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Gwynt Glas Offshore Wind Farm Consents Team

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MMO Reference: DCO/2026/00024
Planning Inspectorate Reference: EN0110036

15 October 2026

Dear Sir/ Madam,

Formal scoping request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 for the proposed Gwynt Glas Offshore Wind Farm Project by Gwynt Glas Offshore Wind Farm Limited

Thank you for your Scoping Opinion request of 22 July 2026 and for providing the Marine Management Organisation (MMO) with the opportunity to comment on the Gwynt Glas Offshore Wind Farm Environmental Impact Assessment (EIA) scoping request.

The MMO issued a generic high level scoping opinion to the Planning Inspectorate (PINS) on 21 July 2026. Following the Applicant's acceptance of the MMO's fees, consultation was enabled with the MMO's technical advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the MMO has prepared a suitable scoping opinion to be submitted.

The MMO's role in Nationally Significant Infrastructure Projects

The MMO was established by the Marine and Coastal Access Act 2009 (the 2009 Act) to contribute to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas. The responsibilities of the MMO include the licensing of construction works, deposits and removals in English inshore and offshore waters and for Welsh and Northern Ireland offshore waters by way of a marine licence[1]. Inshore waters include any area which is submerged at mean high water spring (MHWS) tide. They also include the waters of every estuary, river or channel where the tide flows at MHWS tide. Waters in areas which are closed permanently or intermittently by a lock or other artificial means against the regular action of the tide are included, where seawater flows into or out from the area. In the case of Nationally Significant Infrastructure Projects (NSIPs), the 2008 Act enables Development Consent Order's (DCO) for projects which affect the marine environment to include provisions which deem marine licences[2].

[1] Under Part 4 of the 2009 Act
[2] Section 149A of the 2008 Act

As a prescribed consultee under the 2008 Act, the MMO advises developers during preapplication on those aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction, deposit or removal within the marine area, this also includes assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works. Where a marine licence is deemed within a DCO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a deemed marine licence (DML) enable the MMO to fulfil these obligations. Further information on licensable activities can be found on the MMO's website[3]. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our joint advice note[4].

The MMO notes that the Offshore Export Cable Scoping Boundary is within English waters, however the final development may not be within. Where a DML transferred to the MMO for regulatory, compliance, and decision-making powers once consented is not required for this reason, the MMO has a keen interest in assessing transboundary impacts.

Please find below the scoping opinion of the MMO.

The MMO reserves the right to make further comments on the project throughout the preapplication process and may modify its present advice or opinion in view of any additional information that may come to our attention. This representation is also submitted without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for any other authorisation relevant to the proposed development.

If you require any further information, please do not hesitate to contact me using the details provided below.

Yours Sincerely,

[redacted]
Marine Licensing Case Manager

[redacted]
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[3] https://www.gov.uk/planning-development/marine-licences
[4] https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-eleven-working-with-public-bodies-in-the-infrastructure-planning-process

Scoping Opinion

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

Title: Gwynt Glas Offshore Wind Farm

Applicant: Gwynt Glas Offshore Wind Farm Limited

MMO Reference: DCO/2026/00024

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1 Proposal

Gwynt Glas Offshore Wind Farm

1.1 Project Background

Gwynt Glas Offshore Wind Farm Limited is a joint venture between EDF Power Solutions UK and Electricity Supply Board, with Pembrokeshire based DP Energy acting as an exclusive development partner. The Proposed Development comprises the construction, operation and decommissioning of the Gwynt Glas Offshore Wind Farm located approximately 42 kilometres (km) off the southwest coast of Pembrokeshire in the Celtic Sea, with an anticipated capacity of up to 1.5 gigawatts (GW). The Array Scoping Boundary covers approximately 369 square kilometres (km^2). The Development would include offshore generating infrastructure and associated transmission assets. It is expected that the grid connection would be made at the proposed Llandyfaelog Substation in Carmarthenshire (to be built by National Grid), requiring the installation of underground export cables between the landfall and the grid connection point.

The Development is approximately 36 km from the UK Exclusive Economic Zone (EEZ) boundary between the UK and Ireland. The Array area is located within Welsh waters, whilst the Offshore Export Cable scoping boundary currently extends into English waters. On this basis, our scoping opinion focuses on receptors and potential impacts that may extend into, or otherwise affect, English waters.

There will be between 66 and 118 wind turbines. These will be on floating substructures (FSS) and/or innovative deepwater solutions. FSS designs being considered are tension leg platform, semi-submersible platform, barge platform, modified spar-buoy, semi-spar platform or innovative deepwater solutions. Deep water solutions are hybrid, with the substructure attached to the seabed and stability provided through mooring lines.

Securing the FSS are station keeping systems (SKS). It is possible that different mooring and anchor solutions may be used across the Development. This would be dependent on the site characteristics (i.e. water depths and metocean conditions) and determined during the design development. Different types of SKS being considered are catenary mooring line, semi-taut mooring line, taut or tension-leg. Anchors will connect the SKS to the seabed, these may be piled, suction, embedded plate, javelin, gravity or friction anchors depending on the FSS and SKS design used and seabed.

The subsea infrastructure discussed above will have scour protection, this could be concrete mattresses, graded rock placement rock bags / rock nets, grout bags, eco-based products (e.g. reef cubes) or artificial frond mats.

The Development will use a range of cables, including Inter-Array Cables, Interconnector Cables and Offshore Export Cables (and associated cable protection). The maximum length of the Inter-Array Cables for the Development is estimated to be 300 km. For FSSs, due to the movement of the structure, both static Inter-Array Cables (on seabed) and dynamic Inter-Array Cable (moving in the water column) are required, joined together by a connector to form one continuous cable. Dynamic inter-array cables may be configured one of three ways, free hanging, lazy “S” wave or steep wave.

