mitigation measures applicable to the Onshore Project would also be applied to the Offshore Project, therefore the significance of effect in relation to potential for cumulative effects effect remains **moderate adverse**.

#### 15.8.2.2 Further Mitigation

205. Although mitigation measures will be applied to lessen the impact to individual owners / occupiers of agricultural land, the total area would remain in excess of 20ha and so even if further mitigation measures were applied, the significance of effect would remain **moderate adverse**. It is noted that financial compensation would be provided to landowners to offset the temporary disturbance.

### 15.8.3 Cumulative Impact 3: Soil degradation and loss of soil to erosion

206. Following the proposed mitigation outlined in **Section 15.5.3**, the residual effect for the Onshore Project in relation to soil degradation and soil loss is assessed as minor adverse significance.
207. The White Cross Offshore Project will overlap the Onshore Project at the Landfall location and access routes and so there is the potential for direct cumulative effects upon soils to occur during construction.

#### 15.8.3.1 Significance of effect

208. The mitigation measures applicable to the Onshore Project would also be applied to the Offshore Project, therefore the significance of effect in relation to potential for cumulative effects effect is considered **minor adverse**.

#### 15.8.3.2 Further Mitigation

209. The cumulative effects are not considered to be greater than the **minor adverse** significance of effect for the Onshore Project alone. Therefore, this is considered **not significant** in EIA terms and so no further mitigation measures would be required.

### 15.8.4 Cumulative Impact 4: Impact to Environmental Stewardship Schemes

210. Following the proposed mitigation measures outlined in **Section 15.5.4**, the level of residual effect could range from no impact, a minor or temporary change (such as the need to make changes to grazing or cropping requirements) or termination of the agreement.

#### 15.8.4.1 Significance of effect

211. There will be no direct overlap between the ESS and CSS located within the Onshore Export Cable Corridor of the Onshore Project and the Offshore Project. Therefore, there is no potential for spatial overlap between the two projects.

#### 15.8.4.2 Further Mitigation

212. Mitigation in addition to that previously discussed in **Section 15.5.4** is not considered necessary due to the absence of spatial overlap.

### 15.8.5 Cumulative Impact 5: Disruption to users of recreational routes

213. Following the proposed mitigation outlined in **Section 15.5.6**, the residual effect for the Onshore Project in relation to recreational routes is assessed as minor adverse significance.
214. The White Cross Offshore Project will overlap the Onshore Project at the Landfall location and access routes and so there is the potential for direct cumulative effects upon recreational routes that cross these areas to occur during construction.

#### 15.8.5.1 Significance of effect

215. The mitigation measures applicable to the Onshore Project would also be applied to the Offshore Project, therefore the significance of effect in relation to potential for cumulative effects effect is considered **minor adverse**.

#### 15.8.5.2 Further Mitigation

216. The cumulative effects are not considered to be greater than the **minor adverse** significance of effect for the Onshore Project alone. Therefore, this is considered **not significant** in EIA terms and so no further mitigation measures would be required.

## 15.9 Potential transboundary impacts

217. The Scoping Report identified that there was no potential for significant transboundary effects regarding Land Use from the Onshore Project upon the interests of other EEA States and this is not discussed further.

## 15.10 Inter-relationships

218. Inter-relationship impacts are covered as part of the assessment and consider impacts from the construction, operation or decommissioning of the Onshore 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 Land Use include both:

- **Project lifetime effects:** Effects arising throughout more than one phase of the Onshore 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.

219. **Table 15.23** serves as a signposting for inter-relationships.

