



FAO Emma Cottam
Dogger Bank D Case Team
Planning Inspectorate
doggerbankd@planninginspectorate.gov.uk

Your Reference: EN010104
Our Reference: DCO/2023/00001

By email only

26 June 2023

Dear Emma Cottam,

Formal scoping request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 for the proposed Dogger Bank D Offshore Windfarm.

Thank you for your scoping opinion request of 24 April 2023 and for providing the Marine Management Organisation (MMO) with the opportunity to comment on the Dogger Bank D Offshore Wind Farm Environmental Impact Assessment (EIA) scoping request.

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 make a contribution 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 licence¹. 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 licences².

As a prescribed consultee under the 2008 Act, the MMO advises developers during pre-application 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

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



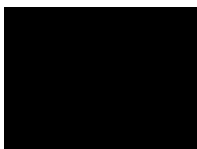
deemed marine licence (“dML”) enable the MMO to fulfil these obligations. Further information on licensable activities can be found on the MMO’s website³. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our joint advice note⁴.

Please find attached the scoping opinion of the MMO. In providing these comments, the MMO has sought the views of our technical advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the MMO Coastal Office – North East Area.

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



Abby-Louise Fraser

Marine Licensing Case Officer



³ <https://www.gov.uk/planning-development/marine-licences>

⁴ <http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/04/Advice-note-11-v2.pdf>



Scoping Opinion

Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (“the Regulations”)

Title: Dogger Bank D (DBD) Offshore Wind Farm (OWF)

Applicant: SSE Renewables and Equinor

MMO Reference: DCO/2023/00001

Contents

1. Proposal.....	4
2. Location	5
3. Scoping Opinion.....	6
3.1 General Comments	6
3.2 Nature Conservation.....	6
3.3 Benthic Ecology.....	6
3.4 Coastal Processes	8
3.5 Fish Ecology and Fisheries	9
3.6 Shellfisheries.....	11
3.7 Marine Mammals.....	11
3.8 Underwater noise.....	11
3.9 Seascape / Landscape.....	13
3.10 Archaeology / Cultural Heritage	13
3.11 Navigation / Other Users of the Sea	13
3.12 Water Quality.....	13
3.13 Dredging and Disposal.....	14
3.14 Population and Human Health	14
4. Conclusion	14
5. References.....	16



1. Proposal

Thank you for your letter dated 24 April 2023 consulting the Marine Management Organisation (MMO) on the EIA Scoping report submitted by SSE Renewables and Equinor in respect to an application for development consent under the Planning Act 2008 (the “2008 Act”) to Dogger Bank D Wind Farm.

1.1 Project Description

Dogger Bank D is proposed to be the fourth phase of the Dogger Bank Wind Farm area. The Dogger Bank D proposal could add up to approximately 1.8 Gigawatt (GW) of renewable energy.

The Applicant is developing two options for how the electricity from the Project will be used, the National Grid or transmission to a Hydrogen Production Facility (HPF). Both the National Grid Option and Hydrogen Option are being developed in order to avoid prematurely dismissing the possibility of the Hydrogen Option, noting that this technology is not yet proven at such scale, compared to a conventional grid connection.

