

# OSSIAN OFFSHORE WIND FARM: TRANSMISSION INFRASTRUCTURE

**EIA SCOPING REPORT: PART 5 (of 5)** 





# OSSIAN OFFSHORE WIND FARM: TRANSMISSION INFRASTRUCTURE

**EIA SCOPING REPORT: APPENDIX 5.1** 





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## 1. APPENDIX 5.1: TRANSBOUNDARY IMPACTS SCREENING

### 1.1. Introduction

- 1.1.1.1 Ossian Offshore Wind Farm Ltd (Ossian OWFL) (hereafter referred to as 'the Applicant') is developing a floating offshore wind farm (referred to as the 'Array') located approximately 80 km off the east coast of Scotland. Applications for Section 36 consent, and two Marine Licenses, were submitted to the Scottish Government (Marine Directorate Licensing and Operations Team (MD-LOT) in June 2024, for consent to construct and operate the Array. The Array Application included the Offshore Substation Platforms (OSPs) as well as interconnector cables between OSPs¹ and these elements do not therefore form part of the Ossian Transmission Infrastructure.
- 1.1.1.2 The National Energy System Operator (NESO), which manages the supply of electricity within Great Britain, has confirmed that the Array will connect to the transmission network in Lincolnshire. The Applicant therefore intends to seek consent for the 'Ossian Transmission Infrastructure', which will connect the Array to the National Grid electricity transmission network.
- 1.1.1.3 Transboundary impacts have the potential to arise if an impact from a proposed development has the potential to affect the environment of a European Economic Area (EEA) state(s).
- 1.1.1.4 This transboundary impacts screening is intended to provide information to the Planning Inspectorate and MD-LOT such that the Secretary of State and Scottish Ministers can evaluate the likelihood of such impacts and effects occurring and the need, if any, for transboundary consultation with EEA states during the preapplication period. The screening of transboundary impacts will be revisited during the EIA process for the Ossian Transmission Infrastructure once the preliminary assessments are completed. This will ensure that any significant transboundary effects are fully considered within the Environmental Statement (ES) submitted alongside the applications for development consent and marine licence.
- 1.1.1.5 The proposed scope of this assessment is the entire Ossian Transmission Infrastructure and is therefore applicable to both the application for a DCO to be made to the Planning Inspectorate and the application for a Marine Licence to be made to MD-LOT.

### 1.2. Policy and Legislation

### 1.2.1 Legislative Context

- 1.2.1.1 The need to consider transboundary impacts (and the resulting effects) has been embodied by The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context, adopted in 1991 in the city of Espoo in Finland, and more commonly referred to as the 'Espoo Convention'. The convention requires that assessments are extended across borders between Parties to the Convention when a planned activity may cause significant adverse transboundary effects.
- 1.2.1.2 The Espoo Convention has been ratified by the United Kingdom (UK) (on behalf of the UK, the Bailiwick of Jersey, the Bailiwick of Guernsey, the Isle of Man and Gibraltar) and the European Union (EU). It is aimed at preventing, mitigating and monitoring environmental damage by ensuring that explicit consideration is given to transboundary environmental factors before a final decision is made as to whether to approve a project. The Espoo convention requires that the Party of origin notifies affected Parties about activities listed in Appendix I of the Convention and likely to cause significant adverse transboundary effects.
- 1.2.1.3 Jersey and Guernsey are Crown Dependencies of the UK and therefore are not considered to be a transboundary consultee for the Ossian Transmission Infrastructure. Any potential impacts upon environmental receptors within Jersey and Guernsey will be fully addressed in the EIA process and reported in the ES as appropriate and are not considered to be transboundary.
- 1.2.1.4 The UK is a signatory of The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the 'Aarhus Convention') and its protocol gives individuals the right to access information, public participation in decision-making and access to justice in environmental matters.
- 1.2.1.5 The EU Directive 2011/92/EU (as amended) (the EIA Directive) implements the Espoo and Aarhus Conventions in the EU. Following the UK's departure from the EU, the UK has no direct obligations under the EIA Directive, however, the requirements established under the EIA Directive (as transposed into UK law) continue to apply.
- 1.2.1.6 The EIA Directive is transposed into UK law by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) and the Marine Works (Environmental Impact Assessment) Regulations 2007 (hereafter referred to as the 'EIA Regulations'). Planning Inspectorate guidance on transboundary impacts (Planning Inspectorate, 2024) sets out a prescribed process of consultation and notification in relation to transboundary effects. Under Regulation 32 of the Planning Act 2008, the Secretary of State must notify and

<sup>&</sup>lt;sup>1</sup> The Array Application included reference to the 'proposed offshore export cable corridor(s)' and the 'proposed onshore export cable corridors'. The Ossian Transmission Infrastructure relates to that infrastructure, albeit that the terminology has now been refined.



consult EEA states in any of the following circumstances (Planning Inspectorate, 2024):

- the development is likely to have significant effects on the environment in an EEA state and the Secretary of State is notified that an Environmental Statement will be provided, or adopts a screening opinion, or makes a direction that development is EIA development;
- or it is otherwise made aware that the development is EIA development and considers it is likely to have significant effects on the environment in an EEA state; or
- it is requested by an EEA state likely to be significantly affected by such development.
- 1.2.1.7 The Scottish Ministers are also required under the Marine Works (Environmental Impact Assessment) Regulations 2007 to make a determination of whether a proposed development is likely to have significant impacts on the receiving environment of an EEA state (i.e. a transboundary impact). Similar provisions regarding transboundary consultation are made in Regulations 18, 19 and 20 of the Marine Works (Environmental Impact Assessment) Regulations 2007.
- 1.2.1.8 Planning Inspectorate guidance on transboundary impacts (Planning Inspectorate, 2024) sets out the roles of the Planning Inspectorate, other states and developers. Applicants have no formal role under the Regulation 32 process, as the duties prescribed by Regulation 32 in notifying and consulting with other states on potential transboundary impacts are the responsibility of the Secretary of State. However, developers are advised to:
  - consider, when preparing documents for consultation and application, that the Planning Inspectorate may notify the relevant state of their particular project;
  - carry out preparatory work to complete a transboundary screening matrix to assist the Secretary of State in determining the potential for likely significant effects on the environment in other states; and
  - submit the transboundary screening matrix along with the scoping request, if a scoping opinion is sought by the developer.
- 1.2.1.9 This transboundary screening appendix is provided in response to this advice. It provides information about the Ossian Transmission Infrastructure, which will be the subject of the application for development consent. It also sets out the information relating to the potential effects of the Ossian Transmission Infrastructure and the interests of the other states in the vicinity, to assist the Planning Inspectorate in forming a view on the likelihood of significant transboundary effects arising from the Ossian Transmission Infrastructure. The information contained within Planning Inspectorate guidance on transboundary impacts (Planning Inspectorate, 2024) and Regulation 32 of the 2017 EIA Regulations, which sets out the criteria and relevant considerations that will be taken into account by the Planning Inspectorate during screening, have been used in preparation of this transboundary screening appendix, as well as Regulations 18, 19 and 20 of the Marine Works (Environmental Impact Assessment) Regulations 2007.

### 1.3. Consultation

1.3.1.1 The Applicant will conduct pre-application consultation for the Ossian Transmission Infrastructure in accordance with the Planning Act 2008 plus associated guidance and regulations, including the 2017 EIA Regulations and the Marine Works (Environmental Impact Assessment) Regulations 2007. If there are potential transboundary impacts, the Applicant will consider how best to consult with the relevant states.

### 1.4. Screening of Transboundary Impacts and Effects

#### 1.4.1 Introduction

A series of screening matrices for potential transboundary impacts associated with the Ossian Transmission Infrastructure are presented for the offshore physical and biological environment (**Table 1.2**), offshore human environment (**Table 1.3**), onshore environment (**Table 1.4** and **Table 1.5**) and offshore and onshore combined topics (**Table 1.6**). These screening matrices have been based upon an initial understanding of the potential impacts arising from the Ossian Transmission Infrastructure on the basis of the project description (presented in **section 4** of the EIA Scoping Report) gathered during the EIA Scoping process and follow the suggested format set out in the Planning Inspectorate guidance on transboundary impacts (Planning Inspectorate 2024).

- 1.4.1.1 The screening matrices consider all potential transboundary impacts that may occur from all phases of the Ossian Transmission Infrastructure (i.e. construction, operation and maintenance, and decommissioning phases). The matrices also address the predicted spatial and temporal scale of potential transboundary impacts for those interests that are proposed to be screened into the assessment within the ES.
- 1.4.1.2 Potential impacts upon European designated sites within other states are considered separately within the screening process for the Habitats Regulations Assessment (HRA).
- 1.4.1.3 The EEA states that may be subject to transboundary impacts are presented in Figure 1.1.
- 1.4.1.4 It should be noted that the screening of the offshore transboundary impacts (part 2, section 6) covers the Offshore Scoping Boundary and Intertidal Scoping Boundary for physical processes, offshore water quality, benthic subtidal and intertidal ecology, fish and shellfish ecology, marine mammals, commercial fisheries, shipping and navigation, and other sea users, and the area of the Offshore Scoping Boundary only for offshore ornithology and marine archaeology.
- 1.4.1.5 The screening of the onshore transboundary impacts (**part 3, section 7**) covers the area of the Onshore Scoping Boundary only for geology, hydrogeology and ground conditions; hydrology and flood risk; onshore ecology and nature conservation; traffic and transport; and air quality and the area of the Onshore



Scoping Boundary and Intertidal Scoping Boundary for onshore and intertidal ornithology; historic environment; land use and recreation; noise and vibration; landscape and visual resources and health and wellbeing.

- 1.4.1.6 The screening of transboundary impacts for the combined topics (**part 4, section 8**) covers the area of the Ossian Transmission Infrastructure Scoping Boundary (Figure 1.1). Further details of the Intertidal Scoping Boundary can be found in **Figure 3.5.1 of part 1, section 3**.
- 1.4.1.7 The distance of the Ossian Transmission Infrastructure from the jurisdictional boundary of the nearest other EEA states is presented in **Table 1.1**.

Table 1.1: Summary of Approximate Distance to the Nearest Applicable European Economic Area States

State	Distance from the Ossian Transmission Infrastructure Scoping Boundary to the Jurisdictional Boundary of EEAs (km)
Netherlands	120.8
Norway	152.0
Belgium	202.9
Denmark	203.4
Germany	203.7
France	216.1



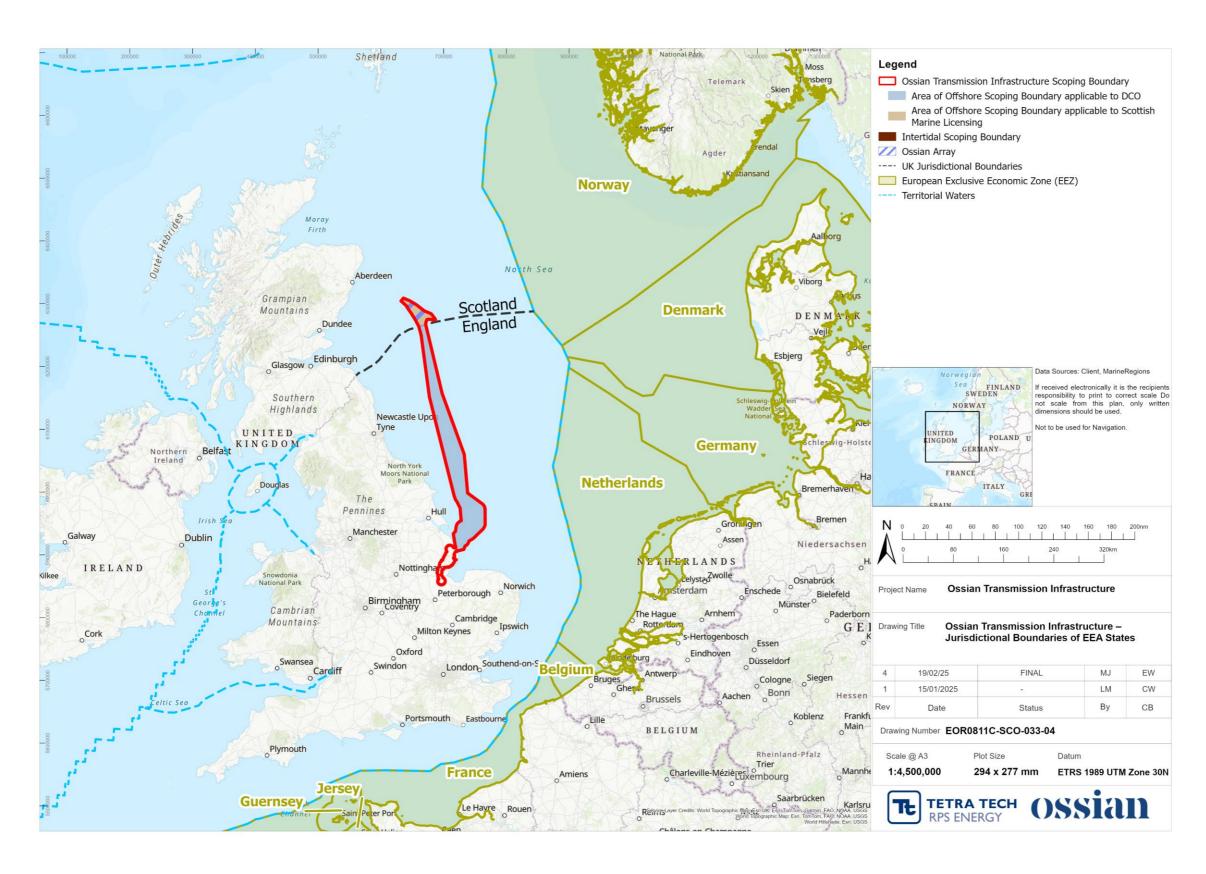


Figure 1.1: Location of the Ossian Transmission Infrastructure and Relevant Neighbouring European Economic Area States for the Purposes of Transboundary Impacts



### 1.4.2 Offshore Transboundary Impacts

#### Physical and Biological Environment

1.4.2.1 A transboundary screening matrix has been completed for offshore transboundary impacts for the offshore physical and biological environment and is presented in **Table 1.2**. The conclusions of the transboundary screening for each offshore physical and biological environment topic are presented in the following sections, together with additional justification.

#### **Physical Processes**

- 1.4.2.2 Potential impacts on physical processes receptors include:
  - increased suspended sediment concentrations and associated deposition;
  - impacts to seabed morphology;
  - impacts to sediment transport pathways due to the presence of the infrastructure;
     and
  - impacts to sediment transport and sediment transport pathways at Landfall.
- 1.4.2.3 All predicted impacts on physical processes are likely to be limited in extent to the physical processes study area. As such, there is no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to result in impacts on physical processes in another EEA state. As such, there being no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to occur outside of the physical processes study area, there is no potential for transboundary impacts and transboundary impacts on physical processes are proposed to be screened out from the EIA process

#### Water Quality

- 1.4.2.4 Potential impacts on water quality receptors include:
  - increased suspended sediment concentrations (SSCs) and associated deposition in all phases;
  - release of contaminated sediments in all phases; and
  - sediment transport and pathways due to infrastructure presence at the proposed Landfall.
- 1.4.2.5 All predicted impacts on water quality are likely to be limited in extent to the water quality study area. As such, there is no pathway for impacts (direct or indirect) arising from the Offshore Transmission Infrastructure to result in impacts on water quality of an EEA state. As such, there being no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to occur outside of the offshore water quality study area, there is no potential for transboundary impacts and transboundary impacts on offshore water quality are proposed to be screened out from the EIA process

#### Benthic Subtidal and Intertidal Ecology

- 1.4.2.6 Potential impacts on benthic subtidal and intertidal ecology receptors include:
  - temporary habitat loss/disturbance during construction and decommissioning;
  - increased SSCs and associated deposition during construction and decommissioning;
  - long term habitat loss during all phases;
  - disturbance/remobilisation of sediment-bound contaminants from all phases;
  - colonisation of hard structures:
  - removal of colonised hard structures
  - increased risk of introduction and spread of Invasive Non-Native Species (INNS) from all phases;
  - changes in physical processes during operation and maintenance; and
  - impacts of Electromagnetic Fields (EMF) from subsea electrical cabling during operation and maintenance.
- 1.4.2.7 All predicted impacts on benthic subtidal and intertidal ecology are likely to be limited in extent to the benthic subtidal and intertidal ecology study area. As such, there is no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to result in impacts on benthic subtidal and intertidal ecology of another EEA state. As such, there being no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to occur outside of the benthic subtidal and intertidal ecology study area, there is no potential for transboundary impacts and transboundary impacts on benthic subtidal and intertidal ecology are proposed to be screened out from the EIA process

#### Fish and Shellfish Ecology

- 1.4.2.8 Potential impacts on fish and shellfish ecology receptors include:
  - temporary habitat loss and disturbance of habitats (shellfish and marine species with a demersal life stage);
  - underwater sound from pre-construction site investigation surveys and removal of infrastructure impacting fish and shellfish receptors;
  - increased SSCs and associated sediment deposition;
  - long-term habitat loss (shellfish and marine species with a demersal life stage);
  - release of sediment-bound contaminants;
  - · colonisation of hard structures; and
  - impacts due to EMFs from subsea electrical cabling.
- 1.4.2.9 Although there is the potential for effects on fish and shellfish ecology receptors (including Annex II migratory fish) from the impacts listed above, it is considered that any potential impacts associated with the Offshore Transmission Infrastructure will not affect fish and shellfish ecology receptors in any EEA states. For example, any direct effects from increases in underwater sound will be restricted to UK territorial and offshore waters and any temporary or permanent habitat loss will be localised to the fish and shellfish ecology study area, also within UK waters. As such, there being no pathway for impacts (direct and indirect) arising from the



Offshore Transmission Infrastructure to occur outside of the fish and shellfish ecology study area, there is no potential for transboundary impacts and transboundary impacts on fish and shellfish ecology are proposed to be screened out from the EIA process

#### Marine Mammals

- 1.4.2.10 Potential impacts on marine mammals receptors include:
  - injury and disturbance from subsea noise generated from unexploded ordnance (UXO) clearance;
  - disturbance due to geophysical surveys;
  - disturbance due to vessel use and other activities;
  - injury due to collision with vessels; and
  - effects on marine mammals due to altered prey availability.
- 1.4.2.11 It is acknowledged that some marine mammals can travel large distances to forage and consequently the regional marine mammal study area extends beyond the Scottish and UK offshore water limits and into the waters of neighbouring EEA states. Therefore, there is potential for transboundary impacts on Annex II marine mammal species associated due to the construction, operation and maintenance and decommissioning phases of the Offshore Transmission Infrastructure. The potential for transboundary effects will be screened in to the EIA process.