Along from the wind turbines Subsea Power Collector(s) may be installed. These are a seabed mounted electrical hub used to collect and distribute power. It functions as an underwater node that receives medium voltage power from groups of wind turbines and routes it onwards, typically towards a Subsea Transmission Station(s) or directly into export infrastructure via dedicated subsea cables.

Subsea Transmission Station(s) may be installed on the seabed to collect, transform, and transmit power generated by offshore wind turbines. Offshore Transmission Station(s) (OTS) would then be used to transform the generated power to an appropriate transmission voltage. OTSs are a topside platform installed on a fixed foundation. Foundations may be monopile, jacket with pin piles, tripod, suction bucket (jacket) or gravity-based structures. Up to three OTSs may be required to reflect the Development phasing. Electricity from the OTSs would be transmitted via one or two subsea export cables to shore.

Electricity will be transferred from the OWF to the onshore grid using either High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) subsea export cables. If HVAC is chosen, up to six cables may be required; if HVDC is chosen, up to three cables may be required. Offshore cables would be buried to a minimum target burial depth of 0.5 m where possible with burial methods including jet trenching, mechanical trenching, cable ploughing and mass flow excavator all being considered.

Midpoint Compensation Reactor(s) may be installed along export cable routes to help manage the reactive power generated in long subsea transmission systems. If midpoint compensation is needed the structure(s) would be fixed to the seabed with the compensation reactor housed on a platform above sea level.

Construction of infrastructure will typically be performed on a 24-hour basis. The total duration of development construction is anticipated to take up to six years (2034 – 2039 inclusive) with an operational lifespan of 40 years.

2 Location

The proposed Gwynt Glas Offshore Wind Farm is located in the Celtic Sea and the Array Scoping Boundary is approximately 42km from shore at its closest point (Pembrokeshire, South Wales). The Onshore Scoping Boundary is located in the Pembrokeshire and Carmarthenshire area of South Wales and the Offshore Export Cable Scoping Boundary passes through the Pembrokeshire South coastal water body (GB611008590003). See Figure 1 for the location plan and scoping boundaries.

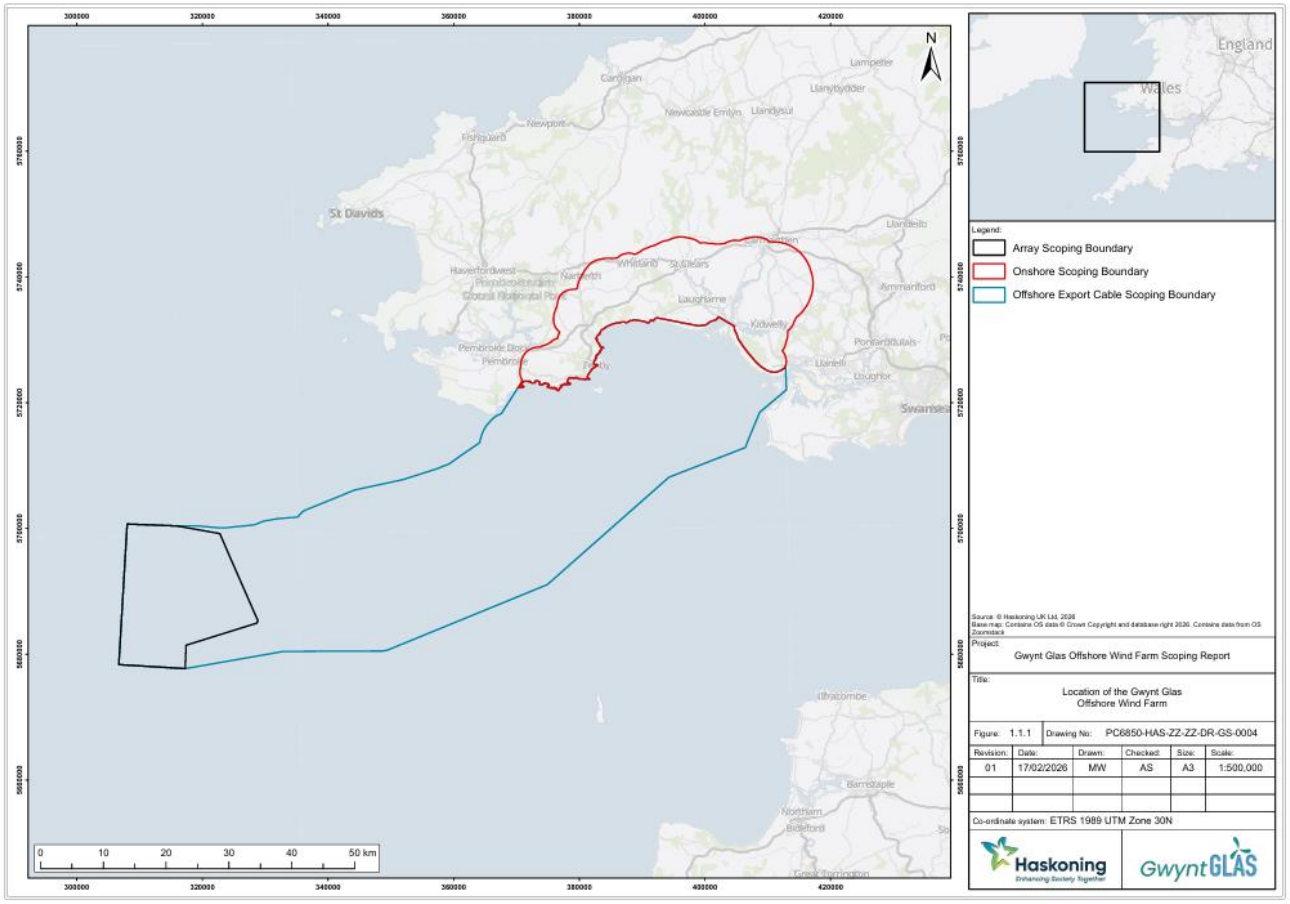


Figure 1: Location Plan and Scoping Boundary (Source: Gwynt Glas Offshore Wind Farm Environmental Impact Assessment Scoping Report)

3 Scoping Opinion

3.1.1 Pursuant of regulations 10 and 11 of the Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations), Gwynt Glas Offshore Wind Farm Limited have requested a Scoping Opinion from the MMO. In so doing the MMO has reviewed the Scoping Report which has been split into three documents entitled Gwynt Glas OWF EIA Scoping Report Parts 1, 2 and 3 (EN0110036-00000 - EN0110036-000005 and EN0110036-000006 respectively) . The MMO agrees with the topics outlined in the Scoping Report and in addition, the MMO outlines that the following aspects be considered further during the EIA and must be included in any resulting Environmental Statement (ES).