*Table 15.23 Land Use Inter-relationships*

Topic and description	Related chapter	Where addressed in this Chapter	Rationale
<b>Construction</b>			
<b>Impact 1: Agricultural drainage</b>	Chapter 14: Water Resources and Flood Risk	<b>Section 15.5.1</b>	Potential impacts on drainage could lead to changes in flood risk or water resources e.g. private water supplies.
<b>Impact 2: Temporary loss of agricultural land</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.5.2</b>	Changes in land uses could result in a loss of earnings for the landowner/occupier of the land parcel affected.
<b>Impact 3: Soil degradation and loss of soil to erosion</b>	Chapter 12: Ground Conditions and Contamination	<b>Section 15.5.3</b>	Changes in soil quality could impact on ground conditions and potentially contaminated land.
	Chapter 21: Socioeconomics (including Tourism and Recreation)		Changes in soil quality and quantity could impact the productivity of the area in relation to, for example, crop yields.
<b>Impact 4: Impact to Environmental Stewardship Schemes</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.5.4</b>	Changes to land uses could result in a loss of earnings for the landowner/occupier of the land parcel affected.
<b>Impact 6: Disruption to users of recreational routes</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.5.6</b>	The Project may affect local businesses in the tourism and recreation industry.



Topic and description	Related chapter	Where addressed in this Chapter	Rationale
<b>Operation and Maintenance</b>			
<b>Impact 7: Disruption to field drainage</b>	Chapter 14: Water Resources and Flood Risk	<b>Section 15.6.1</b>	Potential impacts on drainage could lead to changes in flood risk or water resources, e.g. private water supplies.
<b>Impact 8: Permanent loss of land for agriculture</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.6.2</b>	Changes in land uses could result in a loss of earnings for the landowner/occupier of the land parcel affected. through the loss of agricultural land.
<b>Impact 9: Environmental Stewardship Schemes</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.6.3</b>	Changes to land uses could result in a loss of earnings for the landowner/occupier of the land parcel affected
<b>Impact 11: Disruption to users of recreational routes</b>	Chapter 21: Socioeconomics (including Tourism and Recreation)	<b>Section 15.6.5</b>	The Onshore Project may affect local businesses in the tourism and recreation industry.

## 15.11 Interactions

220. 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 15.24** and **Table 15.25**, 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.

221. **Table 15.26** 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.

*Table 15.24 Interaction between impacts during construction*

Potential impact Construction	Impact 1: Agricultural drainage	Impact 2: Temporary loss of agricultural land	Impact 3: Soil degradation and loss of soil to erosion	Impact 4: Impact to Environmental Stewardship Schemes	Impact 5: Disruption to existing utilities	Impact 6: Disruption to users of recreational routes
Impact 1: Agricultural drainage		Yes	Yes	Yes	No	No
Impact 2: Temporary loss of agricultural land	Yes		Yes	Yes	Yes	No
Impact 3: Soil degradation and loss of soil to erosion	Yes	Yes		Yes	Yes	No
Impact 4: Impact to Environmental Stewardship Schemes	Yes	Yes	Yes		Yes	No
Impact 5: Disruption to existing utilities	No	Yes	Yes	Yes		No
Impact 6: Disruption to users of recreational routes	No	No	No	No	No	

*Table 15.25 Interaction between impacts during operation and maintenance*

Potential impact Operation	Impact 7: Disruption to field drainage	Impact 8: Permanent loss of land for agriculture	Impact 9: Environmental Stewardship Schemes	Impact 10: Disruption to existing utilities	Impact 11: Disruption to users of recreational routes	Impact 12: Soil heating
Impact 7: Disruption to field drainage		Yes	Yes	No	No	No
Impact 8: Permanent loss of land for agriculture	Yes		Yes	Yes	No	No
Impact 9: Environmental Stewardship Schemes	Yes	Yes		No	No	No
Impact 10: Disruption to existing utilities	No	Yes	No		No	No
Impact 11: Disruption to users of recreational routes	No	No	No	No		No
Impact 12: Soil heating	No	No	No	No	No	