#### Offshore Ornithology

- 1.4.2.12 Potential impacts on offshore ornithology receptors include:
  - disturbance and displacement from airborne noise, underwater noise, and presence of vessels and infrastructure;
  - indirect impacts from underwater noise affecting prey species; and
  - indirect impacts from habitat loss or habitat disturbance which results in increased SSCs.
- 1.4.2.13 It is acknowledged that some seabird species can travel large distances during both their breeding and non-breeding periods which may extend beyond the Scottish and UK offshore water limits and into the waters of neighbouring EEA states. The screening exercise identified that there is the potential for transboundary impacts upon offshore ornithological receptors due to construction, operation and maintenance and decommissioning impacts of the Offshore Transmission Infrastructure. The potential for transboundary effects will be screened in to the EIA process.



Table 1.2: Offshore Transboundary Screening Matrix for the Ossian Transmission Infrastructure - Offshore Physical and Biological Environment

Screening criteria	Physical processes	Water quality	Benthic ecology	Fish and shellfish ecology	Marine mammals	Offshore ornithology	
Characteristics of the Offshore Transmission Infrastructure	For a detailed description,	see <b>section 4</b> of the EIA Sc	oping Report.				
Location of the Offshore Transmission Infrastructure		Infrastructure is located appropriately 400 km in length			ne at its most northerly point, whire coastline.	vith the Ossian Transmission	
Environmental importance	Screened out: no transboundary impacts	Screened out: no transboundary impacts	Screened out: no transboundary impacts	Screened out: no transboundary impacts	Screened in for potential transboundary impacts on	Screened in for potential transboundary impacts on	
Potential impacts and pathways	predicted	predicted	predicted	predicted	marine mammals (see paragraph 1.4.2.10)	offshore ornithology (see paragraph 1.4.2.12)	
Extent							
Magnitude		The magnitude of the impacts (taking into consideration the spatial extent, duration, frequency and reversibility of the impact) will be subject to the assessment to be undertaken for the EIA and has, therefore, not been determined at this stage.					
Probability	Screened out: no	Screened out: no	Screened out: no	Screened out: no	Screened in for potential	Screened in for potential	
Duration	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts on marine mammals (see	transboundary impacts on offshore ornithology (see	
Frequency	·				paragraph 1.4.2.10)	paragraph 1.4.2.12)	
Reversibility							
Cumulative impacts	See part 1, section 5, and part 2, section 6.2	See part 1, section 5, and part 2, section 6.11	See part 1, section 5, and part 2, section 6.3	See part 1, section 5, and part 2, section 6.4	See part 1, section 5, and part 2, section 6.5	See part 1, section 5, and part 2, section 6.6	
Conclusion- potential for significant effects	No significant transboundary effects	No significant transboundary effects	No significant transboundary effects	No significant transboundary effects	Transboundary effects will be considered within the EIA process	Transboundary effects will be considered within the EIA process	



#### Offshore Human Environment

1.4.2.14 A transboundary screening matrix has been completed for offshore transboundary impacts for the offshore human environment and is presented in **Table 1.3**. The conclusions of the transboundary screening for each offshore human environment topic are presented in the following sections.

#### Commercial Fisheries

- 1.4.2.15 Potential impacts on commercial fisheries receptors include:
  - temporary loss or restricted access to fishing grounds;
  - · displacement of fishing activity into other areas;
  - interference with fishing activity;
  - increased snagging risk, which could result in loss or damage to fishing gear;
  - increased steaming times; and
  - potential impacts on commercially exploited species.
- 1.4.2.16 There is the potential for significant transboundary impacts upon commercial fisheries due to the construction, operation and maintenance, and decommissioning impacts of the Offshore Transmission Infrastructure. Transboundary impacts are taken as being related to whether vessels of other nationalities have rights to fish in a given area. The potential for transboundary effects will be screened in to the EIA process.

#### Shipping and Navigation

- 1.4.2.17 Potential impacts on shipping and navigation receptors include:
  - increased vessel to vessel collision risk (third party to third party);
  - increased vessel to vessel collision risk (third party to project vessel);
  - reduced access to local ports and harbours;
  - reduction of under keel clearance;
  - anchor interaction with subsea cables: and
  - interference with navigation, communications, and position-fixing equipment.
- 1.4.2.18 Given the international nature of shipping, the in-isolation impact assessment and the cumulative impact assessment will consider vessel routeing to and from international ports by international operators. There is the potential for transboundary impacts, particularly regarding transits to/from other countries including effects on shipping routes to/from EEA state ports. The potential for transboundary effects will be screened in to the EIA process, and this will be assessed as part of the Navigational Risk Assessment (NRA) process.

#### Marine Archaeology

1.4.2.19 Potential impacts on marine archaeology receptors include:

- increased SSCs and deposition leading to indirect impacts on marine archaeology receptors in the marine archaeology study area (in English waters);
- direct damage to maritime archaeology receptors in the marine archaeology study area (in English waters); and
- alteration of sediment transport regimes leading to indirect impacts on marine archaeology receptors in the marine archaeology study area (in English waters).
- All predicted impacts on marine archaeology are likely to be limited in extent to the marine archaeology study area. As such, there being no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to occur outside of the marine archaeology study area, there is no potential for transboundary impacts and transboundary impacts on marine archaeology are proposed to be screened out from the EIA process.

#### Infrastructure and Other Sea Users

1.4.2.20

1.4.2.22

- 1.4.2.21 Potential impacts on infrastructure and other sea users receptors include:
  - displacement of recreational vessels;
  - increased SSCs and associated deposition affecting recreational diving sites and designated bathing water sites;
  - impacts to existing cables or pipelines or restrictions on access to cables or pipelines;
  - increased SSCs and associated deposition affecting aggregate extraction areas;
  - reduction or restriction of oil and gas exploration activities (including surveys, drilling and the placement of infrastructure); and
  - alterations to sediment transport pathways affecting aggregate extraction areas.
  - Potential impacts on recreational activities are likely to be localised, short-term and infrequent in nature, occurring due to construction or decommissioning activities at one location. Offshore cruising and racing between the UK and EEA states (e.g. Norway, the Netherlands, France, Denmark, Germany) is likely to be limited. The North Sea Link North and Viking Link power cables run between the UK and Norway, and the UK and Denmark respectively. Additionally, there are both active and decommissioned telecommunication cables that run through the infrastructure and other sea users study areas linking the UK with Germany and the Netherlands. Potential impacts on existing cables are also likely to be localised, short term and infrequent, occurring due to construction, operation and maintenance or decommissioning activities which may overlap or cross existing cables. Any such activities would be subject to standard cable crossing agreements and cable proximity agreements.
- 1.4.2.23 It is unlikely that there will be significant transboundary effects upon recreational vessels. As such, there being no pathway for impacts (direct and indirect) arising from the Offshore Transmission Infrastructure to occur outside of the infrastructure and other sea users study areas, there is no potential for transboundary impacts and transboundary impacts on infrastructure and other sea users are proposed to be screened out from the EIA process.



Table 1.3: Offshore Transboundary Screening Matrix for the Ossian Transmission Infrastructure - Offshore Human Environment

Screening criteria	Commercial fisheries	Shipping and navigation	Marine archaeology	Other sea users		
Characteristics of the Offshore Transmission Infrastructure	For a detailed description, see <b>section 4</b> of the EIA Scoping Report.					
Location of the Offshore Transmission Infrastructure		e is located approximately 80 km to the e approximately 400 km in length from the		• •		
Environmental importance	Screened in due to potential	Screened in due to potential	Screened out: no transboundary	Screened out: no transboundary impacts predicted		
Potential impacts and pathways	transboundary impacts (see paragraph 1.4.2.15)	transboundary impacts (see paragraph 1.4.2.17)	impacts predicted			
Extent						
Magnitude		The magnitude of the impacts (taking into consideration the spatial extent, duration, frequency and reversibility of the impact) will be subject to the assessment to be undertaken for the EIA and has, therefore, not been determined at this stage.				
Probability	Screened in due to potential	Screened in due to potential transboundary impacts (see paragraph 1.4.2.17)	Screened out: no transboundary impacts predicted	Screened out: no transboundary impacts predicted		
Duration	transboundary impacts (see paragraph 1.4.2.15)					
Frequency						
Reversibility						
Cumulative effects	See part 1, section 5, and part 2, section 6.7	See part 1, section 5, and part 2, section 6.8	See part 1, section 5, and part 2, section 6.9	See part 1, section 5, and part 2, section 6.10		
Conclusion- potential for significant effects	Transboundary effects will be considered within the EIA process	Transboundary effects will be considered within the EIA process	No significant transboundary effects	No significant transboundary effects		



### 1.4.3 Onshore Transboundary Impacts

1.4.3.1 A transboundary screening matrix has been completed for onshore transboundary impacts and is presented in **Table 1.4** and **Table 1.5**. The conclusions of the transboundary screening for each onshore topic are presented, together with additional justification, in the following sections.

#### Geology, Hydrogeology and Ground Conditions

- 1.4.3.2 Potential impacts of the Onshore Transmission Infrastructure (and those parts of the Landfall landward of MHWS) on groundwater quality and/or quantity include the following.
  - · Mobilisation of existing contamination during construction and decommissioning.
  - Creation of new pathways for contaminants during construction.
  - Changes in groundwater levels and flow during construction activities and as a result of permanent in ground features.
- 1.4.3.3 All predicted impacts on groundwater quality and/or quantity are likely to be limited in extent to a localised area in relation to the Onshore Scoping Boundary. There will be no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure that could result in significant effects on groundwaters of an EEA state.
- 1.4.3.4 Potential impacts on human health associated with ground conditions include the following.
  - Mobilisation of existing contamination (airborne dusts and fibres) during construction and decommissioning.
- 1.4.3.5 All predicted impacts on human health associated with ground conditions are likely to be limited in extent to a localised area in relation to the Onshore Scoping Boundary. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure to occur outside of a localised area in relation to the Onshore Scoping Boundary, there is no potential for transboundary impacts and transboundary impacts on geology, hydrogeology and ground conditions are proposed to be screened out from the EIA process.

### Hydrology and Flood Risk

- 1.4.3.6 Potential impacts of the Onshore Transmission Infrastructure (and those elements of the Landfall landward of MHWS) on hydrological and flood risk receptors include the following.
  - Increased flood risk as a result of surface water runoff from additional impermeable areas during the construction of the Onshore Transmission Infrastructure and the operation of the Onshore Converter Stations.
  - Contamination of surface water runoff which could impact the quality of surface water and ground receptors during the construction of the Onshore Transmission Infrastructure.

- Increased flood risk arising from watercourse crossings during the construction of the Onshore Transmission Infrastructure.
- Increased flood risk arising from damage to existing flood defences during the construction of the Onshore Transmission Infrastructure.
- Increased flood risk arising from watercourse diversion(s) during the construction of the Onshore Converter Stations.
- 1.4.3.7 All potential impacts on hydrology and flood risk are likely to be limited to a localised area in relation to the Onshore Scoping Boundary.
- 1.4.3.8 As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure to occur outside of a localised area in relation to the Onshore Scoping Boundary, there is no potential for transboundary impacts and transboundary impacts on hydrology and flood risk are proposed to be screened out from the EIA process.

#### Onshore Ecology and Nature Conservation

- 1.4.3.9 Potential impacts of the Onshore Transmission Infrastructure (and those elements of the Landfall above MHWS) to onshore ecology and nature conservation receptors are largely temporary and limited to the construction (and decommissioning) phases of the Onshore Transmission Infrastructure, given that most of the infrastructure (other than the Onshore Converter Stations) will be buried beneath the ground. The cable route will be carefully designed to avoid the most sensitive habitats including statutory and non-statutory designated sites where possible. Permanent habitat loss is only associated with the Onshore Converter Stations.
- 1.4.3.10 Potential impacts on onshore ecology and nature conservation receptors have been identified as follows.
  - Damage to designated sites and habitats during construction and decommissioning.
  - Permanent and temporary habitat loss and habitat fragmentation.
  - Killing, injury and disturbance to protected species during construction and decommissioning.
  - Changes in air quality affecting important designated features during construction and decommissioning.
  - Changes in water quality affecting important ecological features during construction and decommissioning.
  - Changes in hydrology affecting important ecological features during construction and decommissioning.
  - Noise and visual disturbance to protected species during operation and maintenance.
- 1.4.3.11 All predicted impacts on onshore ecology and nature conservation receptors will be limited in extent to a localised area in relation to the Onshore Scoping Boundary. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure to occur outside of a localised area in relation to the Onshore Scoping Boundary, there is no potential for transboundary impacts



and transboundary impacts on onshore ecology and nature conservation are proposed to be screened out from the EIA process.

#### Onshore and Intertidal Ornithology

- 1.4.3.12 Potential impacts of the Onshore Transmission Infrastructure and Landfall on onshore and intertidal ornithology receptors include the following.
  - Impact of permanent loss of supporting habitats and/or resource availability (arising during the construction phase).
  - Impact of temporary loss of supporting habitats and/or resource availability (arising from construction and decommissioning).
  - Disturbance and displacement from construction and decommissioning activities (and, potentially operation and maintenance if Landfall works require any cable reburial).
  - Impact of pollution caused by spills and/or contaminant release during construction and decommissioning.
- 1.4.3.13 Whilst the impacts are likely to be of a low magnitude, it is recognised that many of the bird species that have the potential to be impacted are migratory. Therefore, there is the potential that the population might be impacted at the biogeographic scale with the bird species range extending over different countries.
- 1.4.3.14 There is the potential for transboundary impacts upon onshore and intertidal ornithological receptors due to construction, operation and maintenance, and decommissioning impacts of the Onshore Transmission Infrastructure and Landfall.
- 1.4.3.15 Therefore, it is proposed that transboundary effects on onshore and intertidal ornithology are screened in to the EIA process.

#### Historic Environment

- 1.4.3.16 Potential impacts of the Onshore Transmission Infrastructure and Landfall on the onshore historic environment include the following.
  - Loss of, or harm to, buried archaeological remains and deposits of geoarchaeological and/ or palaeoenvironmental interest during construction and decommissioning.
  - Loss of, or harm to, elements of the historic landscape during construction and decommissioning.
  - Harm to the significance of designated and non-designated heritage assets as a result of change within their setting during all phases.
  - Harm to the character of the historic landscape during all phases.
- 1.4.3.17 All predicted impacts on the onshore historic environment are likely to be limited in extent to a localised area in relation to the Landfall and Onshore Transmission Infrastructure. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure and Landfall to occur outside of a localised area in relation to the Onshore Scoping Boundary and Landfall, there

is no potential for transboundary impacts and transboundary impacts on the historic environment are proposed to be screened out from the EIA process.

#### Land Use and Recreation

- 1.4.3.18 The potential impacts of the Onshore Transmission Infrastructure and Landfall on land use and recreation receptors include the following.
  - Temporary and permanent loss of agricultural land, including Best and Most Versatile (BMV) land.
  - Temporary and permanent impacts on peaty soils.
  - Temporary and permanent disruption to the operation of farm holdings.
  - Temporary and permanent reduction in access to Public Rights of Way (PRoW) and other promoted routes.
  - Temporary and permanent reduction in access to registered common land and public open space.
  - Temporary and permanent reduction in access to other recreational resources (e.g. golf courses, sport facilities etc).
- 1.4.3.19 None of the potential impacts identified above are likely to result in effects that extend beyond the land required to facilitate construction, operation and maintenance and decommissioning of the Onshore Transmission Infrastructure and Landfall. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure and Landfall to occur outside of a localised area in relation to the Onshore Scoping Boundary and Landfall, there is no potential for transboundary impacts and transboundary impacts on land use and recreation are proposed to be screened out from the EIA process.

#### **Traffic and Transport**

- 1.4.3.20 Potential impacts of the Onshore Transmission Infrastructure (and those elements of the Landfall above MHWS) on traffic and transport receptors include the following.
  - Impact upon driver (including public transport) delay for users of the highway network
  - Impact upon non-motorised user delay for users of the highway network.
  - Impact upon fear and intimidation (non-motorised user amenity) for users of the highway network.
  - Impact upon severance for users of the highway network.
  - Impact upon road safety for users of the highway network.
  - Impact upon the safety of users of the highway network and other transport receptors resulting from Abnormal Indivisible Loads (AILs).
- 1.4.3.21 All predicted impacts on the traffic and transport receptors are likely to be limited to those receptors within a localised area in relation to the Onshore Scoping Boundary. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure to occur outside of a localised area in relation to the Onshore Scoping Boundary, there is no potential for



transboundary impacts and transboundary impacts on traffic and transport are proposed to be screened out from the EIA process.

