Scoping Opinion – Further Information

Marine Works (Environmental Impact Assessment) Regulations 2007 ("the Regulations")

Title: Ossian Offshore Wind Farm – Export Cable Corridor

Applicant: Ossian Offshore Wind Farm Ltd

MMO Reference: DCO/2024/00015

Contents

1 Physical Processes

1.1 It is proposed that the Environmental Impact Assessment (EIA) scope for physical processes will encompass:

- Increased suspended sediment concentrations and associated deposition;
- Impacts to seabed morphology;
- Impacts to sediment transport pathways due to the presence of the infrastructure;
- Impacts to sediment transport and sediment transport pathways at Landfall.

1.2 The MMO believe the potential impacts of the project on the physical environment are covered by these broad themes.

1.3 It is not made clear in this scoping report what physical features/processes are considered a pathway or a receptor. The MMO acknowledge that this can be complex for physical processes as some features can be considered as both. Nonetheless, The MMO think this is worth addressing in the EIA to maximise clarity.

1.4 The applicant has scoped out 'Temperature increase during the operation of the cable due to resistance in the cable'. The MMO believe this to be reasonable given the unlikelihood of it having anything other than a negligibly small impact on the physical environment.

1.5 The MMO consider that the approach to constructing the scoping assessment looks reasonable. The pre-existing evidence base referred to in Table 6.2.2 of report part 2 seems comprehensive.

1.6 The description of the site-specific work that will be undertaken in section 6.2.4.3 remains vague - referring only to geophysical surveys. Considering this, it is not possible for the MMO to comment on the suitability of the site-specific surveys at this stage.

2 Benthic Subtidal and Intertidal Ecology

2.1 The MMO consider that all relevant impacts have been scoped in for assessment and are summarised in Table 6.3.5 of the scoping report.

2.2 Section 6.3.7 of the scoping report lists those impacts that have been scoped out of the assessment and provides adequate justification for doing so. Impacts to benthic receptors from thermal emissions of the buried cable have been scoped out. The MMO agree with the justification for scoping out the impact to benthic receptors from thermal emissions as the anticipated cable burial of between 1-3 metres (m) will dissipate any heat produced by electricity conducting within the cable and therefore, remove the potential for temperature changes at the seabed (where the majority of benthic infaunal species occur).

2.3 The MMO also agree with the scoping out of impacts associated with accidental release of pollutants as the adopted mitigation measures will reduce the likelihood of accidental release and associated plans will act to limit the magnitude of impact through early

detection.

2.4 The MMO agree with the Applicant's decision to scope out the impact of colonisation of hard structures during the construction phase of the Project and note that this impact is scoped in for the operational phase of the Project.

2.5 Similarly, the MMO agree with the decision to scope out the impacts from temporary habitat loss and disturbance and increased suspended solids concentration (and associated deposition) from the operational and maintenance phase of the Project.

2.6 The MMO believe the approach of the scoping assessment and to data gathering is appropriate. Furthermore, the MMO note that the Applicant is planning to conduct a benthic survey to collect sediment samples and seabed imagery in May 2025. The results of this survey will be reported accordingly and will feed into the cable installation plan. This survey design was discussed with MMO and Cefas during a meeting held on 11 of March 2025.

2.7 The MMO defer to the relevant Statutory Nature Conservation Body (SNCB) regarding the Marine Conservation Zone assessment and Habitat Regulations Assessment with regards to potential impacts because of the Project on protected species and/or features within designated sites. The cable route appears to coincide with areas of seabed where the long-lived bivalve species *Arctica islandica* (the ocean quahog) is known to occur and there is a potential for impact to this species from cable laying e.g. damage from collision with machinery or exposure to the seabed surface from sediment disturbance. I recommend that the seabed imagery acquired during the seabed characterisation survey is assessed to determine the presence and extent of *A. islandica* and an assessment made regarding the potential impact to this sensitive species.

3 Shellfish Ecology

3.1 The MMO agree with the criteria scoped in and out for Fish and Shellfish Ecology (section 6.4.6) and Commercial Fisheries (section 6.7.4.)

