

# **XLINKS' MOROCCO-UK POWER PROJECT**

## **Environmental Statement**

**Volume 3, Chapter 9: Offshore Ornithology**

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## XLINKS' MOROCCO – UK POWER PROJECT

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## Contents

<b>9</b>	<b>OFFSHORE ORNITHOLOGY</b> .....	<b>1</b>
9.1	Introduction .....	1
9.2	Legislative and Policy Context .....	2
9.3	Consultation and Engagement.....	8
9.4	Study Area .....	16
9.5	Scope of the Assessment .....	17
9.6	Methodology .....	17
9.7	Baseline Environment .....	23
9.8	Mitigation Measures Adopted as Part of the Proposed Development .....	34
9.9	Key Parameters for Assessment.....	35
9.10	Assessment of Construction Effects .....	38
9.11	Assessment of Operational and Maintenance Effects.....	43
9.12	Assessment of Decommissioning Effects .....	48
9.13	Cumulative Environmental Assessment.....	52
9.14	Transboundary Effects .....	60
9.15	Inter-related Effects.....	63
9.16	Summary of Impacts, Mitigation Measures and Monitoring .....	63
9.17	References.....	66

## Tables

Table 9.1:	Summary of relevant NPS policy .....	3
Table 9.2:	Summary of NPPF requirements relevant to this chapter .....	4
Table 9.3:	Summary of inshore and offshore marine plan policies relevant to this chapter.....	6
Table 9.4:	Summary of North Devon Biosphere Marine Natural Capital Plan and Strategy for Sustainable Development policies relevant to this chapter.....	7
Table 9.5:	Summary of Scoping Responses.....	9
Table 9.6:	Summary of consultation relevant to this chapter .....	14
Table 9.7:	Impacts considered within this assessment .....	17
Table 9.8:	Issues scoped out of the assessment .....	17
Table 9.9:	Desk study sources.....	18
Table 9.10:	Sensitivity criteria .....	20
Table 9.11:	Value criteria .....	21
Table 9.12:	Impact magnitude criteria.....	21
Table 9.13:	Assessment Matrix.....	22
Table 9.14:	Designated sites of international importance with potential connectivity to the study area (with ornithological interest).....	24
Table 9.15:	Designated sites of national importance with potential connectivity to the study area (with ornithological interest).....	24
Table 9.16:	Key receptors taken forward to assessment .....	30
Table 9.17:	Mitigation measures adopted as part of the Proposed Development.....	35
Table 9.18:	Maximum design scenario considered for the assessment of impacts .....	36
Table 9.19:	Significance of effects arising from visual and noise disturbance .....	40
Table 9.20:	Significance of effects arising from indirect impacts via loss/disturbance to habitats and prey .....	41
Table 9.21:	Significance of effects arising from pollution incidents .....	43

Table 9.22: Significance of effects arising from visual and noise disturbance ..... 45  
Table 9.23: Significance of effects arising from indirect impacts via loss/disturbance  
to habitats and prey ..... 46  
Table 9.24: Significance of effects arising from pollution incidents ..... 47  
Table 9.25: Significance of effects arising from visual and noise disturbance ..... 49  
Table 9.26: Significance of effects arising from indirect impacts via loss/disturbance  
to habitats and prey ..... 50  
Table 9.27: Significance of effects arising from pollution incidents ..... 51  
Table 9.28: List of cumulative developments considered within the CEA ..... 53  
Table 9.29: Non-UK designated sites with potential connectivity to the study area ..... 60  
Table 9.31: Summary of environmental effects..... 64  
Table 9.32: Summary of cumulative environmental effects..... 65

**Figures (See Volume 3, Figures)**

<b>Figure Number</b>	<b>Figure Title</b>
9.1	Offshore Ornithology Study Area

## Glossary

Term	Meaning
<b>Terminology Relating to the Proposed Development</b>	
Bipole	A Bipole system is an electrical transmission system that comprises two Direct Current conductors of opposite polarity.
Landfall	The proposed area in which the offshore cables make landfall in the United Kingdom (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Cornborough Range, Devon, between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, and landfall compound(s).
Offshore Cable Corridor	The proposed corridor within which the offshore cables are proposed to be located, which is situated within the UK Exclusive Economic Zone.
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and highways improvements.
Study area	This is an area which is defined for each environmental topic which includes the Order Limits as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.
Xlinks Morocco UK Power Project	The overall scheme from Morocco to the national grid, including all onshore and offshore elements of the transmission network and the generation site in Morocco (referred to as the 'Project').
<b>Further Terminology</b>	
Baseline	The status of the environment without the Proposed Development in place.
Benthic	Associated with or occurring on the bottom of the seabed.
Climate change	A change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.
Cumulative Effects	The combined effect of the Proposed Development in combination with the effects from other planning applications, on the same receptor or resource.
Duration (of impact)	The time over which an impact occurs. An impact may be described as short, medium or long-term and permanent or temporary.
Effect	The term used to express the consequence of an impact. The significance of effect is determined by correlating magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Impact	Change that is caused by an action/proposed development, e.g., land clearing (action) during construction which results in habitat loss (impact).
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.

<b>Term</b>	<b>Meaning</b>
Preliminary Environmental Information Report	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project, and which helps to inform consultation responses.
Ramsar Site	Wetlands of international importance that have been designated under the criteria of the Ramsar Convention. In combination with Special Protection Areas and Special Areas of Conservation, these sites contribute to the national site network.
Receptor	The element of the receiving environment that is affected.
Site of Special Scientific Interest	A site designation specified and protected in the Wildlife and Countryside Act 1981. These sites are of particular scientific interest due to important biological (e.g. a rare species of fauna or flora), geological or physiological features.
Special Protection Areas	A site designation specified in the Conservation of Habitats and Species Regulations 2017, classified for rare and vulnerable birds, and for regularly occurring migratory species. Special Protection Areas contribute to the national site network.
Transboundary effects	Effects from a project within one state that affect the environment of another state(s).

## Acronyms

<b>Acronym</b>	<b>Meaning</b>
BoCC	Bird of Conservation Concern
CEA	Cumulative Effects Assessment
CIEEM	Chartered Institute of Ecology and Environmental Management
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
EA	Environment Agency
EcIA	Ecological Impact Assessment
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
IEMA	Institute for Environmental Management and Assessment
JNCC	Joint Nature Conservation Committee
MDS	Maximum Design Scenario
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
PEIR	Preliminary Environmental Information Report
RSPB	Royal Society for the Protection of Birds
SNCB	Statutory Nature Conservation Body
SSSI	Site of Special Scientific Interest
UK	United Kingdom
UXO	Unexploded Ordnance
ZOI	Zone of Influence

## Units

Units	Meaning
km	Kilometre
m	Metre
m/s	Metres Per Second (Speed)
nm	Nautical mile

## 9 OFFSHORE ORNITHOLOGY

### 9.1 Introduction

- 9.1.1 This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) undertaken for the United Kingdom (UK) elements of Xlinks' Morocco-UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to in this chapter as the 'Proposed Development'. The ES accompanies the application to the Planning Inspectorate for development consent for the Proposed Development.
- 9.1.2 This chapter considers the likely impacts and effects of the Proposed Development on offshore ornithology during the construction, operational and maintenance and decommissioning phases. Specifically, it relates to the offshore elements of the Proposed Development seaward of Mean Low Water Springs (MLWS). Likely impacts and effects from elements of the Proposed Development located landward of MLWS on ornithology are addressed in Volume 2, Chapter 1: Onshore Ecology and Nature Conservation of the ES.
- 9.1.3 In particular, this ES chapter:
- identifies the key legislation, policy and guidance relevant to offshore ornithology;
  - details the EIA scoping and consultation process undertaken to date for offshore ornithology;
  - confirms the study area for the assessment, the methodology used to identify baseline environmental conditions, the impact assessment methodology, and identifies any assumptions and limitations encountered in compiling the environmental information;
  - sets out the existing and future environmental baseline conditions, established from desk studies, surveys and consultation;
  - details the mitigation and/or monitoring measures that are proposed to prevent, minimise, reduce or offset the possible environmental effects identified in the EIA process;
  - defines the project design parameters used to inform for the impact assessment;
  - presents an assessment of the likely impacts and effects in relation to the construction, operational and maintenance and decommissioning phases of the Proposed Development on offshore ornithology; and
  - identifies any cumulative, transboundary and/or inter-related effects in relation to the construction, operational and maintenance and decommissioning phases of the Proposed Development on offshore ornithology.
- 9.1.4 The assessment presented is informed by the following chapters and should be read in conjunction with the following ES chapters:
- Volume 1, Chapter 2: Policy and Legislation;
  - Volume 1, Chapter 3: Project Description;
  - Volume 1, Chapter 5: EIA Methodology;



- Volume 3, Chapter 1: Benthic Ecology;
- Volume 3, Chapter 2: Fish and Shellfish;
- Volume 3, Chapter 5: Shipping and Navigation; and
- Volume 3, Chapter 8: Physical Processes.

## 9.2 Legislative and Policy Context

### Legislation

9.2.1 The following key legislation and policy documents specific to offshore ornithology have been considered within the assessment process:

- Convention on the Conservation of European Wildlife and Natural Habitats (1979);
- Energy Act 2023 (2023);
- European Commission Directive 2009/147/EC (codified version of 79/409/EC) on the Conservation of Wild Birds (the 'Birds Directive') (2009);
- EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (known as the 'Habitats Directive') (1992);
- Offshore Marine Conservation (Natural Habitats, &c.) Regulations (the 'Offshore Regulations') (2017);
- Ramsar Convention on Wetlands of International Importance (1971);
- South West Inshore and South West Offshore Marine Plans (2021);
- The Convention on the Conservation of Migratory Species of Wild Animals (the 'Bonn Convention') (1979);
- The Marine Strategy Regulations (2010);
- The Natural Environment and Rural Communities Act (2006);
- The Wildlife and Countryside Act (as amended) (1981);
- UK Marine Policy Statement (2011); and
- UK Post-2010 Biodiversity Framework (2012).

### Planning Policy Context

9.2.2 The Proposed Development would be located within the UK Exclusive Economic Zone (EEZ) offshore waters (beyond 12 nautical miles (nm) from the English coast) and inshore waters, with the onshore infrastructure proposed to be located wholly within Devon, England. As set out in Volume 1, Chapter 1: Introduction, of the ES, the Secretary of State for the Department for Energy Security and Net Zero (DESNZ) has directed that elements of the Proposed Development are to be treated as development for which development consent is required under the Planning Act 2008, as amended.

## National Policy Statements

- 9.2.3 There are currently six energy National Policy Statements (NPSs), three of which contain policy relevant to the Proposed Development, specifically:
- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (Department for Energy Security & Net Zero 2023a);
  - NPS for Renewable Energy Infrastructure (NPS EN-3) (Department for Energy Security & Net Zero 2023b); and
  - NPS for Electricity Networks Infrastructure (NPS EN-5) (Department for Energy Security & Net Zero 2023c).
- 9.2.4 **Table 9.1** sets out key aspects from the NPSs relevant to the Proposed Development, with particular reference to the need for and approach to consenting such infrastructure.

**Table 9.1: Summary of relevant NPS policy**

Summary of NPS requirement	How and where considered in the ES
<b>NPS EN-1</b>	
The design of energy NSIP proposals will need to consider the movement of mobile/migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development (paragraph 5.4.22).	Bird species are the subject of this ES chapter. The baseline for these species in the study area is detailed in <b>section 9.7</b> of this chapter. The assessment of impacts on these species is set out in <b>section 9.10</b> to <b>section 9.12</b> of this chapter. Potential transboundary effects are considered in <b>section 9.14</b> .
<b>NPS EN-3</b>	
There are no specific NPS EN-3 considerations relevant to the assessment of the effects on offshore ornithology.	
<b>NPS EN-5</b>	
There are no specific NPS EN-5 considerations relevant to the assessment of the effects on offshore ornithology.	

## The National Planning Policy Framework

- 9.2.5 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019, 2021 and 2023 (Department for Levelling Up, Housing and Communities, 2023). The NPPF sets out the Government's planning policies for England.
- 9.2.6 The NPPF has been updated and the draft version was published for consultation on 30 July 2024 with the consultation period ending on 24 September 2024 (Ministry of Housing, Communities and Local Government, 2024). This draft version has been reviewed and considered where necessary.
- 9.2.7 A summary of the NPPF can be found in Table 9.2.

**Table 9.2: Summary of NPPF requirements relevant to this chapter**

Policy	Key provisions	How and where considered in the ES
<p>15 Conserving and enhancing the natural environment</p>	<p>Planning policies and decisions should contribute to and enhance the natural and local environment by [inter alia] ... 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); ... [and] recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; ... [and] minimising impacts on and providing net gains for biodiversity; ...[and] preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.</p>	<p>Considered throughout the ES. Impacts on the environment have been minimised through avoidance and mitigation as required.</p>
	<p>Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries</p>	<p>Designated sites have been considered within the ES, and those which are relevant to the Project are listed in Table 9.14 and Table 9.15.</p>
	<p>To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity</p>	<p>Considered throughout the ES. Impacts on the environment have been minimised through avoidance and mitigation as required. Designated sites have been considered within the ES, and those which are relevant to the Project are listed in Table 9.14 and Table 9.15.</p>
	<p>When determining planning applications, local planning authorities should apply the following principles: a)</p>	<p>Considered throughout the ES.</p>

Policy	Key provisions	How and where considered in the ES
	<p>if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;</p> <p>b) development on land within or outside a Site of Special Scientific Interest (SSSIs), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;</p> <p>c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;</p> <p>and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate</p>	
	<p>The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.</p>	<p>Designated sites have been considered within the ES, and those which are relevant to the Project are listed in Table 9.14 and Table 9.15.</p>

## Marine Policy

### UK Marine Policy Statement

- 9.2.8 The UK Marine Policy Statement was adopted in 2011 and provides the policy framework for the preparation of marine plans and establishes how decisions affecting the marine area should be made (HM Government, 2011).
- 9.2.9 The high-level marine objective “Living within environmental limits” includes the following requirements which are relevant to offshore ornithology:
- Biodiversity is protected, conserved and where appropriate recovered and loss has been halted;
  - Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems;
  - Our oceans support viable populations of representative, rare, vulnerable, and valued species.

### South West Inshore and South West Offshore Marine Plans

- 9.2.10 **Table 9.3** sets out a summary of the specific policies set out in the South West Inshore and South West Offshore Marine Plans (MMO, 2021) relevant to this chapter.