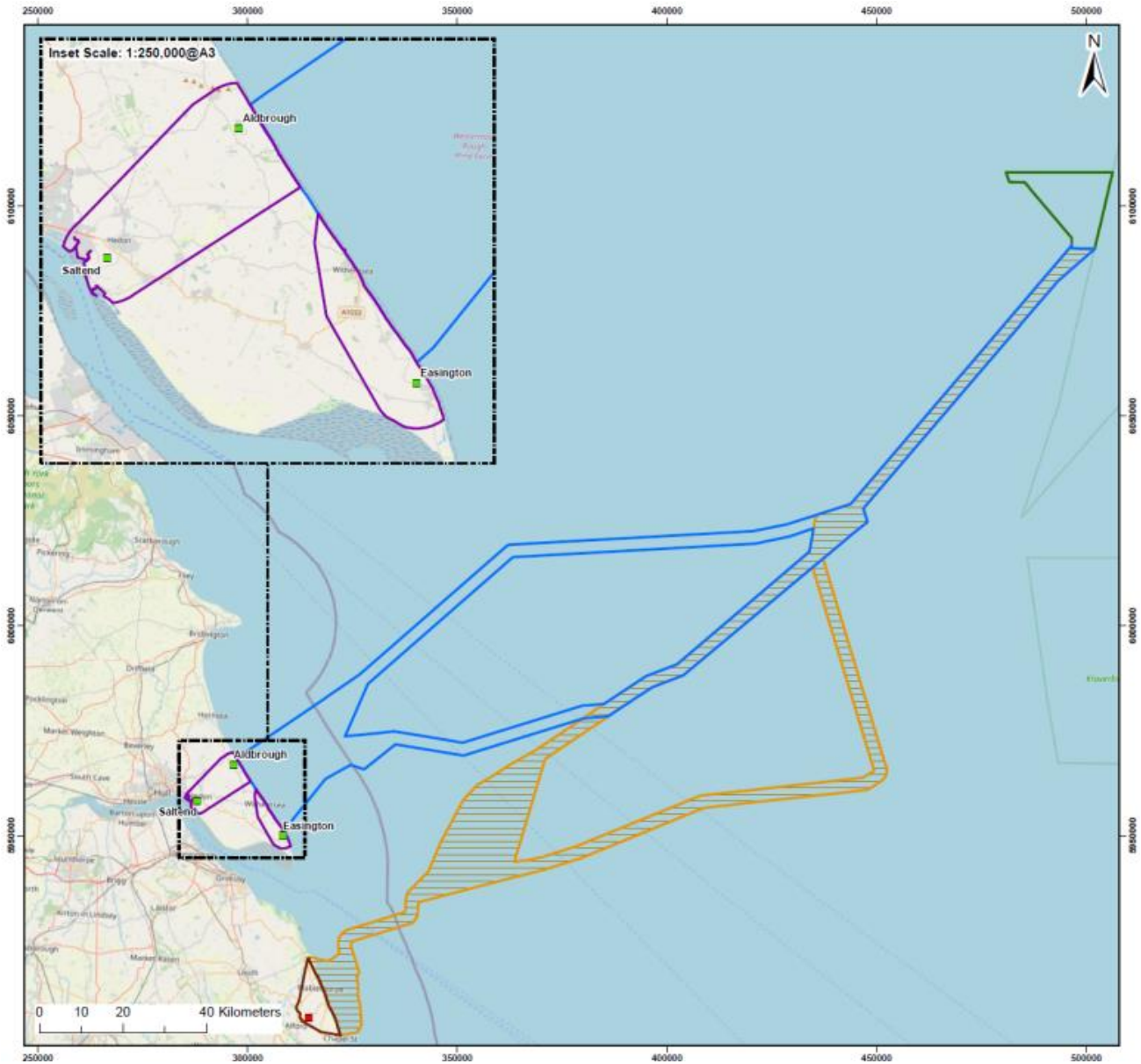
DBD is being developed by a 50 / 50 joint venture between SSE Renewables and Equinor.



2. Location

The Dogger Bank D Offshore Windfarm is located around 210 kilometres (km) off the North-East coast of England and covers an area of 249 kilometres squared (km²). The Scoping area is displayed in Figure 1 below.

Figure 1: The Scoping Boundary of Dogger Bank D



3. Scoping Opinion

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), SSE Renewables and Equinor have requested a Scoping Opinion from the MMO.

In so doing a Scoping Report entitled 'Dogger Bank D Offshore Wind Farm Environmental Impact Assessment Scoping Report' has been submitted to the MMO for review.

The MMO agrees with the topics outlined in the Scoping Report and in addition, we outline that the following aspects be considered further during the EIA and must be included in any resulting Environmental Statement (ES).