3.2 A desktop review of constraints to routing the windfarm assets from the Ossian Array to landfall in Lincolnshire was undertaken to identify those topics most likely to post constraints to cable installation, operation, maintenance and decommissioning. Potential impacts for shellfish and shellfishes have been described. These include seabed disturbances, temporary and permanent loss/disruption to the habitat, increase in suspended sediment concentration, electromagnetic fields (EMFs), contaminant release and interference with fishermen. Overlaps with the offshore Scoping boundary of the Holderness Offshore Marine Conservation Zone are identified.

3.3 Disturbance/remobilisation of sediment-bound contaminants will have more impact on the soft sandier substrates such as near the Farn Deeps areas within the proposed area, than coarser substrates and therefore mitigation may wish to consider zonal categorisations based on larger scale substrate characteristics.

3.4 The MMO have some recommendations for future reporting regarding the Fisheries Liaison and Co-existence Plan. It is important that issues raised with the Fisheries Liaison officers are reported and reviewed alongside any other ongoing monitoring

reporting to ensure any fisheries impacts are noted and examined. It would be informative to document any comments raised, including but not limited to: reported changes in location/ access to fisheries, trends in landings, changes in sex ratio trends or size proportions in the landed catch, and any notification of displaced effort impacting other fisheries. As sessile organisms are identified as the most potentially impacted species (i.e. berried or overwintering shellfish such as crab, lobster and *nephrops spp.*) fisher feedback during the construction or operation would be of benefit to evidence no significant impact.

3.5 There is limited evidence of impact (both negative or positive) from windfarms and cables on shellfish biology (Gill *et al.*, 2025), however there will be an impact on fisheries through the exclusion zones and restrictions of the physical footprint of the windfarm. Any reporting, as noted in paragraph 16, included in monitoring considerations over a longer time frame such as the period of construction, operation and decommissioning, will strengthen evidence for shellfish interactions and co-existence. This evidence will further inform any Environmental Statement predictions and success of mitigations.

3.6 The MMO are in agreement with the impacts scoped out and the justifications stated for shellfish receptors which includes the scoping out of transboundary effects as there are no pathways or impacts expected with another European Economic Area (EEA) due to no proximity to transboundary locations.

3.7 The MMO believe that the applicant's approach to scoping seems appropriate. The scoping report lists '*extensive contemporary and historic information is available regarding fish and shellfish ecology in the North Sea. The baseline characterisation …. has been based on sources, which include scientific literature and EIA Scoping Reports and Environmental Statements from other offshore wind farms in the fish and shellfish ecology study area*' (document cited in paragraph 6. Also listed are recent data sources for use including 10 years of recent MMO landings data, fisher and stakeholder consultations and appropriate literature and other scoping and EIA reporting. Proposed further data sources include VMS UK and non-UK and any published data and relevant reports.

3.8 Commercial shellfish landings by International Council for the Exploration of the Sea (ICES) rectangle dominate the landings value for fisheries data with crabs and lobsters contributing the highest value, followed by *nephrops spp.* and scallop (assumed here to be *Pecten maximus)*. Commercial shellfish species listing includes '*crabs, lobsters, scallops, Norway lobster (Nephrops norvegicus) and whelks (Buccinidae spp)*'. These species are deemed to be of high vulnerability, medium sensitivity, with medium to high recoverability and of significant regional importance within the North Sea. Mitigation should be considered through consultation with fishing industry, stakeholders and regulatory bodies as per paragraph 16.

3.9 When scallops are discussed, especially in the commercial fisheries context, the Applicant should always clarify if data is attributed to solely King scallop *(Pecten maximus*) or whether there is inclusion of Queen scallop (*Aequipecten opercularis*) in the data.

3.10 Table 6.4.3.20 dentifies the key fish and shellfish receptors which have the potential to be affected by the project. These do not include any of the main shellfish species

identified such as lobster, edible crab, *nephrops spp.*, Whelk, Scallop and Cockle.

3.11 Fish Nursery and spawning maps referenced only one present shellfish species: *Nephrops norwegicus*. Modest data exist relating to the existence of specific spawning grounds or spawning migrations for the majority of commercially exploited shellfish species in UK waters. Many shellfish are not explicitly migratory therefore locations of fished stocks may serve as a useful proxy for spawning grounds for a majority of shellfish species, particularly the more sedentary. Therefore indicative spawning and nursing maps can be inferred within predominant fished ICES rectangles.