**Table 9.3: Summary of inshore and offshore marine plan policies relevant to this chapter**

Policy	Key provisions	How and where considered in the ES
SW-BIO-1	<i>'Proposals that may have significant adverse impacts on the distribution of priority habitats and priority species must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate - adverse impacts so they are no longer significant d) compensate for significant adverse impacts that cannot be mitigated).'</i>	Impacts from the Proposed Development on offshore ornithology have been assessed in <b>section 9.10 to 9.12</b> . Mitigation measures adopted as part of the Proposed Development relevant to offshore ornithology are outlined in <b>Table 9.17</b> .
SW-BIO-2	<i>'Proposals that may cause significant adverse impacts on native species or habitat adaptation or connectivity, or native species migration, must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate - adverse impacts so they are no longer significant d) compensate for significant adverse impacts that cannot be mitigated.'</i>	
SW-DIST-1	<i>'Proposals that may have significant adverse impacts on highly mobile species through disturbance or displacement must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate - adverse</i>	

Policy	Key provisions	How and where considered in the ES
	<i>impacts so they are no longer significant.'</i>	

## North Devon Biosphere Reserve

- 9.2.11 The Proposed Development is located within the North Devon Biosphere Reserve, which is recognised under UNESCO's Man and the Biosphere (MAB) Programme and designated as an area for testing and demonstrating sustainable development on a sub-regional scale.
- 9.2.12 The North Devon Biosphere Reserve consists of three zones; a core zone centred around Braunton Burrows SAC / SSSI, a buffer zone consisting of the Taw Torridge Estuary (as far as Barnstaple and Bideford), and a transition zone formed by the catchment area of the rivers and streams that drain to the North Coast of Devon in addition to an area of sea as far out as Lundy.
- 9.2.13 The Biosphere Reserve is overseen by the North Devon Biosphere Reserve Partnership, which is a collaboration of 26 partnership organisations who work to deliver sustainable development through direct action, through advocacy and providing advice. The non-statutory 'North Devon Biosphere Reserve Strategy for Sustainable Development 2014 to 2024' (NDB undated) provides a context for stakeholders to deliver programmes and plans in support of the sustainable development of the Biosphere Reserve.
- 9.2.14 Within the North Devon Biosphere Reserve, non-statutory programmes and plans relevant to offshore ornithology include:
- Marine wildlife watching code of conduct;
  - North Devon Marine Natural Capital Plan; and
  - North Devon Marine Nature Recovery Plan 2022-2027.
- 9.2.15 The extent to which the Proposed Development impacts on the North Devon Biosphere Reserve and its relevant programmes / plans has been considered in this offshore ornithology chapter, and consultation has taken place with the North Devon Biosphere Reserve Partnership during preparation of the ES. **Table 9.4** presents a summary of the specific policies set out in the North Devon Marine Natural Capital plan (North Devon UNESCO Biosphere Reserve, 2020) and the Strategy for Sustainable Development (NDB undated) relevant to this chapter.

**Table 9.4: Summary of North Devon Biosphere Marine Natural Capital Plan and Strategy for Sustainable Development policies relevant to this chapter**

Policy	Key provisions	How and where considered in the ES
Marine Natural Capital Plan PL08: <i>Set management priorities that will rapidly enable 'recovery' of estuarine and coastal intertidal habitats within MPAs, where this conservation objective exists.</i>	In the North Devon Marine Natural Capital Plan area these habitats, particularly saltmarsh as well as shallow subtidal reefs and sediments, support multiple ecosystem benefits including food provision, sea defence, healthy climate, and, tourism and recreation. PL08 recognises the importance of these habitats and focuses management measures towards	A number of offshore receptors have been identified which may utilise these habitats for foraging. Impacts on these receptors have been assessed in <b>sections 9.10 to 9.12</b> of this chapter.

Policy	Key provisions	How and where considered in the ES
	delivering multiple ecosystem service benefits.	
Strategy for Sustainable Development ENV3	Ensure that development should not be permitted that removes critical natural sites and land-take by development is subjected to a programme that ensures no net loss of ecosystem services and biodiversity through on site design and offsite offsetting.	Impacts on offshore ornithology receptors have been assessed in <b>section 9.10</b> to <b>section 9.12</b> of this chapter.
Marine Natural Capital Plan PL08: Set management priorities that will rapidly enable 'recovery' of estuarine and coastal intertidal habitats within MPAs, where this conservation objective exists.	In the North Devon Marine Natural Capital Plan area these habitats, particularly saltmarsh as well as shallow subtidal reefs and sediments, support multiple ecosystem benefits including food provision, sea defence, healthy climate, and, tourism and recreation. PL08 recognises the importance of these habitats and focuses management measures towards delivering multiple ecosystem service benefits.	A number of offshore receptors have been identified which may utilise these habitats for foraging. Impacts on these receptors have been assessed in <b>sections 9.10</b> to <b>9.12</b> of this chapter.

## 9.3 Consultation and Engagement

### Scoping

- 9.3.1 In January 2024, the Applicant submitted a Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the construction, operational and maintenance and decommissioning phases of the Proposed Development. It also described those topics or sub-topics which were scoped out of the EIA process and provided justification as to why the Proposed Development would not have the potential to give rise to significant environmental effects in these areas.
- 9.3.2 Impacts to offshore ornithology in the UK were proposed to be scoped out of the EIA process at the Scoping stage. It was concluded, with high confidence, that potential impacts to relevant receptors would be of negligible significance and as such, offshore ornithology was proposed to be scoped out of further assessment.
- 9.3.3 Following consultation with the appropriate statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 7 March 2024. Responses received from Natural England agreed with the scoping out of impacts on offshore ornithology from the EIA process. However, responses received from the Joint Nature Conservation Committee (JNCC) advised that offshore ornithology should be scoped into the EIA process and included as an aspect chapter within the PEIR and ES. After reviewing these responses and JNCC's justifications included in the Scoping Opinion, offshore ornithology was subsequently included as a chapter within the PEIR and ES to ensure a full audit trail of reporting on the potential impacts and likely significant effects of the Proposed Development on offshore ornithology.

9.3.4 Key issues raised during the scoping process specific to offshore ornithology are listed in **Table 9.5**, together with details of how these issues have been addressed within the ES.

**Table 9.5: Summary of Scoping Responses**

Comment	How and where considered in the ES
<b>Planning Inspectorate</b>	
<p>Several aspect chapters in the Scoping Report refer to fixed distance study areas with no explanation as to why these have been selected. The ES should ensure the study area for each aspect reflects the Proposed Development's ZoI and the impact assessment should be based on the ZoI from the Proposed Development with reference to potential effect pathways. Clear justification should be provided to support any distances applied.</p>	<p>The offshore ornithology study area is defined in <b>section 9.4</b>.</p>
<p>The Inspectorate acknowledges that data and knowledge regarding the baseline environment exists for the offshore area in which the Proposed Development would be located. The Inspectorate understands the benefits of utilising this information to supplement site-specific survey data but advises that suitable care should be taken to ensure that the information in the ES remains representative and fit for purpose. The Applicant should make effort to agree the suitability of information used for the assessments in the ES with relevant consultation bodies.</p>	<p>There were no comments relating to the baseline data used for offshore ornithology to date by statutory consultees. It is not proposed that any site-specific surveys are undertaken to inform the offshore ornithology baseline. The sources used are outlined within <b>section 9.6</b>, which are considered sufficiently robust for EIA purposes.</p>
<p>It is noted that the Scoping Report includes consideration of potential transboundary effects in relation to Offshore Ornithology. The Inspectorate recommends that the ES should identify whether the Proposed Development has the potential for significant transboundary effects, and if so, what these are, and which EEA States would be affected. The Inspectorate will undertake a transboundary screening on behalf of the SoS in due course.</p>	<p>An assessment of transboundary effects has been undertaken in Volume 1, Appendix 5.2 of the ES and discussed further in <b>section 9.14</b> of this chapter.</p>
<p>The Scoping Report states that impacts on fish and shellfish receptors would affect prey availability for some marine mammal and bird receptors, but the scale of this inter-related effect has already been considered and scoped out at Section 8.5.</p>	<p>Impacts of prey availability on avian receptors is discussed in <b>sections 9.10 to 9.12</b> of this chapter.</p> <p>It is noted that the Planning Inspectorate has agreed in their scoping response that '<i>direct injury/mortality of fish and shellfish from vessel activities</i>' can be scoped out of the assessment.</p>
<p>The ES should set out the methodologies used to explain any departure from the proposed approach where professional judgement is applied. Outputs from other assessments should be clearly explained where these have been applied.</p>	<p>Noted. The methodology used for offshore ornithology within the ES is outlined in <b>section 9.6</b>.</p>
<p>The Scoping Report acknowledges that the study area supports foraging bird species, including those associated with European sites, and that the Celtic Sea supports large numbers of birds. While the Scoping Report concludes that significant effects are unlikely, it also relies on a number of measures such</p>	<p>Noted. Potential restrictions on working near Lundy were discussed and it has been determined that seasonal restrictions are not required following a meeting with Natural England on 12/08/24. This is detailed further below.</p>



Comment	How and where considered in the ES
<p>as that to be included within a VMP to avoid likely significant effects and makes the assumption that the number of vessels present would only be present for a short period of time. The Inspectorate notes that JNCC concurs with this position. While NE has confirmed that it considers this matter can be scoped out of further assessment, this is on the basis that seasonal restrictions are applied when working closest to Lundy (ie in the months approximately May to August, when seabird breeding and foraging will be at its peak), and restrictions on vessel speeds around any rafts of birds encountered on the sea surface, need to be secured.</p>	
<p>In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope potential effects on offshore ornithology from the assessment. Accordingly, the ES should include an assessment of this matter, or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of a likely significant effect.</p>	<p>Noted and the assessment of potential offshore ornithology effects is now presented as a full ES chapter (this chapter).</p>
<p>In the absence of the findings of the fish assessment and information demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not able to agree to scope indirect effects on offshore ornithology (due to potential underwater noise or the generation of suspended sediments that may alter the distribution, physiology or behaviour of prey species) out of further assessment at this stage. The ES should include an assessment of indirect impacts to offshore ornithology receptors as a result of impacts to prey species, where likely significant effects could occur.</p>	<p>The Planning Inspectorate has agreed in their scoping response that '<i>direct injury/mortality of fish and shellfish from vessel activities</i>' can be scoped out of the assessment. However, as requested, this chapter includes an assessment of indirect impacts to offshore ornithology receptors resulting from impacts to prey species. This is discussed further within <b>section 9.10</b> to <b>section 9.12</b> of this chapter.</p>
<p>Based on the information provided on the proposed mitigation and control measures, the Inspectorate agrees that significant effects from accidental release of pollution on offshore ornithology receptors during all project phases are unlikely. The ES should provide full details of the proposed mitigation measures for all project phases and describe how they are to be secured.</p>	<p>Noted. Mitigation measures proposed as part of the Proposed Development are outlined in <b>section 9.8</b> of this chapter, which includes adherence to standard pollution prevention measures via a Construction Environmental Management Plan (CEMP) (an outline Offshore CEMP is provided as part of the application for DCO (document reference 7.9)).</p>
<p><b>JNCC</b></p>	
<p>JNCC do not agree that offshore ornithology is scoped out of an Environmental Impact Assessment. We agree with the method used to assess impacts to offshore ornithology as outlined in Appendix C, and we agree that the impacts from the works are likely to be small. However, this assessment of potential impacts to offshore ornithology should be presented within an Environmental Impact Assessment, not at the scoping stage.</p>	<p>Noted and potential effects considered within the ES. Further consultations undertaken with the JNCC prior to PEIR allowing scoping opinion comments to be discussed, with the outputs from these discussions considered in this ES chapter.</p>

<b>Comment</b>	<b>How and where considered in the ES</b>
<p>In paragraph 11.2.6 the Applicant states that “Although it is likely that several seabird species will forage within the study area, the potential for direct impacts during construction, operation and maintenance, and decommissioning are considered (with high confidence) to be of negligible significance, and this is scoped out of further consideration in the EIA. This is consistent for example, with the approach that is used to assess the impact arising from export cables associated with offshore wind farms.” We do not agree that the scoping out of offshore ornithology impacts is consistent with export cables associated with offshore wind farms, or that this is a rationale for scoping out offshore ornithology for this project. We advise that the assessment of potential impacts to offshore ornithology should be carried out within the Environmental Impact Assessment, not at the scoping stage”.</p>	<p>Noted. The offshore ornithology assessment is presented within the PEIR and ES i.e. it is now scoped in for completeness.</p>
<p>“Although large numbers of birds are known to be present in the Celtic Sea, particularly during the breeding season, none of the data sources consulted indicate that the study area is of particular importance for any species listed in comparison to the surrounding habitat outside the study area” We disagree with this statement as the presence of large numbers of birds would suggest that the area is important for seabirds”.</p>	<p>It is acknowledged that the Celtic Sea (where the Offshore Cable Corridor is located) supports large numbers of birds, particularly during the breeding season. However, the desk study does not indicate that the study area is of greater importance than the surrounding habitats. This is discussed in detail within <b>section 9.7</b>.</p> <p>JNCC were consulted further to discuss scoping opinion responses, with a meeting in April 2024. During this meeting JNCC agreed that the Offshore Cable Corridor does not constitute an area of greater importance than the surrounding / wider Celtic Sea.</p>
<p>Table 5 of Appendix C states “Potential impacts would be highly localised and for a limited, short-term duration and only last as long as vessels are present within c.2 km of any area”. Yet it is also stated that installation vessels and up to 20 guard vessels will be present 24/7 for 9 months in 2028 and the same in 2030. Therefore, multiple vessels will be present constantly for two whole breeding season and parts of two non-breeding seasons”.</p>	<p>Although installation and guard vessels will be present for up to 9 months, this would be transient, and vessels would be present within a discrete area for a very short duration. Works will be carried out linearly, with vessels moving along the 370 km route during the proposed 9-month duration. The proposed cable laying vessel speed is estimated at 400-500 m per hour, while the trenching vessels present would move at a slower speed of approximately 150 m per hour.</p> <p>JNCC were consulted further to discuss scoping opinion responses during a meeting in April 2024. JNCC acknowledged the transient nature of any vessel disturbance. JNCC suggested that indicative estimates of the area(s) over which vessels may be operating would be useful in considering any potential disturbance effects.</p> <p>Additional consultation was undertaken with Natural England to discuss potential impacts on Lundy SSSI, as detailed in <b>Table 9.6</b>.</p>