3.2 General Comments

3.2.1 The Scoping Report is a high-level, well written and comprehensive document which has identified the relevant general impacts associated with the proposed project.

3.2.2 The MMO notes that the report utilises a project design envelope (PDE) approach in which the DCO and ML applications are based on worst-case parameters for key elements of the Development rather than a finalised detailed design. The MMO considers that this is appropriate at the scoping stage. The Scoping Boundaries are broad areas at this stage of the Development to allow for further analysis of environmental and engineering constraints. The final route will be selected through Applicant engagement with stakeholders and further assessment of options which the MMO will engage in.

3.2.3 The project description is clearly presented and includes sufficient information at the scoping stage on the proposed offshore wind farm infrastructure, construction activities, operational activities and associated project parameters. The report provides a clear description of the offshore array, offshore export cables, landfall, onshore infrastructure and the anticipated construction and operational phases.

3.2.4 The MMO considers that it would be beneficial for future documents to contain a clear figure of all parts of the Development in relation to the English and Irish territorial boundaries.

3.2.5 Many of the diagrams in Section 1.5 such as Plate 1.2.1, Plate 1.5.2, Table 1.5.3, Table 1.5.4, Table 1.5.5, Plate 1.8.1 and Plate 2.1.1 contain blurry text and visuals that make the diagrams hard to read. The MMO suggests higher resolution images. Additionally, Plate 2.1.1 in Section 2 is not in the Plates references (page 11) and therefore needs updating.

3.3 Marine Planning

3.3.1 Although the scoping boundary is broad at this stage and subject to further refinement, the MMO considers that there must be consideration of how the proposal contributes to the objectives of the Southwest Offshore Marine Plans. The MMO requests that all policies are reviewed within a table to show compliance, when the Project ES is submitted to the Planning Inspectorate. This must be produced as the Secretary of State must use the Southwest Marine Plan when making planning decisions for the

sea, coast, estuaries and tidal waters, as well as developments that impacts these areas, such as infrastructure.

3.4 Nature Conservation

3.4.1 The MMO defers to Natural England as the Statutory Nature Conservation Body (SNCB) on the suitability of the scope of the assessment with regards to Marine Protected Areas (MPAs) and habitats and species of importance.

3.5 Benthic Ecology

3.5.1 The MMO notes that benthic receptors have been scoped into the ES as is appropriate for the proposed floating offshore windfarm project. Potential impacts to benthic receptors at construction, operation and maintenance, and decommissioning stages of the proposed development have been scoped in or out of the EIA and the Scoping Report notes that these may be refined as additional information and data become available. The MMO agrees with the scoping decisions regarding the potential impacts to benthic receptors, summarised in Table 2.2.5 and notes that while the introduction of Introduced Non-Native Species (INNS) is scoped out of the construction phase of the assessment (because of the embedded mitigation related to biosecurity), the colonisation of project infrastructure by INNS is considered at the operation and maintenance phase, and is accordingly scoped into EIA.

3.5.2 The MMO seeks clarification that the colonisation of introduced substrate, for example, FSS, includes the potential for INNS and taxa that would otherwise not become established in an offshore habitat. Project infrastructure, such as FSS, can potentially act as stepping stones for INNS and can host an assemblage of benthic taxa that exploit habitat that would otherwise not be present in the offshore environment. This could lead to functional differences in wider ecosystem functioning and should be assessed accordingly. The MMO notes that the Scoping Report recognises the potential for change from the baseline ecology and has scoped the colonisation of project infrastructure into the EIA.

3.5.3 The MMO considers that appropriate data sources have been identified, with suitable desk-based assessments informing the characterisation of the general habitat within an appropriately sized Benthic Habitat Study Area (including a 15 km buffer around the scoping boundary area) and the assessment of designated sites for benthic features. The MMO however, defers to the relevant SNCB regarding the completeness of this assessment and notes that the Scoping Report has included UK Biodiversity Action Plan habitats that although not protected, are valuable ecological receptors, in addition to Special Protected Area, Marine Conservation Zone, and Special Area of Conservation sites.

3.5.4 In addition to the data sources used to inform the benthic assessment (Table 2.2.3 of the Scoping Report), site specific surveys have been completed within the array scoping boundary (September 2025 seabed sediment and seabed imagery surveys) and commitment is made to suitably survey the landfall zone and offshore export cable scoping boundary in 2027. The MMO notes that the survey methodologies will be agreed with MMO in advance, the MMO welcomes the opportunity to provide advice on suitability and scope.

3.5.5 Although the MMO acknowledges the scoping boundary appears to include a limited number of benthic grab samples (with associated macrofaunal assemblage and sediment information), the MMO recommends that the OneBenthic Data Extraction Tool: Grab/Core application is used which may assist in the benthic baseline assessment.

3.5.6 The MMO notes that transboundary impacts from the benthic ecology assessment for all stages (construction, operation and maintenance, and decommissioning phases) of the proposed development have been scoped out of the report based on the distance from territorial boundaries and the lack of impact pathway. The MMO agrees with this assessment, provided the Zone of Influence of the ultimate project design remains supportive of this conclusion.

3.5.7 The MMO considers that the approach provided within the Scoping Report is suitable considering the current scope of the proposal. Relevant potential impacts to benthic receptors are included for each stage of the proposed development and the PDE approach enables suitable scoping of potential impacts to benthic receptors.