3.12 Some ontogenetic migration occurs in brown crab in the North Sea, with older females moving to deeper water and southward drive of larval crabs along the East coast of the Southern North Sea. Further maps of fishery units and distributions can be sourced: Cefas stock assessments Edible crab and Lobster(2023), ICES WGNEPS (2023) etc), Scallop in English waters (2023), Eaton, 2003. Table 6.4.5: Summary of Key Data Sources for Fish and Shellfish Ecology could include these sources.

3.13 Section 6.7.4.3 notes that '*extensive consultation with relevant stakeholders within the commercial fisheries sector will be undertaken to ensure to help inform the commercial fisheries baseline … particularly to capture details for those vessels not included within VMS or AIS datasets (i.e. <10m vessels)*' and all relevant shellfish and fisheries receptors and potential impacts within the footprint of the works are considered during the EIA process. Please note comment 3.4 and 3.5 where consultation and fisheries liaison throughout the lifespan of the project, such as output from the measures listed in paragraph 24 should be included in the reporting of monitoring outcomes throughout the project operations.

3.14 The MMO agree with the mitigation measures noted for commercial fisheries (Section 6.7.5) namely:

- Ongoing consultation with the fishing industry and appointment of a Fisheries Liaison Officer (FLO), who will produce a Commercial Fisheries Coexistence Plan (CFCP) and liaise with stakeholders as appropriate.
- The development of, and adherence to, a Fisheries Management and Mitigation Strategy (FMMS) within which mitigation measures will be proposed to reduce any likely significant effects on commercial fisheries.
- Adherence to good practice guidance with regards to fisheries liaison (e.g. Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW), 2014, 2015).

3.15 Impacts of the Offshore Transmission Infrastructure on fish and shellfish receptors are presented in part 2, section 6.4 of this EIA Scoping Report. These involve the following impacts: temporary habitat loss and disturbance, underwater sound, increased suspended sediment concentrations (SSCs) and associated sediment deposition, long term habitat loss, release of sediment bound contaminants, colonisation of hard structures, and effects to fish and shellfish ecology arising from EMFs from subsea cabling.

4 Fish Ecology

4.1 The MMO note that he Applicant has defined an appropriately large study area for the fish ecology assessment and carried out a desk-based assessment to characterize the baseline environment for fish ecology receptors which is appropriate.

4.2 The MMO note that the Applicant has identified a number of species which will be present in the area. The demersal species identified include sandeel (*Ammodytidae spp*.), Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*), whiting (*Merlangius merlangus*), lemon sole (*Microstomus kitt*), ling (*Molva molva*), saithe (*Pollachius virens*) and plaice (*Pleuronectes platessa*). Pelagic species identified include Atlantic herring (*Clupea harengus*), sprat (*Sprattus sprattus*), and mackerel (*Scomber scombrus*). Elasmobranch species identified include spotted ray (*Raja montagui*), thornback ray (*Raja clavata*), tope shark (*Galeorhinus galeus*), small-spotted catshark (*Scyliorhinus canicula*), spurdog (*Squalus acanthias*), thorny skate (*Amblyraja radiata*) and cuckoo ray (*Leucoraja naevus*). The Applicant has also listed diadromous and catadromous fish which are potentially present in the fish and shellfish ecology study area, including Twaite shad (*Alosa fallax*), Allis shad (*Alosa alosa*), sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), Atlantic salmon (*Salmo salar*), European eel (*Anguilla Anguilla*) and European smelt (Osmerus eperlanus). Timing of the migratory periods for these migratory species has also been presented in Table 6.4.1

4.3 A number of designated sites with fish as qualifying features have also been identified and are outlined in Table 6.4.4. These include the River Tweed Special Area of Conservation (SAC) and Site of Scientific Interest (SSSI), the North East of Farnes Deep Highly Protected Marine Area, the Humber Estuary and Tweed Estuary SACs, and the Humber Estuary Ramsar site. The MMO note that this is appropriate.