Comment	How and where considered in the ES
	<p>During a meeting, APEM outlined additional baseline vessel movement assessments (undertaken by Anatec) which demonstrated that an additional three project vessels (one CLV and two guard vessels) within 20 km of Lundy for a limited duration (of circa 11 days) was not significant in the context of baseline traffic, which included frequent transit of very large cargo vessels much closer to Lundy than the Proposed Development. This is detailed further within <b>section 9.7</b>.</p> <p>As Lundy is more than 4 km from the Offshore Cable Corridor, there is no pathway for impacts on breeding birds, only foraging seabird species, that are likely to be habituated to the baseline vessel movements and have a very large foraging range.</p> <p>Natural England agreed that the additional disturbance which would arise from the Proposed Development was not significant, and that additional mitigation would not be required. Details on baseline shipping movements across the entire OCC is available within Volume 3, Chapter 5: Shipping and Navigation of the ES.</p>
<p>We agree with the method used to assess impacts to offshore ornithology as presented in Appendix C, and the outcome of the assessment which suggest that impacts from the works are likely to be small. However, this assessment of potential impacts to offshore ornithology should be presented within an Environmental Impact Assessment, not at the scoping stage.</p>	<p>Noted. JNCC have been consulted further to discuss scoping opinion responses. JNCC reiterated that EIA methods used (for e.g. describing magnitude) are appropriate and welcomed the inclusion of offshore ornithology as a full ES chapter.</p>
<p><b>Natural England</b></p>	
<p>The development site is within or may impact on the following Sites of Special Scientific Interest:</p> <ul style="list-style-type: none"> <li>• Mermaid’s Pool to Rowden Gut Site of Special Scientific Interest (SSSI)</li> <li>• Taw Torridge Estuary SSSI</li> <li>• Lundy SSSI</li> </ul> <p>The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within the SSSI and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects.</p>	<p>Noted. Potential effects on Lundy SSSI have been discussed in a further meeting with Natural England on 12/08/24 as detailed below. It has been agreed with Natural England that additional mitigation is not necessary based on the current levels of baseline disturbance (as outlined in <b>section 9.7</b>) and the very limited potential for effects as detailed in <b>section 9.10 to section 9.12</b>.</p>
<p>Natural England agree with the scoping out of impacts on offshore ornithology to this subsea cable project. However, Natural England would advise the applicant to restrict operations closest to Lundy in the months approximately May to August, when seabird breeding and foraging will be at its peak. Similarly, Natural England advise vessels should</p>	<p>Noted. Natural England have been consulted further to determine potential mitigation measures which can be implemented closest to Lundy.</p> <p>Natural England suggested a voluntary buffer restricting vessel operations around Lundy during the breeding season and this has been considered as part of the assessment at ES stage.</p>

Comment	How and where considered in the ES
avoid fast movement around any rafts of birds encountered on the sea surface.	Potential effects on Lundy SSSI have been discussed in a further meeting with Natural England on 12/08/24 as detailed below in <b>Table 9.6</b> . It has been agreed with Natural England that additional mitigation is not necessary.
An appropriate level habitat survey should be carried out on the site, to identify any important habitats present. In addition, ornithological, botanical, and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present.	No site-specific surveys are proposed for offshore ornithology. Desk based data sources are outlined within <b>section 9.6</b> , which are considered sufficiently robust for Offshore Ornithology EIA purposes.

## Preliminary Environmental Information Report

- 9.3.5 The preliminary findings of the EIA process were published in the Preliminary Environmental Information Report (PEIR) on 16 May 2024. The PEIR was prepared to provide the basis for statutory public consultation under the Planning Act 2008. This included consultation with statutory bodies under section 42 of the Planning Act 2008.
- 9.3.6 A summary of the key items raised specific to offshore ornithology is presented in **Table 9.6**, together with how these issues have been considered in the production of this ES chapter.

## Further Engagement

- 9.3.7 Throughout the EIA process, consultation and engagement (in addition to scoping and section 42 consultation) with interested parties specific to offshore ornithology has been undertaken.
- 9.3.8 A summary of the key items raised specific to offshore ornithology is presented in **Table 9.6**, together with how these issues have been considered in the production of this ES chapter.

**Table 9.6: Summary of consultation relevant to this chapter**

Date	Consultee and type of response	Issues raised	How and where considered in the ES
April 2024	JNCC, in person meeting	A meeting was undertaken to discuss JNCC's scoping opinion in further detail, specifically regarding the need for an assessment of offshore ornithology in full within the PEIR. APEM outlined that there was no potential for significant effects, however agreed to undertake a full assessment within the PEIR and ES.	Offshore ornithology was subsequently scoped into the ES, and a full assessment has been undertaken within this chapter.
June 2024	Public responses from statutory consultation – PEIR response.	Stated that there is a potential threat to wildlife associated with Lundy SSSI to arise from the Proposed Development.	Impacts on receptors has included those associated with Lundy SSSI, and are fully assessed in <b>section 9.10</b> to <b>section 9.12</b> of this chapter.
July 2024	Natural England – PEIR response.	Natural England's chief concern is the potential for impacts from vessel-related disturbance to seabirds from the Lundy SSSI. Natural England welcomed the commitment to discuss an appropriate mitigation strategy and recommend that this discussion is had well in advance of submission, so there is time to reach agreement on how best to reduce impacts in sea areas of value to foraging and aggregating seabirds to acceptable levels.	A meeting was arranged for August 2024 to discuss in more detail, as summarised below.
August 2024	Natural England, meeting.	Meeting to discuss potential impacts on Lundy SSSI.	<p>A follow up meeting to discuss Lundy was held with Natural England on 12/08/24.</p> <p>During this meeting, APEM outlined additional baseline vessel movement assessments (undertaken by Anatec) which demonstrated that an additional three project vessels within 20 km of Lundy for a limited duration was not significant in the context of baseline traffic, which included frequent transit of very large</p>

**XLINKS' MOROCCO – UK POWER PROJECT**

Date	Consultee and type of response	Issues raised	How and where considered in the ES
			<p>cargo vessels much closer to Lundy than the Proposed Development.</p> <p>As Lundy is more than 4 km from the Offshore Cable Corridor, there is no pathway for impacts on breeding birds, only foraging seabird species, that are likely to be habituated to the baseline vessel movements, and have a very large foraging range.</p> <p>Natural England agreed that the additional disturbance which would arise from the Proposed Development was not significant, and that additional mitigation would not be required. This was confirmed via email, dated 19/09/24. Details on baseline shipping movements across the entire OCC is available within Volume 3, Chapter 5: Shipping and Navigation of the ES.</p>

## 9.4 Study Area

- 9.4.1 The study area is defined as the Offshore Cable Corridor which runs from the MHWS to the UK EEZ boundary, plus a surrounding 2 km buffer.
- 9.4.2 The study area is based on the Zol of works, as there is the potential to disturb and/or displace birds present within 2 km of the Offshore Cable Corridor due to noise and visual disturbance during the construction, operational and maintenance (where infrequent maintenance or repairs are required) and decommissioning phases of the Proposed Development. This is highly precautionary and is based on professional judgment.
- 9.4.3 Although any disturbance and/or displacement would only potentially occur within 2 km of the Offshore Cable Corridor, it should be noted that seabird species are highly mobile and forage a considerable distance from their breeding colonies.
- 9.4.4 For example, even if a breeding seabird colony was further than 2 km from the Offshore Cable Corridor and there would be no disturbance and/or displacement effects at the nest site, there could still be displacement and/or disturbance effects on birds breeding at the colony which travel to forage within the study area.
- 9.4.5 For breeding seabird species, published mean-maximum foraging ranges have been used to establish potential connectivity between the study area and breeding colonies, some of which are designated sites (Woodward *et al.* 2019).
- 9.4.6 There is no guidance or literature to support a specific distance for the consideration of functional linkage of breeding seabirds, however, using professional judgement it is considered that breeding colonies up to 236 km (the mean-max foraging range plus one standard deviation for lesser black-backed gull *Larus fuscus*) from the study area may have connectivity, where the study area has the potential to support foraging birds breeding at these colonies.
- 9.4.7 In addition, more distant colonies have the potential to be functionally linked to the study area should they host seabirds with extremely large foraging ranges, such as Manx shearwater *Puffinus puffinus*, Leach's petrel *Hydrobates leucorhous*, storm petrel *H. pelagicus*, fulmar *Fulmarus glacialis* and gannet *Morus bassanus* which have mean-max foraging ranges between 315 km and 1,347 km.
- 9.4.8 No sites over 236 km from the study area have been considered in this report as the study area would constitute a negligible proportion of species overall foraging range. Additionally, it is not anticipated that birds from these colonies will reach the study area in sufficient numbers to warrant inclusion within the assessment.
- 9.4.9 Some of these locations over 236 km from the study area, also have no straight-line route to the site without crossing over land and as seabirds generally avoid overland flights this means that foraging distances that would need to be travelled to fly to the study area are in effect, much greater than they would be if measured in a straight line.
- 9.4.10 The cumulative study area is equivalent to the study area.
- 9.4.11 The Offshore Cable Corridor, study area and the 236 km buffer beyond the study area are shown on Volume 3, Figure 9.1 of this ES.

## 9.5 Scope of the Assessment

- 9.5.1 The scope of this ES has been developed in consultation with relevant statutory and non-statutory consultees as detailed in **Table 9.5** and **Table 9.6**. A range of potential impacts on offshore ornithology have been identified, which may occur during the construction, operational and maintenance and decommissioning phases of the Proposed Development.
- 9.5.2 Taking into account the scoping and consultation process, **Table 9.7** summarises the impacts considered as part of this assessment.

**Table 9.7: Impacts considered within this assessment**

Activity	Impacts scoped into the assessment
<b>Construction Phase</b>	
Ground condition surveys, seabed preparation, route clearance, cable lay and burial activities.	Visual and noise disturbance
	Indirect impacts via loss/disturbance to habitats and prey
	Pollution incidents
<b>Operational and Maintenance</b>	
Repair works (cable cut, recover, and burial activities)	Visual and noise disturbance
	Indirect impacts via loss/disturbance to habitats and prey
	Pollution incidents
<b>Decommissioning Phase</b>	
Decommissioning activities	Visual and noise disturbance
	Indirect impacts via loss/disturbance to habitats and prey
	Pollution incidents

- 9.5.3 Impacts that are not likely to result in significant effects have been scoped out of the assessment. A summary of the impacts scoped out, together with justification for scoping them out and whether the approach has been agreed with key stakeholders through either scoping or consultation, is presented in **Table 9.8**.

**Table 9.8: Issues scoped out of the assessment**

Impact	Justification
<b>Construction Phase</b>	
UXO clearance	Effects related to any potential UXO clearance works (including identification survey) have been excluded, and if required would be subject to a separate marine licence application process (approach as confirmed by the MMO).
<b>Decommissioning Phase</b>	
Decommissioning – <i>in situ</i>	No effects on offshore ornithology receptors are expected to occur as a result of de-energising and leaving cables <i>in-situ</i> .

## 9.6 Methodology

### Relevant Guidance

- 9.6.1 Guidance documents relevant to offshore ornithology that have been used to support the assessment include the following:



- Natural England and JNCC (2022) Nature conservation considerations and environmental best practice for subsea cables for English Inshore and UK offshore waters;
- The Chartered Institute of Ecology and Environmental Management (CIEEM) (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (as amended);
- Institute of Environmental Management and Assessment (IEMA) (2017) Delivering Proportionate Environmental Impact Assessment (EIA): A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice; and
- Planning Inspectorate (PINS) (2019) - Advice Note Seventeen: Cumulative Effects Assessment.

## Methodology for Baseline Studies

### Desk Studies

9.6.2 A high-level desk study has been conducted to characterise the offshore ornithology baseline using a range of existing ecological data. Sources used are outlined in **Table 9.9**.

**Table 9.9: Desk study sources**

Source	Summary
MAGIC Map, Natural England and Natural Resources Wales websites	These sources have been used to determine designated sites with potential connectivity to the study area, and data on designated sites, including location, size and qualifying features.
British Trust for Ornithology Non-Estuarine Waterbird Survey (NEWS) Report and online data	This source contains data collected from volunteer surveys (most recently during 2015 to 2016) displaying species distribution within non-estuarine environments. This includes data to determine species likely to be present within nearshore environments at the proposed landfall location.
Seabird Monitoring Programme (SMP) data	The Seabird Monitoring Programme is an annual monitoring programme which was established in 1986 to monitor the breeding populations and breeding success of 25 species of seabird which breed in Britain and Ireland. These data have been used to determine seabird colonies which have connectivity to the study area based on the mean-max foraging range of the breeding species present.
Waggitt <i>et al.</i> (2020)	Provides large-scale data on seabird density across the UK during the breeding and non-breeding seasons, which have been used to determine species distribution within the study area.
Joint SNCB Interim Displacement Guidance Note (JNCC)	Published, peer reviewed scientific literature on bird behaviour and potential impacts from OWFs (transferable offshore literature).
Parsons <i>et al.</i> (2019)	A summary of evidence from several sources to help identify important marine areas in the UK that are used by Balearic shearwater <i>Puffinus mauretanicus</i> .
Kober <i>et al.</i> (2010)	Analysis of European Seabirds At Sea (ESAS) data, conducted to identify and delineate seabird aggregations within the British Fishery Limit that might qualify as Special Protection Areas (SPAs).
Furness <i>et al.</i> (2015)	Non-breeding season data on seabird populations in UK waters which categorises species into distinct geographical populations.

<b>Source</b>	<b>Summary</b>
Bradbury <i>et al.</i> (2014)	Published, peer reviewed scientific literature on seabird sensitivity to OWFs (relevant to other infrastructure types).
Burnell <i>et al.</i> (2023)	Census of Britain and Ireland’s breeding seabirds, providing up to date population data.
Woodward <i>et al.</i> (2019)	Updated seabird foraging ranges to inform Habitat Regulations Assessment (HRA), which can be used to determine potential connectivity of breeding colonies to the study area.
Stone <i>et al.</i> (1995)	Atlas of seabird distribution in north-west European waters.
Trektellen	Website which collates records of migratory birds globally, which has been used to determine presence of migratory species.

## Site-Specific Surveys

- 9.6.3 No site-specific surveys have been undertaken for offshore ornithology. Due to the very low magnitude of potential effects and short duration of proposed works, it is considered that a desk-based approach is sufficient to establish the baseline.
- 9.6.4 This is consistent for example, with the approach that is used to assess the impacts arising from export cables associated with offshore wind farms in England and Wales.