#### Noise and Vibration

- 1.4.3.22 Potential impacts of the Onshore Transmission Infrastructure and Landfall on the onshore noise and vibration sensitive receptors include the following.
  - Impacts on health and quality of life resulting from noise and vibration generated during the construction and decommissioning of the Onshore Transmission Infrastructure.
  - Impacts on health and quality of life due to additional vehicle movements on the local highway network, and consequent increase in road traffic noise levels, during the construction and decommissioning of the Onshore Transmission Infrastructure.
  - Impacts on health and quality of life resulting from noise generated during the operation of the Onshore Converter Stations.
- 1.4.3.23 All predicted impacts on the onshore noise and vibration sensitive receptors are likely to be limited to those receptors within a localised area in relation to the Landfall and Onshore Transmission Infrastructure. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure and Landfall to occur outside of a localised area in relation to the Onshore Scoping Boundary and Landfall, there is no potential for transboundary impacts and transboundary impacts on onshore noise and vibration sensitive receptors are proposed to be screened out from the EIA process.

#### Air Quality

- 1.4.3.24 Potential impacts of the Onshore Transmission Infrastructure (and those parts of the Landfall above MHWS) on air quality include the following.
  - Impact of dust soiling and increases of suspended particulate matter on human and ecological receptors from dust emissions generated by onsite construction.
  - Impact on human health and ecological receptors from vehicle emissions from construction traffic.
- 1.4.3.25 All predicted impacts on air quality are likely to be limited in extent to a localised area in relation to the Onshore Transmission Infrastructure. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure to occur outside of a localised area in relation to the Onshore Scoping Boundary, there is no potential for transboundary impacts and transboundary impacts on air quality are proposed to be screened out from the EIA process.

#### Landscape and Visual Resources

1.4.3.26 Potential impacts of the Onshore Transmission Infrastructure and Landfall on landscape and visual receptors include the following.

- Impacts on the physical and other characteristics of the landscape and its resulting character and quality as a result of effects of the elements of the Onshore Transmission Infrastructure.
- Impacts on views and the perception of visual receptors as a result of effects of the elements of the Onshore Transmission Infrastructure.
- 1.4.3.27 All predicted impacts on landscape and visual resources will be limited in extent to a localised area in relation to the Landfall and Onshore Transmission Infrastructure (which are located entirely within England). The Landscape and Visual Impact Assessment (LVIA) will not consider Offshore Transmission Infrastructure or activities within the marine environment. As such, there being no pathway for impacts (direct or indirect) arising from the Onshore Transmission Infrastructure and Landfall to occur outside of a localised area in relation to the Onshore Scoping Boundary and Landfall, there is no potential for transboundary impacts and transboundary impacts on landscape and visual resources are proposed to be screened out from the EIA process.

#### Health and Wellbeing

- 1.4.3.28 The potential impacts of the Onshore Transmission Infrastructure and Landfall on population health include the following.
  - Temporary disruptions to the local road network and active travel opportunities during construction.
  - Temporary disruptions to open space, leisure facilities and recreational amenities during construction.
  - Opportunities for employment during construction and operation.
  - Construction dust exposure and exposure to air pollutants which may affect respiratory and cardio-metabolic outcomes.
  - Construction noise and vibration, which may affect mental wellbeing, sleep disturbance and educational outcomes.
  - · Visual changes during operation that could influence wellbeing.
  - Noise impacts from the operation of the Onshore Converter Stations to nearby residents and users of recreational and community facilities.
  - Public understanding of risk in relation to electromagnetic fields during operation.
  - Public health benefits of renewable energy security during operation.
- 1.4.3.29 Consistent with the other onshore topics discussed above, these effects relate to onshore populations in the UK. It is not considered that there is the potential for likely significant effects to arise for onshore populations in EEA states.
- 1.4.3.30 For the Offshore Transmission Infrastructure the assessments will consider, as appropriate, effects on human health in the offshore marine environment. Such considerations include how the health of onshore populations of people may be affected by the following.
  - Shipping and navigation effects on health-related journeys and access to medical supplies.
  - Commercial fishing effects on employment as a health determinant affecting coastal communities.



- Water environment pollution risks affecting nearshore bathing waters.
- 1.4.3.31 The offshore human health scope is considered by those assessments, including where shipping and navigation and commercial fishing has screened in transboundary effects. It is however considered unlikely that those topics would have degrees of change for onshore populations either in the UK or in other jurisdictions that would be on a scale to significantly affect public health. For example, the influence on shipping is unlikely to significantly affect health related journeys or delivery of medical supplies on a scale to affect population health. Similarly, the influence on international commercial fishing fleets is unlikely to result in highly localised large-scale economic changes within coastal communities on a scale that could significantly affect population health in any jurisdiction. As there is not the potential for a likely significant population health effect, such offshore impacts are screened out in relation to their transboundary implications for human health.
- 1.4.3.32 There is not the potential for significant effects upon onshore human populations of an EEA state due to construction, operation and maintenance, and decommissioning impacts of the Onshore Transmission Infrastructure, Landfall or Offshore Transmission Infrastructure. It is therefore proposed that transboundary impacts and effects on health and wellbeing are screened out from the EIA process.



Table 1.4: Onshore Transboundary Screening Matrix for the Ossian Transmission Infrastructure

Screening criteria	Geology, hydrogeology and ground conditions	Hydrology and flood risk	Onshore ecology and nature conservation	Onshore and intertidal ornithology	Historic environment	Land use and recreation	
Characteristics of the Onshore Transmission Infrastructure	For a detailed description,	For a detailed description, see <b>section 4</b> of the EIA Scoping Report.					
Location of the Onshore Transmission Infrastructure		n infrastructure is located with the structure is located with the town of Spalding.		ndfall at the Lincolnshire coast	to the south of Mablethorpe	, extending to the west near	
Environmental importance	Screened out: no transboundary impacts	Screened out: no transboundary impacts	Screened out: no transboundary impacts	Screened in for potential transboundary impacts on	Screened out: no transboundary impacts	Screened out: no transboundary impacts	
Potential impacts and pathways	predicted	predicted	predicted	onshore and intertidal ornithology	predicted	predicted	
Extent							
Magnitude	The magnitude of the impacts (taking into consideration the spatial extent, duration, frequency and reversibility of the impact) will be subject to the assessment to be undertaken for the EIA and has, therefore, not been determined at this stage.						
Probability	Screened out: no Screened out: no		Screened out: no	oundary impacts transboundary impacts on transboundary impacts	transboundary impacts	Screened out: no transboundary impacts predicted	
Duration	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted				
Frequency	<u> </u>	'	·				
Reversibility							
Cumulative impacts	See part 1, section 5, and part 3, section 7.2	See part 1, section 5, and part 3, section 7.3	See part 1, section 5, and part 3, section 7.4	See part 1, section 5, and part 3, section 7.5	See part 1, section 5, and part 3, section 7.6	See part 1, section 5, and part 3, section 7.7	
Conclusion- potential for significant effects	No significant transboundary effects.	No significant transboundary effects.	No significant transboundary effects.	Transboundary effects will be considered within the EIA process.	No significant transboundary effects.	No significant transboundary effects.	



Table 1.5: Onshore Transboundary Screening Matrix for the Ossian Transmission Infrastructure (cont.)

Screening criteria	Traffic and transport	Noise and vibration	Air quality	Landscape and visual resources	Health and wellbeing	
Characteristics of the Onshore Transmission Infrastructure	For a detailed description, see s	ection 4 of the EIA Scoping Report	rt.			
Location of the Onshore Transmission Infrastructure	The Onshore Transmission infra near the town of Alford and sout		shire from the Landfall at the Linco	olnshire coast to the south of Mabl	ethorpe, extending to the west	
Environmental importance	Screened out: no	Screened out: no	Screened out: no	Screened out: no	Screened out: no	
Potential impacts and pathways	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted	transboundary impacts predicted	
Extent						
Magnitude		The magnitude of the impacts (taking into consideration the spatial extent, duration, frequency and reversibility of the impact) will be subject to the assessment to be undertaken for the EIA and has, therefore, not been determined at this stage.				
Probability	Screened out: no	Screened out: no transboundary impacts predicted	Screened out: no transboundary impacts predicted	Screened out: no transboundary impacts predicted	Screened out: no transboundary impacts predicted	
Duration	transboundary impacts predicted					
Frequency						
Reversibility						
Cumulative impacts	See part 1, section 5, and part 3, section 7.8	See part 1, section 5, and part 3, section 7.9	See part 1, section 5, and part 3, section 7.10	See part 1, section 5, and part 3, section 7.11	See part 1, section 5, and part 3, section 7.12	
Conclusion- potential for significant effects	No significant transboundary effects.	No significant transboundary effects.	No significant transboundary effects.	No significant transboundary effects.	No significant transboundary effects.	



## 1.4.4 Offshore and Onshore Combined Topics Transboundary Impacts

1.4.4.1 A transboundary screening matrix has been completed for those topics falling under the offshore and onshore combined topics and this is presented in **Table 1.6**. The conclusions of the transboundary screening for each combined topic are presented in the following sections.

### Climate Change

- 1.4.4.2 All developments which emit greenhouse gases (GHGs) have the potential to impact the atmospheric mass of GHGs as a receptor (this includes manufacturing of materials in other territories), and so may have a transboundary impact on climate change. Consequently, transboundary effects due to other specific international development projects are not individually identified but would be taken into account when considering the impact of the Ossian Transmission Infrastructure by defining the atmospheric mass of GHGs as a high sensitivity receptor. Each country has its own policy and targets concerning carbon and climate change which are intended to limit GHG emissions to acceptable levels within that country's defined budget and international commitments.
- 1.4.4.3 It is therefore proposed that transboundary impacts and effects on climate change are screened in for the EIA process.

#### Socio-Economics

- 1.4.4.4 Transboundary socio-economic impacts are expected to arise from the sourcing of some supplies of goods and services from outside the UK during the construction, operation and decommissioning phases. These will be imports to the UK and are expected to be positive in nature for those countries providing goods and services.
- 1.4.4.5 The consideration of measures envisaged to reduce or eliminate such effects is not relevant in the context of potential transboundary impacts. As such, there being no pathway for impacts (direct or indirect) arising from the Ossian Transmission Infrastructure, there is no potential for transboundary impacts and transboundary impacts on socio-economics are proposed to be screened out from the EIA process.



Table 1.6: Offshore and Onshore Transboundary Screening Matrix for the Ossian Transmission Infrastructure

Screening criteria	Climate change	Socio-economics		
Characteristics of the Ossian Transmission Infrastructure	For a detailed description, see section 4 of the EIA Scoping Report.			
Location of the Ossian Transmission Infrastructure	The Ossian Transmission Infrastructure is located approximately 80 km to the east of the Aberdeenshire coastline at its most northerly point, with the Ossian Transmission Infrastructure extending approximately 400 km in length from the Array to the Landfall location along the Lincolnshire coast to the south of Mablethorpe, extending to the west near the town of Alford and south near the town of Spalding.			
Environmental importance	Screened in for potential transboundary impacts on climate	Screened out: no transboundary impacts predicted.		
Potential impacts and pathways	change			
Extent				
Magnitude	The magnitude of the impacts (taking into consideration the spatial extent, duration, frequency and reversibility of the impact) will be subject to the assessment to be undertaken for the EIA and has, therefore, not been determined at this stage.			
Probability	Screened in for potential transboundary impacts on climate	Screened out: no transboundary impacts predicted.		
Duration	change			
Frequency				
Reversibility				
Cumulative impacts	See part 1, section 5, and part 3, section 8.1	See part 1, section 5, and part 3, section 8.2		
Conclusion- potential for significant effects	Transboundary effects will be considered within the EIA process.	No significant transboundary effects.		



### 1.4.5 Conclusion

- 1.4.5.1 This transboundary screening has been prepared in accordance with the Planning Inspectorate guidance on transboundary impacts (Planning Inspectorate, 2024), Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and Regulations 18, 19 and 20 of the Marine Works (Environmental Impact Assessment) Regulations 2007. The primary purpose of this appendix is to provide a screening assessment of potential transboundary impacts which have the potential to affect EEA states.
- 1.4.5.2 This has been carried out considering both the location of the Ossian Transmission Infrastructure and the Project Description (**part 1**, **section 4**). There is the potential for transboundary impacts associated with the Ossian Transmission Infrastructure for the following topics:
  - Offshore topics:
    - Marine mammals;
    - Offshore ornithology;
    - Commercial fisheries; and
    - Shipping and navigation.
  - Onshore topics:
    - Onshore and intertidal ornithology.
  - · Offshore and onshore combined topics:
    - Climate change.



# OSSIAN OFFSHORE WIND FARM: TRANSMISSION INFRASTRUCTURE

**EIA SCOPING REPORT: APPENDIX 9.1** 





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## 1. APPENDIX 9.1: MARINE CONSERVATION ZONE SCREENING

### 1.1. Introduction

- 1.1.1.1 This Marine Conservation Zone (MCZ) screening appendix of the Ossian Transmission Infrastructure Environmental Impact Assessment (EIA) Scoping Report identifies the MCZs of relevance to the Ossian Transmission Infrastructure in relation to the duties under the Marine and Coastal Access Act (MCAA) 2009. It considers the potential for the Offshore Transmission Infrastructure to impact upon the ability of MCZs to meet their conservation objectives.
- 1.1.1.2 This appendix provides a screening to identify the Zone of Influence (ZoI) associated with the Offshore Transmission Infrastructure and therefore determine which MCZs could potentially be impacted as a result of activities in the construction, operation and maintenance and decommissioning phases of the Offshore Transmission Infrastructure. The impact pathways resulting from the Offshore Transmission Infrastructure are identified in the receptor specific sections of the EIA Scoping Report..
- 1.1.1.3 This appendix also outlines the approach that may be undertaken for any Stage 1 Assessment, which considers if there is a significant risk of the project hindering the achievement of the relevant MCZs conservation objectives. A Stage 2 Assessment, which may follow, considers the public benefit of a project as well as whether measures of equivalent environment benefit can be secured if required.
- 1.1.1.4 It should be noted that impacts on Marine Protected Areas (MPAs) in Scottish waters have been previously assessed as part of the Array Application (Ossian OWFL, 2024). In addition, the Offshore Transmission Infrastructure (and the Offshore Transmission Infrastructure MCZ screening boundary, discussed in section 1.3) does not overlap with any Scottish MPAs, therefore, there is no pathway for likely significant effects on Scottish MPAs and this MCZ screening appendix has been produced for English waters and is therefore only applicable to the application for a DCO to be made to the Planning Inspectorate.
- 1.1.1.5 Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in Scottish waters with the potential to be affected are considered in the Stage 1 LSE Screening Report (Ossian OWFL, 2025) and via the Habitats Regulations process, as applicable.

### 1.2. Policy and Legislation

- 1.2.1.1 In addition to the EIA Scoping Report produced for the Ossian Transmission Infrastructure, the Applicant is also required to specifically consider provisions to support the management of MCZs in England.
- 1.2.1.2 Under section 126 of the MCAA 2009, public authorities (in this case the Marine Management Organisation (MMO) in English waters) have specific duties for MCZs

in relation to certain decisions. The public authority is required to consider whether the activity that is the subject of the application (i.e. marine licensable activities subject to a marine licence application) can affect, other than insignificantly, the protected features of an MCZ or any ecological or geomorphological processes on which the conservation of any protected feature in an MCZ is (wholly or partially) dependant.

- 1.2.1.3 This MCZ screening appendix to the Ossian Transmission Infrastructure EIA Scoping Report provides a summary of the intended approach to the MCZ assessment. This MCZ screening appendix also provides the results of a preliminary initial screening of designated MCZs.
- 1.2.1.4 This assessment is informed by the following technical sections:
  - part 2, section 6.2: Physical Processes; and
  - part 2, section 6.3: Benthic Subtidal and Intertidal Ecology.

### 1.3. Methodology

1.3.1.1 The following sections describe the approach to the MCZ assessment in England based on guidance from the MMO (MMO, 2013).

### 1.3.1 Preliminary Screening

- 1.3.1.1 To determine whether section 126 of the MCAA applies and a Stage 1 MCZ assessment is required for the Offshore Transmission Infrastructure, a preliminary screening has been carried out. According to MMO guidance (MMO, 2013), section 126 of the MCAA is applicable if both of the following apply.
  - The licensable activity is taking place within or near an area being put forward or already designated as an MCZ.
  - The activity is capable of affecting (other than insignificantly) either (i) the protected features of an MCZ; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependant.
- 1.3.1.2 The MMO recommends the use of a risk-based approach when determining the 'nearness' of an activity to MCZs, including applying an appropriate buffer zone to the MCZ as well as a consideration of risks associated with activities occurring at greater distances from features of the MCZ(s).
- 1.3.1.3 The preliminary screening stage undertaken in this MCZ screening appendix considers the proximity of the Offshore Transmission Infrastructure to MCZs. To determine the 'nearness' of the activities associated with the Offshore Transmission Infrastructure, the following screening criteria are proposed.
  - Direct impacts to benthic features of MCZs will only occur within the footprint of the installation activities for the Offshore Transmission Infrastructure (including seabed preparation activities such as boulder and sandwave clearance, unexploded ordnance (UXO) clearance) and will be considered within Offshore and Intertidal Scoping Boundaries.



• Indirect impacts to benthic features of the MCZs (e.g. increases in suspended sediment concentrations (SSCs) and associated deposition associated with seabed preparation and cable installation activities) may occur within one maximum tidal excursion from the Offshore and Intertidal Scoping Boundaries (in English waters). One maximum tidal excursion from the Offshore and Intertidal Scoping Boundaries (in English waters) is therefore predicted to be the maximum extent of the ZoI for benthic ecology MCZ features. This distance is defined as a 15 km buffer around the Offshore and Intertidal Scoping Boundaries (in English waters) as determined by the benthic subtidal and intertidal ecology study area (see part 2, section 6.3). This distance will be used as the screening boundary for MCZs (termed the Offshore Transmission Infrastructure MCZ screening boundary) (Figure 1.1).