4.4 The MMO note that the Applicant appears to have consulted a range of appropriate sources including Coull *et al*. (1998) and Ellis *et al*. (2012) in order to identify spawning and nursery grounds within the study area. Table 6.4.5 provides a summary of the key data sources used to inform the scoping report.

4.5 The MMO note that the Applicant does not outline in the report how they intend to characterise important spawning habitat and spawning activity at the herring spawning ground at Flamborough Head. As the Ossian export cable corridor (ECC) runs directly through the heart of the spawning ground the MMO would have expected the Applicant's approach to be more detailed. The Applicant should collect site-specific benthic grab samples and carry out particle size analysis (PSA) to determine the suitability of the sediment within the ECC to support herring spawning habitat. The Applicant should then follow the MarineSpace 'heat' mapping method (Kyle-Henney *et al*., 2024) for determining the importance of herring spawning habitat within the ECC. The MarineSpace 'heat' mapping method uses a suite of data, scored based on how well the data reflects herring spawning activity, to produce a heat map of potential herring spawning habitat based on the confidence of data. PSA data should be categorised as 'Preferred', 'Marginal' and 'Unsuitable' based on the classifications described in Reach *et al.* (2013). The Applicant must include a herring potential spawning habitat 'heat' map in order to inform their impact assessment for spawning herring. Herring larval data for the Flamborough Head spawning Ground (the Banks

spawning stock) should also be included in the characterisation of the spawning ground and the Applicant should use a minimum of 10 years of International Herring Larvae Survey (IHLS) data to inform the assessment. These requirements can be discussed further at the Expert Topic Group meeting scheduled for 9 April 2025.

4.6 The MMO also recommend the same approach should be used for determining habitat suitability for sandeel across the fish ecology study area, based on the methods described by Latto *et al.* (2013) and Reach *et al*., (2024). This is consistent with the approach recommended to other offshore wind developments of a similar size and scale.

4.7 The MMO are content with the fish ecology impact pathways which the Applicant has identified. These are defined as:

- Temporary habitat loss and disturbance of habitats,
- Underwater sound from pre-construction site investigation surveys and removal of infrastructure,
- Increased suspended sediment concentrations (SSCs) and associated sediment deposition,
- Long-term habitat loss,
- Release of sediment-bound contaminants,
- Colonisation of hard structures,
- Electromagnetic Fields (EMF) from subsea electrical cabling.

4.8 The Applicant should note for future assessments that colonisation of hard structures *results* from the introduction of artificial structures into the marine environment during the construction phase of the project. Therefore, colonisation of artificial structures should be considered an *effect*, rather than an *impact*. To this regard, the introduction of artificial structures should be the direct impact from the project works which is scoped into the assessments, with colonisation of said structures by marine biota being noted as one of several subsequent effects (alongside localised increases in biodiversity and the aggregation of fish in the vicinity of structures, as correctly identified by the Applicants). The MMO support that the impact of introduction of artificial structures (and subsequent effect of colonisation of artificial structures) has been scoped into further assessments.

4.9 The MMO note that Applicant has scoped out a number of possible pathways for impacts to fish ecology receptors and provided justification for scoping these impacts out in Table 6.3.6. The MMO are content with this. The impacts scoped out are:

- Accidental release of pollutants – this will be managed through an Environmental Management Plan according to industry best practices.
- Underwater sound from Unexploded Ordinance (UXO) clearance – the Applicant expects that this will be covered by separate Marine Licence.
- All impacts on basking shark - The Applicant states that there have only been four sightings of basking shark in the fish ecology study area within the last 10 years and has scoped impacts to basking out due to due to a scarcity of the species.
- Underwater sound from vessels.
- Long-term habitat loss (for species with fully pelagic lifecycles).

4.10 The MMO note that the Applicant has not defined which pelagic fish species have been

scoped out of the long-term habitat loss assessment. Whilst the MMO are generally in agreement that loss of seabed habitat is unlikely to significantly impact pelagic fish species, Atlantic herring should still be included in the assessment as herring are demersal spawners which rely on specific substrates to provide spawning habitat. Given that the Ossian ECC runs directly through the Banks herring spawning ground at Flamborough Head, a suitably detailed assessment of impacts to herring from habitat loss must be provided.