## Impact Assessment Methodology

### Overview

- 9.6.5 The approach to determining the significance of effects is a two-stage process that involves defining the magnitude of the impact and the sensitivity of the receptor. This section describes the criteria applied in this chapter to assign values to the magnitude of impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on relevant guidance where appropriate, as described in further detail in Volume 1, Chapter 5: EIA methodology of the ES.

### Receptor Sensitivity/Value

- 9.6.6 The sensitivity of offshore ornithology receptors to potential impacts is determined by the species’ ecology and behaviour. A species’ sensitivity to potential impacts can be predicted by information available on species’ responses to various stimuli (e.g., predators, noise and visual disturbance) and whether a species ecology makes it vulnerable to potential impacts. The sensitivity of species has been considered when determining the scope of the assessment.
- 9.6.7 The sensitivity of a receptor is an expression of the likelihood of change when pressure (i.e. a predicted impact) is applied. It is defined by the tolerance (or lack thereof) to a particular impact, along with the capacity for recovery of the receptor. The judgement takes account of information available on the responses of birds to various stimuli (e.g. predators, noise and visual disturbance) and whether a species’ ecology makes it vulnerable to potential impacts.
- 9.6.8 Sensitivity can differ between similar species and between different populations of the same species. Thus, the behavioural responses of offshore ornithology receptors are likely to vary with both the nature and context of the stimulus and

the experience of the individual bird. Sensitivity also depends on the activity of the bird.

- 9.6.9 In addition, individual birds of the same species will differ in their tolerance depending on the level of human disturbance that they regularly experience in a particular area, and have become habituated to (e.g. individuals that forage within close proximity to an area with high human activity levels are likely to have a greater tolerance to anthropogenic disturbance than those that occupy remote locations with little or no human presence).
- 9.6.10 The value of a receptor is used to provide additional context to the impact assessment and may be used to refine predictions, as appropriate. Conservation value and sensitivity are not necessarily linked for a particular impact. Therefore, each receptor's conservation value is considered using reasoned judgement when determining their overall sensitivity to any potential impact or effect. For example, a receptor could be of high conservation value (e.g. a qualifying feature of a Special Protection Area (SPA)) but have a low or negligible physical / ecological sensitivity to an effect (or vice-versa). Such reasoned judgement is an important part of the overall narrative used to determine potential impact significance and is used, where relevant, as a mechanism for modifying the sensitivity of an effect assigned to a specific receptor.
- 9.6.11 The conservation value of ornithological receptors is based on the population from which individuals are predicted to be drawn, reflected in the current understanding of the movements of bird species. The degree / ranking of value, therefore, corresponds to the degree of connectivity predicted between the Offshore Cable Corridor and receptor populations.
- 9.6.12 Using this approach, the conservation importance of a species seen at different times of year may fall into any of the defined categories. Population status is also considered within the assessment. For example, effects on a declining species population may be of more concern than those on a 'healthy' and expanding species population.
- 9.6.13 The criteria for defining sensitivity in this chapter are outlined in **Table 9.10**. The definitions of value for offshore ornithology receptors are provided in **Table 9.11**.

**Table 9.10: Sensitivity criteria**

Sensitivity	Definition
Very High	Receptor has very limited tolerance of a potential impact, e.g. strongly displaced by sources of disturbance such as noise, light, vessel movements and the presence of people
High	Receptor has limited tolerance of a potential impact, e.g. moderately displaced by sources of disturbance such as noise, light, vessel movements and the presence of people
Medium	Receptor has some tolerance of a potential impact, e.g. partially displaced by sources of disturbance such as noise, light, vessel movements and the presence of people
Low	Receptor is generally tolerant of a potential impact e.g. minimal displaced by sources of disturbance such as noise, light, vessel movements and the presence of people
Negligible	Receptor is tolerant of a potential impact e.g. not displaced by sources of disturbance such as noise, light, vessel movements and the presence of people

**Table 9.11: Value criteria**

Sensitivity	Definition
Very High	<ul style="list-style-type: none"> <li>A species which is listed as critically endangered on the International Union for Conservation of Nature (IUCN) Red list.</li> <li>A species listed as a qualifying feature of an internationally designated site (e.g. SPA or Ramsar) where the designated population is greater than 5% of the biogeographic population.</li> </ul>
High	<ul style="list-style-type: none"> <li>A species listed as a qualifying feature of an internationally designated site (e.g. SPA or Ramsar).</li> <li>Species populations present with sufficient conservation importance to meet criteria for SPA selection.</li> <li>For example, a receptor population for which all individuals at risk can be clearly connected to a particular conservation site of international or national importance.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>A species listed as a notified feature of a nationally designated site (e.g. SSSI).</li> <li>Species populations present with sufficient conservation importance to meet criteria for SSSI selection.</li> <li>For example, a receptor population for which individuals at risk may be drawn from a mixture of conservation sites of international, national importance and other populations which may also contribute to individuals at risk.</li> </ul>
Low	<ul style="list-style-type: none"> <li>A species occurring within SPAs, Ramsar sites and SSSIs, but not crucial to the integrity of the site.</li> <li>Species populations present falling short of SSSI selection criteria but with sufficient conservation importance to likely meet criteria for selection as a local site.</li> <li>For example, a receptor population for which individuals at risk have no known connectivity to conservation sites of international or national importance.</li> <li>Other species of conservation concern, including species listed as being of Principal Importance under The Environment (Wales) Act (2016), and those included on the fifth review of UK Birds of Conservation Concern (BoCC5) Red and Amber Lists (Stanbury <i>et al.</i>, 2021).</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>All other species that are widespread and common and which are not present in locally important (or greater) numbers, and which are of low conservation concern (e.g. UK BoCC5 Green List species; Stanbury <i>et al.</i>, 2021).</li> </ul>

## Magnitude of Impact

9.6.14 Impacts on receptors are judged in terms of their magnitude. Magnitude refers to the scale of an impact and is determined on a quantitative basis where possible. This may relate to the area of habitat lost to the development footprint in the case of a habitat feature or predicted loss of individuals in the case of a population of a species of bird.

9.6.15 The criteria for defining magnitude in this chapter are outlined in **Table 9.12**.

**Table 9.12: Impact magnitude criteria**

Magnitude of impact	Definition
High	A change in the size or extent of distribution of the relevant biogeographic population or the population that is the interest feature of a specific protected site that is predicted to irreversibly alter the population in the short to long-term and to alter the long-term viability of the population and/or the integrity of the protected site. Recovery from that change predicted

Magnitude of impact	Definition
	to be achieved in the long-term (i.e., more than five years) following cessation of the development activity.
Medium	A change in the size or extent of distribution of the relevant biogeographic population or the population that is the interest feature of a specific protected site that occurs in the short and long-term, but which is not predicted to alter the long-term viability of the population and/ or the integrity of the protected site. Recovery from that change predicted to be achieved in the medium-term (i.e., no more than five years) following cessation of the development activity.
Low	A change in the size or extent of distribution of the relevant biogeographic population or the population that is the interest feature of a specific protected site that is sufficiently small-scale or of short duration to cause no long-term harm to the feature/ population. Recovery from that change predicted to be achieved in the short-term (i.e., no more than one year) following cessation of the development activity.
Negligible	Very slight change from the size or extent of distribution of the relevant biogeographic population or the population that is the interest feature of a specific protected site. Recovery from that change predicted to be rapid (i.e., no more than c. six months) following cessation of the development activity.
No Change	No positive or negative change is predicted.

## Significance of Effect

- 9.6.16 The significance of the effect upon offshore ornithology has been determined by taking into account the sensitivity of the receptor and the magnitude of the impact. The method employed for this assessment is presented in **Table 9.13**. Where a range of significance levels is presented, the final assessment for each effect is based upon expert judgement.
- 9.6.17 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.
- 9.6.18 For the purpose of this assessment, any effects with a significance level of minor or less are not considered to be significant in terms of the EIA Regulations.

**Table 9.13: Assessment Matrix**

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	Low	Medium	High
<b>Negligible</b>	Negligible	Negligible or Minor	Negligible or Minor	Minor
<b>Low</b>	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
<b>Medium</b>	Negligible or Minor	Minor	Moderate	Moderate or Major
<b>High</b>	Minor	Minor or Moderate	Moderate or Major	Major
<b>Very High</b>	Minor	Moderate or Major	Major	Major

- 9.6.19 Where the magnitude of impact is 'no change', no effect would arise.
- 9.6.20 The definitions for significance of effect levels are described as follows:

- **Major:** These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
- **Moderate:** These beneficial or adverse effects have the potential to be important and may influence the key decision-making process. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor.
- **Minor:** These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the project.
- **Negligible:** No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.
- **No change:** No loss or alteration of characteristics, features or elements; no observable impact in either direction.

### Assumptions and Limitations of the Assessment

- 9.6.21 The marine environment can be highly variable, both spatially and temporally, meaning that seabird numbers may fluctuate greatly between months, bio-seasons and between different years at any given location, lowering the probability of being able to detect consistent patterns, directional changes or to generate reliable population estimates. The most recent guidance and data available has been used to inform the assessment.
- 9.6.22 The existing data available (**Table 9.9**) are deemed sufficient to characterise the baseline environment and for the purposes of the offshore ornithology assessment.

## 9.7 Baseline Environment

- 9.7.1 The Celtic Sea is a key area for seabirds and is used by foraging birds during both the breeding and non-breeding season, including those associated with designated sites.
- 9.7.2 However, the Celtic sea is subject to large amounts of (baseline) anthropogenic disturbance, including from shipping vessels which is important to consider when determining the baseline conditions present. This is discussed in detail within Volume 3, Chapter 5: Shipping and Navigation of the ES.

### Designated sites

- 9.7.3 A search was made for designated sites with potential connectivity to the study area. This included any SPAs, Ramsar sites and SSSIs designated for ornithological features within 236 km of the study area.
- 9.7.4 Sites were assessed as having potential connectivity to the study area if designated for an ornithological feature which could potentially forage within the

study area, based on mean-max foraging ranges (plus one standard deviation) detailed by Woodward *et al.*, (2019).

9.7.5 The following sites of international importance (SPA and Ramsar sites) designated for their ornithological features with potential connectivity to the study area have been identified (**Table 9.14**). Qualifying features of designated sites which have no potential connectivity to the study area have been omitted.

**Table 9.14: Designated sites of international importance with potential connectivity to the study area (with ornithological interest)**

Site Name	Designation	Distance to the Study Area (nearest point)	Qualifying features with potential connectivity to the Study Area
Isles of Scilly	SPA and Ramsar	36 km	<ul style="list-style-type: none"> <li>• Storm petrel</li> <li>• Lesser black-backed gull</li> <li>• Great black-backed gull <i>Larus marinus</i></li> <li>• Seabird assemblage</li> </ul>
Skomer, Skokholm and the seas off Pembrokeshire	SPA	47 km	<ul style="list-style-type: none"> <li>• Manx shearwater</li> <li>• Puffin <i>Fratercula arctica</i></li> <li>• Lesser black-backed gull</li> <li>• Storm petrel</li> <li>• Seabird assemblage</li> </ul>
Severn Estuary	Ramsar	77 km	<ul style="list-style-type: none"> <li>• Lesser black-backed gull</li> </ul>
Grassholm	SPA	78 km	<ul style="list-style-type: none"> <li>• Gannet</li> </ul>
Aberdaron Coast and Bardsey Island	SPA	169 km	<ul style="list-style-type: none"> <li>• Manx shearwater</li> </ul>
*It should be noted that some site boundaries include marine habitats, and therefore the distance between the study area and breeding colonies may be greater than the distance stated.			

9.7.6 The following SSSIs of national importance designated for their ornithological features with potential connectivity to the study area have been identified (**Table 9.15**). Qualifying features of designated sites which have no potential connectivity to the study area have been omitted.

**Table 9.15: Designated sites of national importance with potential connectivity to the study area (with ornithological interest)**

Site Name	Designation	Distance to the Study Area (nearest point)	Qualifying features with potential connectivity to the Study Area
Lundy	SSSI	2 km	<ul style="list-style-type: none"> <li>• Guillemot <i>Uria aalge</i></li> <li>• Kittiwake <i>Rissa tridactyla</i></li> <li>• Manx shearwater</li> <li>• Puffin</li> </ul>

## XLINKS' MOROCCO – UK POWER PROJECT

Site Name	Designation	Distance to the Study Area (nearest point)	Qualifying features with potential connectivity to the Study Area
			<ul style="list-style-type: none"> <li>Razorbill <i>Alca torda</i></li> </ul>
St Helen's (with Northwethel and Men-A-Vaur)	SSSI	39 km	<ul style="list-style-type: none"> <li>Razorbill</li> <li>Guillemot</li> <li>Fulmar</li> </ul>
Annet	SSSI	40 km	<ul style="list-style-type: none"> <li>Manx shearwater</li> <li>Storm petrel</li> <li>Lesser black-backed gull</li> <li>Great black-backed gull</li> <li>Puffin</li> </ul>
Pentle Bay, Merrick and Round Islands	SSSI	40 km	<ul style="list-style-type: none"> <li>Storm petrel</li> </ul>
Pentire Peninsula	SSSI	40 km	<ul style="list-style-type: none"> <li>Fulmar</li> <li>Guillemot</li> <li>Puffin</li> <li>Razorbill</li> </ul>
Tintagel Cliffs	SSSI	42 km	<ul style="list-style-type: none"> <li>Breeding assemblage, including: <ul style="list-style-type: none"> <li>Razorbill</li> <li>Kittiwake</li> <li>Great black-backed gull</li> <li>Lesser black-backed gull</li> <li>Herring gull <i>Larus argentatus</i></li> <li>Fulmar</li> <li>Puffin</li> </ul> </li> </ul>
Chapel Down (St. Martins)	SSSI	44 km	<ul style="list-style-type: none"> <li>Kittiwake</li> </ul>
Godrevy Head to St Agnes	SSSI	46 km	<ul style="list-style-type: none"> <li>Kittiwake</li> <li>Breeding assemblage, including: <ul style="list-style-type: none"> <li>Razorbill</li> <li>Guillemot</li> </ul> </li> </ul>
Castlemartin Range	SSSI	54 km	<ul style="list-style-type: none"> <li>Seabird assemblage, including: <ul style="list-style-type: none"> <li>Guillemot</li> <li>Razorbill</li> <li>Kittiwake</li> <li>Puffin</li> </ul> </li> </ul>
Gerrans Bay to Camels Cove	SSSI	68 km	<ul style="list-style-type: none"> <li>Guillemot</li> <li>Kittiwake</li> <li>Breeding assemblage</li> <li>Razorbill</li> </ul>



