SCOPING OPINION:

Proposed Morecambe Offshore Wind Farm

Case Reference: EN010121

Adopted by the Planning Inspectorate (on behalf of the Secretary of State) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

02 August 2022



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1. INTRODUCTION

- 1.0.1 On 23 June 2022, the Planning Inspectorate (the Inspectorate) received an application for a Scoping Opinion from Cobra Instalaciones y Servicios S.A. (Cobra) and Flotation Energy plc (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Morecambe Offshore Wind Farm Generation Assets (the Proposed Development). The Applicant notified the Secretary of State (SoS) under Regulation 8(1)(b) of those regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development and by virtue of Regulation 6(2)(a), the Proposed Development is 'EIA development'.
- 1.0.2 The Applicant provided the necessary information to inform a request under EIA Regulation 10(3) in the form of a Scoping Report, available from:

http://infrastructure.planninginspectorate.gov.uk/document/EN010121-000028

- 1.0.3 This document is the Scoping Opinion (the Opinion) adopted by the Inspectorate on behalf of the SoS. This Opinion is made on the basis of the information provided in the Scoping Report, reflecting the Proposed Development as currently described by the Applicant. This Opinion should be read in conjunction with the Applicant's Scoping Report.
- 1.0.4 The Inspectorate has set out in the following sections of this Opinion where it has / has not agreed to scope out certain aspects / matters on the basis of the information provided as part of the Scoping Report. The Inspectorate is content that the receipt of this Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects / matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 1.0.5 Before adopting this Opinion, the Inspectorate has consulted the 'consultation bodies' listed in Appendix 1 in accordance with EIA Regulation 10(6). A list of those consultation bodies who replied within the statutory timeframe (along with copies of their comments) is provided in Appendix 2. These comments have been taken into account in the preparation of this Opinion.
- 1.0.6 The Inspectorate has published a series of advice notes on the National Infrastructure Planning website, including <u>Advice Note 7: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping (AN7)</u>. AN7 and its annexes provide guidance on EIA processes during the pre-application stages and advice to support applicants in the preparation of their ES.

- 1.0.7 Applicants should have particular regard to the standing advice in AN7, alongside other advice notes on the Planning Act 2008 (PA2008) process, available from:
 - https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/
- 1.0.8 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (e.g. on formal submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or Associated Development or development that does not require development consent.

2. OVERARCHING COMMENTS

2.1 Description of the Proposed Development

(Scoping Report Section 6)

:	Ref	Description	Inspectorate's comments
2.1.2	Section 5	Alternatives	The Scoping Report discusses the alternatives reviewed when identifying the location of the Proposed Development. the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects. However, the Scoping Report does not explain if a discussion of alternatives will be provided in the ES. The Inspectorate would expect to see a discrete section in the ES that provides details of the reasonable alternatives studied up to the point of submission and the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects.
2.1.3	Section 6.2	Project Design Envelope (PDE) approach	Section 6.2 states that the EIA will be based on parameters for key elements of the Proposed Development rather than finalised detailed design, to retain flexibility. It is stated that a "maximum design scenario" and "options and/ or parameters for which maximum values are defined" will be used to support the impact assessment in the ES. The Inspectorate advises that flexibility in design should only be sought where absolutely necessary, in the interests of a proportionate ES based on the most realistic and refined maximum design envelope possible. For the avoidance of doubt, the ES should assess the worst case that could potentially be built out in accordance with the Authorised Development of the Development Consent Order (DCO) being applied

	Ref	Description	Inspectorate's comments
			number of turbines, turbine height, foundation types, scour protection, cable protection and the layout of offshore structures.
2.1.4	Table 6.3 and paragraph 101	Scour protection	The Scoping Report sets out an indicative maximum diameter for different foundation types, which appears to include an allowance for scour protection. Paragraph 101 states that the amount of scour protection will be defined and refined during the Preliminary Environmental Information Report (PEIR) process. The ES should confirm the amount of scour protection required for each foundation type under consideration, what the maximum seabed footprints would be and the timeframes for installation.
2.1.5	Section 6.3.2	Wind turbine foundations	If drilling is required for the installation of foundations, the ES should identify the likely site for disposal of drilling arisings and include an assessment of effects from these activities.
2.1.6	Paragraph 107	Seabed preparation	The ES should provide further detail on the proposed seabed preparation activities required and identify the worst-case footprint of seabed disturbance that would arise. Should seabed preparation involve dredging, the ES should identify the quantities of dredged material and likely location for disposal. Any likely significant effects (LSE) from dredging should be assessed.
2.1.7	Paragraph 108	Unexploded Ordnance (UXO) removal	It is noted that consent for UXO removal will be sought in a future Marine Licence application which would be supported by a more detailed assessment. The Inspectorate advises that the ES should still include a high level assessment based on a likely worst case scenario (any assumptions used in the definition of the worst case scenario should be explained in the ES). The ES should address any cumulative effects from the construction of the Proposed Development with the likely effects from the UXO clearance. If any

	Ref	Description	Inspectorate's comments
			preliminary works such as UXO surveys would be permitted under the DCO then the effects of these should also be included in the ES.
2.1.8	Section 6.3.4	Inter-array cables	The Scoping Report states that there will be a target depth of 1m for cable burial, with a range between 0.5m to 3m, to be determined by a Burial Assessment Study (BAS) and Cable Burial Risk Assessment (CBRA). Burial could be achieved through a number of techniques dependent on seabed conditions, and where burial is not possible protection measures could be used.
			The BAS and CBRA should be submitted alongside the ES where available. The ES should explain which burial techniques are to be used in which locations and, where a final decision has not been made, include an assessment of the effects using the worst case scenario. It should detail the maximum volume of material required for cable protection and explain how this has been quantified.
2.1.9	Section 6.4.2	Port facilities	Paragraph 125 of the Scoping Report states that onshore works required within a port are excluded from the scope of the ES (on the basis that it relates only to offshore generation assets). Section 7, paragraph 134 confirms that a full and comprehensive assessment of interaction, including cumulative effects, between the Proposed Development and the related proposals for the Transmission Assets would be included. This should include consideration of onshore port works during construction and operation where there is potential for likely significant cumulative effects to occur.
2.1.10	Section 6.5	Operation and maintenance	The ES should provide a full description of the nature and scope of operation and maintenance activities, including types of activity, frequency, and how works will be carried out. This should include consideration of potential overlapping of activities with those required

	Ref	Description	Inspectorate's comments
			for the continuing operation of existing windfarms in the area and construction of those proposed.
2.1.11	Sections 6.4.2 and 6.5.1	Vessel movements	The ES should detail the type, number and frequency of vessel movements required to construct and operate the Proposed Development. If these are unknown, then the ES should explain the assumptions that have been made about vessel movements to inform the assessment.
2.1.12	Section 6.5.2	Decommissioning	The Inspectorate notes that a decommissioning plan will be prepared when the Proposed Development reaches the end of its operation. However, the ES should still include an assessment of the effects of decommissioning in as much detail as can be provided at the stage of the DCO application. It should indicate as far as possible the assumptions that have been made about the options likely to be considered for decommissioning and explain how these have been taken into account in the assessment of different aspects of the environment.
2.1.13	n/a	Relationship to other offshore wind farms	The Proposed Development is located in the Irish Sea with both built and proposed offshore wind farms close by. The Inspectorate considers that it would be useful to include a figure in the introductory section of the ES which places the Proposed Development in the context of the surrounding offshore wind farms.

2.2 EIA Methodology and Scope of Assessment

(Scoping Report Section 7)

ID	Ref	Description	Inspectorate's comments
2.2.1	Section 7.2.2	Predicting the magnitude of impacts	The Scoping Report refers to effects being temporary or short-term in nature but does not explain how these periods have been defined. The ES should define the time periods associated with different durations of effect.
2.2.2	Section 7.7	Cumulative effects	The ES should clearly state which developments will be assumed to be part of the baseline and those which are to be considered in the cumulative effects assessment.
			The Inspectorate notes that while paragraph 134 of the Scoping Report states that the applications for the generation and transmission assets would be accompanied by a full and comprehensive assessment of cumulative impacts and interrelationships, paragraph 159 qualifies this by stating that information which summarises the impacts of the transmission assets "insofar as it is available". The ES for the generation assets DCO should address any cumulative or inter-related effects arising from interactions with the transmission assets. In addition to cumulative/inter-related impacts which arise because of overlapping zones of influence associated with different projects, it should also consider temporal cumulative/inter-related impacts. Examples might include noise impacts on seabirds which initially arise from the construction of the array and then from construction of the transmission assets. Where information on the transmission assets is limited, the ES should explain and justify any assumptions which have been made about the parameters of the transmission assets and why these represent the worst case scenario.

ID	Ref	Description	Inspectorate's comments
2.2.3	Paragraph 155	Use of 'as built' parameters in cumulative effects assessment	The Scoping Report states that where possible, the assessment would use 'as built' project parameter information, as opposed to the use of consented parameters to avoid over-precaution in the assessment. It is the Inspectorate's understanding that unless a DCO or other consent has been revised to recognise the 'as built' rather than as consented parameters, then the consented parameters should be the ones which are considered since the possibility still exists that further build out could be allowed. The ES should undertake the cumulative effects assessment on the basis of the consented parameters for other developments. The Applicant's attention is drawn to the advice from Natural England (NE) on this point in Appendix 2 of this Opinion. However, it would also assist the decision maker if a cumulative effects assessment was included in the ES which uses the 'as built' parameters for other developments.
2.2.4	n/a	Cumulative effects	For a number of aspects, including marine archaeology and heritage, socio-economics and tourism and recreation, the Scoping Report states that cumulative effects are scoped into the ES for all phases of the Proposed Development (for the same impact pathways as the project alone) at this stage but indicates that some may be screened out through cumulative impact assessment screening. This would be on the basis that impacts would be highly localised or management measures would be in place to reduce the risk of impacts.
			The Inspectorate considers that this is an acceptable approach to the assessment provided that the ES includes a clear justification for any screening out of individual impact pathways.
			The Applicant is also advised to seek to agree with stakeholders through the Evidence Plan Process (EPP) which plans and projects should be included in the cumulative effects assessment. The ES should also consider the potential for cumulative effects on receptors within Welsh waters and/or the coastal regions of Wales.