3.1 General Comments

- 3.1.1 Long term habitat loss has been scoped into the EIA. It has not been clarified whether all structures will be removed during the decommissioning phase; if any infrastructure will remain in place after decommissioning then this should be assessed as permanent habitat loss.
- 3.1.2 The approach to the Cumulative Effects Assessment (CEA), inter-related impacts and transboundary impacts are not clearly described within the report. Specific projects in the area, especially those that could have overlapping pressures with DBD, have not been identified in the report.
- 3.1.3 Project specific cumulative impact assessments are inherently limited, as these assessments lack strong definition and guidance to enforce a more complete approach. For example, Section 5.6 outlines that only projects with 'sufficient data' will be included in the cumulative assessment, this creates the problem that projects are not assessed because the data does not exist, and if additional data because available in the future, it has already been scoped out of the assessment. The MMO recommends a more detailed criteria to be developed and applied.

3.2 Nature Conservation

- 3.2.1 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 MPAs.

3.3 Benthic Ecology

- 3.3.1 Section 7.4.3.2. states that, '*regarding the operation of the Hydrogen Production Facility (HPF), no impacts are scoped in relating to potential effects on adult epibenthic invertebrates, or the pelagic larvae of benthic invertebrates, should the water supply come from the marine environment*'.

If mesh were to be used to filter out organisms, then the impact of physical trauma on affected benthic invertebrates should be considered and either scoped in or scoped out with justification. Additionally, if any toxic chemicals were to be added to abstracted seawater as part of the treatment process or to prevent fouling of the pipes, then the impact



on any smaller benthic invertebrates or larvae that pass through the system should also be considered.

Finally, the release of chemicals and any dead or moribund organisms (benthic or otherwise) into the marine environment should be included in the assessment of *'Reduction in Marine Water Quality during Operation of the HPF'*.

- 3.3.2 The MMO notes that depending on the assessment of the operation of the HPF, it may be necessary to implement mitigation measures to reduce the risk to benthic ecology receptors and potentially other receptor groups.
- 3.3.3 Section 7.4.3.1.2 proposes that assessments are made for the HPF and inshore Export Cable Corridor (ECC) only, not the Array Area or offshore ECC. This decision should remain tentative until the findings of the 2023 benthic surveys are used to inform the benthic ecology baseline at the sites.

Additionally, for this decision to be justified, the MMO recommends referring to the thresholds of suspended solids associated with Dogger Bank Teesside A & B, and confirming that the works carried out for DBD will not lead to an increase in suspended sediments that equal or exceed the magnitudes from Dogger Bank Teesside A & B.

- 3.3.4 Please note, where increased suspended sediment is assessed, the subsequent deposition of sediment onto the seabed should also be assessed.
- 3.3.5 Section 7.4.4. does not list 'Increased Suspended Sediment Concentrations' as one of the impacts that will be considered in the CEA. However, Section 7.4.5 lists it as one of the impacts that will be considered in terms of transboundary effects. The CEA should consider 'Increased Suspended Sediment Concentrations', particularly if the impact from DBD alone is not negligible.
- 3.3.6 In Section 7.4.3.2.9, the EIA and CEA should consider the potential role of installed hard structures acting as "steppingstones" that facilitate the spread of invasive non-native species (INNS). Specifically, the assessments should consider whether the presence and spatial distribution of installed hard structures increase connectivity between other (natural or artificial) hard habitats in the region. An important point to consider here is that the larvae of some benthic invertebrates can disperse over distances of tens of kilometres to more than a hundred kilometres, depending on the species (Álvarez-Noriega et al., 2020).
- 3.3.7 The MMO notes that depending on the assessment of EIA and CEA, it may be necessary to implement mitigation measures reduce the potential for hard structures to act as "steppingstones" and facilitate the spread of INNS.
- 3.3.8 The outlined approach to data gathering is appropriate (see section 7.4.7 of the Scoping Report). The existing data sources highlighted by the Applicant (see Table 7-11 of the Scoping Report) are suitable for use in benthic ecology baseline characterisation, and the MMO has no further sources to propose. Moreover, the MMO supports the collection of additional baseline data by conducting site-specific offshore benthic surveys of the Array Area and ECC (geophysical, grab sampling, epibenthic trawls, and drop-down video) and intertidal walkover surveys (Table 7-12 of the Scoping Report). Few details are provided



about the proposed surveys at this stage, so the MMO cannot comment on the specific sampling methodologies or survey designs.