<b>Site Name</b>	<b>Designation</b>	<b>Distance to the Study Area (nearest point)</b>	<b>Qualifying features with potential connectivity to the Study Area</b>
Skokholm	SSSI	72 km	<ul style="list-style-type: none"> <li>• Storm petrel</li> <li>• Manx shearwater</li> <li>• Puffin</li> <li>• Razorbill</li> <li>• Guillemot</li> <li>• Lesser black-backed gull</li> <li>• Seabird assemblage, including:</li> <li>• Fulmar</li> <li>• Herring gull</li> <li>• Great black-backed gull</li> </ul>
Skomer Island and Middleholm	SSSI	75 km	<ul style="list-style-type: none"> <li>• Storm petrel</li> <li>• Manx shearwater</li> <li>• Puffin</li> <li>• Razorbill</li> <li>• Guillemot</li> <li>• Lesser black-backed gull</li> <li>• Kittiwake</li> <li>• Breeding assemblage</li> <li>• Fulmar</li> <li>• Herring gull</li> </ul>
Grassholm	SSSI	80 km	<ul style="list-style-type: none"> <li>• Gannet</li> </ul>
Flat Holm	SSSI	86 km	<ul style="list-style-type: none"> <li>• Lesser black-backed gull</li> </ul>
Berry Head to Sharkham Point	SSSI	86 km	<ul style="list-style-type: none"> <li>• Guillemot</li> </ul>
Prawle Point and Start Point	SSSI	94 km	<ul style="list-style-type: none"> <li>• Breeding assemblage, including:</li> <li>• kittiwake</li> </ul>
Ynys Enlli	SSSI	179 km	<ul style="list-style-type: none"> <li>• Manx shearwater</li> </ul>
Gwylan Islands	SSSI	183 km	<ul style="list-style-type: none"> <li>• Puffin</li> </ul>
*It should be noted that some site boundaries include marine habitats, and therefore the distance between the study area and breeding colonies may be greater than the distance stated.			

9.7.7 The nearest designated site to the study area is Lundy SSSI, which is an offshore island west of Devon, situated 2 km north of the study area. All other relevant designated sites are more than 35 km from the study area. The routing of the Offshore Cable Corridor has been informed by route optimisation studies which included potential ornithological constraints via considerations to avoid all designated sites where possible.

## Desk Study

- 9.7.8 The Celtic Sea is important for seabirds throughout the year, providing foraging grounds for seabirds breeding in adjoining coastal areas during the breeding season, from colonies further afield in the non-breeding season, and for sub-adult birds (pre-breeding age) throughout the year.
- 9.7.9 Overall, at least 23 seabird species breed at coastal areas around the Celtic Sea, including important populations of Manx shearwater, storm petrel and gannet (ICES, 2022). This includes colonies which are designated sites as outlined in **Table 9.14** and **Table 9.15**.
- 9.7.10 Species which have the potential to forage within the study area are those which breed at colonies which are within their mean-max foraging range (plus one standard deviation, as outlined in Woodward *et al.* (2019)). Seabird Monitoring Programme data shows a number of breeding colonies present with potential connectivity to the study area, including colonies which are designated as SPAs, Ramsar sites and SSSIs.
- 9.7.11 The desk study finds that the following species may have potential connectivity with the study area (with receptor descriptions presented in **Table 9.16**):
- Kittiwake;
  - Great black-backed gull;
  - Herring gull;
  - Lesser black-backed gull;
  - Guillemot;
  - Razorbill;
  - Puffin;
  - Storm petrel;
  - Fulmar;
  - Great shearwater *Ardenna gravis*;
  - Manx shearwater;
  - Balearic shearwater;
  - Gannet; and
  - Cormorant *Phalacrocorax carbo*.
- 9.7.12 Although large numbers of birds are known to be present in the Celtic Sea, particularly during the breeding season, none of the data sources consulted indicated that the study area is of particular importance for any species listed in comparison to the surrounding habitat outside the study area (as per consultation discussions with Natural England and the JNCC). Therefore, it is considered unlikely that these species are likely to be present within the study area in notable densities compared to the surrounding habitat.
- 9.7.13 As stated previously, the Celtic Sea is characterised by extensive baseline shipping activity, and therefore avian receptors are subject to, and will be habituated to, regular visual and noise disturbance from vessel movements.
- 9.7.14 The extent of vessel traffic is discussed in detail within Volume 3, Chapter 5: Shipping and Navigation of the ES, however in response to queries by Natural

England within their Scoping Response regarding the baseline conditions close to Lundy SSSI, Anatec undertook specific analysis of vessel movements within 20 km of Lundy SSSI.

- 9.7.15 It was determined that there are regular vessel movements within 20 km of Lundy, with an average of 12-13 vessels present per day including much closer to the island than the Offshore Cable Corridor. The average vessel length was 87 m, however vessels up to 296 m were present. Vessel activity included fishing, cargo, recreational and dive vessels. This demonstrates the high level of baseline disturbance close to Lundy (which is broadly characteristic of the wider Celtic Sea).

### Future Baseline Conditions

- 9.7.16 Schedule 4, paragraph 3 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require that '*an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge*' is included within the ES. This section provides an outline of the likely future baseline conditions in the absence of the Proposed Development.
- 9.7.17 The current baseline description above (and embedded within **Table 9.16**) provides an accurate reflection of the current state of the existing environment and is deemed directly relevant to the construction phase baseline (pre-construction works anticipated to commence in 2027, ahead of initial cable lay campaign in Q3 2027). Outside of short-term or seasonal fluctuations, changes to the baseline in relation to offshore ornithology usually occur over an extended period. Based on current information regarding reasonably foreseeable events across the period of the construction phase (based on UK pre-construction activities starting in 2027), the baseline is not anticipated to fundamentally change from its current state at the point in time when impacts could occur.
- 9.7.18 It is noted that during 2023, there were exceptional numbers of Cory's shearwater and increased numbers of great shearwater present in the Celtic Sea during the summer and early autumn post-breeding based on Trektellen data and anecdotal records (pers comms. Simon Warford).
- 9.7.19 This northward displacement of birds can potentially be attributed to warmer sea temperatures due to a strong La Niña event and is considered to be irregular. However, it could be indicative of a possible future baseline in the event of warming sea surface temperatures.
- 9.7.20 Over a longer timescale, in the absence of significant local impacts, it is likely that the populations of bird species present will evolve in accordance with regional and national trends. The assumed operational life of the Proposed Development is a minimum of 50 years, and therefore there exists the potential for the baseline to evolve between the time of assessment and point of operational and maintenance phase or decommissioning phase impact.
- 9.7.21 Should the Proposed Development be constructed or not, changes in species populations are likely to result from climatic factors (such as temperature change and subsequent impacts on species' ranges) and other natural phenomena (such as the recent avian influenza epidemic), or anthropogenic activities such as changes in fishing activities indirectly affecting marine bird communities. Baseline

conditions are therefore not static and are likely to exhibit some degree of change over time independent of the Proposed Development.

- 9.7.22 A principal consideration of the assessment is distance to breeding colonies, rather than the precise size of the breeding population at those colonies. Thus any modest change to breeding populations over the course of the proposed development lifetime would be unlikely to result in changes to the operational and maintenance phase assessment of impact significance presented in this chapter.

### Key Receptors

- 9.7.23 **Table 9.16** identifies the receptors taken forward into the assessment.

**Table 9.16: Key receptors taken forward to assessment**

Receptor	Description	Sensitivity	Value
Kittiwake	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that kittiwake is likely to be present within the study area, with greater numbers overwintering than present during the breeding season.</p> <p>Kittiwake is a Red listed Bird of Conservation Concern (BoCC) which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that kittiwake also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Low	Medium
Great black-backed gull	<p>Data from Furness <i>et al.</i> (2015) shows that great black-backed gull is likely to be present within the study area in the non-breeding season.</p> <p>Great black-backed gull is an Amber listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that great black-backed gull also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Low	High
Herring gull	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that herring gull is likely to be present within the study area, however the Offshore Cable Corridor appears to support a relatively low density of birds in the context of the UK distribution.</p> <p>Herring gull is a Red listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that herring gull also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Low	Medium
Lesser black-backed gull	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) show that lesser black-backed gull is likely to be present within the study area, with greater numbers present during the breeding season. The Offshore Cable Corridor does not appear to support a particularly high density of birds in the context of the UK distribution.</p> <p>Lesser black-backed gull is an Amber listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that lesser black-backed gull also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Low	Very high
Guillemot	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that guillemot is likely to be present within the study area, with greater numbers present during the non-breeding season. The</p>	Medium	Medium

## XLINKS' MOROCCO – UK POWER PROJECT

Receptor	Description	Sensitivity	Value
	<p>Offshore Cable Corridor does not appear to support a particularly high density of birds in the context of the UK distribution and supports a low density of birds during the breeding season.</p> <p>Guillemot is an Amber listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that guillemot also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>		
Razorbill	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that razorbill is likely to be present within the study area, with greater numbers present during the non-breeding season. The Offshore Cable Corridor does not appear to support a particularly high density of birds in the context of the UK distribution during either the breeding or non-breeding seasons.</p> <p>Razorbill is an Amber listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that razorbill also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Medium	Medium
Puffin	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that puffin is unlikely to be present within the study area unless in very low densities.</p> <p>Puffin is a Red listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that puffin also breeds at a number of non-designated colonies with potential connectivity to the study area.</p>	Medium	High
Storm petrel	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that storm petrel is generally absent from the study area during the non-breeding season, although could be present at higher densities in offshore waters during the breeding season. This species has a very large foraging range.</p> <p>Storm petrel is an Amber listed BoCC and is also listed on Annex I of the Birds' Directive. It breeds at a number of designated sites with potential connectivity to the study area in the Isles of Scilly and on Grassholm.</p>	Low	High
Fulmar	<p>Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that fulmar is likely to be present within the study area at similar densities year-round. The Offshore Cable Corridor does not appear to support a particularly high density of birds in the context of the UK distribution.</p>	Low	Medium

## XLINKS' MOROCCO – UK POWER PROJECT

Receptor	Description	Sensitivity	Value
	Fulmar is an Amber listed BoCC which is a qualifying feature of a number of designated sites which have potential connectivity to the study area. Seabird Monitoring Programme data shows that fulmar also breeds at a number of non-designated colonies with potential connectivity to the study area.		
Great shearwater	Great shearwater is a Green listed BoCC and does not breed within the UK. There is the potential for birds to be present within the study area during the autumn post-breeding, and data from Trektellen shows that numbers were particularly high within the Celtic Sea during 2023.	Low	Negligible
Manx shearwater	Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that Manx shearwater is unlikely to be present within the study area during the non-breeding season, however the Celtic Seas are important for foraging birds during the breeding season, particularly close to breeding colonies. This species has a very large foraging range.  Manx shearwater is an Amber listed BoCC, and listed on Annex I of the Birds' Directive and which breeds at high densities in a small number of locations in the UK, with colonies which are designated sites having potential connectivity to the study area.	Low	Very high
Balearic shearwater	Balearic shearwater is a Red listed BoCC, is listed on Annex I of the Birds' Directive and is considered Critically Endangered by the IUCN <sup>1</sup> . The species does not breed within the UK. There is the potential for birds to be present within the study area during the autumn post-breeding, and data from Trektellen shows that numbers were elevated within the Celtic Sea during 2023.	Low	Very high
Gannet	Data from Waggitt <i>et al.</i> (2019) and Furness <i>et al.</i> (2015) shows that gannet is likely to be present within the study area during the non-breeding and breeding seasons, particularly close to breeding colonies.  Gannet is an Amber listed BoCC and only breeds at a small number of locations in the UK, however it has a large foraging range. Grassholm SPA/SSSI is designated for its breeding gannet population, while the nearby St Margaret's Island also holds breeding pairs which could forage within the study area.	Low	Very high
Cormorant	Seabird Monitoring Programme data shows that cormorant breeds at a number of colonies with potential connectivity to the study area. As this species has a relatively small foraging range it is only likely to be present in nearshore areas.	Low	Negligible

<sup>1</sup> <https://www.iucnredlist.org/species/22728432/166437191> [accessed on 16/02/24]

## XLINKS' MOROCCO – UK POWER PROJECT

Receptor	Description	Sensitivity	Value
	Cormorant is a Green listed BoCC and it is not a qualifying feature of any designated sites which have potential connectivity to the study area.		
Lundy SSSI	<p>Lundy is an offshore island located in the Bristol Channel, approximately 18 km west of mainland Britain. It is designated as a SSSI, in part due to its breeding seabird colonies which nest on the cliffs and grassland. It is designated for the following species:</p> <ul style="list-style-type: none"> <li>• Guillemot</li> <li>• Kittiwake</li> <li>• Manx shearwater</li> <li>• Puffin</li> <li>• Razorbill</li> </ul>	Medium	High
Sensitivity has been quantified using key literature including Bradbury <i>et al.</i> , (2014), Furness <i>et al.</i> , (2013) and JNCC (2022)			



## 9.8 Mitigation Measures Adopted as Part of the Proposed Development

- 9.8.1 For the purposes of the EIA process, the term '*measures adopted as part of the Proposed Development*' is used to include the following types of mitigation measures (adapted from IEMA, 2016). These measures are set out in Volume 1, Appendix 3.1: Commitments Register of the ES.
- Embedded mitigation. This includes the following.
    - Primary (inherent) mitigation - measures included as part of the Proposed Development design. IEMA describes these as '*modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project and do not require additional action to be taken*'. This includes modifications arising through the iterative design process. These measures will be secured through the consent itself through the description of the project and the parameters secured in the DCO and/or marine licences. For example, a reduction in footprint or height.
    - Tertiary (inexorable) mitigation. IEMA describes these as '*actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects*'. It may be helpful to secure such measures through a Construction Environmental Management Plan or similar.
  - Secondary (foreseeable) mitigation. IEMA describes these as '*actions that will require further activity in order to achieve the anticipated outcome*'. These include measures required to reduce the significance of environmental effects (such as lighting limits) and may be secured through environmental management plans.
- 9.8.2 In addition, where relevant, measures have been identified that may result in enhancement of environmental conditions. Such measures are clearly identified within Volume 1, Appendix 3.1: Commitments Register of the ES. The measures relevant to this chapter are summarised in **Table 9.17**.
- 9.8.3 Embedded measures that will form part of the final design (and/or are established legislative requirements/good practice) have been taken into account as part of the initial assessment presented in **section 9.10 to 9.12** below (i.e., the initial determination of impact magnitude and significance of effects assumes implementation of these measures). This ensures that the measures to which the Applicant is committed are taken into account in the assessment of effects.
- 9.8.4 Where an assessment identifies likely significant adverse effects, further or secondary mitigation measures may be applied. These are measures that could further prevent, reduce and, where possible, offset these effects. They are defined by IEMA as actions that will require further activity in order to achieve the anticipated outcome and may be imposed as part of the planning consent, or through inclusion in the ES (referred to as secondary mitigation measures in IEMA, 2016). For further or secondary measures both pre-mitigation and residual effects are presented.