4.11 The MMO note that from the project description, it appears that there are no Offshore Substation Platforms (OSPs), booster or other substations being installed along the cable route in English waters. Given the length of the ECC, it would be helpful if the Applicant could please confirm that this is the case, as any OSP or offshore booster station would likely require a piled foundation. Given the cable route through the Banks herring spawning ground at Flamborough Head, could the Applicant definitely confirm that no infrastructure which might require piling works is included within the scope of this application.

4.12 The MMO note that the Applicant has indicated that they intent to carry out a detailed qualitative assessment to inform the assessment of effects arising from sound on sensitive fish receptors. The MMO recommend that the Applicant refer to the Sound Exposure Guidelines by Popper *et al.,* (2014) to inform this assessment, as Popper *et al.,* (2014) provides a clear categorisation of fish species according to their hearing sensitivity. The MMO support the Applicant's approach and recommend that fish should be assessed/modelled as stationary rather than fleeing receptors for the following reasons:

- The MMO know that fish will respond to noise and vibration, through observed reactions including schooling more closely; moving to the bottom of the water column; swimming away, and burying in substrate (Popper *et al.,* 2014). However, this is not the same as fleeing, which would require a fish to flee directly away from the source over the distance shown in the modelling. We are not aware of scientific or empirical evidence to support the assumption that fish will flee in this manner. Therefore, it is most appropriate to assume a stationary receptor.
- The assumption that a fish will flee from the source of noise is overly simplistic as it overlooks factors such as fish size and mobility, biological drivers, as well as foraging, reproductive or migratory behaviours which may cause an animal to remain/return to the area of impact. This is of particular relevance to herring, as they are benthic spawners which spawn in specific locations with specific substrate composition.
- Eggs and larvae have little to no mobility, which makes them vulnerable to trauma from exposure to noise and developmental effects. Accordingly, they should also be assessed and modelled as a stationary receptor, as per the Popper *et al.,* (2014) guidelines.

4.13 The MMO note that the scoping report is clearly presented, well-structured and easy to navigate. Consideration has been given to the relevant demersal, pelagic, and migratory fish and elasmobranch receptors within the northern North Sea, and the report identifies spawning grounds for species of commercial and conservation importance within the Ossian ECC. Appropriate data sources have been consulted and the Applicant's

proposed next steps for the application (including holding an ETG) are sensible.

4.14 The MMO note that the Applicant should understand and appropriately consider that their proposed ECC works present very clear potential for causing disturbance to adult herring engaged in spawning and their eggs and larvae during their spawning season, as well as disturbance and possible degradation of the integrity of the herring spawning ground at Flamborough Head. The Ossian ECC passes through the Flamborough Head spawning ground and the Applicant should be aware that cable laying works through the spawning ground should be scheduled outside of the herring spawning season or will likely be subject to a temporal restriction during the herring spawning season.

5 Marine Mammals

5.1 The marine mammal study area proposed for the purpose of baseline characterisation and subsequent ES has been defined at two spatial scales (Figures 6.5.1 and 6.5.2; document cited in paragraph 6): 1) the marine mammal study area, and 2) the regional marine mammal study area.

5.2 The MMO notes that the Applicant lists key marine mammal species that are likely to occur within the two spatial scales in England, and thus have been scoped in:

- Harbour porpoise.
- Minke whale.
- White-beaked dolphins.
- Grey seal.
- Harbour seal.
- Humpback whale (qualitative assessment only).

5.3 The MMO note that the Applicant has scoped in the following impacts to marine mammals:

- Injury and disturbance from subsea noise generated during UXO clearance – Construction and Destruction phase only
- Disturbance due to geophysical surveys – All three stages
- Disturbance due to vessel use and other activities – All three stages
- Injury due to collision with vessels – All three stages
- Effects on marine mammals due to altered prey availability – All three stages

5.4 The MMO note the presenece of Information on Unexploded Ordnance (UXO) within the marine mammal study area will be collected during a UXO Desktop Assessment and will be used to inform the marine mammal chapter of the ES. The Applicant notes "*that injury and disturbance from subsea noise generated during UXO clearance is listed as an impact in Table 6.5.3 for the pre-construction and decommissioning phases. Should UXO clearance be required, it is expected that this will be covered by a separate Marine Licence application*".