- 3.3.9 Section 7.4.7 suggests that no new benthic surveys are proposed for the inshore ECC. Clarification should be provided as to whether new benthic surveys are proposed or whether there is existing baseline data for this area that will be used.
- 3.3.10 The MMO notes that it may be necessary to implement mitigation measures to reduce the risk to benthic ecology receptors and potentially other receptor groups.
- 3.3.11 The ECC and Array Area for DBD overlap several designated sites that protect benthic ecology features, namely the Holderness Inshore Marine Conservation Zone (MCZ), the Holderness Offshore MCZ, and the Dogger Bank Special Area of Conservation (SAC) (see Figure 7-10 of the Scoping Report). The MMO advises that impacts on the protected benthic ecology features of designated sites are avoided, as far as practicable, using micro-routing / micro/siting of infrastructure. If there are any potential residual impacts, then monitoring should be carried out to quantify these impacts and determine whether recovery occurs. Compensation measures may be appropriate to offset any residual impacts on protected benthic ecology features of designated sites. However, the MMO defers to the relevant SNCB(s) regarding the management of designated sites and their protected features.

3.4 Coastal Processes

- 3.4.1 The report has scoped out transboundary impacts for marine physical processes. The report demonstrated a worst-case scenario, that covered all of the Dogger Bank wind farms and then argued that any effects from DBD would be lower than what was modelled. The MMO recommends that this should be supported with reference to evidence that wider hydrodynamic effects will not arise from the expansion of further OWF sites and the gradual accumulation of local impacts.
- 3.4.2 Cumulative sediment plumes were found to cross into Dutch waters and seem to be scoped in with transboundary impacts on further topics (benthic ecology, fisheries). The MMO recommends that clarification is provided as to why this was not scoped in for the marine processes section, as the inter-relationships between the biological and physical impacts should be considered.
- 3.4.3 Mitigation is discussed in broad terms, the MMO understands that specific measures have not been proposed yet. Section 3.4.1.1 lists scour protection types and that installation may involve some seabed preparation (such as levelling of the seabed and installation of a gravel bed layer). These are typical measures undertaken for OWF projects. The MMO recommends future reports go into significantly more detail as to quantities and volumes and their expected (or using a worst-case approach) locations in respect of the significant coastal systems and processes.
- 3.4.4 Section 7.2.2.8 highlights the coastal erosion that Holderness experiences as one of the most rapidly eroding coastlines – suggesting that cliffs could retreat from between 60-120m in the next 60 years. Therefore, the MMO considers that assessment is needed of the coastal interface between offshore and onshore aspects of the development to ensure cables etc. aren't at risk of exposure or damage. Section 3.4.4 suggests different cable



installation methodologies, however further consideration is required of the impacts to the coastal interface.

- 3.4.5 The scoping report has sufficient detail and has scoped in the potential impacts from marine physical processes. Further consideration of transboundary impacts as well as the cumulative impact assessments in the process should be provided.