### 1.3.2 Stage 1 Assessment

- 1.3.2.1 The Stage 1 assessment (if/as required) will consider whether the condition in section 126(6) of the MCAA can be met; namely can the MMO be satisfied there is no significant risk of the activity hindering the achievement of the conservation objectives stated for the MCZ. The conservation objectives for MCZ features are statements describing the desired condition of the MCZ features. There are two main conservation objectives for features within an MCZ.
  - If the features are in the desired favourable condition the conservation objective will be for the feature to be 'maintained in favourable condition'.
  - If the features are not in the desired favourable condition the conservation objective will be for the feature to be 'recovered to favourable condition'.
- 1.3.2.2 MMO guidance (MMO, 2013) suggests that they would use the information supplied by the Applicant within the licence application (for the Offshore Transmission Infrastructure, this information would be included in deemed marine licence in the Development Consent Order), advice from other Statutory Nature Conservation Bodies (SNCBs), and any other relevant information to determine whether:
  - there is no significant risk of the activity hindering the achievement of the conservation objectives stated for the MCZ; and
  - the MMO can exercise its functions to further the conservation objectives stated for the MCZ.
- 1.3.2.3 The MCZ assessment will therefore consider whether the Offshore Transmission Infrastructure could potentially affect, and hinder, these conservation objectives for each of the MCZs screened into the assessment. Within this stage of the assessment, the MMO advise that 'hinder' would be any act that could, either alone or in combination:
  - in the case of a conservation objective of 'maintain', increase the likelihood that the current status of a protected feature would go downwards (e.g. from favourable to degraded) either immediately or in the future (i.e. these protected features would be placed on a downward trend); or

- in the case of a conservation objective of 'recover', decrease the likelihood that the current status of a protected feature could move upwards (e.g. from degraded to favourable) either immediately or in the future (i.e. these protected features would be placed on a flat or downward trend).
- 1.3.2.4 The MCZ assessment includes consideration of both direct and indirect impacts upon the designated features of an MCZ.
- 1.3.2.5 If the licencing authority is not satisfied that there is no risk of an act hindering the achievement of the conservation objectives of the MCZ (section 126(6) of the MCAA), the Stage 1 assessment will also consider whether the condition in section 126(7)(a) of the MCAA can be met. The Stage 1 assessment must determine whether there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of the conservation objectives stated for the MCZ. This should include proceeding with it in another manner, or at another location.
- 1.3.2.6 If mitigation to reduce the impacts to an acceptable level cannot be secured, and there are no other alternative locations, then a Stage 2 assessment will be required.

### 1.3.3 Stage 2 Assessment

- 1.3.3.1 The Stage 2 assessment (if/as required) will consider whether the conditions in section 126(7)(b) and (c) of the MCAA can be met, and the socio-economic impact of the plan or project together with the risk of environmental damage. There are two parts to the Stage 2 assessment process:
  - Does the public benefit in proceeding with the project clearly outweigh the risk of damage to the environment that will be created by proceeding with it?
  - If the above is true, can the Applicant satisfy that they can secure, or undertake arrangements to secure, measures of equivalent environmental benefit for the damage the project will have on the MCZ features?
- 1.3.3.2 In determining 'public benefit' the MMO will consider benefits at a national, regional or local level. Guidance from the MMO on what constitutes measures of equivalent environmental benefit states that measures can be based on those considered appropriate when securing compensatory habitat for projects deemed to have an adverse effect on internationally designated sites under the Habitats Directive.

## 1.4. Results: Preliminary Marine Conservation Zone Screening

- 1.4.1.1 On the basis of the methodology and screening buffers described above in **section**1.3, the Applicant has undertaken a preliminary MCZ screening. The following MCZs have been identified for initial inclusion on the basis that the Offshore Transmission Infrastructure is deemed to be potentially capable of affecting (other than insignificantly) a protected feature of the site (**Figure 1.1**):
  - North East of Farnes Deep MCZ and HPMA;



- Swallow Sand MCA;
- Holderness Offshore MCZ; and
- Holderness Inshore MCZ.

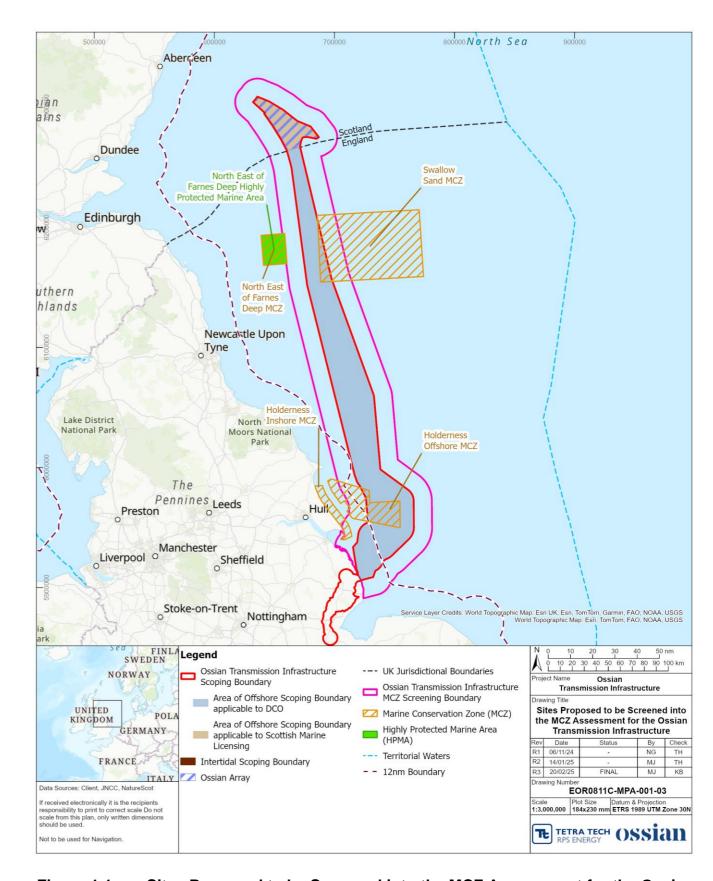


Figure 1.1: Sites Proposed to be Screened into the MCZ Assessment for the Ossian Transmission Infrastructure



### 1.4.1 North East of Farnes Deep MCZ and HPMA

- 1.4.1.1 The North East of Farnes Deep MCZ and Highly Protected Marine Area (HPMA) is located approximately 55 km offshore from the north Northumberland coast in the north-east of England (Joint Nature Conservation Committee (JNCC), 2024a) and overlaps with the Ossian Transmission Infrastructure MCZ screening boundary but does not overlap with the Offshore Scoping Boundary in English waters (**Figure 1.1**).
- 1.4.1.2 The site depth ranges between 50 m and 100 m, with the geological/geomorphological seabed forms comprising part of the North-East Bank seabed mound or pinnacle and covers 492 km². The variety of habitats within this site support a high level of biodiversity with at least 263 benthic and demersal species recorded including phosphorescent sea pen *Pennatula phosphorea*, common dragonet *Callionymus lyra*, ocean quahog *Arctica islandica* and squat lobsters (JNCC, 2024a).
- 1.4.1.3 The North East Farnes Deep MCZ was designated in 2013 and the North East Farnes Deep HPMA was designated in 2023 (JNCC, 2024a). The designated features of the North East of Farnes Deep MCZ and HPMA are outlined in **Table 1.1**. This table also provides the HPMA conservation objectives.

Table 1.1: North East of Farnes Deep MCZ and HPMA Designated Features and Conservation Objectives (JNCC, 2023)

MCZ Protected Feature	Type of Feature	HPMA Protected Feature	HPMA Conservation Objectives		
Subtidal coarse sediment	Broad-scale habitat	The marine ecosystem of the	To achieve full recovery of the protected feature, including its		
Subtidal sand	Broad-scale habitat	area	structure and functions, its qualities and the composition of its characteristic biological		
Subtidal mixed sediment	Broad-scale habitat	communities North East of HPMA, to a  To prevent f			communities present within the North East of Farnes Deep
Subtidal mud	Broad-scale habitat		<ul> <li>HPMA, to a natural state, and;</li> <li>To prevent further degradation and damage to the protected</li> </ul>		
Ocean quahog	Species Feature of Conservation Importance		feature, subject to natural change.		

### 1.4.2 Swallow Sand MCZ

1.4.2.1 The Swallow Sand MCZ is located approximately 100 km offshore from the Northumberland coast in the north-east of England (JNCC, 2013) and overlaps with the Offshore Transmission Infrastructure MCZ screening boundary and the

Offshore Scoping Boundary (in English waters) (**Figure 1.1**). The site covers 4,746 km<sup>2</sup> and is comprised of a sandy plain ranging in depth from 50 m at its shallowest, down to 150 m in the top north-west corner of the site, marking the glacial tunnel valley geological feature (JNCC, 2013). The site was first designated as an MCZ in 2013 (JNCC, 2013). The designated features of the Swallow Sand MCZ and their overarching conservation objectives are outlined in **Table 1.2**.

Table 1.2: Swallow Sand MCZ Designated Features and Conservation Objectives (JNCC, 2018)

Protected Feature	Type of Feature	Conservation Objective	
Subtidal coarse sediment	Broad-scale habitat	Maintain in favourable condition.  This objective requires that:  i. its extent is stable or increasing; and ii. its structures and functions, its quality, and the composition of its characteristic biological communities (which includes a reference to the diversity and abundance of species forming part of or inhabiting that habitat) are such as to ensure that it remains in a condition which is healthy and not deteriorating.  Any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery. Any alteration to that feature brought about entirely by natural processes is to be disregarded.	



Protected Feature	Type of Feature	Conservation Objective
Subtidal sand	Broad-scale habitat	Recover to favourable condition.  This objective requires that:  i. its extent is stable or increasing; and ii. its structures and functions, its quality, and the composition of its characteristic biological communities (which includes a reference to the diversity and abundance of species forming part of or inhabiting that habitat) are such as to ensure that it remains in a condition which is healthy and not deteriorating.  Any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery. Any alteration to that feature brought about entirely by natural processes is to be disregarded.
North Sea glacial tunnel valleys	Feature of Geological Interest	Maintain in favourable condition.  This objective requires that:  i. its extent, component elements and integrity are maintained;  ii. its structure and functioning are unimpaired; and  iii. its surface remains sufficiently unobscured for the purposes of determining whether the conditions in paragraphs (i) and (ii) are satisfied.  Any obscurement of that feature brought about entirely by natural processes is to be disregarded. Any alteration to that feature brought about entirely by natural processes is to be disregarded.

1.4.3 Holderness Offshore MCZ

1.4.3.1 The Holderness Offshore MCZ is located 11 km offshore from the north-east coast of England (JNCC, 2024b) and overlaps with the Offshore Transmission Infrastructure MCZ screening boundary and Offshore Scoping Boundary (in English waters) (**Figure 1.1**). The site lies partly in inshore and partly in offshore waters as it crosses the 12 nm territorial sea limit. The site is relatively shallow, ranging in depth from 5.1 m down to 50 m and covers an area of 1,176 km<sup>2</sup>. The

site was first designated as an MCZ in 2019. The designated features of the Holderness Offshore MCZ and their overarching conservation objectives are outlined in **Table 1.3**.

Table 1.3: Holderness Offshore MCZ Designated Features and Conservation Objectives (JNCC and Natural England, 2021)

Protected Feature	Type of Feature	Conservation Objective
Subtidal coarse sediment	Broad-scale habitat	Recover to favourable condition.
Subtidal sand	Broad-scale habitat	This objective requires that:  i. its extent is stable or increasing; and
Subtidal mixed sediment	Broad-scale habitat	ii. its structures and functions, its quality, and the composition of its characteristic biological communities (which includes a reference to the diversity and abundance of species forming part of or inhabiting that habitat) are such as to ensure that it remains in a condition which is healthy and not deteriorating.  Any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery. Any alteration to that feature brought about entirely by natural processes is to be disregarded.
Ocean quahog Arctica islandica	Species Feature of Conservation Importance	Recover to favourable condition.  This objective requires that the quality and quantity of its habitat and the composition of its population in terms of number, age and sex ratio are such as to ensure that the population is maintained in numbers which enable it to thrive.  Any temporary reduction of numbers is to be disregarded if the population is sufficiently thriving and resilient to enable its recovery.  Any alteration to that feature brought about entirely by natural processes is to be disregarded.

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Protected Feature	Type of Feature	Conservation Objective
North Sea glacial tunnel valleys ('Inner Silver Pit')	Feature of Geological Interest	Maintain in favourable condition.  This objective requires that:  i. its extent, component elements and integrity are maintained; ii. its structure and functioning are unimpaired; and iii. its surface remains sufficiently unobscured for the purposes of determining whether the conditions in paragraphs (i) and (ii) are satisfied.  Any obscurement of that feature brought about entirely by natural processes is to be disregarded. Any alteration to that feature brought about entirely by natural processes is to be disregarded.

### 1.4.4 Holderness Inshore MCZ

1.4.4.1 The Holderness Inshore MCZ is located north of the Humber estuary mouth (Department for Environment, Food and Rural Affairs (Defra), 2016) and overlaps with the Offshore Transmission Infrastructure MCZ screening boundary but does not overlap with the Offshore Scoping Boundary (in English waters) (**Figure 1.1**). The site contains a mosaic of rocky, sandy and muddy sediments which support a diverse range of habitats and organisms (Defra, 2016). The site extends from the intertidal primarily sandy and muddy beach into the subtidal and covers 309 km². The site was first designated as an MCZ in 2016. The designated features of the Holderness Inshore MCZ and their overarching conservation objectives are outlined in **Table 1.4**.



Table 1.4: Holderness Inshore MCZ Designated Features and Conservation Objectives (Defra, 2016)

Protected Feature	Type of Feature	Conservation Objective
Intertidal sand and muddy sand	Broad-scale habitat	Maintain in favourable condition.
Moderate energy circalittoral rock	Broad-scale habitat	This objective requires that:  i. its extent is stable or increasing; and
High energy circalittoral rock	Broad-scale habitat	ii. its structures and functions, its quality, and the composition of its characteristic biological
Subtidal coarse sediment	Broad-scale habitat	communities (which includes a reference to the diversity and abundance of species forming part of or inhabiting that habitat) are such as to
Subtidal mixed sediments	Broad-scale habitat	ensure that it remains in a condition which is healthy and not deteriorating.
Subtidal sand	Broad-scale habitat	Any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery. Any alteration to that feature brought about entirely by natural processes is to be disregarded.
Subtidal mud	Broad-scale habitat	
Spurn head (subtidal)	Feature of Geological Interest	Maintain in favourable condition.  This objective requires that:  i. its extent, component elements and integrity are maintained;  ii. its structure and functioning are unimpaired; and  iii. its surface remains sufficiently unobscured for the purposes of determining whether the conditions in paragraphs (i) and (ii) are satisfied.  Any obscurement of that feature brought about entirely by natural processes is to be disregarded. Any alteration to that feature brought about entirely by natural processes is to be disregarded.

### 1.5. Next Steps

1.5.1.1 A full screening exercise will be undertaken and presented in the ES to confirm the MCZs which may be carried forward for consideration in the Stage 1 assessment, and, if required, Stage 2 assessment, as described in **section 1.3**. This will build

upon the preliminary screening assessment presented above, and consider the literature review undertaken for the physical processes and benthic subtidal and intertidal ecology chapters of the ES where required.

#### 1.5.1.2 The next steps in the MCZ assessment process are:

- to agree with stakeholders upon the approach for the MCZ assessment (including the Offshore Transmission Infrastructure MCZ Screening Boundary);
- to update the MCZ screening following the completion of the physical processes literature review and impact assessment to identify final MCZ Screening conclusions; and
- to agree the with stakeholders which MCZs, if any, should be taken forward for a Stage 1 assessment.



# OSSIAN OFFSHORE WIND FARM: TRANSMISSION INFRASTRUCTURE

**EIA SCOPING REPORT: APPENDIX 9.2** 





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## 1. APPENDIX 9.2: OFFSHORE WATER FRAMEWORK DIRECTIVE SCREENING

### 1.1. Introduction

- 1.1.1.1 This appendix of the EIA Scoping Report identifies the water bodies and receptors of relevance to the Offshore Transmission Infrastructure in relation to the Water Framework Directive (WFD). It considers the potential impacts arising from the construction, operation and maintenance, and decommissioning of the Offshore Transmission Infrastructure on the environmental objectives of the relevant water bodies (see below) that could be affected in the context of the WFD and domestic legislation (section 1.2).
- 1.1.1.2 The appendix provides screening to identify the activities, water bodies and receptors that need to be considered within a site-specific WFD compliance assessment that will be prepared for the proposed Offshore Transmission Infrastructure. It also outlines the approach that will be undertaken for the WFD compliance assessment.
- 1.1.1.3 The WFD establishes a legislative framework to prevent deterioration and protect surface water (including rivers, lakes, transitional waters, and coastal waters) and groundwater. This protection extends out to 3 nm in Scotland and 1 nm in England for ecological status, and 12 nm in both regions for chemical status.
- 1.1.1.4 As the Offshore Transmission Infrastructure is located beyond 12 nm from the Scottish coast, all Scottish water bodies classified under the WFD are excluded from this appendix. This appendix focuses solely on coastal and transitional water bodies in England where the Offshore Export Cable(s) make landfall; specifically ecological status out to 1 nm and chemical status out to 12 nm is considered. Therefore, this assessment is applicable to only the application for a DCO to be made to the Planning Inspectorate.
- 1.1.1.5 River and groundwater bodies will be addressed separately in the Onshore WFD screening for the Onshore Transmission Infrastructure (**part 5**, **appendix 9.3**) and are therefore not included in this appendix. For the avoidance of confusion, the remit of the Offshore WFD screening will be seaward of Mean High Water Springs (MHWS), while the remit of the Onshore WFD screening will be landward of MHWS.