3.5.8 The MMO further agrees with the approach to securing embedded mitigation measures through project design, following good practices, adherence to relevant guidelines and legislation, appropriate consultation, and commitment to pre-construction survey to enable appropriate micrositing decisions. The MMO understands that details of proposed mitigation measures will be provided in due course, as the detailed project design is developed.

3.5.9 The MMO notes that a site-specific benthic survey of the array scoping area was completed in 2025. The design, scope, and sampling methodologies employed on the 2025 survey are not included within the scoping report, and the MMO can therefore provide no comment on suitability for the intended purpose. However, the Scoping Report states that grab sampling (for macrobenthic and particle size distribution analysis) and seabed imagery (using a drop-down camera) was used. The MMO agrees with the use of these methods and requests that additional, relevant detail is included when reporting the results of all site-specific surveys.

3.5.10 Further, the Scoping Report shows commitment to conducting appropriate survey of the Gwynt Glas export cable corridor scoping boundary (including grab sampling, drop-down video (DDV) and molecular techniques) in 2027. The MMO notes that "*survey methodologies will be agreed in advance with relevant stakeholders*" and the MMO welcomes the opportunity to provide comment on proposed survey methodologies and associated processing protocols.

3.6 Coastal Processes

3.6.1 The MMO considers that the Scoping Report provides a comprehensive list of receptors in Table 2.1.2 "Marine Geology, Oceanography and Physical Processes" including Water Quality Receptors, and the justifications for scoping impacts and receptors into or out of the assessment appear sound and proportionate.

3.6.2 The MMO is of the opinion the data sources listed in Section 2.1.3 for coastal processes and sediment, which include both desk-based assessments (existing reports) and past or planned surveys, are appropriate.

3.6.3 The Scoping Report references recognised guidance, standards and regulatory frameworks, including Natural Resources Wales (NRW) guidance, Cefas guidance, Chartered Institute of Ecology and Environmental Management (CIEEM) guidance, OSPAR assessments, Det Norske Veritas (DNV) standards and Natural England best-practice guidance (Sections 1.8, 2.1.4 and 2.2.4; pp. 58-75, 86-88 and 106). Those standards are fairly high level, though, and the report states (page 62) that the list of practice measures is not exhaustive and that it will be finalised in a later stage (ES).

3.6.4 Alongside standard offshore survey techniques proposed, including geophysical, geotechnical, grab sampling, benthic surveys, Environmental DNA (eDNA) and intertidal surveys. (Tables 2.1.1 and 2.2.4; pp. 85-86 and 105), page 58 of the report states that evidence from the Offshore Wind Evidence and Knowledge Hub (OWEKH) will be used, which is not usual practice. However, as OWEKH has cross-governmental support from all UK administrations, the MMO can be confident with that approach.

3.6.5 The MMO considers that the combination of baseline surveys, modelling, receptor identification, cumulative assessment and mitigation hierarchy appears proportionate for a scoping-stage document. However, the MMO notes that the site-specific contaminant sampling still needs to be completed. The results might inform the potential mobility and transportability of pollutants and may lead to a refinement of the site boundary. The MMO requests that the remaining survey is completed and that consideration is provided as to whether the results have any impact on the receptors. The results should be further reviewed to confirm they do not introduce new information gaps, receptor sensitivities, or a need to refine the site boundary.

3.6.6 The MMO notes several mitigation measures are presented on page 61 and 95 of the report. Additionally, Table 1.8.2 lists examples of mitigation measures proposed for the development. The MMO is in agreement with the current mitigation measures proposed.

3.7 Fish Ecology and Fisheries

3.7.1 Sections 1.8.8, 2.3.5.5 and 2.6.5.10 discuss potential transboundary impacts. The Development is approximately 36 km from the UK EEZ territorial boundary between the UK and Ireland. The MMO notes that the Scoping Report determines at this stage there are no impact pathways that would create transboundary impacts for fish, therefore fish receptors are scoped out of a standalone transboundary impact assessment. However, the EIA would consider the distribution of fish stocks and populations across the wider area, including adjacent areas of English and Irish waters where relevant to species movements or ecological functioning. Considering the PDE in its current form, the highest risk of transboundary impacts is likely to come from underwater noise (UWN) generated by piling (e.g. installation of SKS anchors in the array, or foundation installation for the OTS along the export cable corridor) due to the far-reaching range of effect of impulsive noise. Therefore, the MMO requests that transboundary impacts from UWN on fish are scoped in until the design of the

Proposed Development is finalised, and modelling has been carried out with a Zone of Influence known. Results of the UWN modelling can then be used to determine whether transboundary effects on fish will arise.

3.7.2 The MMO requests that fish receptors are treated as a static receptor in the UWN modelling, due to a lack of empirical evidence on 'fleeing', swimming speeds, directions and responses in fish. Details of piling methods, modelled pile locations, the duration of piling activities, and the time of years/months when piling will be carried out will also provide relevant context for determining potential transboundary impacts to fish.

3.7.3 The MMO notes that transboundary impacts for commercial fisheries are scoped into the EIA, this is appropriate.

3.7.4 Recent guidance from the Fishing Liaison with Offshore Wind and Wet Renewables (FLOWW) raises awareness to the new risks, from floating offshore wind to commercial fisheries, not previously seen in fixed offshore wind installations, from the mooring chains and dynamic cables. This introduces hazards below the water surface. The interaction between them and fishing gears during fishing operations is not assessed in the Navigational Risk Assessment and therefore the MMO requests that this must be considered through the Commercial Fisheries chapter. The worst-case scenario for fisheries within the design envelope should be assessed (e.g. catenary mooring systems, dynamic mid-water cables). The MMO also recommends that you engage with the FLOWW process to ensure best resolution data are available to accurately assess potential impacts.