ID	Ref	Description	Inspectorate's comments
2.2.5	n/a	Effects on Welsh waters/coastal region	While the Proposed Development is located entirely in English waters, the ES should explain if the zones of influence of the Proposed Development affect Welsh waters and/or the coastal regions of Wales. If this is the case, then the ES should also consider relevant Welsh legislation and policy, notably the Environment (Wales) Act 2016 and the Wellbeing of Future Generations (Wales) Act 2015.
2.2.6	n/a	Confidential annexes	Public bodies have a responsibility to avoid releasing environmental information that could bring about harm to sensitive or vulnerable ecological features. Specific survey and assessment data relating to the presence and locations of species such as badgers, rare birds and plants that could be subject to disturbance, damage, persecution, or commercial exploitation resulting from publication of the information, should be provided in the ES as a confidential annex. All other assessment information should be included in an ES chapter, as normal, with a placeholder explaining that a confidential annex has been submitted to the Inspectorate and may be made available subject to request.

3. ENVIRONMENTAL ASPECT COMMENTS

3.1 Marine geology, oceanography and physical processes

(Scoping Report Section 8.1)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.1.1	Paragraph 190 and Table 8.3	Effects on waves and tidal currents during construction and decommissioning	The Scoping Report seeks to scope this matter out noting the potential effect from the physical presence of construction equipment will increase incrementally during construction with the greatest effects being predicted during operation negating the need for a construction assessment. The Inspectorate notes that the ES would include an assessment of the most severe effects and agrees that this matter can be scoped out of further assessment.
3.1.2	Paragraph 191 and Table 8.3	Effects on bedload sediment transport and seabed morphological change during construction and decommissioning	The Scoping Report seeks to scope this matter out on the grounds that effects are expected to be localised so would not give rise to any significant effects on seabed features or coastal morphology. Effects on the form and function of the sediment transport processes, including the potential requirement for sand wave levelling, boulder clearance, cable removal and cable protection would be included in the assessment. The Inspectorate agrees that this matter can be scoped out of further assessment.
3.1.3	Paragraph 198 and Table 8.3	Effects on bedload sediment transport and seabed morphological change during operation	Table 8.3 scopes in effects on bedload sediment transport and seabed morphological changes into the assessment. However, paragraph 198 appears to imply effects on bedload sediment transport conditions and sediment transport are likely to be minimal; it is unclear if the intention is to include assessment of these effects in the ES. For the avoidance of doubt, the Inspectorate considers these effects should be assessed in the ES.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.1.4	Section 8.1.6.5	Potential transboundary impacts	The Scoping Report seeks to scope this matter out on the grounds that the Proposed Development is too far from any international border for effects to reach an EEA State. The Inspectorate agrees that significant effects on an EEA site are unlikely to arise and therefore this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.1.5	Paragraph 167 and Figure 8.1	Study area	The study area is defined as the 'Morecambe Offshore Windfarm Site' as shown on Figure 8.1. However, the Scoping Report states that the study area also extends beyond the windfarm site and across the wider regional seabed and coastline. This is not shown on Figure 8.1. The ES should include a figure clearly showing the boundary of the study area and justification for its final extent.
3.1.6	Section 8.1.3.6	Designated sites	The Scoping Report identifies various designated sites within 30km of the Proposed Development which will be included in the assessments in the ES. However, the Scoping Report does not explain how the 30km distance reflects the zone of influence for the Proposed Development. The ES must clearly explain how designated sites included in the assessment have been identified, supported by evidence of agreement from relevant stakeholders. If agreement is not possible, a justification should be provided as to the approach used.
3.1.7	Section 8.1.4 and Table 8.1	Approach to data collection	Table 8.1 lists various reports and datasets which would be used to inform the assessment. It is noted that many of the data sources listed in Table 8.1 are taken from other offshore wind farm assessments and may not cover the area of the Proposed Development. The Applicant's attention is drawn to the Marine Management Organisation's (MMO) comments on the need to give more weight to the regional environmental studies than the offshore

ID	Ref	Description	Inspectorate's comments
			windfarm assessments (see Appendix 2 of this Opinion). The ES should clearly identify the data sources relied on to inform the baseline and their relevance to the area affected by the Proposed Development.
			The Applicant's attention is also drawn to the comments from Natural England (NE) on other potential datasets which could be used to inform the assessment. The ES should include evidence of agreement with relevant stakeholders on the adequacy of the baseline wherever possible.
3.1.8	Table 8.2	Surveys	The Scoping Report lists surveys which have either been carried out or are planned for 2022/23 but does not provide any other information. In the absence of information on the precise methods used, and the rationale behind the approach to sampling and the area covered by the surveys, it is difficult for the Inspectorate to understand if the baseline data is likely to be adequate. The ES should either demonstrate that the adequacy of the baseline data has been agreed through the EPP (with supporting information eg meeting minutes) or present a detailed justification as to why it is considered adequate. A figure should be provided in the ES which shows the survey coverage.
3.1.9	Paragraph 189	Potential impacts	The Inspectorate notes the MMO recommendation that the ES should include a discussion of suspended sediment concentrations profiles during operation to ensure that effects on water quality are fully considered (see Appendix 2 of this Opinion). The Applicant is advised to seek to agree the list of likely impacts with relevant stakeholders and to provide evidence of this agreement in the ES.
3.1.10	Paragraph 205	Potential cumulative impacts	When considering the zone of influence for the cumulative effects assessment, the Applicant's attention is drawn to the comments from the MMO on the potential for multiple adjacent areas of impact to

ID	Ref	Description	Inspectorate's comments
			lead to cumulative effects over a wide area (see Appendix 2 of this Opinion). The ES should provide a full justification for the range of cumulative effects considered and their spatial/temporal coverage.
3.1.11	n/a	Scour protection	Scour protection is proposed around wind turbine bases, however secondary scour effects are not referenced. The Inspectorate considers that the potential for secondary scour to arise from the protection itself should be scoped into the assessment.
			No information has been provided regarding the timeframes for installing scour protection. The ES should provide details regarding timeframes for installing scour protection and either provide assurances that the timeframes for installing scour protection would be sufficient to ensure there would be no LSE or provide an assessment of effects prior to the installation of scour protection, where significant effects are likely to occur.

3.2 Marine water and sediment quality

(Scoping Report Section 8.2)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.2.1	Paragraphs 236 and 241 - 242	Potential leaks and spills during construction, operation and decommissioning	The Inspectorate agrees that control measures set out in regulations (such as the International Convention for the Prevention of pollution from Ships (MARPOL) 73/78), the proposed Project Environmental Management Plan (construction and decommissioning) and Marine Pollution Contingency Plan drafted with the approval of the MMO mean that the Proposed Development is unlikely to give rise to significant effects from leaks and spills. As such the Inspectorate is content to scope this matter out of further assessment.
3.2.2	Section 8.2.6.5	Potential transboundary impacts	The Scoping Report states that effects are unlikely to extend into EEA states. The Inspectorate agrees that significant effects on a European Economic Area site are unlikely to arise and therefore this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.2.3	Paragraph 212 and Figure 8.1	Study area	The study area is defined as the 'Morecambe Offshore Windfarm Site' as shown on Figure 8.1. However the scoping report states that the study area also includes areas beyond the windfarm site and across the wider regional seabed and coastline. This is not shown on Figure 8.1.
			The ES should include a figure clearly showing the boundary of the study area and provide a justification for the final extent.

ID	Ref	Description	Inspectorate's comments
3.2.4	Table 8.4	Existing datasets	The datasets listed are, with one exception, over ten years old and it is not clear how relevant they are to the area affected by the Proposed Development. Given the age of previous surveys within the area, the distance from the Proposed Development and the lack of information on the survey methods used, there is a risk that the baseline may not be robust.
			The ES should clearly identify the datasets used to determine the baseline, supported with evidence of agreement with relevant stakeholders wherever possible.
3.2.5	Paragraph 223	Sediment sampling	The Applicant should ensure that sediment samples used for the analysis of contaminants (e.g. metals, polycyclic aromatic hydrocarbon (PAHs), and Polychlorinated biphenyls (PCBs)) are collected separately from faunal samples and utilise suitable collection techniques. The ES should include a detailed description of the survey methodology used. The intention to agree the survey approach through the EPP is noted; the Applicant should also seek to agree the suite of contaminants to be considered through the EPP.

3.3 Benthic ecology

(Scoping Report Section 8.3)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.3.1	Paragraphs 285 - 287 and Table 8.10	Physical presence of infrastructure during construction and decommissioning leading to a change in habitat type	As described in the Scoping Report, this effect is expected only to arise in the operational phase when the sub-sea structures such as the foundations and cable/scour protection are in place. The Inspectorate agrees that this matter can be scoped out of further assessment for the construction phase. However, in the absence of detailed information on the extent to which sub-sea structures would be left in place after decommissioning, the Inspectorate is not in a position to agree to scope this matter out of further assessment. Accordingly, the ES should include an assessment of these matters or information demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.3.2	Paragraphs 277, 291 and Table 8.10	Remobilisation of contaminated sediments during construction and operation	The Scoping Report notes that if the benthic sampling demonstrates low levels of contamination, then this matter would be scoped out of further assessment through the evidence plan process (EPP). The Inspectorate agrees that if this approach is agreed through the EPP then this matter can be scoped out of further assessment. However, the specific contamination levels recorded through benthic sampling should still be provided as an annex to the ES.
3.3.3	Paragraph 279 and Table 8.10	Introduction and colonisation of invasive non-native species (INNS) during construction and decommissioning	Paragraph 279 of the Scoping Report identifies this matter as something that will be assessed but Table 8.10 scopes it out for construction and decommissioning. For the avoidance of doubt, the risk of introducing INNS during construction and decommissioning should be assessed in the ES.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.3.4	Paragraphs 280 - 281 and 295 - 296	Effects on water quality during construction due to spillages and leakages during construction and operation	The Scoping Report proposes to scope out accidental pollution resulting from the construction and operation of the Proposed Development. The Inspectorate agrees that such effects are capable of mitigation through standard management practices and can be scoped out of the assessment. The ES should provide details of the proposed mitigation measures to be included in the Project Environment Management Plan and Marine Pollution Contingency Plan.
3.3.5	Paragraph 288	Effects of electromagnetic fields (EMF) during operation	The Scoping Report cites various studies which show that various benthic species do not respond to EMF. However, it does not explain whether the cable burial depth in these studies is similar to the cable burial depth for the Proposed Development. In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope these matters from the assessment. Accordingly, the ES should include an assessment of these matters or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of LSE. The Applicant's attention is also drawn to the comments from NE on this point (see Appendix 2 of this Opinion).
3.3.6	Paragraph 292	Underwater noise and vibration during operation	The Scoping Report seeks to scope this matter out on the grounds that monitoring studies from several operational offshore wind farms demonstrate that levels of noise and vibration during operation are only marginally above ambient noise levels. However, the Inspectorate notes that NE do not consider the available evidence to be conclusive (see Appendix 2 of this Opinion). In addition, the size of turbines likely to be installed may be considerably larger than those assessed in the monitoring studies. In the absence of information such as evidence demonstrating clear agreement with