### 1.2. Policy and Legislation

1.2.1.1 Policy and legislation on renewable energy infrastructure is presented in **part 1**, **section 2** of this EIA Scoping Report. Policy and legislation specifically in relation to WFD is provided below.

<sup>1</sup> Transitional waterbody is defined as a body of surface water in the vicinity of river mouths that is partly saline due to its proximity to coastal waters but is substantially influenced by freshwater flows. In comparison coastal water bodies are those waters that are directly influenced by the sea but are not as heavily influenced by freshwater flows as transitional waters.

- 1.2.1.2 Effects on hydrology, water quality and morphology combine with any direct effects on aquatic biology to potentially affect the overall WFD status of water bodies. The EIA will be supported by a standalone WFD Assessment in relation to marine receptors. This WFD screening will cover transitional and coastal water bodies only. WFD compliance for transitional and coastal water bodies will be assessed based on the results of assessments for hydromorphology and water quality, plus the results of the assessment of effects on aquatic biology. Specific guidance used to inform the WFD assessment includes:
  - Nationally Significant Infrastructure Projects Advice on the Water Framework Directive (Planning Inspectorate, 2024).
  - Water Framework Directive Assessments: estuarine and coastal waters ("Clearing the Waters for All") (Environment Agency, 2023).
- 1.2.1.3 For activities in the marine environment up to 1 nm out to sea, a WFD assessment is required as part of any application. The application will draw upon the WFD assessment considering the impact the proposed activity may have on the immediate water body and any linked water bodies.

### 1.2.2 Legislative Context

- 1.2.2.1 The WFD (Council Directive 2000/60/EC establishing a framework for community action in the field of water policy) was adopted by the European Commission (EC) in 2000. The WFD was transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended, including by the Floods and Water (Amendment etc.) (EU Exit) Regulations 2019 and by Part 5 of the Environment Act 2021) (the 2017 WFD Regulations).
- 1.2.2.2 While the EIA process is an effective mechanism for gathering information relevant to a WFD compliance assessment, the data must be evaluated specifically in relation to the WFD. Environment Agency (EA) guidance emphasises that impacts on biology, chemistry, and hydromorphology should be analysed in relation to WFD status classes and reported in a dedicated WFD section within any EIA Report or ES, or in a standalone WFD compliance report (EA, 2023).
- 1.2.2.3 Accordingly, as part of the application for a Development Consent Order (DCO), a WFD compliance assessment will be conducted to demonstrate how any impacts on WFD receptors from activities associated with the Offshore Transmission Infrastructure align with the objectives for affected WFD water bodies. The WFD compliance assessment will also help inform the detailed design of the Offshore Transmission Infrastructure to avoid, reduce, mitigate, or compensate for potential risks to WFD water body receptors, if risk assessments indicate that activities may:



- cause or contribute to a deterioration in status class of surface water bodies, including coastal water bodies, or lead to significant localised effects that may contribute to such deterioration; and/or
- prevent or hinder progress towards achieving good status for surface water potentially compromising the measures established to reach these water body objectives.

#### 1.2.3 Water Body Classification

- 1.2.3.1 The WFD outlines the quality elements used to assess the ecological and chemical status of a water body. These quality elements are generally biological (e.g. habitats, fish, invertebrates, macrophytes) or chemical (e.g. heavy metals, pesticides, nutrients). Environmental quality is classified into five categories: high, good, moderate, poor, and bad, which collectively determine a water body's status. Classifications indicate where environmental quality is good, where improvements may be needed, and specific areas for enhancement. Over time, these classifications facilitate improvement planning, trend analysis, and monitoring of the effectiveness of the measures implemented. Three primary status classifications are commonly reported: chemical, ecological, and quantitative.
- 1.2.3.2 Chemical status is assessed based on compliance with environmental standards for priority substances and/or priority hazardous substances for surface water bodies. These substances are designated as 'Annex X' substances under the 2017 WFD Regulations. Chemical status is recorded as either 'good' or 'fail'. A water body's chemical status is determined by the lowest performing chemical (using the 'one-out-of-all-out' principle).
- 1.2.3.3 Ecological status classifications apply to surface water bodies only and may include up to four assessments:
  - An assessment of status indicated by a biological quality element such as fish, invertebrates, or algae. The presence of invasive species is also tested separately.
  - An assessment of compliance with environmental standards for supporting physiochemical conditions, including dissolved oxygen, phosphorus, or ammonia.
  - An assessment of compliance with environmental standards (after the Environmental Quality Standards Directive) for specific main pollutants (known as 'Annex VIII' substances), such as zinc, cypermethrin or arsenic and priority substances (Annex X) both of which are monitored due to their impact on water quality
  - For 'high' status determinations, additional tests are conducted to ensure hydromorphology is largely undisturbed.
- 1.2.3.4 Ecological status is recorded as high, good, moderate, poor or bad. 'High' represents conditions that are 'largely undisturbed'. Other classifications indicate increasing deviation from undisturbed or reference conditions. This deviation is quantified as an Ecological Quality Ratio (EQR), which ranges from zero (bad status) to one (high status). As with chemical status, the ecological status is determined by the lowest-performing component (using the 'one-out-of-all-out' principle.

- 1.2.3.5 Biological status is a subset of ecological status focused solely on biological quality elements, excluding physio-chemical, Annex VIII substances, and hydromorphology. The 'one-out-of-all-out' principle is used to determine the biological status classification.
- 1.2.3.6 Overall status is a composite measure that incorporates ecological, chemical, and quantitative status, depending on the water body type. Thus, overall status evaluates all four elements under ecological status (biological, physio-chemical, Annex VIII substances, and hydromorphology), in addition to chemical status (priority substances).
- 1.2.3.7 The 'one-out-of-all-out' principle is applied again, meaning a water body must achieve a 'good' or better rating across ecological, chemical, and quantitative assessments to be classified as having a 'good' overall status.

#### 1.2.4 Water Body Objectives

- 1.2.4.1 There is no prescribed format or process for WFD assessment (Planning Inspectorate, 2024). However, the EA has provided guidance on WFD assessments for estuarine and coastal waters (EA, 2023). Based on this guidance, the WFD compliance assessment is conducted in stages, analysing study area data and project proposals against WFD requirements to evaluate potential impacts on the status of affected water bodies.
- 1.2.4.2 If the assessment, after considering proposed mitigation measures, determines that the project may degrade water body quality or hinder its ability to achieve the required status, it would signify non-compliance with WFD objectives. In such cases, guidance stipulates that the project should not proceed unless it meets the criteria for justification under Article 4.7 of the Directive.
- 1.2.4.3 The four objectives of the WFD compliance assessment are:
  - Objective a: To prevent any deterioration of the status of the water body.
  - Objective b: To protect, enhance and restore each waterbody with the aim of achieving good ecological status.
  - Objective c: Protect and enhance each artificial or heavily modified water body with the aim of achieving good ecological potential.
  - Objective d: Aim to progressively reduce pollution from priority substances and aim to cease or phase out emissions, discharges and losses of priority hazardous substances.

#### 1.2.5 WFD Compliance Assessment Scope

- 1.2.5.1 The WFD compliance assessment to be undertaken as part of the EIA process will draw upon a number of other disciplines in determining the potential impact to the environmental objectives of the water bodies that have the potential to be impacted. These include hydrology and water quality, terrestrial and aquatic ecology, hydrogeology and the Habitats Regulations Assessment (HRA).
- 1.2.5.2 A staged approach will be adopted in undertaking the WFD compliance assessment in accordance with guidance from the EA on WFD assessment of



estuarine (transitional) and coastal waters, 'Clearing the Waters for All' (EA, 2023) and the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on the WFD Guidance (Planning Inspectorate, 2024).

- 1.2.5.3 The WFD compliance assessment generally involves three stages:
  - Screening: Excludes low-risk activities associated with the Offshore Transmission Infrastructure from further assessment.
  - Scoping: Identifies potentially at-risk receptors within the water bodies that require further assessment.
  - Impact Assessment: Evaluates potential impacts of project activities, identifies ways to avoid or reduce impacts, and assesses whether the activity may cause deterioration or prevent the water body from achieving 'good' status.
- 1.2.5.4 **Figure 1.1** presents a flowchart from the *Nationally Significant Infrastructure Projects: Advice on the WFD Guidance* (Planning Inspectorate, 2024), detailing the recommended process for achieving WFD compliance during the pre-application phase. This framework will inform the WFD compliance assessment for the Offshore Transmission Infrastructure as part of the EIA process.
- 1.2.5.5 An initial screening exercise has been conducted in this appendix to evaluate the potential impacts of the Offshore Transmission on the water environment. This screening assesses potential effects on WFD receptors, including:
  - hydromorphology;
  - biology habitats (both higher and lower sensitivity);
  - biology fish;
  - · water quality and quantity; and
  - protected areas.
- 1.2.5.6 The results of the screening exercise are presented in **Table 1.2**. Where a potential risk to a WFD receptor is identified, that receptor will be scoped into the detailed impact assessment. As shown in **Table 1.2**, all WFD receptors have been identified as at potential risk. Consequently, no receptors are proposed to be excluded from the detailed assessment.
- 1.2.5.7 This screening exercise helps define the scope of the detailed assessment, identifying key issues and providing an opportunity to engage with the EA (a key WFD consultee under the Planning Act 2008) to agree on the assessment's approach. Since there are no water bodies within 3 nm of the Scottish coast, consultation with the Scottish Environment Protection Agency (SEPA) is not anticipated.
- 1.2.5.8 The detailed WFD compliance assessment for the Offshore Transmission Infrastructure will evaluate potential impacts on water bodies, including cumulative effects. It will also propose mitigation measures to address identified risks and recommend enhancements where feasible.

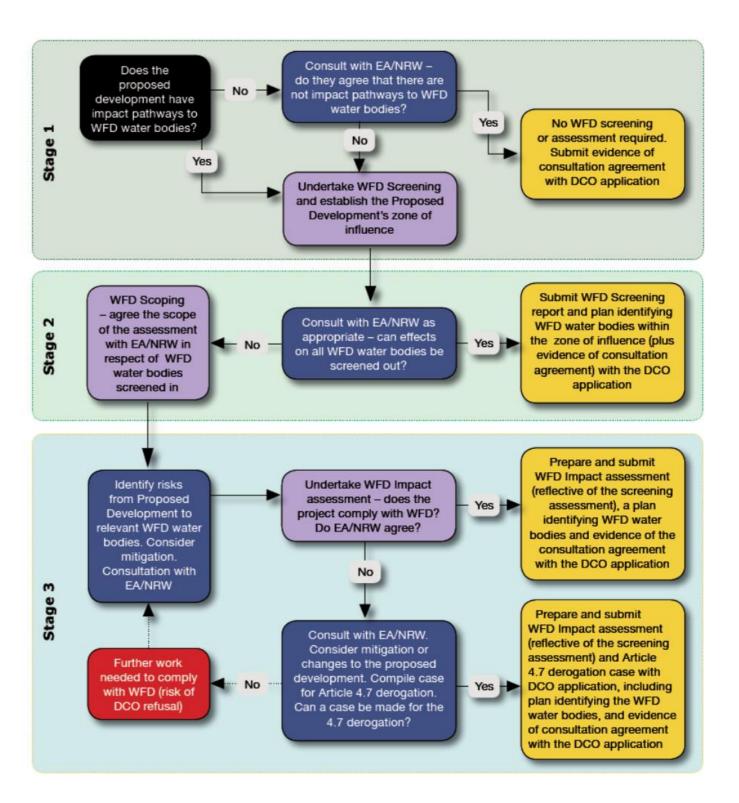


Figure 1.1: Flowchart Illustrating WFD Compliance Assessment Process (Planning Inspectorate, 2024)



## 1.3. Study Area

1.3.1.1 For this EIA Scoping Report, the WFD study area for the offshore environment will utilise the water quality study area defined in **part 2**, **section 6.11**. This will include the Offshore and Intertidal Scoping Boundaries (in English waters only) plus one spring tidal excursion (ABPmer, 2024) as determined by the physical processes study area (see **part 2**, **section 6.2**). The buffer is designed to cover the Zone of Influence (ZoI) for indirect impacts, such as increases in suspended sediment concentration (SSC) and potential changes in physical processes. Beyond this ZoI, any project-related effects on WFD receptors would be minimal. The WFD applies to waters out to 1 nm in England and 3 nm in Scotland for ecological status and out to 12 nm for chemical status, thus WFD does not apply to Offshore Transmission Infrastructure in Scottish waters.

#### 1.4. Baseline Environment

#### 1.4.1 WFD Study Area

- 1.4.1.1 The WFD study area shows the Offshore Transmission Infrastructure has potential to affect the ecological and/or chemical status of six transitional and coastal water bodies, as illustrated in **Figure 1.2**:
  - Lincolnshire (Water body ID GB640402492000);
  - Humber Lower (Water body ID GB530402609201);
  - Yorkshire North (Water body ID GB650401500004);
  - Yorkshire South (Water body ID GB640402491000);
  - Steeping (Water body ID GB530503016300); and
  - Wash Outer (Water body ID GB640523160000).
- 1.4.1.2 **Table 1.1** details the chemical and ecological status as well as key elements contributing to classification of each water body from the EA Catchment Data Explorer (EA, 2021).

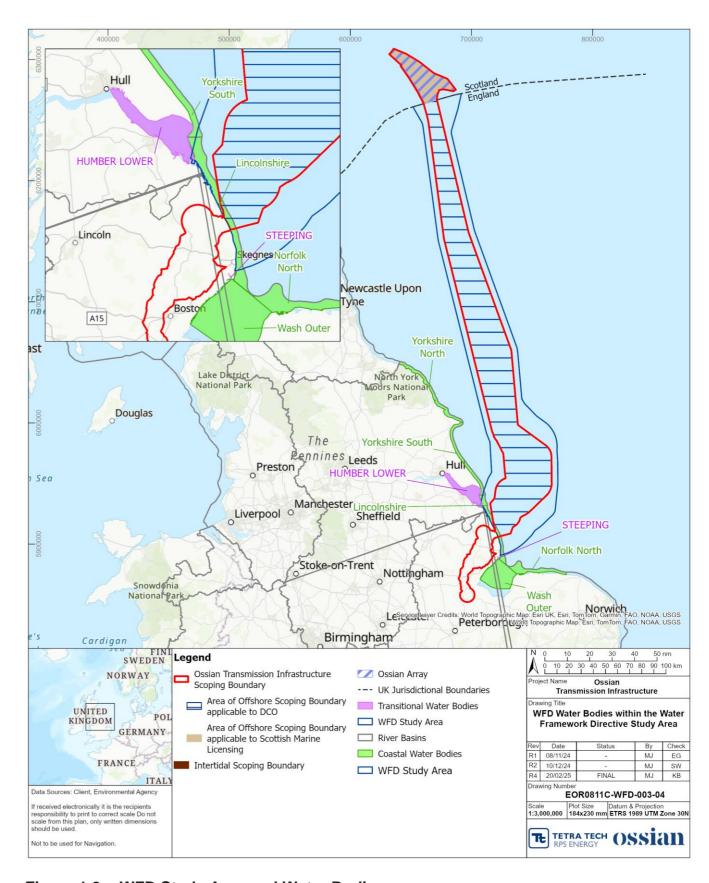


Figure 1.2: WFD Study Area and Water Bodies



Table 1.1: WFD Status Classification for Coastal, Transitional Water Bodies within the WFD Study Area, and Key Elements Driving Status Classification

Operational Catchment	Water Body	Water Body Type	Heavily Modified Water Body (HMWB)	Overall Ecological Status	Biological Quality Elements	Physio- chemical quality elements	Hydro morphological supporting elements	Supporting elements (surface water)
Lincolnshire Transitional and Coastal (TraC)	Lincolnshire ID GB640402492000	Coastal	Y	Moderate	Moderate	Moderate	-	Moderate
Humber Estuary TraC	Humber Lower ID GB530402609201	Transitional	Y	Moderate	Moderate	Moderate	-	Moderate
Yorkshire Coast	Yorkshire North ID GB650401500004	Coastal	Υ	Moderate	Good	High	-	Moderate
Yorkshire Coast	Yorkshire South ID GB640402491000	Coastal	Y	Moderate	Moderate	High	-	Moderate
The Wash TraC	Steeping ID GB530503016300	Transitional	Y	Moderate	-	Fail*	-	Moderate
The Wash TraC	Wash Outer ID GB640523160000	Coastal	N	Moderate	Moderate	Moderate	Supports Good	-

<sup>\*</sup> Rating based on the last assessment conducted.



#### 1.4.2 WFD Protected Areas

- 1.4.2.1 As per the guidance detailed in **section 1.2** above, the WFD assessment considers if WFD protected areas are at risk from the proposed activity. These include:
  - Special Area of Conservation (SACs);
  - Special Protection Areas (SPAs);
  - Shellfish waters;
  - Bathing waters;
  - Nutrient sensitive areas polluted or eutrophic; and
  - Nitrate Vulnerable Zones (NVZs) polluted or sensitive.
- 1.4.2.2 **Figure 1.3** shows the WFD protected areas within the WFD study area.
- 1.4.2.3 There are no Shellfish Protected Areas, no NVZs, and seven designated bathing water sites within WFD study area: Mablethorpe Town, Sutton-on-Sea, Huttoft and Marsh Yard, Anderby, Chapel St Leonards, Ingoldmells South, and Skegness.