3.7.5 The MMO notes that appropriate fish receptors have been scoped in, including mackerel (*Scomber scombrus*), horse mackerel (*Trachurus trachurus*), Atlantic herring (*Clupea harengus*), sprat (*Sprattus sprattus*), whiting (*Micromesistius poutassou*), European sea bass (*Dicentrarchus labrax*), anglerfish (*Lophius piscatorius*), European hake (*Merluccius merluccius*), sandeel sp. (*Ammodytes spp*.), Atlantic cod (*Gadus morhua*), plaice (*Pleuronectes platessa*), lemon sole (*Microstomus kitt*), Dover sole (*Solea solea*), ling (*Molva molva*), tope (*Galeorhinus galeus*), spotted ray (*Raja montagui*), thornback ray (*Raja clavata*), spurdog (*Squalus acanthias*), boarfish (*Capros aper*), haddock (*Melanogrammus aeglefinus*), megrim (*Lepidorhombus whiffiagonis*), witch flounder (*Glyptocephalus cynoglossus*), John dory (*Zeus faber*), starry smoothhound (*Mustelus asterias*), small-spotted catshark (*Scyliorhinus canicular*), cuckoo ray (*Leucoraja naevus*), common stingray (*dasyatis Pastinaca*), blonde ray (*Raja brachyura*), angelshark (*squatina squatina*), blue shark (*Prionace glauca*), thresher shark (*Alopias vulpinus*), shortfin mako (*Isurus oxyrinchus*), ocean sunfish (*mola mola*) and Atlantic bluefin tuna (*Thunnus thynnus*). The MMO further notes that diadromous species have been scoped in.

3.7.6 Fish spawning and nursery ground maps from Ellis *et al.* (2012) and Coull *et al.* (1998) are overlaid with the Development's scoping boundary in Figures 2.3.2 and 2.3.3 which provide a visual overview of the overlap between the development and spawning and nursery habitats. The report also classifies key fish species according to their hearing group (as per Popper *et al.* (2014)), and their conservation status. The importance of pelagic species in being an important part of the ecosystem providing food for seabirds, larger fish and marine mammals is noted.

3.7.7 The Offshore Export Cable Scoping Boundary intersects with Pembrokeshire Special Area of Conservation (SAC) and Carmarthen Bay and Estuaries SAC which include Twaite shad (*Alosa fallax*), Allis shad (*Alosa alosa*), river lamprey (*Lampetra fluviatilis*) and sea lamprey (*Petromyzon marinus*) as features. Due to the migratory nature of these fish, interactions with transboundary effects will be assessed in the ES as fish receptors, rather than through a separate transboundary assessment. The MMO agrees that due to the wider ranging movements and sparse distribution of these fish that this is appropriate.

3.7.8 Figure 2.6.1 shows the local and regional Fisheries Study Areas for commercial fisheries and International Council for the Exploration of the Seas (ICES) rectangles that the Development is within. The Commercial Fisheries Study Areas have been defined in accordance with Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) guidance and provide a proportionate basis for identifying commercial fisheries receptors with potential to interact with the Offshore Scoping Boundary and for assessing potential impacts. The MMO considers that this is appropriate.

3.7.9 Fifty percent of the value of landings from the Commercial Fisheries Local Study Area were landed by English vessels, with two English in the top five for landings, Ilfracombe and Padstow on the North coast of Devon and Cornwall. Shellfish, in particular whelks, are the predominant fishery (68% of landed value and 79% of landed weight), with sole and sea bass being the most landed and valuable finfish. After pots and traps, demersal and beam trawls were the most used gear type.

3.7.10 The MMO considers that the Scoping Report has scoped in appropriate impacts to commercial fisheries including; reduction in access to, or exclusion from established fishing grounds within the Array Scoping Boundary, displacement leading to gear conflict and increased fishing pressure on adjacent grounds, disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity, increased vessel traffic, increased steam, and gear snagging. Transboundary impacts for commercial fisheries are scoped into the EIA and would be considered based on any potential displacement of fishing activity into the French and Irish EEZs.

3.7.11 The MMO considers that the assessment should consider the fishing activity taking place in the area and its economic and social value, vulnerability and adaptability. The assessment should also consider individual fishing fleet métiers (i.e. combination of target species, gear type and vessel size), rather than broad groupings (e.g. mobile gears and static gears).

3.7.12 In line with FLOWW guidance, the MMO considers that the following impact pathways should be considered:

- Reduction in access to, or exclusion from, established fishing grounds;
- Displacement leading to gear conflict and increased fishing pressure on adjacent grounds;
- Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity;

- Increased vessel traffic associated with the Development within fishing grounds leading to interference with fishing activity;
- Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Development;
- Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging.

These pathways should be considered for construction, operation and decommissioning phases. Reduction in access to, or exclusion from, established fishing grounds should include the potential for restricted access during the operational phase, due to below-surface hazards, any statutory safety zones and developer-requested safe working distances from structures. Gear snagging risk must always be assessed, even if it is assumed that fishing will not resume within the site post-construction (for the purposes of a precautionary impact assessment), unless there will be a permanent statutory exclusion of all navigation within the site. Statutory closure of sites is considered unlikely, therefore the potential for fishing vessels to enter and fish within the site should always be considered. The impact on individual métiers should be assessed at a scale that is appropriate to each métier.

3.7.13 The impact pathways discussed in point 3.7.14 should also be assessed in the cumulative and in-combination assessment, using appropriate and consistent methodologies. Projects in proximity to each other should seek to use consistent assessment parameters and approaches, to facilitate effective cumulative assessment.

3.7.14 In regard to commercial fisheries, the MMO notes that consultation will be undertaken at an early stage in the EIA process to identify and manage potential effects on commercial and recreational fishing activities throughout construction, operation, and decommissioning. This typically involves engagement with fisheries stakeholders such as fishing industry representatives, fisheries management organisations, and individual operators, supported by a fisheries impact assessment. The process considers issues including temporary exclusion during works, damaged and lost fishing gear best practice, boulder relocation information, changes to access or navigation, interactions with fishing gear, and potential displacement effects, with appropriate mitigation and co-existence measures developed where required. These will become clearer once the design is finalised.