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			relevant statutory bodies, the Inspectorate is not in a position to agree to scope these matters from the assessment. Accordingly, the ES should include an assessment of these matters or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.3.7	Section 8.3.6.5	Potential transboundary effects	The Scoping Report seeks to scope this matter out on the grounds that the effects of the Proposed Development would not occur beyond English waters. The Inspectorate agrees that effects on EEA States are unlikely to occur and this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.3.8	Table 8.8	Existing datasets	The intention to agree the baseline data with relevant stakeholders is noted. The Applicant is advised to check if there are any other relevant datasets available for instance through the Marine Data Exchange and to confirm the adequacy of the desk-based assessments with relevant stakeholders. The Applicant's attention is drawn to the comments from NE on this point (see Appendix 2 of this Opinion).
3.3.9	Paragraph 262	Benthic surveys	The Scoping Report states that the benthic surveys were carried out in accordance with the guidance listed and that a detailed method statement was presented to stakeholders as part of the EPP. In the absence of information on the precise methods used, and the rationale behind the approach to sampling and the area covered by the survey, it is difficult for the Inspectorate to understand if the baseline data is likely to be adequate. The ES should either demonstrate that the adequacy of the baseline data has been agreed

ID	Ref	Description	Inspectorate's comments
			through the EPP (with supporting information eg meeting minutes) or present a detailed justification as to why it is considered adequate.
3.3.10	Paragraph 264	Reliance on proxy species	The Scoping Report states that where information is unavailable relating to key species, proxy species with similar ecological features may be used in the assessment. The ES should explain (with supporting evidence) to what extent this approach has been agreed with the marine expert working group of the EPP.
3.3.11	Paragraph 266	Duration of impacts	Where the duration of impacts is being determined with reference to the time for recovery for various receptors, the ES should explain what evidence is being relied on to reach conclusions about the likely time for recovery from impacts.
3.3.12	Paragraph 287	Impacts from presence of sub-sea structures	The Scoping Report states that as part of the assessment of the presence of sub-sea structures, potential indirect effects from localised changes in hydrodynamic/sedimentary processes would also be taken into account. However, the Scoping Report does not explain how this would be done. The Inspectorate is concerned that combining two different effects (colonisation of sub-sea structures and habitat loss/disturbance as a result of hydrodynamic/sedimentation changes) will be confusing. The ES should clearly distinguish between the two different impacts and their effects on benthic ecology.
3.3.13	Paragraph 290	Increased sediment deposition from maintenance during operation	It is not clear from the wording of the Scoping Report if the intention is to assess this impact or scope it out of further consideration. For the avoidance of doubt, this impact should either be assessed in the ES or a justification should be provided as to why significant environmental effects are unlikely.
3.3.14	n/a	Temperature changes from cables	Temperature changes from the presence and operation of cables have not been discussed in the Scoping Report and it is unclear whether

ID	Ref	Description	Inspectorate's comments
			this would have an impact on benthic communities. The ES should determine if there would be any temperature changes as a result of cable presence and assess any impacts on benthic communities where they are likely to occur.

3.4 Fish and shellfish ecology

(Scoping Report Section 8.4)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.4.1	Paragraph 335 and Table 8.13	Temporary habitat loss/physical disturbance during operation	It is noted that the ES will consider permanent habitat loss during operation. As such the Inspectorate is content for this matter to be scoped out of further assessment.
3.4.2	Table 8.13	Permanent habitat loss during construction and decommissioning	It is noted that the ES will consider permanent habitat loss during operation. The Inspectorate is content that this matter can be scoped out of further assessment.
3.4.3	Table 8.13	EMF during construction and decommissioning	On the basis that the Proposed Development will not be operational and generating EMF during construction and decommissioning, the Inspectorate is content to scope this matter out during construction and decommissioning.
3.4.4	Paragraph 348 and Table 8.13	Introduction/removal of hard substrate during construction	As described in the Scoping Report, this refers to the potential for marine structures to be colonised by benthic invertebrates. The Inspectorate agrees that it is more appropriate for this effect to be considered during operation and therefore this matter can be scoped out of the construction stage assessment.
3.4.5	Table 8.13	Cumulative permanent habitat loss during construction	As noted above, permanent habitat loss will be considered as part of the assessment of operational effects. On the basis that the ES will assess cumulative permanent habitat loss during operation, the Inspectorate agrees that this matter can be scoped out of the construction stage assessment.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.4.6	Paragraphs 337, 344 and Table 8.13	Remobilisation of contaminated sediments during construction and operation	The Scoping Report notes that if the benthic sampling demonstrates low levels of contamination, then this matter would be scoped out of further assessment through the EPP. As stated above, the Inspectorate agrees that if this approach is agreed through the EPP then this matter can be scoped out of further assessment. However, the contamination levels recorded through benthic sampling should still be provided as an annex to the ES.
3.4.7	Section 8.4.6.5 and Table 8.13	Potential transboundary impacts	The Scoping Report states that as the distribution of fish and shellfish species is independent of national geographical boundaries, a specific assessment of transboundary effects is unnecessary, in line with the approach adopted for several other offshore wind farms (East Anglia THREE, East Anglia ONE North, Norfolk Vanguard and Awel y Môr). However, the Applicant should be aware that the Inspectorate undertook transboundary consultation with the relevant European Economic Area (EEA) states for these projects, including for their impacts on fish and shellfish. As such, the assessment in the ES must be sufficient to allow any EEA states to determine if a significant effect on their environment is likely. The Inspectorate does not consider that the Scoping Report provides sufficient evidence to allow this matter to be scoped out. Accordingly, the ES should include an assessment of this matter or a justification as to the absence of LSE.

	ID	Ref	Description	Inspectorate's comments
•	3.4.8	Section 8.4.3.4	Designated sites (ecological)	The Scoping Report notes the presence of various designated sites with 30 – 45km of the windfarm site but also notes the potential for migratory species associated with other designated sites to occur in the windfarm site. The ES should explain how the zone of influence

ID	Ref	Description	Inspectorate's comments
			for the Proposed Development has been defined and how this has led to the identification of designated sites which could be affected.
3.4.9	Section 8.4.4	Baseline data	Table 8.12 lists existing datasets used to inform the review. Given the age of previous surveys within the area, the distance from the Proposed Development and the lack of information on the survey methods used, there is a risk that the baseline may not be robust.
			The ES should clearly identify the datasets used to determine the baseline, supported with evidence of agreement with relevant stakeholders wherever possible. The Applicant's attention is drawn to the comments from the MMO relating to the need to include data on Irish Sea herring larvae which is held by the Agri-Food and Biosciences Institute of Northern Ireland (see Appendix 2 of this Opinion).
3.4.10	Paragraph 331	Assessment of impacts	The Scoping Report states that the assessment of impacts will be based on a realistic worst case scenario. The Applicant is reminded that the ES should assess the full range of potential impacts which could occur as a result of the works which would be permitted by the DCO.
3.4.11	Paragraph 334	Consideration of impacts from different phases of the Proposed Development	The Scoping Report states that impacts which span the life of the Proposed Development will be considered as part of the operational phase rather than the construction phase to avoid duplication. This implies that the ES may not report the full range of effects for construction. The Inspectorate advises that it would be more appropriate to take the approach outlined in relation to benthic ecology (para 274) where effects likely to arise across the lifetime of the Proposed Development are assessed in the construction phase.
3.4.12	Paragraph 345	Underwater noise and vibration during operation	The Scoping Report states that it considers unlikely that operational noise impacts would cause physical harm to fish or shellfish but this

ID	Ref	Description	Inspectorate's comments
			matter has been scoped in to allow for further justification when full baseline information is available. It is noted that the research cited in the Scoping Report dates from 2011 and 2014. Given the age of the studies and the increase in the size and capacity of wind turbines since 2014, the Inspectorate considers that this matter should be addressed in the ES.
3.4.13	Sections 8.4.6.1 and 8.4.6.2	Potential impacts	The Inspectorate notes that the Scoping Report identifies the potential presence of basking shark. The ES should assess the potential for vessel collision on basking shark and any significant effects that are likely to occur.
3.4.14	Section 8.4.5	Approach to impact assessment	The Scoping Report gives little information on the methods likely to be used for assessments. The ES should include a clear description of the methods used to assess impacts on fish and shellfish and any assumptions which support the assessment (including whether concurrent piling is expected to occur).
			Evidence demonstrating that the methodology has been agreed with relevant stakeholders should also be included wherever possible. If agreement with consultees on the approach used is not possible then the ES should include a justification as to why the methods used in the assessments are appropriate.
			Unless otherwise agreed with the relevant stakeholders, the ES should:
			 Base assessments of underwater noise impacts on the assumption that fish, eggs and larvae are stationary rather than fleeing receptors for the reasons outlined in the advice from the MMO (see Appendix 2 of this Opinion).
			 Use particle size analysis to inform the assessment of habitat suitability for herring spawning and sandeel.