**Table 9.17: Mitigation measures adopted as part of the Proposed Development**

Commitment Number	Measure Adopted	How the Measure Will be Secured
<b>Embedded Measures</b>		
OFF07	A Marine Pollution Contingency Plan (MPCP) will form part of the final Offshore CEMP and will include measures to minimise the impact of any pollution events arising from the Proposed Development, and will comply with the International Convention for the Prevention of Pollution from Ships (MARPOL).	Requirement of the Outline Offshore CEMP (document ref. 7.9).
OFF11	The Navigational Safety and Vessel Management Plan (NSVMP) will confirm the types and numbers of vessels that would be engaged on the Proposed Development and consider vessel coordination including indicative transit route planning. The NSVMP will include protocols for vessel communications, lighting and maintenance of “safe” distances (which will be monitored by guard vessels during the construction period). An outline NSVMP is provided as Volume 3, Appendix 5.2 Navigational Safety and Vessel Management Plan of the ES; the NSVMP will be updated to final by the offshore construction contractor.	Requirement of the Outline Offshore CEMP (document ref. 7.9).
OFF12	Route optimisation studies, including multiple desktop studies and marine investigation surveys, have informed the routing of the Offshore Cable Corridor to avoid sensitive locations where possible and as far as reasonably practicable.	The Offshore Cable Corridor is defined in the Deemed Marine Licence authorised scheme grid coordinates.
<b>Secondary (Further) Measures</b>		
N/A		
<b>Enhancement Measures</b>		
N/A		

## 9.9 Key Parameters for Assessment

### Maximum Design Scenario

- 9.9.1 The maximum design scenarios identified in **Table 9.18** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the information provided in Volume 1, Chapter 3: Project Description of the ES. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different infrastructure layout), to that assessed here be taken forward in the final design. Therefore, this comprises a conservative assessment of a worst case scenario.

**Table 9.18: Maximum design scenario considered for the assessment of impacts**

Impact	Phase <sup>1</sup>					Maximum Design Scenario	Justification
	C	O	O repair	D in-situ	D remove		
<p>Direct impacts - disturbance, displacement and impacts on foraging birds</p> <p>Indirect impacts due to effects on prey species and habitats</p> <p>Accidental pollution during construction, operational and maintenance, and decommissioning (including indirect effects)</p>	✓	×	✓	×	✓	<p><b>Construction phase</b></p> <p>Phased construction activities. Pre-lay works may commence for bipole 1 (first cable bundle) in 2027, with cable lay activities due to start Q3 2027. Bipole 2 (second cable bundle) pre-lay scheduled for 2029, with cable lay scheduled for 2030. Burial and protection activities to progress broadly in parallel, with protection taking longer to completion. Activities assumed 24 hours a day but transient (progressing along the Offshore Cable Corridor at typical rates of e.g. trenching at c.150 m per hour).</p> <p>Vessels to be involved in the cable installation include: one (two at changeovers) CLV; up to five trenching vessels; up to 20 guard vessels (vessels only deployed during periods of unprotected cable and one every 10 nm– thus 20 would be highly unlikely); two rock placement vessels. A maximum of two jack-up/multi-cat vessels will also be required for HDD works, while tugs, workboats and survey vessels will also be required for survey works, route preparation and cable crossing works.</p> <p><b>Operational and Maintenance phase</b></p> <p>No routine maintenance anticipated.</p> <p>One survey vessel to undertake routine post installation inspection surveys under the following survey schedule:</p> <ul style="list-style-type: none"> <li>- Routine surveys of the offshore submarine cables shall commence two years from the commissioning of the first Bipole.</li> <li>- If no issues are found, the next follow up survey would be in three years, with the interval increasing by one year each time, until the period between surveys reaches five years.</li> <li>- If no issues are found, routine surveying through the remainder of the operational phase, is likely to be conducted on a five-year basis.</li> <li>- If an issue is found, it will be flagged for further investigation, and mobilisation of repair as appropriate.</li> </ul> <p>Unplanned repair works may require similar vessels (on temporary, localised basis) to those used in the construction phase.</p>	<p>Maximum vessel numbers and construction period will be assumed, as this will be the design scenario with the greatest magnitude.</p> <p>Design life selected to reflect the full duration of the impact.</p>

## XLINKS' MOROCCO – UK POWER PROJECT

						<p><b>Decommissioning Phase</b> Assumed similar to construction phase as a worst case assumption.</p>	
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<sup>1</sup> C=construction, O=operational and maintenance, D=decommissioning

## 9.10 Assessment of Construction Effects

### Introduction

- 9.10.1 The impacts of the construction of the Proposed Development have been assessed. The impacts arising from the construction phase of the Proposed Development are listed in **Table 9.18**, along with the maximum design scenario against which each impact has been assessed.
- 9.10.2 A description of the likely effect on receptors caused by each identified impact is given below. As the nature and magnitude of impacts are the same for all receptors, where possible duplication of text has been reduced by assessing receptors together.

### Visual and Noise Disturbance

- 9.10.3 There is the potential for disturbance and/or displacement of birds within the study area due to the presence of vessels during the construction phase. As stated in the Maximum Design Scenario, there is the potential for up to twenty guard vessels, plus installation vessels to be present during the construction phase (noting that guard vessels would be stationed 10 nm apart and only employed for sections of the cable that are unprotected e.g. for the period between lay and burial).
- 9.10.4 Due to the distance from the Offshore Cable Corridor to breeding seabird colonies, there is no pathway for direct impacts at breeding colonies (including designated sites). However, there is the potential for impacts to qualifying features of designated sites foraging within the study area (functionally linked habitat).

### Sensitivity of the Receptor

- 9.10.5 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.10.6 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.10**.

### Magnitude of Impact

- 9.10.7 Pre-lay works such as route clearance and boulder removal may take place in 2027 ahead of cable lay and protection works. Cable lay works for Bipole 1 (first cable bundle) are scheduled to begin in 2027 and it is anticipated that these works would be completed in three sections each taking approximately one month. It is currently envisaged that one section will be laid in Q3 2027 and two sections will be laid in 2028.
- 9.10.8 Dates are indicative at this time and may be influenced by factors including weather limitations on the CLV. For Bipole 2 (second cable bundle), offshore

works would begin with pre-lay works in 2029 and the three sections scheduled to be laid in 2030.

- 9.10.9 During all phases, works would be sequential and transient (linear installation), and there is only the potential for impact generating activities within small sections of the study area at any one time. Potential impacts would be highly localised and for a limited, short-term duration and only last as long as vessels are present within c.2 km of any area.
- 9.10.10 There is the potential for disturbance and displacement of foraging seabirds within a 2 km radius of vessels. As stated in the Baseline Environment section of this chapter (**section 9.7**), it is considered unlikely that the study area supports significant numbers of foraging birds in the context of their UK distribution, or is of elevated importance in comparison to the surrounding area. As vessels would only be present within a discrete area for a short period of time, any impacts arising from noise and visual disturbance would be short-term and reversible. In addition, disturbance from vessels is common within the Celtic Sea (c.f. Volume 3, Chapter 5: Shipping and Navigation of the ES), and therefore species will be habituated to this source of disturbance, which will be similar to the baseline conditions within the wider area.
- 9.10.11 It should also be noted that the foraging ranges for seabird species which may be disturbed or displaced is very large (Woodward *et al.*, 2019). Therefore, although there is the potential to impact foraging species, the proportion of their overall foraging range within which birds would be displaced from or disturbed is very small. Beyond a 2 km radius from vessels, there would be suitable alternative foraging habitat available for any displaced individuals and therefore foraging could continue throughout works.
- 9.10.12 The impact is predicted to be of local spatial extent and short term duration. The magnitude is therefore negligible for all species and therefore also negligible for Lundy SSSI.

### Significance of the Effect

- 9.10.13 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.19**.

**Table 9.19: Significance of effects arising from visual and noise disturbance**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.10.14 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.10.15 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

### Indirect impacts via loss/disturbance to habitats and prey

9.10.16 Impacts may result from underwater noise or the generation of suspended sediments that may alter the distribution, physiology or behaviour of prey species and thereby have an indirect effect on offshore ornithology receptors. These mechanisms could potentially result in less prey, in the area adjacent to active construction works, being available to foraging seabirds.

9.10.17 For example, if there are impacts on fish, which reduces foraging success, then breeding success of seabird colonies could be negatively impacted.

9.10.18 There is also the potential for foraging to be directly impacted due to increased turbidity which could impact foraging success for species. Again, this would be highly localised and for a limited, short-term duration.

### Sensitivity of receptor

9.10.19 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.

9.10.20 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.10**.

### Magnitude of impact

9.10.21 Any impacts on prey species arising from noise and visual/physico-chemical/chemical disturbance would be short-term and reversible, and any habitats which are impacted are likely to be rapidly recolonised by prey species following cable burial. The area within which prey would be impacted is also very small in relation to the foraging range of receptors (Woodward *et al.*, 2019).

9.10.22 Volume 3, Chapter 2: Fish and Shellfish Ecology of the ES confirms that there would be no significant effects on fish or shellfish receptors, which would include prey species of offshore ornithology receptors.

9.10.23 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

### Significance of effect

9.10.24 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.20**.

**Table 9.20: Significance of effects arising from indirect impacts via loss/disturbance to habitats and prey**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.10.25 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.10.26 All potential impacts have been determined to be not significant and there is no further mitigation proposed.



## Pollution Incidents

- 9.10.27 The impact of pollution, including accidental spills and contaminant releases associated with the construction activities and use of supply/service vessels, may lead to direct mortality of birds or indirect impacts via causing a deterioration in habitat quality or a reduction in prey availability, either of which may affect species' survival rates.

## Sensitivity of the Receptor

- 9.10.28 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.10.29 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.16**.

## Magnitude of Impact

- 9.10.30 Assuming that best practice during construction is followed, it is considered unlikely that there would be any pollution incidents. Any impact would be of local spatial extent and short-term duration.
- 9.10.31 The Planning Inspectorate stated in their scoping response that '*significant effects from accidental release of pollution on offshore ornithology receptors during all project phases are unlikely*'.
- 9.10.32 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

## Significance of the Effect

- 9.10.33 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.21**.

**Table 9.21: Significance of effects arising from pollution incidents**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.10.34 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.10.35 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

## 9.11 Assessment of Operational and Maintenance Effects

9.11.1 The impacts of the operational and maintenance phase of the Proposed Development have been assessed. The impacts arising from the operation and maintenance phase of the Proposed Development are listed in **Table 9.18**, along with the maximum design scenario against which each impact has been assessed.

9.11.2 The only identified operational and maintenance phase impacts with relevance to offshore ornithology are associated with survey and repair activities as needed; therefore, for the vast majority of the operational and maintenance phase there are not expected to be any effects on offshore ornithology receptors.

9.11.3 A description of the likely effect on receptors caused by each identified impact is given below.

### Visual and Noise Disturbance

9.11.4 There is the potential for disturbance and/or displacement of birds within the study area due to the presence of vessels associated with the repair and maintenance of the cables (where required).

- 9.11.5 Where any repair works are required, impacts would likely be equivalent to those during the construction phase, albeit over a very limited area.
- 9.11.6 Due to the distance from the Offshore Cable Corridor to breeding seabird colonies, there is no pathway for direct impacts at breeding colonies (including designated sites). However, there is the potential for impacts to qualifying features of designated sites foraging within the study area (functionally linked habitat).

### Sensitivity of the Receptor

- 9.11.7 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.11.8 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.10**.

### Magnitude of Impact

- 9.11.9 During the operational and maintenance phase the magnitude of disturbance and displacement would be greatly reduced from the construction phase, as the number of vessels that would be present is likely to be minimal, and works would be very infrequent.
- 9.11.10 The maximum design scenario considers the presence of one survey vessel to undertake routine post installation inspection surveys under the proposed schedule outlined in **Table 9.18**. Furthermore, there will be a vessel requirement to support unplanned maintenance and repair, as and when required. Whilst this will lead to an uplift in vessel activity, the numbers are likely to be insignificant relative to baseline vessel traffic (Volume 3, Chapter 5: Shipping and Navigation, of the ES, suggests an average number of 90 vessels per day within 5 nm of the Offshore Cable Corridor).
- 9.11.11 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

### Significance of the Effect

- 9.11.12 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.22**.

**Table 9.22: Significance of effects arising from visual and noise disturbance**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.11.13 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.11.14 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

### Indirect impacts via loss/disturbance to habitats and prey

9.11.15 It is unlikely that there would be any impacts on habitats of prey during the operational and maintenance phase unless repair works were required. If this were the case, impacts may result from underwater noise or the generation of suspended sediments that may alter the distribution, physiology or behaviour of prey species and thereby have an indirect effect on offshore ornithology receptors.

9.11.16 These mechanisms could potentially result in less prey in the area adjacent to works being available to foraging seabirds. Again, this would be highly localised and for a limited, short-term duration.

### Sensitivity of receptor

9.11.17 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.

9.11.18 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.10**.

### Magnitude of impact

9.11.19 During the operational and maintenance phase the magnitude would be greatly reduced compared to the construction phase, as the number of vessels and the extent of any works likely to be minimal. In the event of repair works, this would be short-term and over a very small area.

9.11.20 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

### Significance of effect

9.11.21 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.23**.

**Table 9.23: Significance of effects arising from indirect impacts via loss/disturbance to habitats and prey**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.11.22 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.11.23 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

### Pollution Incidents

9.11.24 The impact of pollution, including accidental spills and contaminant releases associated with the operational and maintenance activities, may lead to direct

mortality of birds or indirect impacts via causing a deterioration in habitat quality or a reduction in prey availability, either of which may affect species' survival rates.