3.5 Fish Ecology and Fisheries

- 3.5.1 The MMO recommends that the impacts to fish ecology arising from temporary habitat loss and physical disturbance, during the operation phase of the development, be scoped in for assessment. The justification that the impacts will be limited in spatially or temporally cannot be supported until the spatial/temporal extent has been quantified and assessed. Therefore, the MMO recommends this pressure is scoped in for all stages of the EIA.
- 3.5.2 The term 'long term' should be changed to 'permanent' in the context of assessing loss of habitat or changes in habitat type from OWFs during the operation and decommissioning phases. Unless the Applicant is able to commit that all infrastructure relating to the project will be removed from the seabed at the end of the Project's lifetime then permanent habitat loss should be scoped into the decommissioning phase.
- 3.5.3 The MMO does not support the scoping out of the impacts arising from increased suspended sediment and sediment re-deposition during the operation phase of development. As per point 3.5.1, the justification that the impacts will be local and temporary cannot be supported until the spatial / temporal extent of the impacts in relation to specific species and/or habitats has been quantified and assessed. This impact should be scoped into EIA for all stages.
- 3.5.4 Paragraph 404 in Section 7.5.2.1 states the scientific name for cuckoo ray is *Raja naevus*, however the correct scientific name is *Leucoraja naevus*. Similarly, common skate is now recognised to be two different species; the flapper skate, *Dipturus intermedius*, and the blue skate, *Dipturus batis* (Iglésias et al.,2010).
- 3.5.5 The MMO notes that geophysical and benthic sampling will be undertaken across the proposed Array Area and offshore ECC to characterise the seabed and this will include particle size analysis (PSA) of sediments. The MMO supports the collection of site-specific PSA data which can be used to inform the suitability of seabed sediments as herring spawning habitat and sandeel habitat. The Applicant must ensure good coverage of PSA data for the array area and the ECC, in particular the nearshore portion of the ECC which passes through the main Banks herring spawning ground off Flamborough Head.
- 3.5.6 The MMO notes the presence of herring spawning grounds within the project study area and that these species are highly sensitive to changes in their substrate composition. The report does not provide details of the intended method/s for determining potential herring spawning habitat or how they will be used to inform the fish ecology characterisation and impact assessment. For the characterisation of herring spawning habitat, the MMO recommends the method described by MarineSpace (2013).
- 3.5.7 The MMO notes the presence of sandeel habitat within the project study area and that these species are highly sensitive to changes in their substrate composition. The report



does not provide details of the intended method/s for determining potential sandeel habitat or how they will be used to inform the fish ecology characterisation and impact assessment.

The MMO supports the use of International Herring Larvae Surveys (IHLS) data to inform the characterisation of herring spawning habitat, however, Table 7-15 suggests that only the 2022 data will be used in the assessment. The MMO recommends that a minimum of 10 years of IHLS data is used to determine potential herring spawning habitat, as per the MarineSpace (2013) method.

3.5.8 Similarly, for sandeel, the MMO recommends the method described by MarineSpace (2013) to determine areas of suitable sandeel habitat. This method uses Vessel Monitoring System (VMS) data as one of a number of layers to form a sandeel habitat 'heat map'.

As acknowledged in the report, the MMO introduced a new byelaw in 2022 to protect important habitats and species within the Dogger Bank SAC. The byelaw prohibits bottom towed fishing across the whole SAC (MMO, 2022). With this in mind, it should be noted that the coverage of VMS data used to inform the Preliminary Environmental Information Report (PEIR) and ES is likely to change compared to what has typically been observed over the years, as commercial fishing fleets using bottom towed gear targeting sandeel (and other demersal species) on the Dogger Bank will be excluded from the area. As the new byelaw has only just come into force, VMS data for fishing activity on the Dogger Bank in recent years will still be relevant to the assessment.

3.5.9 Paragraph 452 in Section 7.5.8 states that the footprint of potential habitat loss and disturbance will be calculated and used as the basis for the impact assessment. The MMO do not recommend the calculation of total fish habitats, as this approach can over- or under- represent the habitat and is usually based on either substrate suitability or broadscale historic mapped data. A summary of the reasons why the MMO does not support the calculation of total habitat is provided below:

- (i) The calculation is usually based on previous nursery/spawning ground data, however areas can change over time or become recolonised.
- (ii) Whilst spawning and nursery ground maps are used to provide the most recent and appropriate information to identify spawning areas, they do not fully define/consider/identify the following:
 - All potential areas of spawning;
 - Any habituation that may occur;
 - Specific substrate requirements;
 - More suitable topography;
 - Environmental factors that may influence spawning intensity such as temperature, oxygenation, natural disturbance, anthropogenic disturbance etc.;
 - Calculations of specific spawning areas are based on peak spawning times i.e., the number of days of a spawning period rather than considering the entire spawning season.

The MMO recommends acknowledging the overlap with the spawning and/or nursery grounds but to avoid quantifying the impacts based on percentage overlap.

3.5.10 The MMO supports the use of baseline characterisations and survey data gathered for other OWF developments in the former Dogger Bank and Hornsea zones. Whilst much of



the data collected for these earlier OWF projects will be relevant to DBD, any limitations associated with the data must be acknowledged, such as the age of the data (some data are now in excess of 10 years old), the effectiveness of any fishing gear types used to collect data, and their effectiveness at targeting certain species. The seasonality and timing of surveys should also be considered when considering presence/absence of species. Factors such as loss of habitat, introduction of hard substrates, and temporal and natural variations in fish assemblages may have changed over this period.