*Table 15.26 Potential interactions between impacts on Land Use*

Highest level significance					
Receptor	Construction	Operation and Maintenance	Decommissioning	Phase Assessment	Lifetime Assessment
<b>Field drainage network</b>	Minor adverse	No impact	Minor adverse	<b>No greater than individually assessed impact.</b> The impacts to the field drainage networks within the Onshore Project area are considered to have no or minor significance of effect on receptors. Given that the significance levels are no impact to minor and that each impact would be managed with standard and best practice methodologies, it is considered that there would either be no interactions or that these would not result in greater impacts than when assessed individually.	<b>No greater than individually assessed impact.</b> Most impacts within the Onshore Project area will occur during the construction phase. Field drainage would be reinstated following construction, where possible, with drainage requirements at the Onshore Substation complying with a flood risk assessment. The impacts to field drainage during the life of the Onshore Substation is negligible. It is therefore anticipated that there are no lifetime impacts for receptors.
<b>Agricultural land</b>	Moderate adverse	Moderate adverse	Moderate adverse	<b>No greater than individually assessed impact.</b> The impacts to agricultural land within the Onshore Project area are considered to have moderate adverse significance of effect on receptors. Given that the potential impact will be mitigated through agreements with landowners / occupiers and land would be reinstated to its previous condition, where possible, it is considered that these would not result in greater impacts than when assessed individually.	<b>No greater than individually assessed impact.</b> Most impacts within the Onshore Project area will occur during the construction phase. Land would be reinstated to its original condition following construction where possible. The impacts to agricultural land during the life of the Onshore Substation is negligible. It is therefore anticipated that there are no lifetime impacts for receptors.
<b>Agricultural soils</b>	Minor adverse	No impact	Minor adverse	<b>No greater than individually assessed impact.</b> Impacts to soils (degradation and erosion) are considered to have a medium magnitude of impact on individual receptors, with the significance of effect dependent upon the sensitivity of the receptor. Given that the impacts would be managed with standard and best practice methodologies, it is considered that there would either be no interactions or that these would not result in greater impact than when assessed individually.	<b>No greater than individually assessed impact.</b> Most impacts within the Onshore Project area will occur during the construction phase. Soil would be reinstated following construction where possible, restoring the area to its original condition. The impacts to soil during the life of the Onshore Project are negligible. It is therefore anticipated that there are no lifetime effects for receptors.
<b>ESS</b>	No impact to major adverse	No impact	No impact to major adverse	The significance of effect on agri-environmental schemes will only be known once the final Project area has been established, and landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels. Therefore, it is not possible to establish if there will be interactions between each of the phases or lifetime of the Onshore Project.	
<b>Utilities</b>	No impact	No impact	No impact	Not applicable	
<b>Users of recreational routes</b>	Minor adverse	No impacts	Minor adverse	<b>No greater than individually assessed impact.</b> The impacts on recreational routes are considered to have no to minor significance of effects on the individual receptors. Given that each impact would be managed with standard best practice methodologies, it is considered that there would either be no interactions or that these would not result in a greater impact than when assessed individually.	<b>No greater than individually assessed impact.</b> There would be limited impact to recreational routes during the construction phase of the Onshore Project. It is unlikely that there would be widespread closures of routes during the operational phase of the Onshore Project. It is therefore anticipated that there are no lifetime impacts for receptors.

## 15.12 Summary

222. This chapter has investigated the potential effects on Land Use 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.
223. **Table 15.27** presents a summary of the impacts assessed within this ES chapter, any commitments made, and mitigation required and the residual effects. These impacts are driven mainly by change in land use, soil handling and the disruption to PRoW and paths during construction. The construction impacts to land use and soil have a greater likelihood to be more significant on higher sensitivity land (such as ALC Grade 2 land) and land subject to agri-environmental schemes. The construction stage of the Onshore Project has the potential to disrupt paths which are determined to have high sensitivity to change. However, many of the impacts are temporary and reversible once construction is completed.
224. During operation, the impacts to land use are limited. This is because the onshore export cables will be buried. However, residual effects associated with changes in land use and agri-environmental schemes during operation are no more than minor adverse. Private agreements will be sought with the relevant landowners / occupiers regarding any permanent loss of land incurred.
225. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. Impacts during the decommissioning stage are assumed to be the same as those identified during the construction stage.
226. The assessment of cumulative effects from the Onshore Project and other developments concluded that the significance of effect would be no greater than those identified for the Onshore Project alone and further mitigation would not be required.