5.5 The Applicant also notes that "*should UXO clearance be required, the Applicant intends to develop and adhere to a Marine Mammal Mitigation Plan (MMMP) based on quantitative modelling performed using information on any confirmed potential UXO targets; and, by default, the use of low noise methods of clearance e.g., deflagration. These measures will be further discussed and assessed in the separate Marine Licence*

applications for UXO clearance (should this activity be required)". A MMMP is required to reduce the risk of Permanent Threshold Shift (PTS) in marine mammals.

5.6 In respect to UXO clearance, the Applicant should note the following:

- Effective Deterrence Range (EDR) for low order UXO clearance should be backed by empirical data, as there are no EDRs specified for low order clearance in the SNCB guidance (JNCC, 2020). For instance, a 5 kilometer (km) EDR for low order detonation may be reasonable and could be supported by extrapolating published data, it is the developer's duty to provide evidence. However, The MMO note that the Marine Noise Registry Tool recommends a 5 km EDR for low order clearance. There is a need going forward for empirical data to support EDRs.
- The suggested EDR for high order UXO clearance is based on the monopile EDR of 26 km.
- Our recommendations for assessing disturbance from UXO are set out below:
  For quantifying the risk of behavioural responses, we recommend that assessments apply dose-response curves for proximity to the sound source and received sound level (Dunlop et al., 2017). Approaches based directly on the "distance of effect" reported for insitu behavioural studies (e.g., Merchant et al., 2018) can also be used as an empirical estimate of the risk of behavioural responses (Gomez et al., 2016), provided that the sound level of the noise source in the cited study is not substantially exceeded in the assessment scenario. Similarly, the SNCB guidance (JNCC 2020) lays out advice on the assessment of significant disturbance in UK Special Areas of Conservation (SACs) for harbour porpoise. The advice is to use fixed disturbance distances (in the form of EDRs) for different activities, based on empirical evidence. These EDRS could also be used in impact assessments in the absence of more bespoke scientific evidence for the species and noise source concerned. Since harbour porpoise are relatively skittish and sensitive to underwater noise, the EDRs are likely to be conservative for other marine mammal species and are therefore a suitably precautionary option in the absence of other data (unlike using TTS as a proxy for disturbance).

5.7 The Applicant should also note that standard mitigation measures that are commonly employed for UXO clearance, include: deployment of acoustic deterrent devices (ADDs), Marine Mammal Observers (MMOb), Passive Acoustic Monitoring (PAM) system, low order techniques and noise abatement.

- Of note for ADD is that there is no guarantee all marine mammals will be deterred. For example, Brandt et al. (2013) observed total deterrence only up to 1.9 km, with porpoises occasionally seen as close as ~800 m, indicating variability in porpoise reactions depending on individual sensitivity or behavioural context (Brandt et al., 2013). Additionally, Brandt et al. (2012) found some porpoises within 750 m of the source.

5.8 The MMO would like to bring to the Applicants attention that there are noise generating activities that can occur that are exempt from requiring additional licences/consultation but could occur within this Marine Licence application (e.g. geophysical surveys, cable reburial and repairs/replacement). The potential impacts of these activities on marine life should be adequately considered / assessed (e.g. in the ES) where applicable.

5.9 The MMO note that species that may be rare or occasional visitors and/or occur in very

low numbers in the marine mammal study area and, therefore, will be scoped out:

- Common dolphin.
- Atlantic white-sided dolphin.
- Risso's dolphin.
- Killer whale.
- Long finned pilot whale.
- Pygmy sperm whale.
- Sei whale.
- Marine turtles.

5.10 The MMO note that the approach of the scoping assessment is clearly laid out. The baseline has been constructed "*through a desktop review of key datasets (Table 6.5.2; document cited in paragraph 6) information from the site-specific aerial surveys undertaken within the Array Site Boundary and site-specific surveys for nearby offshore wind farms. Additional data sources (e.g. emerging research and relevant EIAs including for offshore wind and cable projects) will also be used to inform the assessment in the marine mammal ecology chapter of the ES*".