ID	Ref	Description	Inspectorate's comments
			 Use a 135 dB threshold for herring at their spawning ground to model behavioural responses.
3.4.15	Section 8.4.7	Potential mitigation measures	The Applicant should explain how it will control the timing of the proposed construction and / or operational activities to avoid key and sensitive periods to species, such as fish spawning seasons and fish migration periods. Mitigation measures for noise generating activities such as piling (such as the use of twin walled piles or bubble curtains) should also be described in the ES. The ES should explain how the delivery of measures has been secured through the DCO.

3.5 Marine mammal ecology

(Scoping Report Section 8.5)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.5.1	Paragraph 372	Sea turtles	The Scoping Report states that effects on marine turtles may be scoped out of further assessment. The Inspectorate agrees that this matter can be scoped out of further assessment but advises that the ES should explain the supporting evidence for the conclusions that significant effects would be unlikely to occur. This should be supported by evidence of agreement from the relevant stakeholders. In the event that marine turtles are included in the assessment, then the Inspectorate advises that this chapter of the ES should be renamed to recognise that it covers turtles as well as marine mammals.
3.5.2	Paragraphs 420, 433 and Table 8.20	Potential impacts from changes to water quality during construction and operation	The Scoping Report states that impacts related to changes in water quality are currently scoped in for assessment but may be scoped out once further information is available. The Inspectorate agrees this matter can be scoped out of further assessment, provided the ES can demonstrate that the remobilisation of contaminants or increases in suspended sediment concentrations would not be significant. Any mitigation measures which would be relied on to avoid significant environmental effects must also be described.
3.5.3	Paragraphs 434 – 439 and Table 8.20	Barrier effects on marine mammal movements from the Proposed Development alone	The Scoping Report seeks to scope out this matter on the grounds that a number of research reports demonstrate that marine mammals are not excluded from operational wind farms and in fact will forage within them. However, it concludes that the cumulative effects of the Proposed Development with other projects will be considered in the cumulative effects assessment. The logic of this position is not entirely clear to the Inspectorate – if the Proposed Development is not going to affect marine mammal movements then why would a

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			cumulative effect arise? In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. Accordingly, the ES should include an assessment of this matter or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of an LSE.
3.5.4	Paragraphs 440 – 446 and Table 8.20	Direct effects of EMF during operation	The Scoping Report seeks to scope this matter out on the grounds that there is no evidence to suggest that existing subsea cables affect cetaceans or seals, that harbour porpoise are known to move over operating cables in the Baltic Sea and that evidence from operational windfarms does not suggest that marine mammals are excluded. In addition, this matter has not been included in EIAs for other offshore windfarms. The Inspectorate agrees this matter can be scoped out of further assessment. However, no supporting evidence has been provided in relation to effects of EMF on marine turtles. In the event that marine turtles are not scoped out of further assessment, the ES should include either an assessment of this matter or information demonstrating agreement with the relevant consultation bodies and the absence of an LSE
3.5.5	Table 8.20	Underwater noise during foundation installation during operation and decommissioning	It is noted that this effect would only arise during the construction phase. The Inspectorate is content that this matter can be scoped out of further assessment.
3.5.6	Table 8.20	Underwater noise from operational wind turbines during construction and decommissioning	It is noted that this effect would only arise during the operational phase. The Inspectorate is content that this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.5.7	Section 8.5.2	Study area	The Scoping Report states that the study area covers the wider Irish Sea area to take account of the movements of marine mammals/turtles and relevant Management Units (MU). However, NE has advised that several of the MUs being scoped in are greater than the spatial extent of the wider Irish Sea and that the full extent of the MUs should be considered in the ES (see Appendix 2 of this Opinion). The Inspectorate considers that the study area should include the full extent of the relevant MUs.
3.5.8	Section 8.5.3.1	Site specific survey information	The Scoping Report does not provide details on the coverage of the aerial surveys which are currently being undertaken, or how much of the data collected would be included in the final assessments. The ES should include a figure demonstrating the coverage. It should also include a description of the methods used to collect the survey data and the subsequent data analysis, supported by evidence of agreement with the relevant stakeholders. Where agreement has not been possible, the ES should provide a justification for the appropriateness of the methods used.
3.5.9	Section 8.5.3.2	Designated sites	The Scoping Report states that connectivity between the wind farm site and various Special Areas of Conservation will be considered during the Habitats Regulations Assessment. Any significant effects should also be reported in the ES.
			The Applicant's attention is drawn to the advice from NE (see Appendix 2 of this Opinion) which suggests the use of an additional Marine Protected Area for minke whale and draft MUs for seals to identify designated sites which could be affected by the Proposed Development. The Applicant should seek to agree the list of designated sites which could be affected by the Proposed Development with the appropriate nature conservation bodies (ANCB).

ID	Ref	Description	Inspectorate's comments
3.5.10	Paragraphs 385 and 413	Underwater noise modelling and UXO	Please see the comment under ID REF. 2.1.7 above on the potential need for a cumulative effects assessment with the UXO clearance to be consented under a separate Marine Licence.
3.5.11	Paragraph 391	Definition of sensitivity	The factors which affect the sensitivity of receptors are listed as adaptability, tolerance and recoverability. The ES should clearly explain and provide supporting evidence used to determine the adaptability, tolerance and recoverability of each species included in the assessment.
3.5.12	Paragraphs 397 - 398 and Table 8.17	Definition of magnitude	The Scoping Report refers to the Joint Nature Conservation Committee (JNCC) 2010 draft guidance to determine what represents an effect of medium magnitude. The Inspectorate notes that the guidance is still draft and now around 12 years old. In relation to the definitions of magnitude used in the assessment, the ES should present evidence that the definitions have been agreed with relevant stakeholders or, if agreement is not possible, a justification as to why the approach used in the ES remains appropriate.
3.5.13	Paragraph 416	Disturbance at seal haul-out sites during construction	The Scoping Report states that the potential for disturbance at seal haul-out sites from vessel transits between the Proposed Development and the local port will be assessed. However, paragraph 125 states that at present the port facilities are unknown. The ES should explain the assumptions that have been made in relation to movements between the Proposed Development and the port and why this represents the worst case scenario.
3.5.14	Section 8.5.7	Potential mitigation measures	The Inspectorate advises that the Applicant should provide an outline Vessel Management Plan to demonstrate how effects on marine mammals would be minimised. The Applicant's attention is drawn to the comments from NE in Appendix 2 of this Opinion.

3.6 Offshore ornithology

(Scoping Report Section 8.6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.6.1	Table 8.22	Displacement/disturbance/barrier effects due to presence of turbines and other infrastructure during construction and decommissioning	While these effects will principally occur during operation, the Scoping Report does not explain why they would not also occur during other phases of the development as structures and cables are being installed or removed. In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope these matters from the assessment. Accordingly, the ES should include an assessment of this matter or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.6.2	Table 8.22	Collision risk from operational wind turbines during construction and decommissioning	It is noted that this effect would only arise during the operational phase. The Inspectorate is content that this matter can be scoped out of the construction and decommissioning stage assessments.
3.6.3	Section 8.6.6.5 and Table 8.22	Potential transboundary impacts during construction and decommissioning	As information on the species which could be affected and the likely construction/decommissioning activities is limited, the Inspectorate is not in a position to agree to scope these matters from the assessment. Accordingly, the ES should include an assessment of these matters or a justification as to why LSE would not arise.

ID	Ref	Description	Inspectorate's comments
3.6.4	Section 8.6.2	Study area/identification of receptors	It is not clear from the Scoping Report how the study area for ornithology will be defined. Paragraph 465 refers to regional populations of seabirds and migratory birds and the possibility of connectivity with designated sites but does not explain how the

ID	Ref	Description	Inspectorate's comments
	Paragraphs 465 and 479		regional populations or connectivity would be established. Paragraph 479 and Figure 8.6 describe the area covered by the aerial surveys which is stated to be based on the advice from the ANCBs. The Scoping Report lists the species which have so far been recorded in the aerial surveys but does not explain if all these species would be considered in the assessment.
			The ES must clearly explain and justify how the receptors for the assessment have been identified, supported by evidence of agreement with relevant stakeholders wherever possible. It must also explain how regional populations and connectivity have been established.
3.6.5	Section 8.6.4	Approach to data collection	It is noted that the survey coverage (both temporal and spatial) has been based on advice from the ANCBs, particularly NE. The ES should provide the full rationale for the survey coverage, supported by evidence demonstrating agreement with relevant stakeholders. Where agreement cannot be reached then the ES should include a justification for the approach used.
3.6.6	Table 8.21	Results from aerial survey data	Table 8.21 records substantial numbers of birds which have not been identified. While the Inspectorate recognises that it is not always possible to identify every bird to species level, surveys for offshore windfarms are normally able to at least put birds into categories such as 'large gulls'. The Applicant is encouraged to take a similar approach if at all possible. Where such large numbers of birds remain unidentified it may call into question the credibility of any assessments using the baseline data. The Applicant's attention is also drawn to the comments from NE in Appendix 2 of this Opinion.
3.6.7	Paragraph 482	Baseline data	The Scoping Report refers to various surveys and studies relevant to seabird populations. It is noted that the list of datasets in paragraph 482 is not exhaustive. The ES should identify the datasets used to

ID	Ref	Description	Inspectorate's comments
			inform the baseline data and explain their age and geographical coverage in relation to the zone of influence of the Proposed Development.
3.6.8	Paragraph 488	Population viability analysis (PVA)	The Scoping Report lists the various quantitative assessment methods which will be used in the ES assessments, including PVA. However, the Scoping Report does not explain which species would be subject to PVA. The Applicant should seek to agree this point with relevant stakeholders through the EPP.
3.6.9	Paragraph 489	Methodology and scope of assessment	The Scoping Report states that the detailed methodology and scope of the assessment will be agreed with key stakeholders through the EPP. While this approach is welcomed, the Inspectorate notes that it has not always been possible for offshore wind farms to reach agreement with stakeholders on the appropriate methods for analysis of effects on offshore ornithology. Where it is not possible to reach agreement with the relevant stakeholders, the ES should provide assessments based both on the Applicant's preferred approach and that recommended by statutory consultees.
3.6.10	Paragraphs 496 and 505	Bird displacement risk during construction and operation	The Scoping Report states that birds are considered to be most at risk from disturbance when they are resident in an area as opposed to being on passage. The ES should explain the evidence which supports this statement and whether it applies throughout the year.
3.6.11	Paragraph 502	Barrier effects	The Scoping Report provides some information on the methodology for assessing displacement and collision related mortality but there is no explanation as to how barrier effects would be dealt with. The ES should explain the methodology to be used and evidence demonstrating agreement of relevant stakeholders. Where agreement is not possible then the ES should provide a justification for the approach used.