*Table 15.27 Summary of potential impacts for Land Use during construction, operation, maintenance and decommissioning of the Onshore Project*

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation measures	Residual effect
<b>Construction</b>						
<b>Impact 1: Agricultural drainage</b>	Field drainage network	Medium	Medium	Moderate adverse	Maintaining / reinstating land drainage systems; provision of an ALO and / or local specialised drainage contractor; implementation of the final CEMP and SMP.	Minor adverse
<b>Impact 2: Temporary loss of agricultural land</b>	Agricultural land	High	Low	Moderate adverse	Landowner consultation; maintain access for farm vehicles; plan timing of works; implement private agreements. Although mitigation measures will be implemented to reduce the magnitude of impact, the area of land temporarily affected will remain >20ha.	Moderate adverse
<b>Impact 3: Soil degradation and loss of soil to erosion</b>	Agricultural soils	Medium	Medium	Moderate adverse	Topsoil stripping; appropriate storage and handling of soils according to their characteristics and in appropriate weather conditions; restrict movements of heavy plan vehicles; minimising excavation footprints; SMP; construction method statements for soil handling; private agreements.	Minor adverse

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation measures	Residual effect
<b>Impact 4: Impact to Environmental Stewardship Schemes</b>	ESS	The level of impact could range from the termination of an agreement to no impact, or a minor and temporary change. The impact on specific agreements will only be known once the final TCPA boundary has been established, and landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels.				
<b>Impact 5: Disruption to existing utilities</b>	Utilities	No impact.				
<b>Impact 6: Disruption to users of recreational routes</b>	Users of recreational routes	High	Medium	Moderate adverse	Appropriately fenced (unmanned) crossing points; manned crossing points; and temporary alternative routes.	Minor adverse
<b>Operation and Maintenance</b>						
<b>Impact 7: Disruption to field drainage</b>	Field drainage network	Medium	No impact			
<b>Impact 8: Permanent loss of land for agriculture</b>	Agricultural land	High	Low	Moderate adverse	Private agreements will be sought with the relevant landowners / occupiers regarding any permanent loss of land incurred.	Minor adverse
<b>Impact 9: Environmental Stewardship Schemes</b>	ESS	The land located within the agri-environmental scheme will be reinstated following completion of the construction phase of the Onshore Project (with the exception of the link boxes), however there is the potential that time will be required for the land to return to its original condition. Therefore, the impact on specific agreements will only be known once the final TCPA boundary has been established, and landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels. The Onshore Substation will not be located within an area under an existing agri-environmental scheme and so there would be no impact during the operational phase.				



Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation measures	Residual effect
<b>Impact 10: Disruption to existing utilities</b>	Utilities	No impact				
<b>Impact 11: Disruption to users of recreational routes</b>	Users of recreational routes	No impact				
<b>Impact 12: Soil heating</b>	Agricultural soils	Medium	Negligible	Minor adverse	No additional mitigation is required	Minor adverse
<b>Decommissioning</b>						
The detail and scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. A Decommissioning Plan would be provided. Impacts during the decommissioning stage are assumed to be the same as those identified during the construction stage.						
<b>Cumulative</b>						
<b>Impact 1: Agricultural drainage</b>	Field drainage network	Medium	Medium	Moderate adverse	<p>No further mitigation measures would be required for cumulative effects. However, the following project alone mitigation measures are relevant.</p> <p>Maintaining / reinstating land drainage systems; provision of an ALO and / or local specialised drainage contractor; implementation of the final CEMP and SMP.</p>	Minor adverse

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation measures	Residual effect
<b>Impact 2: Temporary loss of agricultural land</b>	Agricultural land	High	Low	Moderate adverse	<p>No further mitigation measures would be required for cumulative effects. However, the following project alone mitigation measures are relevant.</p> <p>Landowner consultation; maintain access for farm vehicles; plan timing of works; implement private agreements. Although mitigation measures will be implemented to reduce the magnitude of impact, the area of land will remain &gt;20ha.</p>	Moderate adverse
<b>Impact 3: Soil degradation and loss of soil to erosion</b>	Agricultural soils	Medium	Medium	Moderate adverse	<p>Topsoil stripping; appropriate storage and handling of soils according to their characteristics and in appropriate weather conditions; restrict movements of heavy plan vehicles; minimising excavation footprints; SMP; construction method statements for soil handling; private agreements.</p>	Minor adverse
<b>Impact 4: Impact to Environmental Stewardship Schemes</b>	ESS	No impact				