## Sensitivity of the Receptor

- 9.11.25 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.11.26 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.10**.

## Magnitude of Impact

- 9.11.27 As minimal works are predicted during the operational and maintenance phase, the likelihood of pollution incidents is reduced in comparison to the construction phase. Best practice working procedures as required by the final CEMP and adherence to e.g. MARPOL will minimise the potential for pollution incidents to occur.
- 9.11.28 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

## Significance of the Effect

- 9.11.29 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.24**.

**Table 9.24: Significance of effects arising from pollution incidents**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

- 9.11.30 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

## Further Mitigation

- 9.11.31 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

## 9.12 Assessment of Decommissioning Effects

- 9.12.1 The impacts of the decommissioning phase of the Proposed Development have been assessed. The impacts arising from the operational and maintenance phase of the Proposed Development are listed in **Table 9.18**, along with the maximum design scenario against which each impact has been assessed.
- 9.12.2 Current best practice, and the least environmentally damaging option, is to de-energise the cable, disconnect it from the system, and secure it in place to be left *in-situ*, thereby avoiding unnecessary seabed disturbance.
- 9.12.3 However, other options may include the requirement for full or partial removal of the cables. The methods for removal, where the cable is buried, would be broadly similar to those used for installation with the potential for the cables to be removed by direct pulling, rather than de-burial. The requirement for any removal could also apply to other infrastructure installed as part of the project i.e. cable protection. The footprint of decommissioning activities would be reduced, relative to the construction phase.
- 9.12.4 The potential impacts arising from the decommissioning phase of the Proposed Development will be subject to appropriate consenting requirements, best practice techniques and guidance, and EIA protocols at the time of decommissioning.
- 9.12.5 A description of the likely effect on receptors caused by each identified impact is given below.

## Visual and Noise Disturbance

- 9.12.6 If cables are left *in-situ* following decommissioning, then no disturbance effects are anticipated. If removal of cables was required, then it is anticipated that the disturbance effects would be equivalent to those outlined for the construction phase in **section 9.10**.

## Sensitivity of the Receptor

- 9.12.7 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.12.8 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.16**.

## Magnitude of Impact

- 9.12.9 Should removal of cables be required during decommissioning (and adopting a precautionary approach), the magnitude of disturbance effects would be equivalent to those outlined for the construction phase in **section 9.10**. The

magnitude is therefore negligible for all species and therefore also negligible for Lundy SSSI.

## Significance of the Effect

9.12.10 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.25**.

**Table 9.25: Significance of effects arising from visual and noise disturbance**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.12.11 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

## Further Mitigation

9.12.12 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

## Indirect impacts via loss/disturbance to habitats and prey

9.12.13 If cables were left *in-situ* following decommissioning, then no indirect effects are anticipated. If removal of cables is required, then it is anticipated that the disturbance effects would be equivalent to those outlined for the construction phase in **section 9.10**.

## Sensitivity of receptor

9.12.14 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.



9.12.15 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.16**.

### Magnitude of impact

9.12.16 If removal of cables was required during decommissioning, the magnitude of indirect effects would be equivalent to those outlined for the construction phase in **section 9.10**.

9.12.17 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

### Significance of effect

9.12.18 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.26**.

**Table 9.26: Significance of effects arising from indirect impacts via loss/disturbance to habitats and prey**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

9.12.19 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

### Further Mitigation

9.12.20 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

### Pollution Incidents

9.12.21 If cables were left *in-situ* following decommissioning, then no pollution effects are anticipated. If removal of cables is required, then it is anticipated that the disturbance effects would be equivalent to those outlined for the construction phase in **section 9.10**.

## Sensitivity of the Receptor

- 9.12.22 There is the potential for foraging seabirds to be present within the study area during the breeding and non-breeding seasons. This includes qualifying features of designated sites with potential connectivity to the study area, as the distance to the study area from breeding colonies is within the mean-max foraging range (plus one standard deviation) of a number of seabird species.
- 9.12.23 The receptors which could be impacted, and their sensitivity is outlined in **Table 9.16**.

## Magnitude of Impact

- 9.12.24 If removal of cables was required during decommissioning, the magnitude of pollution effects would be equivalent to those outlined for the construction phase in **section 9.10**.
- 9.12.25 The magnitude of potential impact is therefore assessed to be negligible for all species and therefore also negligible for Lundy SSSI.

## Significance of the Effect

- 9.12.26 The magnitude of the impact and the sensitivity of each receptor have been used to determine the significance of effect, as outlined in **Table 9.27**.

**Table 9.27: Significance of effects arising from pollution incidents**

Receptor	Sensitivity	Magnitude	Significance
Kittiwake	Low	Negligible	Negligible
Great black-backed gull	Low	Negligible	Negligible
Herring gull	Low	Negligible	Negligible
Lesser black-backed gull	Low	Negligible	Negligible
Guillemot	Medium	Negligible	Negligible
Razorbill	Medium	Negligible	Negligible
Puffin	Medium	Negligible	Negligible
Storm petrel	Low	Negligible	Negligible
Fulmar	Low	Negligible	Negligible
Great shearwater	Low	Negligible	Negligible
Manx shearwater	Low	Negligible	Negligible
Balearic shearwater	Low	Negligible	Negligible
Gannet	Low	Negligible	Negligible
Cormorant	Low	Negligible	Negligible
Lundy SSSI	Low	Negligible	Negligible

- 9.12.27 The effect will, therefore, be of negligible adverse significance, which is **not significant** for all receptors.

## Further Mitigation

- 9.12.28 All potential impacts have been determined to be not significant and there is no further mitigation proposed.

## 9.13 Cumulative Environmental Assessment

- 9.13.1 The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Proposed Development together with other projects and plans. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (Volume 1, Appendix 5.3: CEA Screening Matrix of the ES). Each project has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.
- 9.13.2 The offshore ornithology CEA methodology has followed the methodology set out in Volume 1, Chapter 5: EIA methodology of the ES. As part of the assessment, all projects and plans considered alongside the Proposed Development have been allocated into 'tiers' reflecting their current stage within the planning and development process.
- Tier 1
    - Under construction
    - Permitted application
    - Submitted application
    - Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact
  - Tier 2
    - Scoping report has been submitted
  - Tier 3
    - Scoping report has not been submitted
    - Identified in the relevant Development Plan
    - Identified in other plans and programmes.
- 9.13.3 This tiered approach is adopted to provide a clear assessment of the Proposed Development alongside other projects, plans and activities.
- 9.13.4 The CEA also considers the Proposed Development and the anticipated National Grid Electricity Transmission (NGET) substation (which will be implemented by NGET and thus, does not form part of the Proposed Development) together. This is because the NGET substation will be required for the connection of the Proposed Development to the national grid.
- 9.13.5 The specific projects, plans and activities scoped into the CEA, are outlined in **Table 9.28**. The locations of such projects, plans and activities are presented as Figure 1.2 within Volume 1, Appendix 5.3: Cumulative Effects Assessment Screening Matrix of the ES.

**Table 9.28: List of cumulative developments considered within the CEA**

Project	Status	Distance from Proposed Development (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
<b>Tier 1</b>						
Celtic Interconnector	Under construction	Crosses offshore cable corridor	<p>700 MW high-voltage direct current submarine power cable under construction between the southern coast of Ireland and the north-west coast of France.</p> <p>The UK elements of the Celtic Interconnector comprise:</p> <ul style="list-style-type: none"> <li>• A submarine cable within the UK EEZ approximately 211 km in length placed on or beneath the seabed. It passes approximately 30 km west of the Isles of Scilly and approximately 75 km west of Land's End but does not enter UK Territorial Waters.</li> <li>• Secondary rock protection using rock placement (if required), where target depth of cable lowering is not fully achieved or at cable crossings, with a linear extent of between 0 km and 80 km or 0 to 270 tonnes.</li> <li>• A fibre optic link shall be laid along the cable route for operational control, communication and telemetry purposes.</li> </ul>	2025	2027	No overlap with construction, however there will be operational overlap with the Proposed Development

## XLINKS' MOROCCO – UK POWER PROJECT

Project	Status	Distance from Proposed Development (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
White Cross Floating Offshore Windfarm	Permitted	7.8 (with the Offshore Cable Corridor overlapping / directly adjacent to the White Cross Cable Corridor)	Proposed OWF located in the Celtic Sea with a capacity of up to 100 MW. The Windfarm Site is located over 52 km off the North Cornwall and North Devon coast (west-north-west of Hartland Point), in a water depth of 60 m – 80 m. The Windfarm Site covers 50km <sup>2</sup> .  The current wind turbine design envelope for the project is a WTG capacity of 12 - 24 MW, 6 - 8 three bladed horizontal axis turbines with a rotor diameter of 220 - 300 m.	2028 - 2029	2029 onwards	Potential overlap with construction, and there will be operational overlap with the Proposed Development
Aqua Botanika Nearshore seaweed cultivation of native species	Pending	27.4	A Kelp Farm on ropes with buoys anchored to the seabed or to blocks in roughly 50 m frequencies, main ropes connecting the buoys in each direction creating a grid. Growing ropes are then connected to main ropes to run parallel at 10 m centres. Proposal is for multiple bays which equate to an area of 100 hectares.	Autumn 2024	Winter 2024 - Spring 2025	No overlap with construction, however there will be operational overlap with the Proposed Development
TwinHub Floating Offshore Wind Demonstration Project	Permitted	29.5	Two semisubmersible platforms with two turbines each in order to generate up to 32MW power from renewable floating offshore wind energy. The Site already consists of existing cables and onshore infrastructure which was originally granted consent in 2007. No	Unknown	Unknown	As the schedule is currently unknown, there may be construction and operational overlap with the Proposed Development.

## XLINKS' MOROCCO – UK POWER PROJECT

Project	Status	Distance from Proposed Development (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
			further work to existing infrastructure is anticipated.			
New dwelling and flood defence wall flanking River Torridge	Permitted	4.5	It is proposed to construct a new four bedroom, three-storey residential dwelling with ground floor parking, driveway, and landscaped border. As part of the proposed development, it is proposed to modify and extend the existing flood defence wall which runs for a 40 metre (m) length along the eastern site boundary. These works are required to provide necessary flood protection to the proposed dwelling. The works are proposed to take place from August 2024 - March 2025.	2024 - 2025	2025 onwards	No overlap with construction, however there will be operational overlap with the Proposed Development
Shellfish cultivation pilot at seaweed farm	Permitted	1	Algapelago Marine Limited intend to trial a shellfish cultivation pilot to establish the commercial feasibility of shellfish cultivation at their existing site in Bideford Bay. The shellfish pilot study will last four years, to enable species to reach full market size. Two species are in scope for the cultivation pilot trials: i) - spat sourced from natural settlement and ii) king scallop - spat sourced from Scallop Ranch Ltd. The pilot trial is anticipated to run from August 2024 - August 2028.	N/A	2024 - 2028	No overlap with construction, however there will be operational overlap with the Proposed Development

## XLINKS' MOROCCO – UK POWER PROJECT

Project	Status	Distance from Proposed Development (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
			Infrastructure: algapelago intend to install 4 x 200 m submerged longlines for the propagation of shellfish. All infrastructure will be deployed within algapelago's existing licenced area.			
<b>Tier 2</b>						
No known proposed development is at this stage within the planning and development process in relation to cumulative impacts for offshore ornithology receptors.						
<b>Tier 3</b>						
The Crown Estate's Celtic Sea Floating Offshore Wind Leasing Round 5 - Project Development Area 2 (PDA2)	Future planned development	20.1	PDA 2 sits within Welsh and English Governance and is one of three suitable PDAs identified within the Celtic Sea for floating offshore wind development, each of which having a potential capacity of up to 1.5 GW.	Unknown (the schedule for PDA 2 is unknown, however, pre-consent metocean surveys are planned for 2024 and geotechnical investigations are planned for summer 2024)	Unknown	As the schedule for PDA 2 is currently unknown, there is the potential for overlap with both the construction and operational and maintenance phases of the Proposed Development
The Crown Estate's Celtic Sea Floating Offshore Wind Leasing Round 5 - Project	Future planned development	Overlaps with portion of the offshore cable corridor	<ul style="list-style-type: none"> <li>PDA 3 sits within English Governance and is one of three suitable PDAs identified within the Celtic Sea for floating offshore wind development, each of which</li> </ul>	Unknown (the schedule for PDA 3 is unknown, however, pre-consent	Unknown	As the schedule for PDA 3 is currently unknown, there is the potential for overlap with both the construction and operational and

## XLINKS' MOROCCO – UK POWER PROJECT

Project	Status	Distance from Proposed Development (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
Development Area 3 (PDA3)			having a potential capacity of up to 1.5 GW.	metocean surveys are planned for early 2024 and geotechnical investigations are planned for summer 2024)		maintenance phases of the Proposed Development



## Scope of Cumulative Effects Assessment

- 9.13.6 The cumulative effects presented and assessed in this section have been based on the Project Design Envelope set out in Volume 1, Chapter 5: Project Description of the ES as well as the information available on other projects and plans. The maximum design scenario as described for the Proposed Development (see **Table 9.18**) has been assessed cumulatively with the following other projects/plans:
- Celtic Interconnector;
  - White Cross Offshore Wind Farm;
  - Nearshore seaweed cultivation of native species;
  - The TwinHub Floating Offshore Wind Demonstration Project;
  - New dwelling and flood defence wall flanking River Torridge; and
  - Shellfish cultivation pilot at seaweed farm
- 9.13.7 The CEA has considered the Proposed Development, alongside the NGET substation to be developed at the existing Alverdiscott Substation Site. The assessed design of NGET substation has been based upon a combination of reasonable worst case parameters, as detailed within Volume 1, Chapter 3: Project Description of the ES. The development area for the NGET substation would comprise up to 3.8 ha of land. Within that area it is assumed that the substation itself will occupy a footprint of approximately 2.8 ha, with a maximum height of 15 m, excluding connecting tower structures. If further information is available for the proposal before the Proposed Development receives development consent, the Applicant will review the information and provide any update needed to the CEA.

## Cumulative Effects Assessment

- 9.13.8 In undertaking the CEA for the Proposed Development, it is important to consider that it is less certain if projects and plans in Tier 3, which are not yet consented, may contribute to cumulative impacts with the Proposed Development. This is because some projects may not achieve approval or may not be built due to other factors (e.g. client withdrawal). The projects categorised under Tier 3 could not provide sufficient information to allow a robust assessment of the impacts on offshore ornithology; therefore, all Tier 3 projects have been scoped out of this assessment. No projects were identified under Tier 2 to be assessed within this CEA. Therefore, only projects identified under Tier 1 are included in this CEA.
- 9.13.9 A description of the significance of cumulative effects upon offshore ornithology receptors arising from construction, operational and maintenance and decommissioning is given below.