3.7 Commercial fisheries

(Scoping Report Section 8.7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.7.1	Table 8.24	Physical presence of infrastructure leading to gear snagging during construction	The Scoping Report does not provide a direct justification as to why this matter has been excluded from further assessment. It appears likely that as construction proceeds, there is an increasing risk that infrastructure would be present that could lead to gear snagging. Accordingly, the ES should include an assessment of this matter or provide a justification (for instance through explaining the relevant mitigation and how it has been secured) as to why LSE would not arise.

ID	Ref	Description	Inspectorate's comments
3.7.2	Paragraph 523	Baseline data	When using landings data, any conservation or management measures for species captured in the vicinity of the windfarm should be considered and acknowledged, as this may affect the species abundance and distribution within the windfarm area. The Applicant should make efforts to include, or otherwise account for, vessels excluded from the Vessel Monitoring Systems data. Baseline data should also be up to date as possible at the point of submission.
3.7.3	Paragraph 526	Future baseline	The ES should clearly explain how the future baseline has been derived from the existing baseline and identify sources of evidence on long term trends.
3.7.4	Paragraph 552	Reduction in access to, or exclusion from established fishing grounds	The ES should provide a justification, with supporting evidence where available, as to the extent of fishing that is likely to be resumed within the array area once the Proposed Development is operational.

ID	Ref	Description	Inspectorate's comments
3.7.5	n/a	Invasive non-native species	The ES should assess the potential for the introduction of hard substrate and vessel movements to facilitate the spread of INNS (e.g. via ballast water and through accidents and spillages) and the potential for impacts upon commercial fisheries, where significant effects are likely to occur. Where significant effects are likely to occur, the ES should also consider the potential for climate change-related effects to facilitate the spread and exacerbate the impacts of INNS.
3.7.6	Section 8.7.7	Potential mitigation measures	The Scoping Report states that where practicable, cable burial will be the preferred means of cable protection. The ES should include an assessment of the effects of cable protection from methods other than burial, based on the worst case scenario which has been defined for the area of cable protection likely to be required.

3.8 Shipping and navigation

(Scoping Report Section 8.8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.8.1	Paragraph 618	Cumulative impact on snagging risk	The Applicant proposes to scope out cumulative impact on snagging risk for all phases of the Proposed Development. The Scoping Report states that potential snagging risk impacts would be of limited spatial influence. However, the Scoping Report does not provide any evidence to support this conclusion. As shown on Figure 8.23 of the Scoping Report, there are a number of existing or proposed offshore wind farms in the vicinity of the Proposed Development so it appears to the Inspectorate that there could be a cumulative impact.
			In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. Accordingly, the ES should include an assessment of this matter or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.8.2	Table 8.27	Cumulative impact on marine navigation equipment and Search and Rescue (SAR)	Cumulative impacts on marine navigation equipment and SAR are proposed to be scoped out of the ES but the Scoping Report does not provide a justification for this approach. As noted above, the number of offshore wind farms in the Irish Sea is expected to increase. In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. Accordingly, the ES should include an assessment of this matter or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of an LSE.

ID	Ref	Description	Inspectorate's comments
3.8.3	Paragraph 572	Study area	A study area of 10 nautical miles (nm) has been proposed for the shipping and navigation assessment. The ES should explain the rationale behind the choice of study area and, where possible, the approach should be agreed with the relevant consultation bodies.
3.8.4	n/a	Future baseline	The ES should identify a future baseline for vessel movements and explain how this has been established, taking into account the existing sea users and the numerous proposed offshore wind farm projects in the vicinity.

3.9 Marine archaeology and cultural heritage

(Scoping Report Section 8.9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.9.1	Table 8.30	Indirect transboundary impacts associated with changes to marine physical processes	The Scoping Report seeks to scope this matter out on the grounds that indirect transboundary impacts would only occur as a result of changes to marine processes and these would not affect an EEA State. As noted above, the Inspectorate agrees that transboundary impacts on marine processes can be scoped out. Consequently, the Inspectorate also agrees that indirect transboundary impacts on marine archaeology can also be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.9.2	Paragraph 626	Study area	The Scoping Report describes the study area but does not explain why the area chosen is sufficient to reflect the likely zone of influence of the Proposed Development. The ES should be based on a defined study area, which is sufficient to identify the LSE of the Proposed Development, including any potential setting effects to any offshore heritage assets within the English coastal zone. The ES should confirm whether the study area aligns with relevant policy and guidance and provide justification for any divergences. A figure showing the extent of the final study area should be provided in the ES.
3.9.3	Sections 8.9.4 and 8.9.5	Baseline information	The Applicant's attention is drawn to the comments of Historic England (see Appendix 2) about the scope and planning of deskbased assessment and surveys, with regards to informing the marine archaeological mitigation strategy. Unless otherwise agreed with relevant stakeholders the assessment should include:

ID	Ref	Description	Inspectorate's comments
			 Including geoarchaeological considerations into the geotechnical investigations and providing the geoarchaeologist with direct access to core material.
			A specialist palaeoenvironmental assessment, where surveys indicate potential for survival of palaeoenvironmental remains.
			 A preliminary deposit model as part of the desk-based assessment to assist in identification of the potential depth and character of Palaeolithic archaeology.
			Use of data generated by monitoring programmes for oil and gas infrastructure in the area.
3.9.4	Section 8.9.7	Potential mitigation measures	It is noted that mitigation measures likely to be considered include a Written Scheme of Investigation and Protocol for Archaeological Discoveries. Unless otherwise agreed with relevant stakeholders, the ES should explain how it will be ensured that a professional, accredited archaeological consultant will be involved in assessing the risk to archaeological remains during seabed levelling. The Applicant's attention is drawn to the comments from Historic England in Appendix 2 on this matter.

3.10 Civil and military aviation

(Scoping Report Section 8.10)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.10.1	Paragraph 693	Impacts to Secondary Surveillance Radar (SSR) systems for all phases of the Proposed Development	The Scoping Report seeks to scope out impacts to SSR systems, on the basis that the wind turbine generators would be located 33km away from the nearest SSR facility at St Annes. However, given the concerns raised by NATS (see Appendix 2 of this Opinion), the Inspectorate does not consider that it has enough information to scope out this matter at present.
			Accordingly, the ES should include an assessment of this matter or information demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.10.2	Section 8.10.5.5	Potential transboundary impacts	The Scoping Report seeks to scope out transboundary impacts on the grounds that the effects on aviation are expected to be localised. The distance between the Proposed Development and the Shannon Flight Information Region (FIR) boundary is 119 km which puts it beyond the responsibility of the Irish Aviation Authority. As such the Applicant considers there would be no transboundary effects. The Inspectorate agrees that this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.10.3	Section 8.10	Study area	The Scoping Report does not describe the study area used to assess the effects on civil and military aviation receptors. The ES must clearly describe the study area(s) and explain why it is sufficient in extent to support the identification of LSE.

ID	Ref	Description	Inspectorate's comments
			The Applicant should seek to agree the study area and receptors with relevant consultation bodies. The ES should include figures to identify the final study area and location of any receptors considered in the assessment.
3.10.4	Section 8.10.6	Potential mitigation measures	It is noted that the measures listed include implementing aids to navigation such as lighting as advised by various consultees including the Ministry of Defence (MOD). Unless otherwise agreed with relevant stakeholders, including the MOD, the ES should explain how the Proposed Development would be fitted with MOD accredited aviation safety lighting in accordance with the Civil Aviation Authority Air Navigation Order 2016.

3.11 Infrastructure and other users

(Scoping Report Section 8.11)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.11.1	Section 8.11.3.6 and Table 8.34	Impacts on or from nuclear power stations	The Applicant proposes to scope out effects on or from nuclear power stations for all phases of the Proposed Development. The Scoping Report states that there are three nuclear power stations along the coastline of the Irish Sea, but potential impacts on or from these facilities have been scoped out as there is no overlap with any existing infrastructure.
			On the basis that there is no overlap in infrastructure, the Inspectorate is content to scope this matter out of further assessment.
3.11.2	Section 8.11.3.5	Impacts on MOD activities	The Applicant seeks to scope out impacts on MOD activities on the basis of the distance between the Proposed Development and known practice and exercise areas (PEXA). The Inspectorate notes that the MOD has no concerns about this approach and therefore agrees that this matter can be scoped out of further assessment. However, the Applicant should ensure that the ES covers effects on the surveyed routes which support defence maritime navigational interests referred to by the MOD (see Appendix 2 of this Opinion).
3.11.3	Section 8.11.6.5	Potential transboundary impacts	The Scoping Report seeks to scope these matters out of further assessment on the grounds that the only potential transboundary receptors are cables owned by international operators which would already be covered by the assessments in the ES. The Inspectorate agrees that this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.11.4	Section 8.11.2	Study area	It is noted that the study area is a 50km radius from the Proposed Development but the Scoping Report does not explain why this extent has been chosen. The ES should provide a justification for the extent of the study area and why it is considered to reflect the zone of influence for the Proposed Development.
3.11.5	Paragraph 746	Unexploded Ordnance (UXO)	The Scoping Report states that there is potential for Unexploded Ordnance (UXO) within the Irish Sea and the exact locations of any UXO would be determined post-consent following discussion with relevant consultation bodies. As noted in section 2.1 of this Opinion, the ES should include a high level assessment of the LSE associated with UXO clearance.