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Mitigation measures	Residual effect
<b>Impact 5: Disruption to users of recreational routes</b>	Users of recreational routes	High	Medium	Moderate adverse	Appropriately fenced (unmanned) crossing points; manned crossing points; and temporary alternative routes.	Minor adverse

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# White Cross Offshore Windfarm Environmental Statement

## APPENDIX 15.A OUTLINE PUBLIC RIGHTS OF WAY STRATEGY



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## Glossary of Acronyms

<b>Acronym</b>	<b>Definition</b>
<b>ALO</b>	Agricultural Liaison Officer
<b>CoCP</b>	Code of Construction Practice
<b>ES</b>	Environmental Statement
<b>LPA</b>	Local Planning Authority
<b>MLWS</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>MW</b>	Mega Watt
<b>NG</b>	National Grid
<b>WCOWL</b>	White Cross Offshore Windfarm Limited
<b>PRoW</b>	Public Right of Way
<b>TCPA</b>	Town and Country Planning Act

## Glossary of Terminology

Defined Term	Description
<b>Applicant</b>	Offshore Wind Limited.
<b>Landfall</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>Onshore Export Cables</b>	The cables which bring electricity from MLWS at the Landfall to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland.
<b>Onshore Infrastructure</b>	The combined name for all infrastructure associated with the Project from MLWS at the Landfall to the NG grid connection point at East Yelland. The onshore infrastructure will form part of a separate Planning application to the Local Planning Authority (LPA) under the Town and Country Planning Act 1990.
<b>the Onshore Project</b>	The Onshore Project for the onshore TCPA application includes all elements onshore of MLWS. This includes the infrastructure associated with the offshore export cable (from MLWS), landfall, onshore export cable and associated infrastructure and new onshore substation (if required).
<b>White Cross Offshore Windfarm Ltd</b>	White Cross Offshore Windfarm Ltd (WCOWL) is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd.
<b>the Project</b>	the Project is a proposed floating offshore windfarm called White Cross located in the Celtic Sea with a capacity of up to 100MW. It encompasses the project as a whole, i.e. all onshore and offshore infrastructure and activities associated with the Project.
<b>White Cross Offshore Windfarm</b>	Up to 100MW capacity offshore windfarm including associated onshore and offshore infrastructure.
<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 NG electrical requirements at the grid connection point at East Yelland.

## APPENDIX 15.A OUTLINE PUBLIC RIGHTS OF WAY STRATEGY

### 1. Introduction

#### 1.1 Purpose of the document

1. This document describes the Outline Public Rights of Way (PRoW) Strategy (herein 'the strategy') to be employed by Offshore Wind Limited (OWL), the Applicant, and its contractors during the construction phase of the onshore infrastructure for the White Cross Offshore Windfarm. This PRoW Strategy outlines the health and safety requirements associated with the interactions of PRoWs during the construction works within the Town and Country Planning Act (TCPA) application limits, as well as the PRoW management methodologies that will be implemented.

#### 1.2 Construction Works

2. Full details are presented in **Chapter 5: Project Description** of the Environmental Statement (ES).

### 2. Public Rights of Way

#### 2.1 Baseline

3. The Onshore Project interacts with PRoW at 12 locations (see ES **Chapter 15: Land Use**). Key PRoW identified include Tarka Trail and the South West Coast Path. Other key PRoW include:
  - Nine footpaths
  - Two bridleways.
4. An extension of the England Coastal Path also crosses the Onshore Project area, although it should be noted that the section that may be affected is approved in part but not yet open.

#### 2.2 Scope of Strategy

5. No PRoWs will be impacted during the operation or decommissioning phases of the Onshore Project. This strategy covers the temporary impacts associated with the construction works at the Landfall, along the onshore cable corridor, and at the onshore substation.
6. This PRoW strategy will be employed by the Onshore Project and is inclusive of the installation of underground cable ducts, via both open cut trenching and trenchless

methods, installation of associated joint bays and link boxes, and the construction of the onshore substation infrastructure and access roads.