## Construction

### Tier 1 Projects

- 9.13.10 The Offshore Cable Corridor of the Proposed Development will overlap with the White Cross Offshore Wind Farm export cable, and the Celtic Interconnector. The construction phase of the White Cross Offshore Wind Farm could overlap with the

construction phase of the Proposed Development. As there is the potential for overlapping construction phases, there is the potential for cumulative effects to arise from vessel movements.

- 9.13.11 It is considered that based on the baseline conditions, the additional visual and noise disturbance that would arise from the construction phase of the White Cross Offshore Wind Farm would be negligible. In addition, cumulative effects on habitats and fish have been ruled out, therefore it is considered that any indirect cumulative impacts due to loss of prey would be negligible. Sensible coordination of works, and staggering of construction programmes, would further reduce the potential for cumulative effects.
- 9.13.12 The construction phase of the Proposed Development would overlap with the operational phases of all projects/plans.
- 9.13.13 As the potential impacts arising from the Proposed Development during the construction phase are of negligible significance, it is considered that the potential for cumulative effects is minimal. Furthermore, the operational phase impacts on offshore ornithology receptors associated with all projects/plans (the relevant portions of the White Cross Offshore Wind Farm project are limited to the export cable) is anticipated to be of negligible significance (based on project type only). Therefore, no detailed CEA has been completed for the construction phase.

## Operational and Maintenance

### Tier 1 Projects

- 9.13.14 The Offshore Cable Corridor of the Proposed Development will overlap with the White Cross Offshore Wind Farm export cable, and the Celtic Interconnector. The operational and maintenance phase of the Proposed Development would overlap with the operational phases of all projects/plans.
- 9.13.15 As the potential impacts arising from the Proposed Development during the operational and maintenance phase are of negligible significance, it is considered that the potential for cumulative effects is minimal. Furthermore, the operational phase impacts on offshore ornithology receptors associated with all projects/plans (the relevant portions of the White Cross Offshore Wind Farm project are limited to the export cable) is anticipated to be of negligible significance (based on project type only). Therefore, no detailed CEA has been completed for the construction phase.

## Decommissioning

### Tier 1 Projects

- 9.13.16 The Offshore Cable Corridor of the Proposed Development will overlap with the White Cross Offshore Wind Farm export cable, and the Celtic Interconnector. The decommissioning phase of the Proposed Development is assumed (in the absence of detailed project life spans) to overlap with the operational phases of the Celtic interconnector and White Cross Offshore Wind Farm.
- 9.13.17 As the potential impacts arising from the Proposed Development during the decommissioning phase are of negligible significance, it is considered that the potential for cumulative effects is minimal. Therefore, no detailed CEA has been completed for the decommissioning phase.

## 9.14 Transboundary Effects

- 9.14.1 A screening of transboundary impacts has been carried out and any potential for significant transboundary effects with regard to offshore ornithology from the Proposed Development upon the interests of other states has been assessed as part of this ES.
- 9.14.2 The potential transboundary impacts assessed within Volume 1, Appendix 5.2: Transboundary Screening of the ES are summarised below:
- direct impacts due to disturbance, displacement and impacts on foraging birds;
  - indirect impacts due to effects on prey species and habitats; and
  - pollution incidents.
- 9.14.3 Potential transboundary effects have been determined using the study area outlined in **section 9.4**, with any sites or species within 236 km considered (the mean max foraging distance for lesser black-backed gull). The following designated sites listed in **Table 9.29** are within 236 km of the study area.

**Table 9.29: Non-UK designated sites with potential connectivity to the study area**

Site Name	Distance from Proposed Development	Qualifying Features with Potential Connectivity to the Proposed Development
<b>Irish SPAs</b>		
Saltee Islands	157 km	<ul style="list-style-type: none"> <li>• Fulmar (breeding)</li> <li>• Gannet (breeding)</li> <li>• Lesser black-backed gull (breeding)</li> <li>• Kittiwake (breeding)</li> <li>• Razorbill (breeding)</li> <li>• Puffin (breeding)</li> </ul>
Helvick Head to Ballyquin	191 km	<ul style="list-style-type: none"> <li>• Kittiwake (breeding)</li> </ul>
Old Head of Kinsale	194 km	<ul style="list-style-type: none"> <li>• Kittiwake (breeding)</li> </ul>
Wicklow Head	222 km	<ul style="list-style-type: none"> <li>• Kittiwake (breeding)</li> </ul>
<b>French SPAs</b>		
Mers Celtiques - Talus du golfe de Gascogne	<1 km (adjacent to Proposed Development within French EEZ)	<ul style="list-style-type: none"> <li>• Razorbill (concentration)</li> <li>• Cory's shearwater <i>Calonectris diomedea</i> (concentration)</li> <li>• Great skua <i>Stercorarius skua</i> (concentration)</li> <li>• Puffin (concentration)</li> <li>• Fulmar (concentration)</li> <li>• Black-throated diver <i>Gavia arctica</i> (concentration)</li> <li>• Storm petrel (concentration)</li> <li>• Herring gull (concentration)</li> <li>• Common gull <i>Larus canus</i> (concentration)</li> <li>• Lesser black-backed gull (concentration)</li> <li>• Great black-backed gull (concentration)</li> <li>• Mediterranean gull <i>Ichthyaetus melanocephalus</i> (concentration)</li> </ul>

Site Name	Distance from Proposed Development	Qualifying Features with Potential Connectivity to the Proposed Development
		<ul style="list-style-type: none"> <li>• Little gull <i>Coloeus minutus</i> (concentration)</li> <li>• Black-headed gull <i>Chroicocephalus ridibundus</i> (concentration)</li> <li>• Sabine's gull <i>Xema sabini</i> (concentration)</li> <li>• Common scoter <i>Melanitta nigra</i> (concentration)</li> <li>• Gannet (concentration)</li> <li>• Leach's storm petrel (concentration)</li> <li>• Cormorant (concentration)</li> <li>• Grey phalarope <i>Phalaropus fulicarius</i> (concentration)</li> <li>• Great shearwater (concentration)</li> <li>• Sooty shearwater <i>Ardenna griseus</i> (concentration)</li> <li>• Manx shearwater (concentration)</li> <li>• Balearic shearwater (concentration)</li> <li>• Kittiwake (concentration)</li> <li>• Arctic skua <i>Stercorarius parasiticus</i> (concentration)</li> <li>• Pomarine skua <i>Stercorarius pomarinus</i> (concentration)</li> <li>• Common tern <i>Sterna hirundo</i> (concentration)</li> <li>• Arctic tern <i>Sterna paradisaea</i> (concentration)</li> <li>• Sandwich tern <i>Thalasseus sandvicensis</i> (concentration)</li> <li>• Guillemot (concentration)</li> </ul>
Ouessant-Molène	114 km	<ul style="list-style-type: none"> <li>• Lesser black-backed gull (breeding)</li> <li>• Puffin (breeding)</li> <li>• Fulmar (breeding)</li> <li>• Manx shearwater (breeding)</li> <li>• Storm petrel (breeding)</li> </ul>
Ilot du Trevors	150 km	<ul style="list-style-type: none"> <li>• Lesser black-backed gull (breeding)</li> </ul>
Camaret	163 km	<ul style="list-style-type: none"> <li>• Storm petrel (breeding)</li> <li>• Lesser black-backed gull (breeding)</li> <li>• Manx shearwater (breeding)</li> <li>• (Kittiwake) (permanent)</li> <li>• Fulmar (breeding)</li> </ul>
Cap Sizun	176 km	<ul style="list-style-type: none"> <li>• Fulmar (breeding)</li> <li>• Lesser black-backed gull (breeding)</li> <li>• Kittiwake (breeding)</li> </ul>
Baie de Morlaix	189 km	<ul style="list-style-type: none"> <li>• Puffin (breeding)</li> <li>• Storm petrel (breeding)</li> <li>• Lesser black-backed gull (breeding)</li> <li>• Manx shearwater (breeding)</li> </ul>
Cote de Granit Rose-Sept Iles	211 km	<ul style="list-style-type: none"> <li>• Gannet (breeding)</li> <li>• Lesser black-backed gull (breeding)</li> <li>• Fulmar (breeding)</li> </ul>

Site Name	Distance from Proposed Development	Qualifying Features with Potential Connectivity to the Proposed Development
		<ul style="list-style-type: none"> <li>• Storm petrel (breeding)</li> <li>• Balearic shearwater (concentration)</li> <li>• Manx shearwater (breeding)</li> <li>• Puffin (breeding)</li> </ul>
Archipel de Glenan	223 km	<ul style="list-style-type: none"> <li>• Lesser black-backed gull (breeding)</li> </ul>

- 9.14.4 As the study area encompasses breeding seabird colonies (including Natura 2000 sites) beyond the UK EEZ, there is the potential for associated seabirds to forage within the Offshore Cable Corridor. Impacts on designated sites including those within other jurisdictions are considered fully within the Report to Inform Appropriate Assessment (document reference 7.16).
- 9.14.5 Breeding seabird colonies within the Irish and French EEZs are a considerable distance from the Offshore Cable Corridor, therefore there would be no direct impacts at any seabird colonies. Impacts on foraging birds with connectivity to Irish breeding colonies would be negligible, and at a similar level to UK colonies, which have all been assessed, with negligible significance.
- 9.14.6 It should also be noted that sites within the French EEZ will be assessed within the separate application which covers the section of the project within the French EEZ. The scale of any potential interaction between the UK activities and many sites in the French jurisdiction will, by definition, be less than the same linear activities when conducted within the French EEZ.
- 9.14.7 It is considered unlikely that the study area supports significant numbers of foraging birds in the context of their distribution within their foraging range, or in comparison to the surrounding area.
- 9.14.8 As vessels would only be present within a discrete area for a short period of time, any direct disturbance and/or displacement impacts arising would be short-term and reversible during all stages of the Proposed Development. In addition, disturbance from vessels is common within the Celtic Sea, and therefore species will be habituated to this source of disturbance, which will be similar to the baseline conditions within the wider area (Volume 3, Chapter 5: Shipping and Navigation chapter of the ES).
- 9.14.9 Any indirect impacts on prey species arising from noise, visual, physico-chemical, chemical disturbance would be short-term and reversible (e.g. Volume 3, Chapter 8: Physical Processes chapter of the ES), and any (benthic) habitats which are impacted are likely to be rapidly recolonised by prey species following cable burial (Volume 3, Chapter 1: Benthic Ecology of the ES). The area within which prey would be impacted is also very small in relation to the foraging range of seabird species. The Planning Inspectorate has stated in their scoping response that '*direct injury/mortality of fish and shellfish from vessel activities*' can be scoped out of the assessment.
- 9.14.10 Although there is the potential for pollution impacts, the likelihood of this is low if construction best practice is followed. In addition, any impact would be of local spatial extent, short term duration. The Planning Inspectorate stated in their scoping response that "significant effects from accidental release of pollution on offshore ornithology receptors during all project phases are unlikely".

9.14.11 Therefore, as impacts would be of low magnitude, within a local spatial extent, for a short-term duration, it is considered that all transboundary effects would be of negligible adverse significance and therefore **not significant**.

## 9.15 Inter-related Effects

9.15.1 Inter-relationships are the impacts and associated effects of different aspects of the Proposed Development on the same receptor. These are as follows.

- Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Proposed Development (construction, operation and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases.
- Receptor led effects: Assessment of the scope for all relevant effects (including inter-relationships between environmental topics) to interact, spatially and temporally, to create inter-related effects on a receptor.

9.15.2 A description of the likely interactive effects arising from the Proposed Development on offshore ornithology is provided in Volume 4, Chapter 5: Inter-related effects of the ES.

## 9.16 Summary of Impacts, Mitigation Measures and Monitoring

9.16.1 Information on offshore ornithology within the study area was collected through desk study.

9.16.2 **Table 9.30** presents a summary of the impacts, measures adopted as part of the Proposed Development and residual effects in respect to offshore ornithology. The impacts assessed include:

- Visual and noise disturbance;
- Indirect impacts via loss/disturbance to habitats and prey; and
- Pollution incidents.

9.16.3 Overall, it is concluded that there will be no significant effects arising from the Proposed Development during the construction, operation and maintenance or decommissioning phases.

9.16.4 **Table 9.31** presents a summary of the cumulative impacts, mitigation measures and residual effects. The cumulative impacts assessed include:

- Visual and noise disturbance;
- Indirect impacts via loss/disturbance to habitats and prey; and
- Pollution incidents.

9.16.5 Overall, it is concluded that there will be no significant cumulative effects from the Proposed Development alongside other projects/plans.

9.16.6 No transboundary impacts have been identified in regard to effects of the Proposed Development, and there will be no significant cumulative transboundary impacts.

**Table 9.30: Summary of environmental effects**

Description of Impact	Phase <sup>a</sup>			Embedded Mitigation	Sensitivity of receptors	Magnitude of impact	Significance of Effect	Further Mitigation	Residual Effect	Proposed Monitoring
	C	O	D							
Visual and noise disturbance	✓	✓	✓	OFF12 (see Table 9.17)	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None
Indirect impacts via loss/disturbance to habitats and prey	✓	✓	✓	OFF07 (see Table 9.17)	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None
Pollution incidents	✓	✓	✓	OFF11 (see Table 9.17)	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None

**Table 9.31: Summary of cumulative environmental effects**

Description of Impact	Phase <sup>a</sup>			Embedded Mitigation	Sensitivity of receptor	Magnitude of impact	Significance of Effect	Further Mitigation	Residual Effect	Proposed Monitoring
	C	O	D							
<b>Tier 1</b>										
Visual and noise disturbance	✓	✓	✓	OFF12 (see <b>Table 9.17</b> )	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None
Indirect impacts via loss/disturbance to habitats and prey	✓	✓	✓	OFF07 (see <b>Table 9.17</b> )	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None
Pollution incidents	✓	✓	✓	OFF11 (see <b>Table 9.17</b> )	C: Low to Medium O: Low to Medium D: Low to Medium	C: Negligible O: Negligible D: Negligible	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None	C: Negligible adverse O: Negligible adverse D: Negligible adverse (not significant)	C: None O: None D: None



## 9.17 References

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