3.12 Seascape, landscape and visual amenity

(Scoping Report Section 8.12)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.12.1	Paragraph 774	Seascape, landscape and visual effects beyond 50km of the Proposed Development	The Inspectorate notes that the zone of theoretical visibility (ZTV) mapping presented at Figure 8.25 of the Scoping Report indicates that visibility of the Proposed Development is restricted at distances beyond 50km, although some areas of visibility at greater distance are shown. Paragraph 773 of the Scoping Report also describes that actual visibility from inland areas would be further fragmented by landform and screening (vegetation and buildings).
			The Inspectorate considers that, on the basis of the information presented in the Scoping Report, the potential for LSE beyond 50km cannot be excluded. As the zone of visual influence is refined through the further desk study and field work described at paragraph 811 of the Scoping Report, consideration should be given to the possibility of significant effects at a distance of 60km from the Proposed Development. This includes potential for effects to St Bees Head Heritage Coast. The Applicant should make effort to agree the final study area with relevant consultation bodies. The Applicant's attention is drawn to the advice from NE on this point in Appendix 2 of this Opinion.
3.12.2	Paragraph 797	Landscape character effects within Wales	The Scoping Report seeks to scope out this matter on the basis of the distance of the Proposed Development from the Welsh coast (more than 45km) and the presence of closer range, intervening offshore windfarms. The Inspectorate notes that the ZTV and study area do include parts of the Welsh coast. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. Accordingly, the ES should include an assessment of

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			these matters or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.12.3	Table 8.36	Cumulative impacts during construction and decommissioning	The Inspectorate notes that there is potential for a cluster of new offshore windfarms in proximity to the Proposed Development as part of the Round 4 Leasing, as shown on Figure 8.23 of the Scoping Report, which could have similar or overlapping construction and decommissioning timescales. The transmission assets for the Proposed Development are proposed to be subject to a separate DCO application, the impacts of which would be summarised "insofar as [information is] available" through cumulative impact assessment according to paragraph 159 of the Scoping Report. There may be construction activity and equipment, as well as partially built turbines, associated with these developments that could result in a cumulative impact to seascape, landscape and visual receptors.
			The Scoping Report does not set out a rationale for scoping this matter out and for the reasons stated above, the Inspectorate considers that there is potential for likely significant cumulative effects to seascape, landscape and visual receptors. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of these matters or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.12.4	Section 8.12.6.6 and Table 8.36	Potential transboundary impacts	The Scoping Report seeks to scope this matter out of further assessment on the grounds that there are unlikely to be any transboundary effects because of the distance between the Proposed Development and the boundaries of EEA States. Notwithstanding the concerns expressed under ID Ref 3.12.1 above, the Inspectorate

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			agrees that effects on an EEA State are unlikely and this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.12.5	Paragraph 778	Definition of worst case scenario	It is noted that the assessment will be based on the Project Design Envelope (PDE), which is "intended to identify key design parameters setting out a realistic 'worst case scenario' for different elements within the windfarm site." The ZTV used in the Scoping Report is based on the maximum height to blade tip that would be allowed under the proposed DCO. The Applicant should consider if relying on one scenario will be sufficient to capture the full range of effects. Subject to agreement with other consultation bodies, the ES should present assessments based on a scenario using the largest turbines allowed under the DCO and one where the maximum number of turbines is constructed.
3.12.6	Paragraph 810	Visual receptors – recreational vessel routes	The Scoping Report states that the visual effects on people using recreational vessels on routes from Liverpool and Heysham will be considered in the assessment. The preliminary representative viewpoint list at Table 8.35 does not include any dynamic views on the vessel route. The Applicant should give consideration to whether representative visualisations of points on the vessel route should be used to support the assessment.
3.12.7	Section 8.12.7	Mitigation measures	The Scoping Report describes a number of potential mitigation measures, which will evolve as the project design is developed. It is stated that the requirement and feasibility for mitigation will be discussed with relevant consultation bodies. For the avoidance of

ID	Ref	Description	Inspectorate's comments
			doubt, the ES should include a description of all measures proposed to mitigate adverse effects. Where mitigation would be secured through management plans or strategies, drafts or outlines of these should be submitted as part of the DCO application.

3.13 Air Quality

(Scoping Report Section 8.13)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
3.13.1	Section 8.13.2.1	Emissions from vessels on human and ecological receptors during all phases of the Proposed Development	The Inspectorate agrees that this matter may be scoped out of further assessment in the ES on the basis that the main source of emissions would be exhaust emissions from vessels and, due to the nature and location of the Proposed Development, associated vessel movements would only generate a small increase in emissions, which is unlikely to result in significant effects on land based human and ecological receptors.
3.13.2	Section 8.13.2.2	Cumulative effects	The Inspectorate agrees that due to the nature and location of the Proposed Development it is unlikely that emissions from it would combine with other offshore proposals to result in significant cumulative effects on land based human and ecological receptors. This matter can therefore be scoped out of further assessment in the ES.
3.13.3	Section 8.13.2.3	Potential transboundary impacts	The Scoping Report seeks to scope this matter out on the grounds that as vessel movements associated with the Proposed Development would only trigger a small increase in emissions, significant effects on land based human and ecological receptors in an EEA State are unlikely. The Inspectorate agrees that this matter can be scoped out of further assessment.

3.14 Airborne Noise

(Scoping Report Section 8.14)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
3.14.1	Section 8.14.2	Offshore airborne noise during construction, operation and decommissioning	On the basis of the information presented in paragraph 868 about the types of activity, and the distance of these activities from the nearest onshore receptors (at circa 30km), the Inspectorate agrees that offshore airborne noise impacts are unlikely to result in significant effects during construction, operation and decommissioning, and can be scoped out of further assessment in the ES. The Inspectorate is content that the main impacts from underwater offshore noise to biological receptors, including fish, marine mammals and birds, will be assessed in other relevant aspect chapters.

3.15 Human Health

(Scoping Report Section 8.15)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.15.1	Paragraph 882	Baseline surveys	The Scoping Report states that no bespoke baseline surveys will be undertaken and that health analysis will be informed by project wide consultation.
			The Inspectorate agrees that bespoke surveys are not required for the ES. However, this is on the basis that the ES will include information about the baseline condition from relevant public data sources, for example any joint strategic needs assessment, to inform the assessment of LSE.
3.15.2	Table 8.37	Safe and cohesive communities: housing	The Scoping Report states that no housing is proposed as part of the Proposed Development and that it is expected that a large proportion of the workforce will be resident in the local region or aboard vessels.
			The Scoping Report does not provide information about the predicted number of workers or the baseline conditions for local housing supply. As such the Inspectorate does not consider that the Scoping Report contains sufficient information to allow this matter to be scoped out of further assessment. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of this matter or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.15.3	Tables 8.37 and 8.38	Transport	The Scoping Report states that the vast bulk of material will arrive by ship and that there would be a limited effect on the local road

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			network. It is stated that a Port Traffic Management Plan (PTMP) would be produced to manage impacts.
			Please see the Inspectorate's comments at ID Ref. 3.19.7 in respect of potential onshore transport effects. For the same reasons, the Inspectorate cannot exclude the possibility of effects to human health arising from increased traffic on the local road network.
3.15.4	Table 8.37	Safe and cohesive communities: community safety	The Inspectorate agrees that this matter can be scoped out of the ES on the basis that worker behaviour at ports and in communities would be managed to avoid issues and there is no evidence that the Proposed Development would give rise to an increase in crime or other activity that could affect community safety.
3.15.5	Tables 8.37 and 8.38	Air quality	Please see the Inspectorate's comments at ID Ref. 3.19.7 in respect of potential onshore transport effects. For the same reasons, the Inspectorate cannot exclude the possibility of effects to human health arising from increased traffic on the local road network leading to localised increases in emissions. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of this matter or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.15.6	Tables 8.37 and 8.38	Noise	Please see the Inspectorate's comments at ID Ref. 3.19.7 in respect of potential onshore transport effects. For the same reasons, the Inspectorate cannot exclude the possibility of effects to human health arising from increased traffic on the local road network leading to localised increases in noise emissions. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			the assessment. The ES should include an assessment of this matter or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.15.7	Tables 8.37 and 8.38	Radiation	Radiation (EMF) risks are proposed to be scoped out of the ES on the grounds that the Proposed Development is not located in proximity to people and relevant occupational safeguards would be followed.
			The Inspectorate agrees on that basis that such risks to human health are unlikely and this matter can therefore be scoped out further assessment in the ES.
3.15.8	Tables 8.37 and 8.38	Health and social care services	The Inspectorate agrees that it is unlikely that there would be significant effects on health and social care services arising from workers associated with the Proposed Development. However, the Scoping Report does not present any information about the predicted number of workers, the proportion of these that are expected to already live in the local area or the baseline condition/ capacity of services including GPs, dentists and schools and there is therefore insufficient information on which to exclude the possibility of LSE. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of this matter or evidence demonstrating agreement with the relevant stakeholders and the absence of LSE.
3.15.9	Table 8.38	Climate change during construction and decommissioning	The Scoping Report does not provide a justification for excluding LSE from effects on climate change during the construction and decommissioning phases. In the absence of this information, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of this matter or a justification as to why LSE would not arise.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.15.10	Table 8.38	Water quality during operation and maintenance	Section 8.2.6 of the Scoping Report states that no LSE on marine water quality are expected as pollution prevention and control measures would be in place. This includes implementation of a PEMP and MPCP.
			The Inspectorate agrees that, given marine water quality effects during operation and maintenance have been scoped out of the ES as described at ID Ref. 3.2.1, significant effects to human health receptors as a result of changes to water quality are also unlikely. This matter can therefore be scoped out of further assessment in the ES.
			Outline versions of the PEMP and MPCP should be submitted as part of the DCO application.
3.15.11	Table 8.38	Wider societal benefits during construction and decommissioning	The Scoping Report describes wider societal benefits in Table 8.37, as comprising energy security, noting that a reliable supply of electricity is an essential service that enables a range of benefits including healthcare, learning and income generation.
			Based on that definition of wider societal benefits, the Inspectorate agrees there are unlikely to be significant effects during construction and decommissioning of the Proposed Development, as no renewable electricity would be produced during these phases. The Inspectorate therefore agrees that this matter can be scoped out of the ES.
3.15.12	Section 8.15.3.2 and Table 8.38	Potential transboundary effects	The Scoping Report seeks to scope this matter out on the grounds that port activities within another jurisdiction would be expected to operate within their existing consented levels of activity. In addition, any international supply chain would be expected to operate policies which would protect against significant effects on populations. The Inspectorate notes that even where a port is operating within its consented levels of activity, significant environmental effects may

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			arise. The Inspectorate does not consider that the Scoping Report provides sufficient evidence to allow this matter to be scoped out of further assessment. Accordingly, the ES should include an assessment of this matter or a justification as to why LSE would not arise.