3.7.15 There are some embedded mitigations suggested for fish receptors such as cable routing to avoid sensitive habitats including fish spawning grounds, micro-siting to avoid sensitive habitats and grounds for fish, using a construction method statement and timing to avoid migration and spawning. However, as these works are all within Welsh waters they are beyond the MMO's remit to provide comment on. The MMO will keep a watching brief of NRW's responses.

3.7.16 The MMO notes that particle size analysis (PSA) data will be used from grab samples collected during the benthic survey to identify areas of potential herring spawning habitat and sandeel habitat, which is appropriate. However, no information is provided on the methods being used to determine whether sediments are/are not suitable habitat. The MMO requests that Latto *et al.* (2013) and Reach *et al*. (2024) are referred

to for methods to determine sandeel habitat suitability and Reach *et al.* (2013) to determine potential herring spawning habitat.

3.7.17 The Scoping Report refers to the use of the International Herring Larvae Survey (IHLS) data to inform the EIA. The MMO highlights that the IHLS covers herring spawning grounds in the North Sea and English Channel, so is unlikely to provide useful data on herring larval abundance in the Celtic Sea. To the MMO's knowledge there are no herring larval surveys at the historic herring spawning ground near Milford Haven (as per Coull *et al.* (1998)). The nearest monitored herring spawning grounds to the Development are those surveyed under the Northern Irish Northeastern Larvae Survey (NINEL) around the Isle of Man. The NINEL survey is conducted by the Agri-Food and Biosciences Institute. NINEL data can be downloaded from the ICES Database of Trawl Surveys (ICES DATRAS).

3.7.18 The MMO in line with FLOWW guidance also considers that developers should seek high-resolution data from the fishing industry and other sources. To characterise the baseline, data sources beyond those that are publicly-available should be used (e.g. Inshore Fisheries and Conservation Authority (IFCA) sightings, gear scout data, Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM), Landings Enriched Approach for Positional Fisheries data (LEAPFISH), Inshore Vessel Monitoring System **(**iVMS) when/where available, project-specific surveys, aggregated plotter data (temporally linked) when/where possible, cogniscent of General Data Protection Regulation (GDPR) requirements.

3.7.19 The MMO considers that it would also be beneficial to refer to survey data from the Irish Sea and Bristol Channel Q3 annual beam trawl survey and Western Channel and Celtic Sea Q1 annual beam trawl survey data which can be found on ICES DATRAS.

3.7.20 The MMO notes that no new fisheries surveys are proposed, however eDNA sampling will offer an additional tool for confirming species presence.

3.8 Shellfish

3.8.1 The MMO broadly agrees with the impacts that have been scoped into the assessment for shellfish and shellfisheries. The MMO notes that only operational noise linked to behavioural disturbance has been scoped in at the operation and maintenance stage (injury or mortality effects have been scoped out).

3.8.2 The MMO considers that appropriate data sources have been identified for shellfish and shellfisheries, the eport makes use of desk based studies using existing literature and data sources which are listed in Table 2.3.3 and 2.6.1 of the Scoping Report (e.g. MMO landings data, ICES international bottom trawl survey, Fisheries Sensitivity Maps in British Waters (Coull *et al.,* 1998), Spawning and nursery grounds of selected fish species in UK waters, Scientific Series Technical Report (Ellis *et al.,* 2012)).

3.8.3 For shellfish, the primary data sources identified (Coull *et al.* 1998; Ellis *et al.* 2012; Cefas, 1999) may not appropriately characterise the spawning and nursery grounds (except for *Nephrops*); the spawning grounds for commercially important shellfish species can be derived using commercial fisheries data as a proxy.

3.8.4 No new fisheries surveys are proposed; however, as noted above, eDNA sampling will offer an additional tool for confirming species presence. The MMO requests that it is clearly stated whether there are taxa known to be poorly detected by eDNA and therefore not accurately represent shellfish species in the eDNA.

3.8.5 The MMO notes that transboundary impacts have been scoped out from the shellfish ecology assessment (as a standalone assessment) for all stages (construction, operation and maintenance, and decommissioning phases) of the Proposed Development. However, the EIA would consider the distribution of fish and shellfish stocks and populations across the wider area, including adjacent areas of English and Irish waters where relevant to species movements or ecological functioning. For commercial fisheries transboundary impacts are scoped into the EIA and would be considered based on any potential displacement of fishing activity into the French and Irish EEZs. The MMO agrees with this assessment, provided the Zone of Influence of the ultimate project design remains supportive of this conclusion.

3.8.6 The MMO agrees with the approach to securing embedded mitigation measures through Project Design. Embedded mitigation measures such as a Fisheries Liaison officer will be beneficial to reduce the impacts on shellfisheries.

3.8.7 Section 2.3.5.4 and 2.6.5.9 of the Scoping Report includes a brief discussion of the potential for cumulative effects on shellfish and shellfisheries, which has been scoped into EIA. The MMO considers that this is appropriate and adequate considering the stage of the proposed development.

3.9 Underwater Noise

3.9.1 The project may involve a number of activities with the potential to generate underwater sound, including pre-construction geophysical and geotechnical surveys, seabed preparation works, pre-lay grapnel runs, cable installation, vessel movements, foundation and anchor installation (including potential impact piling and non-impact piling techniques), and, if required, unexploded ordnance (UXO) clearance. The Scoping Report also identifies operational noise sources, including wind turbine operation, mooring systems, maintenance activities and associated vessel traffic.

3.9.2 The MMO considers that, from an underwater noise perspective, the appropriate biological receptors have been scoped into the ES. Marine mammals and fish and shellfish receptors have been identified and are proposed for assessment where potential underwater noise impacts may occur. Please see detailed comments in Sections 3.7 and 3.8 above.