#### **Special Areas of Conservation**

- 1.4.2.4 The Southern North Sea SAC overlaps with the WFD study area and is designated for the harbour porpoise *Phocoena phocoena*, a species listed under Annex II of the Habitats Directive.
- 1.4.2.5 Inner Dowsing, Race Bank and North Ridge SAC overlaps with the WFD study area and is designated for two Annex I habitats, 'Reefs' and 'Sandbanks which are slightly covered by seawater all the time'.
- 1.4.2.6 The Wash and North Norfolk Coast SAC overlaps with the WFD study area and is designated for seven Annex I habitats, and one Annex II species:
  - Sandbanks which are slightly covered by seawater all the time.
  - Mudflats and Sandflats not covered by seawater at low tide.
  - Large Shallow Inlets and Bays.
  - · Reefs.
  - Salicornia and other annuals colonizing mud and sand.
  - Atlantic Salt Meadows Glauco-Puccinellietalia maritimae.
  - Mediterranean and thermo-Atlantic halophilous scrubs Sarcocornetea fruticosi.
  - Harbour seal Phoca vitulina.
- 1.4.2.7 The Humber Estuary SAC is designated for two Annex I habitats: 'Estuaries' and 'Mudflats and sandflats not covered by seawater at low tide'.

#### **Special Protection Areas**

- 1.4.2.8 The Greater Wash SPA is classified for the protection of red-throated diver *Gavia* stellata, common scoter *Melanitta nigra*, and little gull *Hydrocoloeus minutus* during the non-breeding season, and for breeding sandwich tern *Sterna sandvicensis*, common tern *Sterna hirundo* and little tern *Sternula albifrons*.
- 1.4.2.9 The Humber Estuary SPA incorporates a number of Sites of Special Scientific Interest (SSSIs) and qualifies as an SPA due to the presence of ten Annex I

species, and ten migratory species in quantities exceeding 1% of their respective biogeographical populations, as required by Articles 4.1 and 4.2 of the Directive (79/409/EEC).

1.4.2.10 Gibraltar Point SPA is a designated site regularly supporting little tern and over winter the bar tailed godwit *Limosa lapponica* Additional qualifying species include sanderling *Calidris alba*, and grey plover *Pluvialis squatarola*.

#### 1.4.3 WFD Sensitive Habitats

- 1.4.3.1 Higher sensitivity WFD habitats are displayed in **Figure 1.4** below.
- 1.4.3.2 There are areas of saltmarsh overlapping with the northern section of the WFD study area. and along the section of coast within the Wash Outer (Water body ID GB640523160000).
- 1.4.3.3 Also present within the Wash Outer (Water body ID GB640523160000) and overlapping with the WFD study area are small areas of polychaete reefs and mussel beds.
- 1.4.3.4 Lower sensitivity WFD habitats are displayed in **Figure 1.5**. Throughout the WFD study area, there is primarily subtidal soft sediment, with areas of gravel and cobbles dominating the approach to the proposed Landfall location. There are also small areas of subtidal rocky reefs located within the boundary of the Offshore Transmission Infrastructure.

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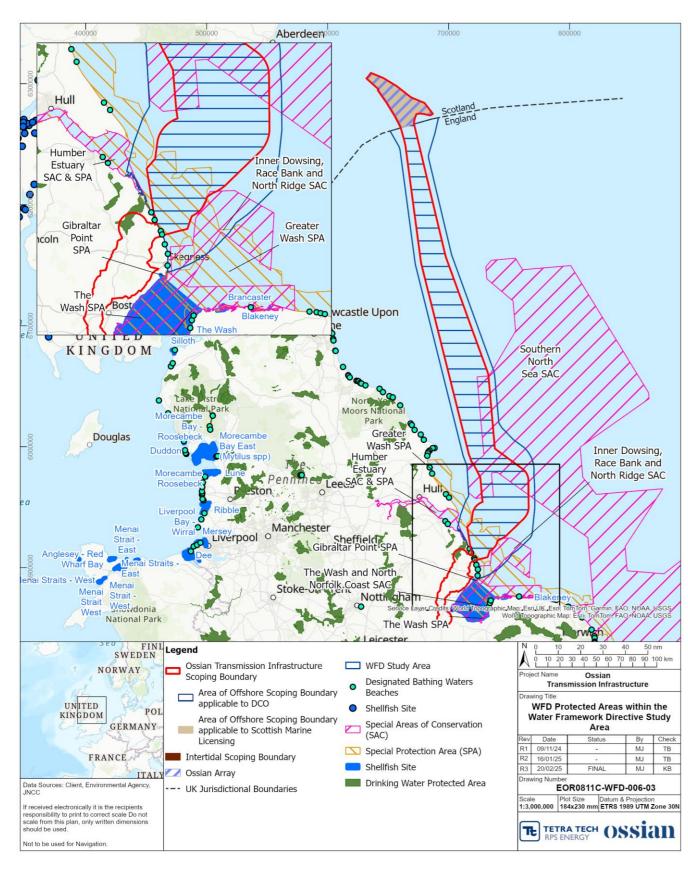


Figure 1.3: Protected Areas Within the WFD Study Area

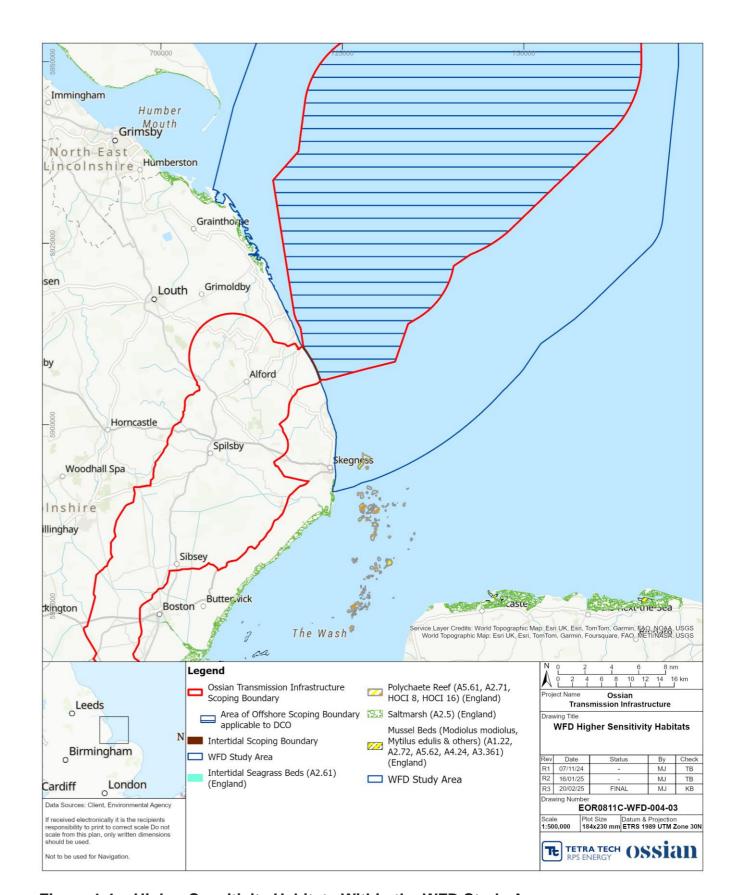


Figure 1.4: Higher Sensitivity Habitats Within the WFD Study Area



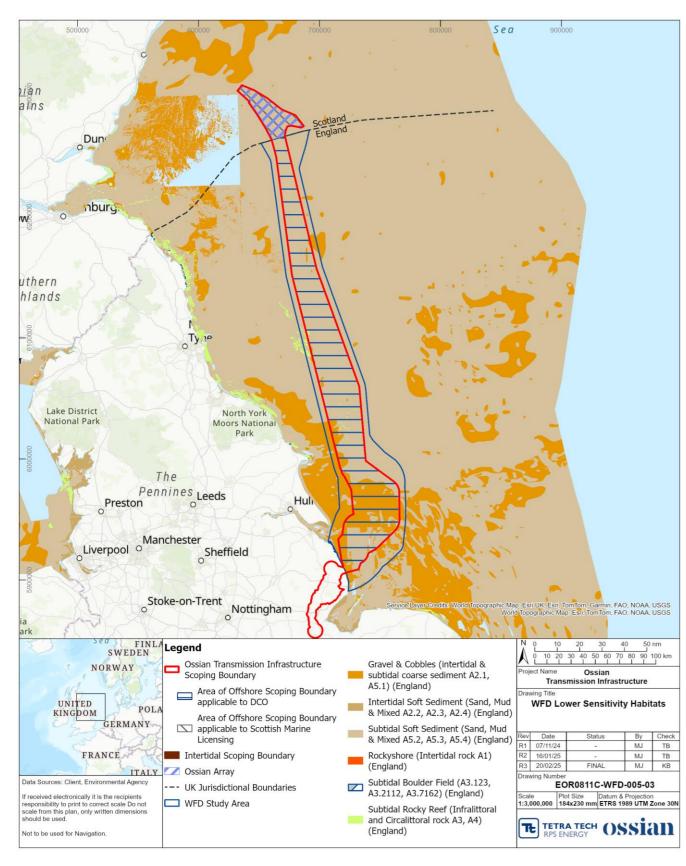


Figure 1.5: Lower Sensitivity Habitats Within the WFD Study Area



Table 1.2: Potential Risks to Receptors as Defined by the Environment Agency Guidance 'Clearing the Waters For All', as Required for a WFD Assessment (EA, 2023)

Receptor	Water Body	Potential Risk to Receptor	Description
Hydromorphology	Lincolnshire	Yes	Activities associated with the Offshore Transmission Infrastructure,
	Humber Lower		such as cable installation, may cause increased SSC and associated sediment deposition, thus posing a potential risk to the
	Yorkshire North		hydromorphology of the identified water bodies. The WFD Impact Assessment will further assess this impact.
	Yorkshire South		7.0303311011t Will further assess this impact.
	Steeping		
	Wash Outer		
Biology (habitats)	Lincolnshire	Yes	Biology (habitats) should be scoped into the WFD Impact Assessment
	Humber Lower		if the Offshore Transmission Infrastructure falls within 1% or more of a water body's area, is within 500 m of a higher sensitivity habitat, or falls
	Yorkshire North		within 1% or more of a lower sensitivity habitat.
	Yorkshire South		Both higher and lower WFD sensitivity habitats are located within each
	Steeping		of these water bodies which overlap with the WFD study area. Therefore, the WFD Impact Assessment will further assess this impact.
	Wash Outer		
Biology (fish)	Lincolnshire	Yes	Biology (fish) should be scoped into the WFD Impact Assessment if the
	Humber Lower		Offshore Transmission Infrastructure could affect fish within the vicinity of an estuary.
	Yorkshire North		There is potential for increased SSCs and associated deposition to
	Yorkshire South		have an effect on fish spawning habitats (through changes to sediment
	Steeping		composition, smothering of eggs etc.) and cause disturbance to diadromous fish species migration in the vicinity of the Humber Estuary.
	Wash Outer		Therefore, the WFD Impact Assessment will further assess this impact.
Water Quality	Lincolnshire	Yes	Water Quality should be scoped into the WFD Impact Assessment if
	Humber Lower		the Offshore Transmission Infrastructure could impact certain water quality characteristics (e.g., temperature, salinity), is located within a
	Yorkshire North		water body with previous moderate, poor or bad phytoplankton status or harmful algae, or if there is potential for sediment disturbance or
	Yorkshire South		release of chemicals.
	Steeping		



Receptor	Water Body	Potential Risk to Receptor	Description
	Wash Outer		The construction and decommissioning phases of the Offshore Transmission Infrastructure have the potential to lead to accidental spills/contaminant release which could adversely affect water quality, and/or altered surface water flows.  Cable construction/laying activities by vessels presents a risk of spills and contamination to coastal and transitional water bodies. Therefore, the WFD Impact Assessment will further assess this impact.
Protected Areas	Southern North Sea SAC	Yes	Protected Areas should be scoped into the WFD Impact Assessment if the Offshore Transmission Infrastructure is within 2 km of any WFD
	Inner Dowsing Race Bank and North Ridge SAC		protected area.
	The Wash and North Norfolk Coast SAC		Activities associated with the Offshore Transmission Infrastructure may
	Humber Estuary SAC		affect WFD protected areas within 2 km, for example through increased
	Greater Wash SPA		SSC and associated sediment deposition, as explained in the guidance, 'Clearing Waters for All' (EA, 2023). Therefore, the WFD
	Humber Estuary SPA		Impact Assessment will further assess this impact.
	Gibraltar Point SPA		
	Bathing Waters		
Invasive non-native species	Lincolnshire	Yes	Activities associated with the construction and decommissioning of the
(INNS) <sup>2</sup>	Humber Lower		Offshore Export Cable(s) may cause the spread of INNS, which could adversely affect the status of native protected or notable habitats and
	Yorkshire North		species and present a risk in the achievement of the environmental objectives of the water bodies affected. Therefore, the WFD Impact
	Yorkshire South		Assessment will further assess this impact.
	Steeping		
	Wash Outer		

<sup>&</sup>lt;sup>2</sup> Invasive Non-Native Species (INNS) (not listed as a receptor or a quality element but guidance states INNS 'should be considered' at the scoping stage (EA, 2023)) therefore it has been included as a WFD receptor in this table.



#### 1.5. Conclusion

- 1.5.1.1 There is the potential for the Offshore Transmission Infrastructure to impact the following water bodies:
  - Lincolnshire (Water body ID GB640402492000);
  - Humber Lower (Water body ID GB530402609201);
  - Yorkshire North (Water body ID GB650401500004);
  - Yorkshire South (Water body ID GB640402491000);
  - Steeping (Water body ID GB530503016300); and
  - Wash Outer (Water body ID GB640523160000).
- 1.5.1.2 The following WFD protected areas may also be at risk:
  - Southern North Sea SAC;
  - Inner Dowsing Race Bank and North Ridge SAC;
  - The Wash and North Norfolk Coast SAC;
  - Humber Estuary SAC;
  - Greater Wash SPA;
  - Humber Estuary SPA;
  - · Gibraltar Point SPA; and
  - Seven designated bathing water sites.
- 1.5.1.3 As described in **Table 1.2**, all WFD receptors have been identified to be potentially at risk, thus all WFD receptors are carried forward to the WFD impact assessment.

#### Next Steps

- 1.5.1.4 Potential risks to receptors associated with the Offshore Transmission Infrastructure on the coastal water bodies and transitional water bodies affected have been identified. The water bodies, protected areas and risks to receptors that have been initially screened in this WFD Screening will be further refined as the Offshore Transmission Infrastructure (seaward of MHWS) is further defined, in particular the location of the Offshore Transmission Infrastructure. This refinement will be undertaken in discussion and agreement with the EA through the evidence plan process. Following refinement, a scoping assessment will be undertaken to consider the assets and embedded mitigation. This will allow a full WFD compliance assessment to be completed, following the stages outlined in Figure 1.1, which will be presented in the PEIR and subsequent ES.
- 1.5.1.5 It is proposed that the WFD assessment will be presented as a technical appendix of the water quality chapter of the ES. The assessment of water quality impacts will focus on the impact on turbidity using spreadsheet-based models.





# OSSIAN OFFSHORE WIND FARM: TRANSMISSION INFRASTRUCTURE

**EIA SCOPING REPORT: APPENDIX 9.3** 



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# 1. APPENDIX 9.3: ONSHORE WATER FRAMEWORK DIRECTIVE SCREENING

#### 1.1. Introduction

- 1.1.1.1 This appendix of the EIA Scoping Report identifies the water bodies and receptors of relevance to the Onshore Transmission Infrastructure in relation to the Water Framework Directive (WFD). It considers the potential impacts arising from the construction, operation and maintenance, and decommissioning of the Onshore Transmission Infrastructure and those parts of the Landfall above Mean High Water Springs (MHWS) on the environmental objectives of the relevant water bodies (see below) that could be affected in the context of the WFD and domestic legislation (section 1.2).
- 1.1.1.2 The appendix provides screening to identify the activities, water bodies and receptors that need to be considered within a site-specific WFD compliance assessment that will be prepared for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS. It also outlines the approach that will be undertaken for the WFD compliance assessment.
- 1.1.1.3 The WFD establishes a legislative framework to prevent deterioration and protect surface water (including rivers, lakes, transitional waters, and coastal waters) and groundwater.
- 1.1.1.4 The remit of the Onshore WFD Screening will be landward of MHWS. Elements of the Ossian Transmission Infrastructure seaward of the MHWS are addressed within the Offshore WFD Screening (see Appendix 9.2 of the EIA Scoping Report).
- 1.1.1.5 This appendix provides a screening report to identify the resources that need to be considered within a site-specific WFD assessment that will be prepared for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS. Furthermore, this appendix also outlines the approach that will be taken for the WFD Compliance Assessment of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS. The approach to the assessment is included in **section 1.2.5**.

## 1.2. Policy and Legislation

- 1.2.1.1 Policy and legislation on renewable energy infrastructure is presented in **section 2** of this EIA Scoping Report. Policy and legislation specifically in relation to WFD is provided below.
- 1.2.1.2 Specific guidance used to inform the WFD assessment includes the following.
  - Nationally Significant Infrastructure Projects Advice on the Water Framework Directive (Planning Inspectorate, 2024).
  - Water Framework Directive Assessments: estuarine and coastal waters ("Clearing the Waters for All") (Environment Agency, 2023).