3.6 Shellfisheries

- 3.6.1 All relevant impacts have been identified and scoped in for shellfish. The applicant has scoped out temporary habitat loss during the operation phase of the project, this is acceptable as long-term habitat loss has been scoped in for this stage of the project. Increased suspended sediment has also been scoped out of the operation phase, the MMO agree with the rationale that there is expected to be limited resuspension of sediment during this phase.
- 3.6.2 Mitigation has not been identified and is not expected at this stage of the application process. Mitigation is expected when impacts have been assessed and identified as causing a negative impact.

3.7 Marine Mammals

- 3.7.1 The MMO has provided comments on impacts on marine mammals from underwater noise. The MMO defers to Natural England as the Statutory Nature Conservation Body (SNCB) in relation to all other potential impacts to marine mammals.

3.8 Underwater noise

- 3.8.1 The MMO recommends that fish are treated as a stationary receptor in any modelling used to make predictions for noise propagation on fish spawning and nursery grounds. The MMO does not support the use of a fleeing animal model for fish the reasons outlined below:
- (i) Fish will respond to loud noise and vibration, through observed reactions include 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. The MMO is not aware of scientific or empirical evidence to support the assumption that fish will flee in this manner.
 - (ii) 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, and philopatric behaviour 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 require a specific substrate type on which to spawn.
 - (iii) Eggs and larvae have little to no mobility, which makes them vulnerable to barotrauma and developmental effects. Accordingly, they should also be assessed and modelled as a stationary receptor, as per the Popper et al. (2014) guidelines.
 - (iv) The outputs of modelling should be presented in map-form depicting the predicted noise contours. 10 years of IHLS data should be presented in the form of a 'heat map'



which should be overlaid with the mapped noise contours. This will provide a better understanding of the likely extent of noise propagation into herring spawning grounds and allow for a more robust assessment of impacts to be made.

- (v) The MMO recommends clearly stating in the report whether simultaneous piling will be undertaken. If simultaneous piling is proposed, then underwater noise modelling for impacts to fish should be based on this scenario.

- 3.8.2 The MMO notes that a separate marine licence application will be made prior to construction for unexploded ordnance (UXO) investigation and clearance works, with an accompanying assessment of UXO clearance impacts on marine mammals, which will include site-specific underwater noise modelling. Please note that this assessment should also assess impacts of UXO on fish, particularly for those fish species with spawning grounds near the project area that possess a swim bladder involved in hearing (e.g., Atlantic herring and cod). The MMO recommends that the UWN assessment of UXO for fish should follow the relevant hearing threshold guidelines from Popper et al. (2014).
- 3.8.3 Non-piling sources of noise during construction, such as vessel noise, are proposed to be scoped out from further assessment on the basis that “there is no evidence to suggest that this low level of noise and vibration has a significant effect on benthic receptors”. The MMO considers that insufficient justification has been provided, in this instance, to scope out other sources of noise during construction. Recent review papers have highlighted that the effects of shipping noise and vibration, and the noise of construction and operation of marine renewable energy devices might induce avoidance behaviour and reduce fitness of sound-sensitive organisms, thereby potentially changing population structure and distribution patterns. Therefore, the MMO recommends that rather than scoping out other sources of noise during the construction, the uncertainties should be recognised, and conclusions should be supported with appropriate peer-reviewed literature.
- 3.8.4 Similarly, the effects of underwater noise and vibration during the operational phase are proposed to be scoped out of the EIA, on the basis that there is no evidence to suggest that this low level of noise and vibration has a significant effect on benthic ecology. As above, the MMO recommends that rather than scoping these out, the uncertainties should be recognised, and conclusions should be supported with appropriate peer-reviewed literature. For example, operational noise may mask fish communication, given that certain fish species create low-frequency sounds or affect fish behaviour or movement in an area (Copping et al., 2021).
- 3.8.5 Paragraph 481 in Section 7.6.3.1.1.1 scopes out potential threshold shift (PTS) and temporary threshold shift (TTS) for non-piling activities, such as dredging, cable laying, and rock placement. The MMO considers the justification to be insufficient to scope out PTS and TTS as a result of these construction activities. A more elaborate argument is required, based on the location, predicted source level, and anticipated duration of each activity, as well as the assumptions of receptor responses (e.g., fleeing etc.).
- 3.8.6 Similarly, operation and maintenance activities are expected to be similar to the other construction activities (such as dredging, cable laying, and rock placement) and therefore, the potential for PTS and TTS has also been scoped out of the EIA for operation and maintenance activities and vessel presence. As stated above, for the other construction activities, a more elaborate argument is required, based on the location, predicted source