ID	Ref	Description	Inspectorate's comments
3.15.13	Paragraph 875	Study area	The Scoping Report states that a study area will be established based on the project limits and zones of influence and receptors impacted by other aspects with inter-relationships with human health, for example including marine water quality, commercial fisheries, etc. Study areas will also be used from other aspects to broadly define representative population groups instead of setting boundaries.
			The Inspectorate agrees that potential human health effects may not be limited to strictly defined geographical boundaries but the ES must clearly describe the study area(s) and explain why it is sufficient in extent to support the identification of LSE.
			The Applicant should seek to agree the study area and receptors with relevant consultation bodies. The ES should include figures to identify the final study area and location of any static receptors considered in the assessment.
3.15.14	Paragraph 876	Health considerations in relation to port activities	If a decision has not been made on the port that will be used during construction and operation of the Proposed Development, the ES should include an assessment of effects to human health arising from port activities using a worst case scenario, consistent with the

ID	Ref	Description	Inspectorate's comments
			approach described in paragraph 125 of the Scoping Report, where significant effects are likely to occur.
3.15.15	Table 8.37	Effects to be scoped into the ES	The Inspectorate notes the proposal to scope in a number of matters on a precautionary basis at this stage, which will be kept under review as further information becomes available. If the potential for a LSE can be excluded, it is proposed that such matters would be scoped out but that an explanation would be provided in the ES.
			The Inspectorate recommends that the Applicant seeks agreement with relevant consultation bodies on matters subsequently scoped out and provides evidence of any such agreement in the ES.
3.15.16	Table 8.37	Effects on human health receptors	Whilst the Inspectorate acknowledges the potential for beneficial effects to human health receptors from the operation of the Proposed Development as described in relation to reduction in the severity of climate change, increased energy security (described as wider societal benefits) and upskilling of the workforce, the ES should also identify and assess any adverse effects, where significant effects are likely to occur.
3.15.17	Table 9.1	Inter-relationships	The Scoping Report describes that the human health assessment will draw on the conclusions of other chapters in the ES. The Inspectorate notes that there is some discrepancy in the Scoping Report (between paragraph 873 and Table 9.1) about the inter-relationships that would be of relevance. For the avoidance of doubt, the Inspectorate agrees that all of the inter-relationships described in paragraph 873 would be relevant to human health.

3.16 Socio-economics and tourism and recreation

(Scoping Report Section 8.16)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.16.1	Table 8.39	Reduction in accommodation due to construction personnel during operation and decommissioning	The Inspectorate notes that paragraph 913 of the Scoping Report describes the operational and maintenance activities associated with maintaining an offshore windfarm as 'considerable', and that impacts arising from increased employment and change in demographics are scoped into the assessment of the operational phase. Paragraph 916 of the Scoping Report describes decommissioning impacts as being similar to those of construction. The Scoping Report does not set out information about the estimated number of workers required for each phase, including those that would migrate into the area, or the local housing supply.
			As such, the Inspectorate does not have sufficient information to conclude that there would be no LSE during operation and decommissioning. In the absence of evidence that demonstrates agreement with relevant consultation bodies, the Inspectorate is not in a position to agree to scope this matter from the assessment. The ES should include an assessment of these matters or evidence demonstrating agreement with the relevant consultation bodies and the absence of LSE.
3.16.2	Paragraph 920 and Table 8.39	Potential transboundary effects	It is noted that potential transboundary effects to commercial fishing, shipping and navigation and other users will be considered separately. On this basis, the Inspectorate agrees that this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
3.16.3	Paragraph 893	Inter-relationships with other aspects	The Inspectorate notes that the assessment will draw on conclusions from other assessments scoped into the ES. The Inspectorate is content with this approach to avoid duplication of effort but it should be clear to the reader where relevant information is located within the ES. In addition to the aspects listed at paragraph 893 of the Scoping Report, the Inspectorate considers that effects to commercial fisheries may also be of relevance to the socio-economic assessment and should be included in the ES if LSE are likely to arise. If LSE are not likely to arise then a reasoned justification should be provided as to why this is the case.
3.16.4	Paragraph 895	Study area	The Scoping Report broadly describes the study area as being part of the Irish Sea. The Applicant should seek to agree the study area and receptors with relevant consultation bodies. The ES should include figures to identify the final study area and location of any static receptors considered in the assessment.
3.16.5	Paragraph 897	Baseline data	The Inspectorate is unclear as to what is meant by a "high level indication of temporary and rented accommodation supply and trends." Baseline data should be sufficiently detailed to enable a robust assessment in the ES of the potential LSE of the Proposed Development on the local housing supply.
3.16.6	Paragraph 909	Potential construction impacts	The Inspectorate considers that, as well as tourism accommodation, in-migrant construction workers could also use accommodation in the local housing supply more generally, with potential for impacts such as a reduction in available accommodation and increases in rental cost. These matters should also be considered in the ES where significant effects are likely to occur.

3.17 Climate change

(Scoping Report Section 8.17)

ID		Applicant's proposed matters to scope out	Inspectorate's comments
3.17.1	n/a	n/a	No matters have been proposed to be scoped out of the assessment

ID	Ref	Description	Inspectorate's comments
3.17.2	Section 8.17	Assessment of climate change	The Inspectorate notes that the Scoping Report includes high level information regarding the scope of the climate change assessment to be undertaken and has the following comments. The ES should include a description and assessment (where relevant) of the LSE the Proposed Development would have on climate (for example having regard to the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from climate change. The assessment should be based upon the latest published projections. The ES should also describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development.

3.18 Major accidents and disasters

(Scoping Report Section 8.18)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments	
3.18.1	Section 8.18	Major accidents and disasters	The Scoping Report states that major accidents and disasters are not proposed to be considered as a standalone chapter but considered in other relevant aspect chapters of the ES, as listed in paragraph 928.	
			The Inspectorate is content that this aspect does not need to be assessed within a standalone chapter, subject to the following comments:	
			 The ES should include a section which signposts the reader to the specific sections of the ES which deal with the relevant matters. 	
			 The Inspectorate notes that the sections of the Scoping Report addressing the aspects listed at paragraph 928 do not specifically state that the assessments will include consideration of major accidents and disasters, as relevant to the identified project risks. The ES should clearly describe the consideration that has been given to this matter and any LSE deriving from vulnerability to risks of major accidents and disasters. 	
			 In addition to the aspects listed at paragraph 928, the Applicant should consider whether there is potential for major accidents and disasters relating to the vulnerability of the Proposed Development to climate change. 	
			 Any design measures taken to avoid major accidents and disasters should be clearly described within the ES. 	

3.19 Onshore topics

(Scoping Report Section 8.19)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.19.1	930	Ground conditions and contamination	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. The Inspectorate agrees that this matter can be scoped out of further assessment.
3.19.2	930	Land use	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. The Inspectorate agrees that this matter can be scoped out of further assessment.
3.19.3	930	Onshore ecology	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. On the basis that effects on migratory fish which could be associated with freshwater rivers will be included in the ES, it is agreed that other effects on onshore ecology can be scoped out of further assessment.
3.19.4	930	Onshore ornithology	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. The Inspectorate agrees that this matter can be scoped out of further assessment.
3.19.5	930	Onshore archaeology and cultural heritage	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. The Inspectorate agrees that there would be no direct physical impacts to onshore cultural heritage assets and no direct physical or setting impacts to onshore

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			archaeology, and these matters can therefore be scoped out of the ES.
			However, the Inspectorate notes that section 8.12 of the Scoping Report describes that the ZVI for the Proposed Development is approximately 50km and that there are several registered parks and gardens within the study area for the seascape, landscape and visual impact assessment, including the Grade II listed Ashton Gardens and Promenade Gardens at Lytham St. Anne's, which it states would be assessed in the cultural heritage chapter of the ES. The Scoping Report does not contain any other information about the baseline environment.
			The Inspectorate does not have sufficient information to exclude the possibility of significant effects on the setting of onshore cultural heritage assets, including onshore assets located within the English coastal zone, and this matter should therefore be assessed in the ES or an explanation should be provided as to why significant effects are not likely to occur, together with evidence of agreement with relevant consultation bodies.
3.19.6	930	Water resources and flood risk	The Scoping Report seeks to scope this matter out on the grounds that as the Proposed Development is located approximately 30km from shore, there is no pathway for effects. The Inspectorate notes that effects on marine water quality will be included in the ES and agrees that this matter can be scoped out of further assessment.
3.19.7	930	Onshore traffic and transport, air and noise impacts	The Scoping Report states that any potential onshore traffic and transport, air quality and noise impacts associated with transport of materials onshore will be considered separately in a Port Access and Transport Plan, which will be submitted with the DCO application. No information is presented in the Scoping Report about the likely routeing of vehicles, location of receptors or predicted traffic

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			movements arising from the Proposed Development, although section 8.15 describes that the vast bulk of material will arrive by ship at a loadout port.
			On the basis of information presented in the Scoping Report, the Inspectorate considers that it is unlikely that the volume of traffic movements arising from the Proposed Development would result in significant onshore traffic, air quality and/ or noise effects but does not have sufficient information to exclude this possibility. The ES should confirm that the anticipated road vehicle movements are below the screening values in relevant guidance for these aspects, and if values are exceeded then an assessment of LSE should be provided.