5.11 The MMO note that the designated sites containing relevant qualifying features located within the regional marine mammal study area which may be scoped in for further assessment, upon review of potential impacts (Table 1 below). The MMO defer to the relevant SNCBs with regards to potential impacts and appropriateness of the those that are scoped in and out.

Table 1: Summary of Designated Sites with Relevant Qualifying Features Located within the Regional Marine Mammal Study Area Which May Be Scoped In For Further Assessment, Upon Review of Potential Impacts (obtained from Table 6.5.1)

Designated site	Distance to Offshore/Intertidal Scoping Boundaries (km)	Relevant qualifying features
English waters		
Marine Protected Area (MPA)		
Southern Trench MPA	81.3	• Minke whale
Special Area of Conservation (SAC)		
Humber Estuary SAC	2.7	• Grey seal
Southern North Sea SAC	0 - overlaps with the Offshore Scoping Boundary (extent of overlap: 1524.7 km²)	• Harbour porpoise
The Wash and North Norfolk Coast SAC	3.61	• Harbour seal
Berwickshire and North Northumberland Coast SAC	79.9	• Grey seal
Scottish waters		
Moray Firth SAC	198.4	• Bottlenose dolphin
Mousa SAC	344.9	• Harbour seal
Yell Sound Coast SAC	399.7	• Harbour seal

5.12 The MMO agree that the screening approach has identified that highly technical monitoring/modelling isn't required at this time for the scoping report.

5.13 The Applicant has scoped in various impacts to marine mammals and no impacts have

been scoped out. The Applicant has stated that UXO clearance will be applied for within a separate Marine Licence application. The MMO defer comment to the relevant SNCBs regarding the impacts to marine mammals and designated sites.

6 Sediment Disturbance

6.1 The MMO notes that all relevant impacts have been scoped in; most importantly is the scoping in of disturbance/remobilisation of sediment-bound contaminants. The Applicant states that "the physical processes assessment will be based upon a literature review of relevant offshore wind farm projects and other relevant projects in the vicinity of the Offshore Export Cable Corridor(s). This will be used to inform the assessment of effects arising from increased SSCs [suspended sediment concentrations] and associated sediment deposition". The MMO note that the Applicant will also use desktop sources, such as the Cefas Action Level viewer and data from other offshore wind farm surveys to help determine the level of sediment contamination within the Offshore Export Cable Corridor(s). The Applicant will also use targeted site-specific surveys in 2025 to "characterise benthic ecology, which will include the collection of sediment samples for contaminant analysis". This approach is appropriate however the Applicant may wish to apply for a sediment sample plan to ensure that the appropriate number of samples are taken and relevant contaminants are analysed for.

6.2 The MMO note that the Holderness Offshore Marine Conservation Zone (MCZ), Swallow Sand MCZ, North East of Farnes Deep Highly Protected Marine Area (HPMA) overlap with the offshore and intertidal scoping boundaries whilst the North East of Farnes Deep MCZ, Humber Estuary Special Area of Conservation (SAC), The Wash and North Norfolk Coast SAC, Inner Dowsing, Race Bank and North Ridge SAC and North Norfolk Coast SAC are all close to the offshore and intertidal scoping boundaries. The MMO defer to the relevant SNCBs with regards to potential impacts and appropriateness of the those that are scoped in and out.

6.3 The MMO want to highlight that from the list of designated sites is that the Applicant is applying to overlap with a HPMA, although The MMO defer to Natural England (the SNCB), the conservation advice for HPMA states that "*the physical, biological and chemical ecosystem processes and functions proceed unhindered, so that the site realises its full ecological potential to deliver goods and services, including habitats and species considered important to the long-term storage of carbon, and habitats and species important for flood and erosion protection*"[1]. This therefore implies that the cable may not be suitable to route through a HPMA.

6.4 Section 6.3.7 and Section 11.2 lists those impacts that have been scoped out of the assessment, in which The MMO believe provide sufficient justification for each impact to be scoped out.