level, and anticipated duration of each activity, as well as the assumptions of receptor responses (e.g., fleeing etc.).

3.8.7 Paragraph 485 in Section 7.6.3.1.1.2 states that “where there is no information on potential disturbance ranges, then TTS may be used to inform the disturbance assessment as a proxy for disturbance”. The MMO does not consider it appropriate to use the TTS-onset thresholds as a proxy for disturbance. TTS occurs at much higher sound exposures, and so will underestimate the risk of disturbance.

3.8.8 Relevant impacts in relation to underwater noise have been appropriately scoped into the EIA. However, there are some relevant impacts that have been scoped out, and the MMO does not believe that sufficient justification has been provided at this stage for scoping these out. The MMO requests that the following impacts are also scoped into the EIA:

Construction phase:

- The effects of other sources of noise (i.e., non-piling activities) on benthic ecology.
- The potential for auditory injury (PTS and TTS) in marine mammals arising from other (i.e., non-piling) construction activities.
- Operational phase:
- Effects of underwater noise and vibration during the operational phase on benthic ecology.
- Effects of underwater noise and vibration during the operational phase on fish and shellfish ecology.
- The potential for auditory injury (PTS and TTS) in marine mammals arising from O&M activities (similar to the other (i.e., non-piling) construction activities).

Rather than simply scoping the above impacts out, the uncertainties should be recognised, and conclusions should be supported with appropriate peer-reviewed literature.

3.9 Seascape / Landscape

3.9.1 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.

3.10 Archaeology / Cultural Heritage

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

3.11 Navigation / Other Users of the Sea

3.11.1 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.

3.12 Water Quality

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



3.13 Dredging and Disposal

- 3.13.1 Figure 7-7 shows the British Geological Survey (BGS) sediment data in relation to the offshore scoping area and demonstrates that the majority of the area is classified as 'sand'. The BGS data refers to geological deposition and is not necessarily characteristic of the surface sediments in the area, the MMO recommends that recent data collected from the scoping area be used to confirm this classification. Additionally, the term "large volumes" is rather vague, and the MMO requests the specific volumes of material that may be disturbed throughout the project construction and decommissioning are provided.
- 3.13.2 The scoping report relies heavily on data collected in 2011 and 2012 in support of the Dogger Bank C (DBC) and Sofia OWF environmental assessments. OSPAR guidelines recommend that material to be dredged/disposed of at sea should be subject to characterisation every three to five years. The MMO does not consider the data to be suitable to inform a decision on these works, especially considering levels of Nickel were found in excess of Cefas Action Level 2 (AL2) during this sampling (as shown in Table 7-5 of the scoping report). Further, only one of the samples collected at that time was collected from within the DBD Array area, and no samples were collected from the wider DBD offshore scoping area (according to figure 7-7 of the scoping report).
- 3.13.3 Section 7.3.7 of the report states "a site-specific sediment survey to include chemical contaminant analysis is anticipated to be undertaken as part of the wider benthic ecology survey requirement and will be reported as part of the benthic ecology assessment". The MMO recommends considering this information as part of the sediment quality chapter, in line with requirements under OSPAR and the London Convention and Protocol (LCLP). The MMO also recommends this survey data is taken into consideration regarding the scoping of the remobilisation of existing contaminated sediments.
- 3.13.4 The MMO notes that the report does not mention whether a disposal site is anticipated to be designated for the array area and offshore EEC. In line with OSPAR and LCLP, any deposition of material within the marine environment must be within a licenced disposal area, and therefore the MMO requests consideration is given to this during the EIA, such as a disposal site characterisation report.
- 3.13.5 The MMO considers that additional sampling is required to determine the suitability of material for dredging/disposal at sea. The report suggests that there is a plan to undertake such sampling as part of the benthic ecology survey requirements. The MMO request any details of this survey are provided to the MMO for review, along with details of the volumes of material likely to be subject to dredging and/or disturbance this should be done through the Marine Case Management System and as soon as possible to help inform the survey.