7. The onshore export cables would be pulled through the installed ducts. During cable pulling works, the cables will be pulled through the pre-installed ducts from jointing pits located along the onshore cable corridor. Access to and from the jointing pits would be required to facilitate the works, and this would be achieved via the haul road. The construction corridor and onshore cable routes do not currently impact on any PRowS. However, localised and temporary works accesses may cross a small number of PRowS. This strategy will be applied to the haul road and access points.
8. The operational phase of the Onshore Project will require a permanent access road to the onshore substation to be retained for maintenance purposes, this does not impact on any PRowS.

### **3. Health and Safety**

9. In the interest of safety, temporary fencing will be erected around each section of construction works being undertaken along the onshore cable corridor. Where a PRow crosses the onshore cable corridor, lockable gates will be installed within the fencing for the period of time the PRow is closed.
10. Each PRow that crosses the onshore cable corridor will be risk assessed prior to that section of construction works being undertaken and appropriate fencing will be specified to meet health and safety requirements of users and the security requirements of the site. The assessment will take into consideration the requirement to manage risks arising from the intersection of the PRow and the haul road (taking into account the type and volume of users) during construction hours and maintaining security integrity out of hours. In addition, the Applicant and its contractors will ensure that all employees have undergone the necessary health and safety training.

#### **3.1 Public Rights of Way Management Methodologies**

11. Disruption of any PRow will be managed by the Principal Contractor to ensure continued safe access along the PRow for members of the public, and all efforts will be made to minimise PRow closure durations. The exact management method will be agreed in advance with the relevant local authority and detailed within the final Code of Construction Practice (CoCP) for that stage of works. Methods available include:
  - Appropriately fenced (unmanned) crossing points

- Manned crossing points
  - Temporary alternative routes (assumed to be required for approximately one week).
12. There will be no permanent closures of any PRoW.
13. Safety measures will be implemented where the haul road for site accesses crosses a PRoW, including raising awareness of the PRoW to haul road users and informing PRoW users of the hazards associated with the haul road. Where a PRoW is used as part of a haul road, an alternative route for the PRoW will be provided.
14. Following cessation of construction works, all PRoWs will be reinstated to their original condition or otherwise as agrees with the relevant local authority.
15. For all temporary alternative routes required, the following measures will be followed:
- A pre- and post-construction survey (including identification of surface condition and street furniture) of the PRoW affected will be undertaken. PRoW surveys will be undertaken by an experienced surveyor with scope of coverage and methodology to be agreed with the relevant local authority. A qualified Agricultural Liaison Officer (ALO) will be employed to ensure that information on existing land conditions is obtained, recorded and verified during the rights of way surveys
  - Where impacted by the works, the surveyed PRoW will be restored to its original condition or otherwise as agreed with the relevant local authority. The ALO will act as the point of contact for the restoration of the PRoW
  - The Applicant will advertise all alternative routes following the local authority's standards for advertising temporary closures of PRoW. This will include:
    - Provision of a map showing the extent of the temporary closure and alternative route
    - Confirmation that the alternative route is to other PRoWs, roads or on land under the control of the Applicant
    - Confirmation that the alternative route across land under the Applicant's control is safe and fit for public use
  - Permission would be obtained from County, District and Parish Councils in order to implement temporary closures or diversions of PRoWs
  - A notice describing the temporary closures would be published in the press a minimum of two weeks in advance of the closure. Consideration will also be

given to publishing the temporary closures via additional alternative methods such as websites

- Advanced site notices (i.e. notices to members of the public warning of diversions ahead) would be posed at appropriate locations to minimise the likelihood of trespassing and to avoid aborted journeys:
  - These site notices would be erected in visible locations on site one to two weeks in advance of temporary closures
  - The notices would describe the duration of temporary closure and the alternative route proposed
- Whilst any extensions to the closure of a PRow would be avoided where possible, if required, this would be discussed with the relevant local authority.

16. Disruption associated with the interaction between the Onshore Project and the Tarka Trail will be managed during construction of the Onshore Project by the installation of gates where the interactions occur. No operational disruption or interaction would occur.