1.2.1.3 Whilst Environmental Impact Assessment (EIA) is an efficient mechanism to gather the relevant information for a WFD compliance assessment, this information needs to be interpreted in relation to the WFD. According to guidance from the Planning Inspectorate, impacts of biology, chemistry and hydromorphology need to be considered specifically in relation to WFD status classes and to be reported under a specific WFD section in any Environmental Statement (ES) or report produced or in a separate WFD compliance report (Planning Inspectorate, 2024).

#### 1.2.2 Legislative Context

- 1.2.2.1 The WFD (Council Directive 2000/60/EC establishing a framework for community action in the field of water policy) was adopted by the European Commission in 2000. The WFD was transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended, including by the Floods and Water (Amendment etc.) (EU Exit) Regulations 2019 and by Part 5 of the Environment Act 2021 (the 2017 WFD Regulations).
- 1.2.2.2 The WFD requires the prevention of deterioration and to protect, enhance, and restore all bodies of water. This means that new development should not adversely impact upon on the ability of a water body to achieve its environmental objectives.
- 1.2.2.3 The 2017 WFD Regulations provide for the implementation of the WFD through the designation of all surface waters (rivers, lakes, transitional (estuarine) and coastal waters) and groundwaters as water bodies and the establishment of targets to achieve their environmental objectives. The Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive guidance (Planning Inspectorate, 2024) summarises the requirements of the 2017 WFD Regulations in relation to Nationally Significant Infrastructure Project applications.
- 1.2.2.4 The WFD applies to WFD water bodies. The consideration of the proposals under the WFD will therefore apply to all surface water bodies and groundwater bodies that have the potential to be impacted by the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS.

### 1.2.3 Water Body Classification

1.2.3.1 The WFD outlines the quality elements that are used to assess the ecological and chemical status of a water body. These quality elements are generally biological (e.g. fish, invertebrates, macrophytes) or chemical (e.g. heavy metals, pesticides, nutrients). Environmental quality is classified into five categories: high, good, moderate, poor, and bad, which collectively determine a water body's status. Classifications indicate where environmental quality is good, where improvements may be needed, and specific areas for enhancement. Over time, these classifications facilitate improvement planning, trend analysis, and monitoring of the effectiveness of the measures implemented. Three primary status classifications are commonly reported: chemical, ecological, and quantitative.



- 1.2.3.2 Chemical status is assessed from compliance with environmental standards for chemicals that are priority substances and/or priority hazardous substances for surface water and groundwater bodies. These are known as 'Annex X' substances listed in the 2017 WFD Regulations. Chemical status is recorded as either 'good' or 'fail'. A water body's chemical status is determined by the lowest performing chemical (using the 'one-out-all-out' principle).
- 1.2.3.3 Ecological status classifications apply to surface water bodies only and may include up to four assessments.
  - An assessment of status indicated by a biological quality element such as fish, invertebrates, or algae. The presence of invasive species is also tested separately.
  - An assessment of compliance with environmental standards for supporting physiochemical conditions, such as dissolved oxygen, phosphorus, or ammonia.
  - An assessment of compliance with environmental standards (after the Environmental Quality Standards Directive) for specific main pollutants (known as 'Annex VIII' substances), such as zinc, cypermethrin or arsenic and priority substances (Annex X) both of which are monitored due to their impact on water quality.
  - For 'high' status determinations, additional tests are conducted to ensure hydromorphology is largely undisturbed.
- 1.2.3.4 Ecological status is recorded as high, good, moderate, poor or bad. 'High' represents 'largely undisturbed conditions'. Other classes indicate increasing deviation from undisturbed or reference conditions. This deviation is quantified as an Ecological Quality Ratio (EQR) which ranges from zero (bad status) to one (high status). As with chemical status, ecological status is determined by the lowest-performing component (one-out-all-out principle).
- 1.2.3.5 Biological status is a subset of ecological status focused solely on biological quality elements excluding physio-chemical, Annex VIII substances, and hydromorphology. The 'one-out-all-out' principle is used to determine the biological status classification.
- 1.2.3.6 Quantitative status measures the degree to which a body of groundwater is affected by direct and indirect abstractions (i.e. the available groundwater resource must not be exceeded by the long-term annual average rate of abstraction). Groundwater abstraction must also not cause failure of 'Good' ecological status in dependent surface waters.
- 1.2.3.7 Overall status is a composite measure that incorporates ecological status, chemical status and quantitative status dependent on the water body type. Thus, overall status evaluates all four elements under ecological status (biology, physiochemical, Annex VIII substances and hydromorphology) in addition to chemical status (priority substances) and quantitative status (for groundwater bodies).
- 1.2.3.8 The one-out-all-out rule is applied again, meaning a water body must achieve 'good' or better rating across ecological, chemical and quantitative assessments to be classified as having 'good' overall status.

#### 1.2.4 Water Body Objectives

- 1.2.4.1 There is no prescribed format or process for surface water and ground waterbodies WFD assessments. However the Environment Agency (EA) has produced guidance on Water Framework Directive Assessments (Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive 2024) that suggests it is suitable to follow the estuarine and coastal WFD guidance (Water Framework Directive assessment: estuarine and coastal waters 2023).
- 1.2.4.2 If the assessment finds, after consideration of the proposed mitigation, that the project may reduce the quality status of the water bodies or prevent them from reaching the required status, the WFD objectives are not met and the project should not proceed unless justified under Article 4.7 of the Directive. The four objectives of the WFD compliance assessment (Environment Agency, 2024) are as follows.
  - Objective 1: To prevent deterioration in the ecological status of the water body.
  - Objective 2: To prevent the introduction of impediment to the attainment of Good WFD status for the water body.
  - Objective 3: To ensure the attainment of the WFD objectives for the water body is not compromised.
  - Objective 4: To ensure the achievement of WFD objectives in other water bodies within the same catchment is not permanently excluded or compromised.

#### 1.2.5 WFD Compliance Assessment Scope

- 1.2.5.1 The WFD compliance assessment to be undertaken as part of the EIA process will draw upon a number of other disciplines in determining the potential impact to the environmental objectives of the water bodies that have the potential to be impacted. These will include hydrology and water quality, terrestrial and aquatic ecology, hydrogeology and the Habitat Regulations Assessment (HRA).
- 1.2.5.2 A staged approach will be adopted in undertaking the WFD compliance assessment in accordance with guidance from the EA on WFD assessment of estuarine (transitional) and coastal waters (Environment Agency, 2023) and the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Planning Inspectorate, 2024).
- 1.2.5.3 The three stage assessment to be used for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS is as follows.
  - Stage 1 WFD screening. To provide a baseline summary and highlight receptors and potential risks arising from the project.
  - Stage 2 WFD scoping. To further classify risks of the activities to receptors based on the baseline environment, and assess how embedded mitigation may limit impacts.
  - Stage 3 WFD impact assessment. A detailed assessment of water bodies and their quality elements that are likely to be affected by the identified risks of the project, which have not been screened and scoped out, and if relevant propose further mitigation measures.



- 1.2.5.4 A flow chart, taken from Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Planning Inspectorate, 2024) for assessing activities and projects for compliance with the WFD has been included in **Figure 1.2.1**. This provides an overview of the recommended process to address the WFD during the pre-application process. This process will be followed for the WFD compliance assessment to be undertaken as part of the EIA process for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS.
- 1.2.5.5 An initial screening exercise has been undertaken for this appendix to review the Onshore Scoping Boundary in terms of potential impact to the water environment. This initial screening highlights which identified WFD receptors may be affected by the identified impacts arising from the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS. This screening will assist in further defining the focus of the scoping and detailed assessments. It identifies potential issues and provides an opportunity to engage stakeholders through the Expert Topic Group (ETG) process where applicable to agree the scope of the detailed assessment.
- 1.2.5.6 The detailed WFD compliance assessment for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS will then examine the potential impact on water bodies (including cumulative impacts) and suggest mitigation measures and enhancements where appropriate. The WFD compliance assessment will also consider whether the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS will contribute to the delivery of the Anglian river basin district River Basin Management Plan (RBMP).

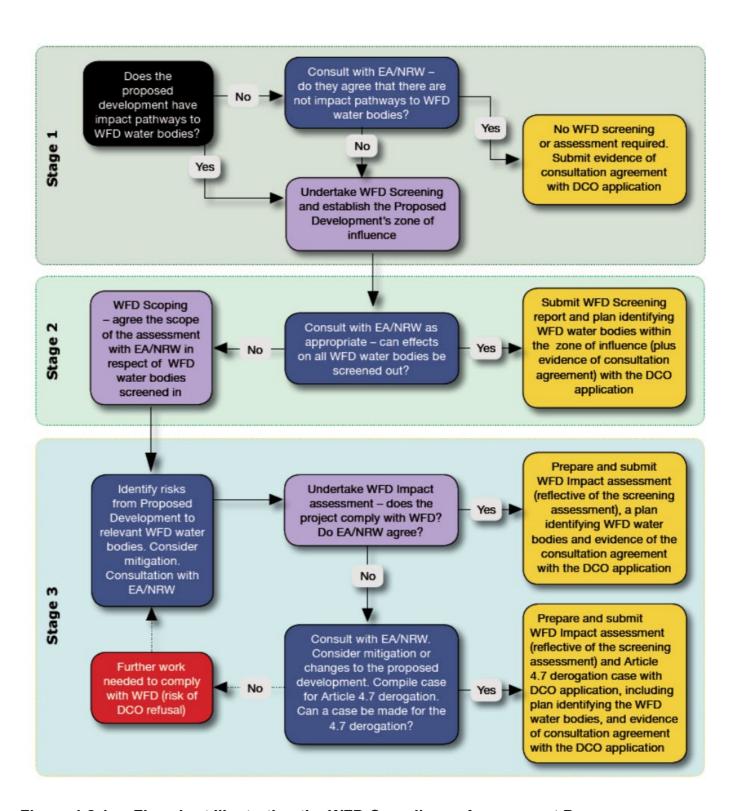


Figure 1.2.1: Flowchart Illustrating the WFD Compliance Assessment Process



#### **Data Sources**

1.2.5.7 Data sources to be used to inform the WFD Compliance Assessment are provided within **Table 1.2.1**.

Table 1.2.1: Data Sources

Name	Location	Date Accessed
Environment Agency Catchment Data Explorer	https://environment.data.gov.uk/catchment- planning/	28 November 2024
Department of Farming and Rural Affairs Magic Map	https://magic.defra.gov.uk/magicmap.aspx	28 November 2024
Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive	https://www.gov.uk/guidance/nationally- significant-infrastructure-projects-advice-on- the-water-framework-directive	28 November 2024

# 1.3. Context of the Onshore Transmission Infrastructure WFD Assessment

- 1.3.1.1 Whilst the design of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS has not been finalised for the Development Consent Order application, typical components that have the potential to impact on the WFD objectives are outlined below. These are for indicative purposes only to present an understanding of the nature of the works and how these have the potential to impact on the environmental objectives of the water bodies affected.
  - Landfall the area where the Offshore Export Cables are brought ashore and jointed to the Onshore Export Cables via the Transition Joint Bays. This term applies to the entire area between the Transition Joint Bays and Mean Low Water Springs and the infrastructure within this area.
  - HVDC Onshore Export Cables high voltage direct current cable(s) used for transferring electricity from the Landfall to the Onshore Converter Station(s).
  - Onshore Converter Stations would be required close to the National Grid substations to transform the electricity supplied by the Ossian Array from HVDC to HVAC for connection to the National Grid electricity transmission system. The Onshore Converter Stations required as part of the Ossian Transmission Infrastructure include the following.
    - One Onshore Converter Station in the vicinity of one of the two new Lincolnshire Connection Substations (referred to as LCS A) proposed as part of the Grimsby to Walpole project.
    - Up to two Weston Marsh Onshore Converter Stations in the vicinity of the new Weston Marsh Substation proposed as part of the Grimsby to Walpole project.

- HVAC Onshore Export Cables high voltage alternative current cable(s) used for transferring electricity from the Onshore Converter Station(s) to the National Grid Substation(s).
- Grid connection works (if required).
- Crossings where the cable route would need to cross features, such as environmentally sensitive areas, trenchless techniques will be considered. Such techniques may include HDD, direct pipe, micro-tunnelling or equivalent techniques.
- Temporary construction accesses these are particularly important if they cross watercourses and the method of construction to be used, e.g. clear span bridge verses temporary culverts.
- Construction compounds construction compounds will be required to facilitate construction of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS.
- Transition joint bays and link boxes.
- From the key components of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS outlined above, the activities which have the potential to impact the achievement of the WFD objectives will be identified for consideration within the WFD compliance assessment. An initial review of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS has identified the following activities that may potentially pose a detrimental risk to the water environment in the absence of mitigation.
- Topsoil stripping, excavation, and stockpiled earth (including reinstatement) for the Onshore Export Cables, watercourse crossings, Onshore Converter Stations and Landfall.
- Use of oils, chemicals, and cement.
- Construction and operation of temporary bridges and culverts to facilitate crossing
  of watercourses by machinery should this be required resulting in temporary
  impacts to the morphology of the channel and banks.
- Morphological impacts resulting from watercourse service crossings.
- · De-watering of trenches.
- Temporary abstractions from surface water/groundwater.
- Offshore cable installation and maintenance, methods including pre-lay ploughing, trenching or ietting.
- Landfall cable installation and maintenance landward of MHWS, trenchless or trenching methods are currently under consideration.

#### 1.4. Study Area

1.3.1.2

1.4.1.1 For the purposes of this initial WFD screening, water bodies that are within, intersect or which are hydrologically connected to the Onshore Scoping Boundary have been identified and considered as relevant water bodies for the different stages of the WFD compliance assessment.



#### 1.5. Baseline Environment

#### Water bodies within the Onshore Scoping Boundary

1.5.1.1 The water bodies that occur within the Onshore Scoping Boundary are shown in **Figure 1.5.1**. These water bodies will be refined through the ETG process once the location of Onshore Transmission Infrastructure and those parts of the Landfall above MHWS has been further refined. The impact of the different project components on these water bodies will be considered in the WFD compliance assessment which will be submitted as an appendix to the Preliminary Environmental Information Report (PEIR) and subsequent ES.

#### WFD Water Body Status Classification

- 1.5.1.2 The overall, ecological and chemical status of the surface water bodies listed in **Table 1.5.1** has been established through consultation with the EA Catchment Data Explorer (EA, 2024).
- 1.5.1.3 **Table 1.5.1** highlights the overall, ecological, and chemical status as well as the contributing elements to the status classification based on the 2018 baseline. The RBMP states that the 2018 water body classification is the baseline from which deterioration should be avoided. This table forms the basis of the initial screening from which activities associated with the different components of the grid connection are scoped into the detailed WFD compliance assessment.



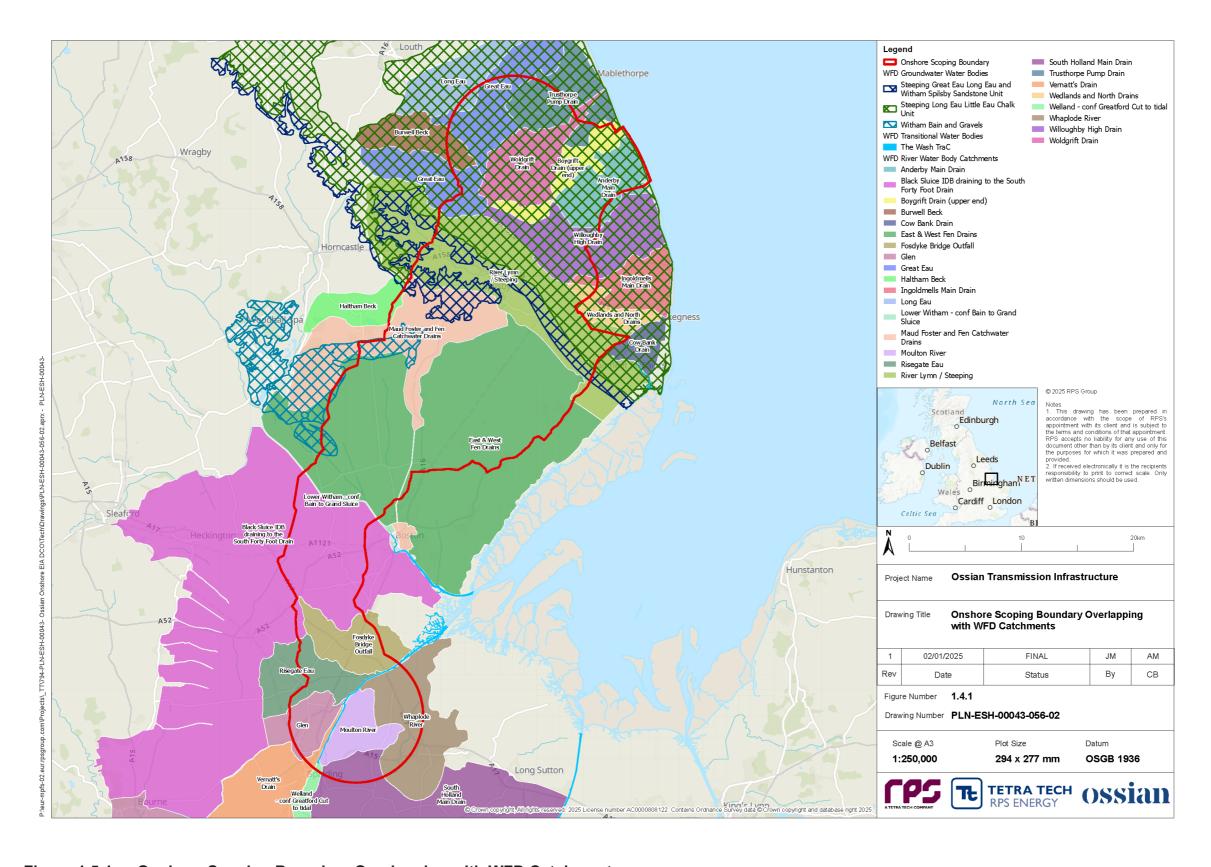


Figure 1.5.1: Onshore Scoping Boundary Overlapping with WFD Catchments

Ossian Transmission Infrastructure EIA Scoping Report: Appendix 9.3 February 2025