3.14 Population and Human Health

- 3.14.1 The MMO defers to the Local Planning Authority and UK Health Security Agency on the suitability of the scope of the assessment with regards to population and human health impacts.

4. Conclusion



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 EIA report 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 program of these planned works, other information may prove necessary.

Yours Sincerely



Abby-Louise Fraser

Marine Licensing Case Officer



5. References

Copping, A.E., Hemery, L.G., Viehman, H., Seitz, A., Staines, G.J. and Hasselman, D.J. (2021). Are fish in danger? A review of environmental effects of marine renewable energy on fishes. *Biological Conservation* 262 (2021) 109297.

Dannheim, J., Bergström, L., Birchenough, S. N. R., Brzana, R., Boon, A. R., Coolen, J. W. P., Dauvin, J.-C., De Mesel, I., Derweduwen, J., Gill, A. B., Hutchison, Z. L., Jackson, A. C., Janas, U., Martin, G., Raoux, A., Reubens, J., Rostin, L., Vanaverbeke, J., Wilding, T. A., Wilhelmsson, D., and Degraer, S. (2020). Benthic effects of offshore renewables: identification of knowledge gaps and urgently needed research. – *ICES Journal of Marine Science*, 77: 1092–1108.

Iglésias, S.P., Toulhoat, L. and Sellos, D.Y. (2010), Taxonomic confusion and market mislabelling of threatened skates: important consequences for their conservation status. *Aquatic Conserv: Mar. Freshw. Ecosyst.*, 20: 319-333. <https://doi.org/10.1002/aqc.1083>

Coull, K. A., Johnstone, R. and Rogers, S. I. (1998), 'Fisheries Sensitivity Maps in British Waters'. Published and distributed by UKOOA Ltd.

Hawkins, A., Roberts, L., & Cheesman, S. (2014). Responses of free-living coastal pelagic fish to impulsive sounds. *The Journal of the Acoustical Society of America*, 135, 3101–3116. <https://doi.org/10.1121/1.4870697>.

Marine Management Organisation (2022) The Dogger Bank Special Area of Conservation (Specified Area) Bottom Towed Fishing Gear Byelaw 202. [Online] Available at: The Dogger Bank Special Area of Conservation (Specified Area) Bottom Towed Fishing Gear Byelaw 2022 - GOV.UK (www.gov.uk) (Accessed 18 August 2022).

MarineSpace Ltd, ABPmer Ltd, ERM Ltd, Fugro EMU Ltd and Marine Ecological Surveys Ltd, (2013). Environmental Effect Pathways between Marine Aggregate Application Areas and Atlantic Herring Potential Spawning Habitat: Regional Cumulative Impact Assessments. Version 1.0. A report for the British Marine Aggregates Producers Association.

MarineSpace Ltd, ABPmer Ltd, ERM Ltd, Fugro EMU Ltd and Marine Ecological Surveys Ltd, (2013). Environmental Effect Pathways between Marine Aggregate Application Areas and Sandeel Habitat: Regional Cumulative Impact Assessments and Case Study Environmental Impact Assessments. A report for BMAPA.

Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D.A., Bartol, S., Carlson, T.J., Coombs, S., Ellison, W.T., Gentry, R.L., Halvorsen, M.B., Løkkeborg, S., Rogers, P.H., Southall, B., Zeddies, D.G. & Tavalga, W.N. (2014). Asa S3/Sc1.4 Tr-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report Prepared by ANSI-Accredited Standards Committee S3/Sc1 a (Springerbriefs in Oceanography).