6.5 The impact from accidental release of pollutants has been scoped out of all phases. The Applicant states that "*there is potential for the accidental release of pollutants … However, this risk will be reduced with the implementation of measures adopted as part of the project, including an EMP [Environmental Management Plan] and MPCP [Marine Pollution Contingency Plan] (see paragraph 6.3.5.1). These plans will consider the*

[1] https://hub.jncc.gov.uk/assets/d12633b1-b123-4738-a594-b53c183aee68

potential for accidental spills, any additional potential contaminant releases and will present mitigation plans in case of an accidental release of pollutants. As such, the resulting likelihood of a release of pollutants occurring will be very low and any effects from the release of pollutants will be reduced". This justification is sufficient for this impact to be scoped out.

6.6 The impact from increased SSCs and associated sediment deposition has been scoped out during the operation and maintenance phase. The Applicant states that "*minimal impacts associated with increased SSCs and associated sediment deposition are expected. Impacts may arise from minor repairs or cable reburial events only; therefore, any increases in SSCs are expected to be much smaller than for the construction and decommissioning phases*". The MMO consider that justification is sufficient for the impact to be scoped out.

6.7 The MMO believe the approach of the scoping assessment and to data gathering is appropriate. A desktop review of constraints was undertaken which included (but not limited to) characterisation of seabed substrates and presence of and proximity to designated sites, Annex I and/or sensitive features, and The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) threatened or declining habitats. This desktop information included scientific literature and EIA scoping reports and Environmental Statements from other projects.

6.8 Data presented in the Eastern Green Link 3 and 4 Scoping Report has been used to inform the understanding of sediment quality within the English portion of the Offshore Scoping Boundary due to its similar locality in English waters. The Applicant notes that "*for all sample records taken from the DOME Portal[2] for the Eastern Green Link 3 and 4 project, contaminant levels were below Cefas Action Level 1*".

6.9 The Cefas Action Level Viewer[1] has also been used to provide an indication of contaminant levels within the Offshore and Intertidal Scoping Boundaries in English waters. The Applicant states that "*from the available data, there was no indication of levels of any assessed contaminant (including organotins, PAH, PCB and Total Hydrocarbons) above Cefas Action Level 1 … However, at the mouth of the Humber Estuary … there were a number of samples from 2013 which were reported to have levels of Total Hydrocarbons exceeding Cefas Action Level 1*". The Applicant acknowledges that the Cefas Action Level Viewer is not up to date. Again, the Applicant may wish to apply for a sediment sample plan to ensure that the appropriate number of samples are taken and relevant contaminants are analysed for, especially in the nearshore environment where contaminant levels are likely to be higher.

6.10 The MMO note that the Applicant should know that any contaminants above Cefas Action Level 1 without a Cefas Action Level 2 will require other criteria for review; Cefas use the best available evidence for assessment and therefore refer to the recommendations in Mason *et al*. (2022). For instance, in the absence of a defined Cefas Action Level 2 for Polycyclic Aromatic Hydrocarbons, Cefas utilise the Gorham-Test approach (Gorham *et al*., 1999; Long *et al*., 1995; 1998).

6.11 The MMO note that the Applicant is planning to conduct a benthic survey to collect

[2] [redacted]

seabed imagery, sediment samples and sediment chemistry analysis in 2025. The results of this survey will be reported accordingly and supplemented by other published data e.g. nearby offshore wind site-specific surveys, to provide higher certainty to reported levels of contaminants.

6.12 The MMO note that the Applicant should make sure that the survey in 2025 to collect sediment samples and sediment chemistry analysis should have a good representation in respect to sample numbers and contaminants. The OSPAR guidelines[3] can aid the Applicant however the length of the cable corridor/transmission boundary should be appropriately represented in the number of sediment samples collected.

7 Conclusion

The topics highlighted in this scoping opinion must be assessed during the EIA process and the outcome of these assessments **must** be documented in the ES in support of the Development Consent Order and Deemed Marine Licence application and any associated planning application(s). This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.

Yours Sincerely,

[redacted]

[redacted]
Marine Licencing Case Officer

D [redacted]
E [redacted]

Enclosed: References

[3] OSPAR Commission. Agreement 2014-06. Update 2024. OSPAR Guidelines for the Management of Dredged Material at Sea. URL: [redacted]

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