Table 1.5.1: WFD Status Classification for Surface Water (River and Transitional) and Groundwater Bodies that Overlap with the Onshore Scoping Boundary

Operational Catchment	Water Body Name ID	Water Body Type	Hydromor phology	Supporting Elements (Surface Water)	Other Pollutants	Specific Pollutant s	Physio- Chemical Quality Elements	Biological Quality Elements	Overall Ecological Status	Overall Chemical Status	Qualitative Groundwater Status	Quantitative Groundwater Status	Overall Ground water Status
Steeping Long Eau Little Eau Chalk Unit	South Lincolnshire Chalk Unit GB40501G40 1600	Groundwater	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Poor	Good	Poor
Steeping Great Eau Long Eau and Witham Spilsby Sandstone Unit	Spilsby Sandstone Unit GB40501G40 1700	Groundwater	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Good	Poor	Poor
Witham Bain and Gravels	Bain Sands and Gravels GB40503G00 0100	Groundwater	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Good	Good	Good
The Wash TraC	Welland GB53050310 0400	Transitional	heavily modified	Good	Does not require assessment	N/A	N/A	N/A	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Great Eau (upstream of South Thoresby) GB10502906 1620	River	not designated artificial or heavily modified	Supports good	Does not require assessment	Not assessed	High	Bad	Bad	Fail	N/A	N/A	N/A
Steeping and Eaus	Burwell Beck GB10502906 1630	River	not designated artificial or heavily modified	Supports good	Does not require assessment	Not assessed	High	Moderate	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Trusthorpe Pump Drain GB10502906 1641	River	artificial	Supports good	Does not require assessment	Not assessed	Moderate	Good	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Great Eau (downstream of South	River	artificial	Moderate	Does not require assessment	High	High	Poor	Poor	Fail	N/A	N/A	N/A



Operational Catchment	Water Body Name ID	Water Body Type	Hydromor phology	Supporting Elements (Surface Water)	Other Pollutants	Specific Pollutant s	Physio- Chemical Quality Elements	Biological Quality Elements	Overall Ecological Status	Overall Chemical Status	Qualitative Groundwater Status	Quantitative Groundwater Status	Overall Ground water Status
	Thoresby) GB10502906 1660												
Steeping and Eaus	Long Eau GB10502906 1670	River	heavily modified	Moderate	Does not require assessment	Not assessed	Moderate	Poor	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Ingoldmells Main Drain GB10502906 1700	River	artificial	Moderate	Does not require assessment	Not assessed	Good	Good	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Willoughby High Drain GB10502906 1710	River	artificial	Moderate	Does not require assessment	Not assessed	Moderate	Poor	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Boygrift Drain (upper end) GB10502906 1720	River	artificial	Moderate	Does not require assessment	Not assessed	Good	High	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Anderby Main Drain GB10502906 1730	River	artificial	Moderate	Does not require assessment	Not assessed	Good	Good	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Woldgrift Drain GB10502906 1750	River	artificial	Moderate	Does not require assessment	High	Moderate	Good	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Haltham Beck GB10503005 6260	River	heavily modified	Good	Does not require assessment	Not assessed	High	Moderate	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Wedlands and North Drains GB10503005 6441	River	heavily modified	Good	Does not require assessment	Not assessed	Moderate	N/A	Moderate	Fail	N/A	N/A	N/A
Steeping and Eaus	Cow Bank Drain	River	heavily modified	Good	Does not require assessment	Not assessed	Moderate	Moderate	Moderate	Fail	N/A	N/A	N/A



Operational Catchment	Water Body Name ID	Water Body Type	Hydromor phology	Supporting Elements (Surface Water)	Other Pollutants	Specific Pollutant s	Physio- Chemical Quality Elements	Biological Quality Elements	Overall Ecological Status	Overall Chemical Status	Qualitative Groundwater Status	Quantitative Groundwater Status	Overall Ground water Status
	GB10503005 6442												
Steeping and Eaus	River Lymn / Steeping GB10503006 2430	River	artificial	Moderate	Does not require assessment	High	Moderate	Moderate	Moderate	Fail	N/A	N/A	N/A
Glens	Glen GB10503105 0720	River	artificial	Moderate	Does not require assessment	High	Moderate	Good	Moderate	Fail	N/A	N/A	N/A
South Forty Foot Drain	Black Sluice Internal Drainage Board (IDB) draining to the South Forty Foot Drain GB20503005 1515	River	heavily modified	Moderate	Good	High	Moderate	Poor	Moderate	Fail	N/A	N/A	N/A
Fens East and West	East & West Fen Drains GB20503005 6405	River	artificial	Moderate	Does not require assessment	Not assessed	Good	Bad	Bad	Fail	N/A	N/A	N/A
Fens East and West	Maud Foster and Fen Catchwater Drains GB20503005 6465	River	heavily modified	Good	Does not require assessment	Not assessed	Moderate	Bad	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Lower Witham - conf Bain to Grand Sluice GB20503006 2426	River	heavily modified	Moderate	Good	High	Moderate	N/A	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Welland - conf Greatford Cut to tidal	River	heavily modified	Moderate	Good	High	Moderate	Good	Moderate	Fail	N/A	N/A	N/A



Operational Catchment	Water Body Name ID	Water Body Type	Hydromor phology	Supporting Elements (Surface Water)	Other Pollutants	Specific Pollutant s	Physio- Chemical Quality Elements	Biological Quality Elements	Overall Ecological Status	Overall Chemical Status	Qualitative Groundwater Status	Quantitative Groundwater Status	Overall Ground water Status
	GB20503105 0685												
Witham Lower	Vernatt's Drain GB20503105 0705	River	artificial	Good	Does not require assessment	High	Moderate	Good	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Moulton River GB20503105 0755	River	artificial	Good	Does not require assessment	Not assessed	Moderate	N/A	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Whaplode River GB20503105 5495	River	artificial	Good	Does not require assessment	High	Moderate	Bad	Moderate	Fail	N/A	N/A	N/A
Witham Lower	Risegate Eau GB20503105 5525	River	artificial	Good	Does not require assessment	Not assessed	Moderate	Poor	Poor	Fail	N/A	N/A	N/A
Witham Lower	Fosdyke Bridge Outfall GB20503105 5535	River	artificial	Good	Does not require assessment	High	Moderate	Bad	Bad	Fail	N/A	N/A	N/A
Nene Lower	South Holland Main Drain GB20503205 0405	River	artificial	Good	Does not require assessment	Not assessed	Good	Good	Good	Fail	N/A	N/A	N/A



#### WFD Protected Areas

- 1.5.1.4 A number of waters in the Onshore Scoping Boundary are protected under other existing EU legislation which applied directly or indirectly to the UK before December 2020 and have been retained in UK law as a form of domestic legislation known as 'retained EU legislation'. These water dependent protected areas require special protection due to their sensitivity to pollution or their particular economic, social or environmental importance. All of the areas requiring special protection have been identified by the EA, mapped and listed in a register of protected areas (required under Article 5 of the WFD). The register of protected areas includes the following.
  - Drinking Water Areas.
  - Economically Significant Waters (including shellfish waters).
  - Recreational Waters (including bathing waters).
  - Nutrient Sensitive Areas.
  - Special Protection Areas (SPAs).
  - Special Areas of Conservation (SACs).
- 1.5.1.5 Protected areas for the WFD are the areas of land and bodies of water that have specific uses which require special protection (relevant areas listed in **Table 1.5.2**). These include waters used for drinking water, bathing (recreational waters), commercial shellfish harvesting (economically significant), nutrient sensitive (both in terms of the Urban Wastewater Treatment Directive and the Nitrates Directive) and those that sustain the most precious wildlife species and habitats (European sites). These areas have legally binding objectives in place that protect those uses from potentially harmful activities and new developments.

Table 1.5.2: Protected Areas for the WFD within Water Bodies that Overlap with the Onshore Scoping Boundary

Water Body	Protected	Area Type				
Name and ID	Drinking Waters	Recreational Waters	Economically Significant Waters	Nutrient Sensitive Areas	SAC	SPA
South Lincolnshire Chalk Unit GB40501G401600	<b>√</b>	×	×	✓	✓	✓
Spilsby Sandstone Unit GB40501G401700	<b>√</b>	×	×	✓	✓	✓
Bain Sands and Gravels GB40503G000100	✓	×	×	✓	×	×

Water Body	Protected	Area Type				
Name and ID	Drinking Waters	Recreational Waters	Economically Significant Waters	Nutrient Sensitive Areas	SAC	SPA
Welland GB530503100400	×	×	✓	×	✓	✓
Great Eau (upstream of South Thoresby) GB105029061620	<b>√</b>	×	×	✓	×	×
Burwell Beck GB105029061630	✓	×	×	✓	×	×
Trusthorpe Pump Drain GB105029061641		×	×	×	√	✓
Great Eau (downstream of South Thoresby) GB105029061660	✓	×	×	<b>√</b>	✓	✓
Long Eau GB105029061670	✓	×	×	✓	×	×
Ingoldmells Main Drain GB105029061700	×	×	×	<b>√</b>	×	×
Willoughby High Drain GB105029061710	×	×	×	✓	×	×
Boygrift Drain (upper end) GB105029061720	×	×	×	✓	×	✓
Anderby Main Drain GB105029061730	×	×	×	×	×	×
Woldgrift Drain GB105029061750	×	×	×	✓	×	×
Haltham Beck GB105030056260	×	×	×	✓	×	×



Water Body	Protected	Area Type				
Name and ID	Drinking Waters	Recreational Waters	Economically Significant Waters	Nutrient Sensitive Areas	SAC	SPA
Wedlands and North Drains GB105030056441	×	×	×	×	×	×
Cow Bank Drain GB105030056442	×	×	×	×	✓	✓
River Lymn / Steeping GB105030062430	×	×	✓	<b>√</b>	<b>√</b>	√
Glen GB105031050720	×	×	✓	✓	×	×
Black Sluice IDB draining to the South Forty Foot Drain GB205030051515	×	x	✓	<b>√</b>	<b>√</b>	✓
East & West Fen Drains GB205030056405	×	×	✓	<b>√</b>	√	✓
Maud Foster and Fen Catchwater Drains GB205030056465	×	×	✓	✓	×	×
Lower Witham - conf Bain to Grand Sluice GB205030062426	×	×	✓	<b>√</b>	×	×
Welland - conf Greatford Cut to tidal GB205031050685	×	×	×	✓	×	×
Vernatt's Drain GB205031050705	×	×	✓	✓	✓	×
Moulton River GB205031050755	×	×	✓	×	×	×

Water Body Name and ID	Protected Area Type								
	Drinking Waters	Recreational Waters	Economically Significant Waters	Nutrient Sensitive Areas	SAC	SPA			
Whaplode River GB205031055495	×	×	✓	✓	✓	✓			
Risegate Eau GB205031055525	×	×	✓	✓					
Fosdyke Bridge Outfall GB205031055535	×	×	✓	<b>√</b>	<b>√</b>	<b>√</b>			
South Holland Main Drain GB205032050405	×	×	×	×	×	×			

#### 1.5.2 Screening of Potential Impacts on WFD Objectives

- 1.5.2.1 Due to the absence of a specific methodology for fluvial or groundwater WFD compliance assessments, the approach of ensuring activities will not 'cause or contribute to deterioration of status' or 'jeopardise the water body achieving good status', should be taken. Guidance for assessing activities and projects in estuarine and coastal waters (EA, 2023) for compliance with the WFD identifies some activities may be screened out within WFD compliance assessments if they are considered 'low risk'. A key activity for the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS is water course crossings. At this stage of design the number and nature of the crossings is not known and therefore these crossings cannot be screened out. On this basis the potential for impact on the hydromorphological supporting conditions, biology and physico-chemical elements of ecological status cannot be screened out. Should the design confirm that all crossings will be undertaken using trenchless techniques avoiding the potential physical changes to the water body, then this screening in can be revisited.
- 1.5.2.2 **Table 1.5.3** and **Table 1.5.4** summarise the potential impacts associated with the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS on the surface water bodies and groundwater bodies affected. The detailed WFD compliance assessment will be based on these activities and water bodies.



Table 1.5.3: Potential Impacts of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS on Surface and Transitional Water Bodies

	Impacts						
Water Bodies	An increase of contaminated runoff suspended sediment during construction and operation and maintenance	Impact on habitats during construction	Long term habitat loss	Increased risk of invasive species being introduced during construction	Impacts on hydro morphology during construction and operation and maintenance	Impact of contaminated runoff on water quality during construction	Impact of increased surface water runoff on waterbodies during construction and operation and maintenance
Welland GB530503100400	✓	✓	✓	✓	✓	✓	✓
Great Eau GB105029061620	✓	✓	✓	✓	✓	✓	✓
Burwell Beck GB105029061630	✓	✓	✓	✓	✓	✓	✓
Trusthorpe Pump Drain GB105029061641	✓	✓	✓	✓	✓	✓	✓
Great Eau GB105029061660	✓	✓	✓	✓	✓	✓	✓
Long Eau GB105029061670	✓	✓	✓	✓	✓	✓	✓
Ingoldmells Main Drain GB105029061700	✓	✓	✓	<b>√</b>	✓	✓	✓
Willoughby High Drain GB105029061710	✓	✓	✓	✓	✓	✓	✓
Boygrift Drain (upper end) GB105029061720	✓	✓	✓	✓	✓	✓	✓
Anderby Main Drain GB105029061730	✓	✓	✓	✓	✓	✓	✓
Woldgrift Drain GB105029061750	✓	✓	✓	✓	✓	✓	✓
Haltham Beck GB105030056260	✓	✓	✓	✓	✓	✓	✓
Wedlands and North Drains GB105030056441	✓	✓	✓	✓	✓	✓	✓



	Impacts						
Water Bodies	An increase of contaminated runoff suspended sediment during construction and operation and maintenance	Impact on habitats during construction	Long term habitat loss	Increased risk of invasive species being introduced during construction	Impacts on hydro morphology during construction and operation and maintenance	Impact of contaminated runoff on water quality during construction	Impact of increased surface water runoff on waterbodies during construction and operation and maintenance
Cow Bank Drain GB105030056442	✓	✓	✓	✓	✓	✓	✓
River Lymn / Steeping GB105030062430	✓	✓	✓	✓	✓	✓	✓
Glen GB105031050720	✓	✓	✓	✓	✓	✓	✓
Black Sluice IDB draining to the South Forty Foot Drain GB205030051515	✓	✓	✓	✓	✓	✓	✓
East & West Fen Drains GB205030056405	✓	✓	✓	✓	✓	✓	✓
Maud Foster and Fen Catchwater Drains GB205030056465	✓	✓	<b>√</b>	✓	✓	✓	✓
Lower Witham - conf Bain to Grand Sluice GB205030062426	✓	<b>√</b>	✓	✓	✓	✓	✓
Welland - conf Greatford Cut to tidal GB205031050685	✓	<b>√</b>	✓	✓	✓	✓	✓
Vernatt's Drain GB205031050705	✓	<b>√</b>	✓	✓	✓	✓	√
Moulton River GB205031050755	✓	<b>√</b>	✓	✓	✓	✓	✓
Whaplode River GB205031055495	✓	<b>√</b>	✓	✓	✓	✓	✓
Risegate Eau GB205031055525	✓	✓	✓	✓	✓	✓	✓
Fosdyke Bridge Outfall GB205031055535	✓	✓	✓	✓	✓	✓	✓

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Impacts							
Water Bodies	An increase of contaminated runoff suspended sediment during construction and operation and maintenance	Impact on habitats during construction	Long term habitat loss	Increased risk of invasive species being introduced during construction	Impacts on hydro morphology during construction and operation and maintenance	Impact of contaminated runoff on water quality during construction	Impact of increased surface water runoff on waterbodies during construction and operation and maintenance
South Holland Main Drain GB205032050405	✓	✓	✓	✓	✓	✓	✓

Table 1.5.4: Potential Impacts of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS on Groundwater Bodies

Impacts								
Water bodies	Deterioration of groundwater quality in ground water bodies and disturbance of existing contamination	Reduction in WFD status	Deterioration in groundwater quality and quantity of the ground water bodies including at Source Protection Zones	Reduction in quantity and deterioration in quality of surface waters fed by groundwater	Thermal impacts from the underground cables on groundwater quality			
South Lincolnshire Chalk Unit GB40501G401600	✓	✓	✓	✓	✓			
Spilsby Sandstone Unit GB40501G401700	✓	✓	✓	✓	✓			
Bain Sands and Gravels GB40503G000100	✓	✓	✓	✓	✓			



#### 1.5.3 Next steps

- 1.5.3.1 Potential impacts associated with the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS on the surface water bodies and groundwater bodies affected have been identified.
- 1.5.3.2 The water bodies and impacts that have been initially screened in this WFD screening stage will be further refined as the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS is further defined, in particular the location of the Onshore Transmission Infrastructure and those parts of the Landfall above MHWS. This refinement will be undertaken in discussion and agreement with the EA through the evidence plan process.
- 1.5.3.3 As the scheme is further refined, crossings of watercourses will be appraised based upon the crossing methodologies proposed and the context of their position within the wider WFD water body catchment.
- 1.5.3.4 Following refinement, a scoping assessment will be undertaken to consider the assets and embedded mitigation. This will allow a full WFD compliance assessment to be completed, following the stages outlined in **Figure 1.2.1** will be presented in the PEIR and subsequent ES.