3.9.3 Overall, the MMO considers the proposed assessment methodology to be clearly presented and generally justified at the scoping stage in relation to marine mammals. The Scoping Report proposes to undertake underwater noise modelling for the principal construction, operation and maintenance noise sources, including pile driving, non-impact piling anchor installation, cable installation, seabed preparation activities, vessels, operational turbine and mooring noise, and maintenance activities (including rock placement, cable repair and replacement). Potential impacts would be assessed against baseline marine mammal data and relevant reference populations, with impact significance determined using a matrix-based approach supported by

expert judgement. The report also proposes ongoing consultation through a Marine Mammal Expert Topic Group to inform key assessment parameters, including species density estimates and reference populations. In addition, underwater noise modelling for any potential UXO clearance is proposed, although any detailed UXO assessment would be undertaken through a separate Marine Licence application if required.

3.9.4 The MMO notes that the report identifies the principal underwater noise impact pathways for marine mammals and has provided justification for those proposed to be assessed within the ES. Auditory injury and behavioural disturbance resulting from underwater noise during construction have been scoped into the assessment. Paragraph 441 also notes that pre-construction surveys, such as geophysical surveys, may be required and that the potential impacts of these activities would be assessed separately through project-specific European Protected Species risk assessments.

3.9.5 During operation and maintenance, behavioural disturbance from underwater noise has been scoped into the assessment, whilst auditory injury has been scoped out. The report states that operational noise sources would primarily comprise vessel activity, operational turbine noise and activities such as cable repair, re-burial and cable protection replacement, which are anticipated to be of substantially lower magnitude than construction noise sources. Given the absence of pile driving and the lower levels of vessel activity anticipated during operation and maintenance, the potential for auditory injury has been scoped out from further assessment within the ES.

3.9.6 Whilst the MMO agrees that the risk of auditory injury during operation and maintenance is likely to be low, the MMO requests that the ES provides sufficient evidence to support the proposed scoping out of this impact pathway. This should include appropriate justification, and where relevant reference to project-specific assessments, published evidence and/or comparable offshore wind projects demonstrating that operational underwater noise sources would not be expected to result in injury-level exposure for marine mammals.

3.9.7 The MMO considers that the report identifies the principal underwater noise impact pathways relevant to fish and shellfish ecology. During construction, underwater noise and vibration generated by pile driving and other construction activities, including UXO clearance, has been scoped into the assessment. The report identifies potential effects including injury or mortality, disturbance and displacement, and impacts on spawning behaviour, nursery areas and migration patterns.

3.9.8 During operation and maintenance, behavioural disturbance resulting from operational underwater noise has been scoped into the assessment. The Scoping Report proposes that operational noise sources, including wind turbine operation, mooring line movement (if floating substructures are used) and routine vessel activity, are expected to be low-intensity and are therefore unlikely to result in injury-level effects. On this basis, injury and mortality effects during operation have been scoped out of further assessment within the EIA.

3.9.9 Whilst the MMO agrees that the risk of injury or mortality to fish and shellfish receptors during operation and maintenance is likely to be low, the MMO requests that the ES provides sufficient evidence to support the proposed scoping out of this impact pathway. This should include appropriate justification, and where relevant reference

to project-specific assessments, published evidence and/or comparable offshore wind projects demonstrating that operational underwater noise sources would not be expected to result in injury-level exposure.

3.9.10 The MMO notes that details of the proposed noise assessment are necessarily limited at the scoping stage. However, the assessment approach identifies underwater noise modelling as a key component of the assessment and references recognised fish noise exposure criteria, including Popper *et al.* (2014), which the MMO expects to be considered when assessing potential underwater noise effects on fish receptors. The assessment also proposes that underwater noise modelling will be undertaken to inform the marine mammal assessment.

3.9.11 While established noise exposure criteria are available for fish and marine mammal receptors, criteria remain limited for marine invertebrate species. Where quantitative thresholds are not available, the MMO expects conclusions regarding potential underwater noise effects on marine invertebrates to be informed by the most relevant and up-to-date peer-reviewed scientific literature and supporting evidence base.

3.9.12 The Scoping Report identifies that underwater noise modelling would be undertaken to inform the assessment of potential impacts on marine mammals and fish receptors. The MMO requests that the ES clearly describes the modelling approach adopted, including the assumptions, input parameters, data sources and any relevant validation or quality assurance procedures applied to the modelling outputs.

3.9.13 Paragraph 468 in the Scoping Report states that there is a significant level of marine development being undertaken or planned by European Union (EU) Member States in the wider region. Populations of marine mammals are highly mobile and there is potential for transboundary impacts especially when considering noise impacts. Transboundary impacts have therefore been scoped in to the EIA which is appropriate.

3.9.14 In relation to fish and shellfish ecology, the report states that fish populations and ecological processes may extend across administrative boundaries, including adjacent English and Irish waters. Whilst the report does not consider that a standalone transboundary assessment is required, interactions with Special Areas of Conservation designated for migratory fish species associated with the Offshore Export Cable Scoping Boundary would be assessed within the relevant ecological assessments.

3.9.15 At this stage of the process, the MMO agrees with the proposed mitigation measures. The MMO notes that the report proposes a range of embedded and additional measures relevant to underwater noise receptors, including the production of a Marine Mammal Mitigation Protocol and Site Integrity Plan, consideration of cable routing and micro-siting to avoid sensitive habitats where practicable, and timing construction activities to avoid sensitive periods for key species (see Table 1.8.2 of the scoping report).

3.9.16 The Scoping Report also states that the findings of the EIA and habitats regulation assessment will inform the need for any additional mitigation. Potential measures identified include Noise Abatement Systems for piling and UXO activities, lower-impact construction methods (e.g. low-order UXO clearance and alternative piling installation

techniques), Acoustic Deterrent Devices, and seasonal or temporal restrictions on noisy activities where required (see paragraph 472). The MMO considers this to be an appropriate approach at the scoping stage. The final mitigation package should be informed by the findings of the ES, including the underwater noise assessment, and developed in consultation with the relevant stakeholders and regulators.

3.10 Seascape and Landscape

3.10.1 The MMO defers to Historic England, Natural England (as the SNCB) and relevant local planning authorities on the suitability of the scope of the assessment with regards to Seascape and Landscape.

3.11 Archaeology and Cultural Heritage

3.11.1 The MMO defers to Historic England on the suitability of the scope of the assessment with regards to Archaeology and Cultural Heritage impacts

3.12 Navigation and Other users of the sea

3.12.1 The MMO defers to the Maritime Coastguard Agency (MCA) and Trinity House on the suitability of the scope of the assessment with regards to navigation of vessels.

3.13 Water quality

3.13.1 The MMO defers to the Environment Agency on the suitability of the scope of the assessment with regards to water quality.

3.14 Dredging and Disposal

3.14.1 If dredge and disposal is required, a disposal method should be provided including the estimated volume of material to be disposed of. This must be provided in order to make an assessment of the proposed activity and to allow the proposed volumes to be included on any Development Consent Order.

3.14.2 Section 2.1.5 details potential impacts to Marine Geology, Oceanography and Physical Processes including Water Quality, which appear appropriate. Those relevant to dredge and disposal are listed below and are adequately justified when scoped in/out.

- Construction Stage - Impacts on Contaminant Concentrations due to Changes in SCCs:
- Operation and Maintenance Stage - Impacts on Contaminant Concentrations due to Changes in suspended sediment concentrations (SSCs)
- Potential Impacts During the Decommissioning Stage:
- Potential Cumulative Impacts

3.14.3 The MMO notes that sediment samples have been acquired for the Erebus Offshore Wind Farm environmental impact assessment, which is located immediately adjacent to the northern boundary of the Array Scoping Boundary. In total 107 samples sites were analysed for trace metals and polycyclic aromatic hydrocarbons. The Scoping

Report notes that "*higher concentrations of contaminants were generally located in Erebus' export cable corridor within Milford Haven rather than in the array location*".

3.14.4 The report also states that "*the Array Scoping Boundary is located within an area of the now closed Milford Haven Industrial Sea disposal site (reference LU040). Characterisation information is not available for the site given it was closed in 1984 but historical use records indicate the site was used for the disposal of sewage sludge. The Applicant sought disposal site records from Cefas in December 2025, however, Cefas confirmed that no such records exist for the site. Therefore, site-specific sampling will be used to characterise the Array Scoping Boundary*". The MMO considers that this is appropriate and the MMO requests that sample plan advice is sought from the MMO for both the Array and Offshore Export Cable Scoping Boundaries prior to sampling to ensure that sediment sampling and analysis is appropriate and proportionate.

3.14.5 The assessment of sediment quality will be undertaken in accordance with sediment quality guidelines used by the OSPAR Commission and the MMO. This is appropriate.

3.14.6 Project wide embedded mitigation measures relating to Marine Geology, Oceanography and Physical Processes including Water Quality impacts are detailed in Table 1.8.2, however the MMO notes that none of these are specific to sediment contaminants and/or dredging and disposal.

3.14.7 The Scoping Report states that "*requirements for any additional mitigation measures would be determined through the EIA. … Mitigation measures, if required, would evolve as the EIA progresses and in response to consultation with the relevant stakeholders. These would be fed iteratively into the design and assessment process. All proposed mitigation measures would comply with regulatory requirements and good practice*". The MMO considers that this is appropriate.

3.15 Population and Human Health

3.15.1 The MMO defers to the Local Authority and UK Health Security Agency (UKHSA) on the suitability of the scope of the assessment with regards to population and human health impacts.

3.16 Cumulative Impacts & In-Combination Impacts

3.16.1 Section 2.2.5.5 of the Scoping Report includes a brief discussion of the potential for cumulative effects on benthic habitats, which has been scoped into EIA. Section 1.1.8 provides an overview of the Planning Inspectorate's advice on plans and projects that should be considered in the Cumulative Effects Assessment (CEA). This appears appropriate and adequate considering the stage of the Proposed Development.

3.16.2 The report notes that some impacts may be screened out of the CEA due to the predicted highly localised nature of their impact. The MMO broadly agrees with this approach and understands there may be examples when this may be the case of benthic receptors with some offshore installation techniques (e.g., sediment remobilisation and subsequent settlement from installation of helical screw anchors).

However, the MMO requests that suitable rationale and evidence is provided for any omission of impacts from the benthic CEA in the ES.

3.16.3 For marine mammals, the Scoping Report states that the CEA would consider displacement resulting from cumulative underwater noise, impacts on prey species, and displacement arising from offshore vessel activity and maintenance activities during the operational phase. All other marine mammal impact pathways are proposed to be scoped out of the cumulative assessment (see paragraph 467).

3.16.4 Auditory injury during construction is proposed to be assessed at the project level for marine mammal receptors. However, this pathway does not appear to have been taken forward within the proposed CEA. The MMO requests that the ES clearly explains the rationale for not taking cumulative auditory injury effects forward for assessment.

3.16.5 For fish and shellfish ecology, paragraph 406 states that cumulative underwater noise would be considered within the CEA. However, it is not clear which specific underwater noise impact pathways are proposed to be taken forward within the cumulative assessment. The MMO requests that the ES clearly identifies the underwater noise effects that will be considered cumulatively and provide justification for any impact pathways proposed to be scoped out of the cumulative assessment.

4 Conclusion

4.1 The topics highlighted in this scoping opinion should be assessed during the EIA process and the outcome of these assessments should be documented in the ES in support of the deemed Marine Licence Application and the Planning Application. This statement, however, should not necessarily be seen as a definitive list of all EIA (and HRA) requirements. Given the scale and programme of these planned works, other work may prove necessary.

Yours sincerely

[redacted]

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