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

TABLE A1: PRESCRIBED CONSULTATION BODIES¹

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
Natural England (Offshore Wind Farms)	Natural England (Offshore Wind Farms)
The relevant fire and rescue authority	Lancashire Fire and Rescue Authority
The relevant police and crime commissioner	Lancashire Police and Crime Commissioner
The relevant police and crime commissioner	Merseyside Police and Crime Commissioner
The Joint Nature Conservation Committee	Joint Nature Conservation Committee
The Maritime and Coastguard Agency	Maritime & Coastguard Agency
The Maritime and Coastguard Agency - Regional Office	The Maritime and Coastguard Agency - Liverpool
The Marine Management Organisation	Marine Management Organisation (MMO)
The Civil Aviation Authority	Civil Aviation Authority
Trinity House	Trinity House
Public Health England, an executive agency of the Department of Health	United Kingdom Health Security Agency
The Crown Estate Commissioners	The Crown Estate
The Secretary of State for Defence	Ministry of Defence

Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')

TABLE A2: RELEVANT STATUTORY UNDERTAKERS²

STATUTORY UNDERTAKER	ORGANISATION
Lighthouse	Trinity House
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route Safeguarding
The relevant public gas transporter	Cadent Gas Limited
	Last Mile Gas Ltd
	Energy Assets Pipelines Limited
	Southern Gas Networks Plc
	ES Pipelines Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	ESP Connections Ltd
	Fulcrum Pipelines Limited
	Harlaxton Gas Networks Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Leep Gas Networks Limited
	Murphy Gas Networks limited
	Quadrant Pipelines Limited
	Squire Energy Limited
	National Grid Gas Plc

 $^{^{2}\,}$ 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

STATUTORY UNDERTAKER	ORGANISATION
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
The relevant electricity distributor with	Eclipse Power Network Limited
CPO Powers	Energy Assets Networks Limited
	ESP Electricity Limited
	Forbury Assets Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Indigo Power Limited
	Last Mile Electricity Ltd
	Leep Electricity Networks Limited
	Murphy Power Distribution Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	National Grid Electricity Transmission Plc
	National Grid Electricity System Operator Limited

TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))³

N/A

TABLE A4: NON-PRESCRIBED CONSULTATION BODIES

ORGANISATION
Blackpool Council
Borough of Barrow-in-Furness
Conwy County Council
Copeland Borough Council
Cumbria County Council
Denbighshire County Council
Flintshire County Council
Fylde Borough Council
Historic England
Isle of Man Government
Lancashire County Council
Lancaster City Council
North West Ambulance Service NHS Trust
Royal National Lifeboat Institution
Sefton Council
South Lakeland District Council
West Lancashire Borough Council

³ Sections 43 and 42(B) of the PA2008

⁴ As defined in Section 43(3) of the PA2008

ORGANISATION
Wirral Council
Wyre Council

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:
Conwy County Council
Health and Safety Executive
Historic England
Joint Nature Conservation Committee
Lancashire County Council
Marine Management Organisation
Maritime & Coastguard Agency
Ministry of Defence
National Grid Electricity Transmission Plc
NATS En-Route Safeguarding
Natural England
Trinity House
United Kingdom Health Security Agency
Wyre Council



Gwasanaethau Rheoleiddio a Thai / Regulatory and Housing Services

Pennaeth Gwasanaeth / Head Of Service - Peter Brown

Adain Rheoli Datblygu ac Adeiladu / Development & Building Control Section

Rheolwr Rheoli Datblygu ac Adeiladu / Development & Building Control Manager – Paula Jones

Cyfeiriad Post / Postal Address: Blwch Post 1, CONWY / PO Box 1, CONWY, LL30 9GN;

[Dolen i'r Hysbysiadau Preifatrwydd: http://www.conwy.gov.uk/cy/YCyngor/Mynediad-at-Wybodaeth/Hysbysiadau-Ryifatrwydd

Preifatrwydd/Hysbysiadau-Preifatrwydd.aspx.

Link to Privacy Notices: http://www.conwy.gov.uk/en/Council/Access-to-Information/Privacy-Notices/Privacy-Notices.aspx

The Planning Inspectorate Environmental Services Central Operations Temply Quay House 2 The Square Bristol BS1 6PN Gofynnwch am / Please ask for: Ceri Thomas

101492575391

Ein Cyf / Our Ref: DC/ENQ/31363

Eich Cyf / Your Ref:

Dyddiad / Date: **08/07/2022**

Site / Location: Morecambe Offshore Windfarm Proposal: EN010121 - Morecambe

Offshore Windfarm (Generation

Assets) - EIA Scoping

Consultation

Dear The Planning Inspectorate

Re: Your EIA Scoping Consultation

Thank you for your letter dated 23rd June regarding the above matter.

In view of the site's distance from Conwy County Borough, I can confirm that Conwy County Borough Council does not wish to comment on the Scoping Consultation.

Yn ddiffuant / Yours sincerely



ppPaula Jones

Rheolwr Rheoli Datblygu ac Adeiladu / Development and Building Control Manager









For the attention of: Laura Feekins-Bate The Planning Inspectorate Temple Quay House Temple Quay Bristol BS1 6PN

By email only:-

morecambeoffshorewindproject@planninginspectorate.gov.uk

Chemicals, Explosives and Microbiological Hazards Division – Unit 4

NSIP Consultations Land Use Planning Team Building 1.2, Redgrave Court, Bootle L20 7HS

NSIP.applications@hse.gov.uk http://www.hse.gov.uk/

Date: 5/7/2022

References: CM9 Ref: 4.2.1.6988.

NSIP Ref: EN010121

Dear Ms Feekins-Bate,

PROPOSED MORECAMBE OFFSHORE WIND FARM COBRA INSTALACIONES Y SERVICIOS S.A. AND FLOTATION ENERGY PLC

INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) REGULATIONS 10 and 11

Thank you for your letter of **(date)** regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports, but the following information is likely to be useful to the applicant.

HSE's Land Use Planning Advice

Will the proposed development fall within any of HSE's consultation distances?

The detail provided in the Scoping Report is heavily focussed on the offshore aspects with only minimal information on the onshore aspects e.g. location of the onshore project substation. At this stage, it is not possible to determine whether the onshore components fall within any of HSE's consultation distances.

If, after greater detail is provided on the onshore components, the proposed development should encroach on any of HSE's consultation distances, HSE would be able to provide more specific advice. The advice will detail which site or pipeline operators the Applicant should make contact with, to inform an assessment of whether or not the proposed onshore aspects are vulnerable to a possible major accident.

HSE's Land Use Planning advice would be dependent on the location of areas where people may be present. When we are consulted by the Applicant with further information under Section 42 of the Planning Act 2008, we can provide full advice.

Hazardous Substances Consent

It is not clear whether the applicant has considered the hazard classification of any chemicals that are proposed to be present within the onshore aspects of the development e.g. onshore project substation. Hazard classification is relevant to the potential for accidents. For example, hazardous substances planning consent is required to store or use any of the Categories of Substances or Named Hazardous Substances set out in Schedule 1 of The Planning (Hazardous Substances) Regulations 2015 as

amended, if those hazardous substances will be present on, over or under the land at or above the controlled quantities. There is an addition rule in the Schedule for below-threshold substances. If hazardous substances planning consent is required, please consult HSE on the application.

Consideration of risk assessments

Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role on NSIPs is summarised in the following Advice Note 11 Annex on the Planning Inspectorate's website - Annex G - The Health and Safety Executive. This document includes consideration of risk assessments on page 3.

Explosives sites

Regarding the above NSIP, the Explosives Inspectorate has no comment to make as there are no licensed explosive sites in the vicinity'.

Electrical safety

No comment from a planning perspective

At this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at nsip.applications@hse.gov.uk. We are currently unable to accept hard copies, as our offices have limited access.

Yours faithfully,



pp MR ALLAN BENSON CEMHD4 NSIP Consultation Team



Helen Lancaster Senior EIA Advisor The Planning Inspectorate Temple Quay House 2 The Square Bristol, BS1 6PN

Your Ref: EN010121

15th July 2022

Dear Ms Lancaster,

Morecambe Offshore Wind Project – Generation Assets Environmental Impact Assessment Scoping Report

Thank you for your email and letter, dated 23rd June 2022 requesting our comments on the following document, as referenced:

Morecambe Offshore Wind – Generation Assets, Environmental Impact Assessment Scoping Report (June 2022), prepared by Royal HaskoningDHV for Cobra Instalaciones Servicios, S.A. and Flotation Energy plc.

In summary, we concur with the conclusions of the above referenced Scoping Report that marine archaeology and cultural heritage, as relevant to defined aspects of construction, operation and maintenance and decommissioning phases of this proposed development, will be scoped into the EIA exercise for this proposed development.

The role of Historic England

As you may be aware, Historic England is the Government's advisor on all aspects of the historic environment in England. Historic England's general powers under section 33 of the National Heritage Act 1983 were extended (via the National Heritage Act 2002) to modify our functions to include securing the preservation of monuments in, on, or under the seabed within the seaward limits of the UK Territorial Sea adjacent to England. We provide our advice in reference to National Policy Statements and in recognition of the English marine plan areas (inshore and offshore), as defined by the Marine and Coastal Access Act 2009 and the objectives and policies of published Marine Plans.





The proposed Morecambe Offshore Wind Project

We understand that Cobra Instalaciones Servicios, S.A. and Flotation Energy plc. are jointly developing the Morecambe Offshore Wind Project which could be located in the eastern Irish Sea 30km from the northwest coast of England.

The information regarding an output from the Holistic Network Design Review (HNDR) was helpful in that the Morecambe Offshore Wind Project will share a grid connection location at Penwortham (Lancashire) with the proposed Morgan Offshore Windfarm. However, we are aware that this Scoping Report is focused on generation assets and that the Morgan and Morecambe projects will each separately prepare Scoping Reports in accordance with The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

Morecambe Offshore Wind EIA Scoping Report

Part 1: Project Background

We understand that a particularly unique aspect of this proposed project is that windfarm array area overlaps with the South Morecambe Gas Fields, which are expected to cease production around 2027. It is interesting to see that the array area location was selection to be the first offshore wind farm which would be "fully co-exist with oil and gas operations on previously developed seabed." We noted that this co-location strategy was a way to minimise potential impacts on other sea users.

Section 3.3 (Pre-scoping consultation), paragraph 40 - It is apparent from the information supplied to us that the proposed Wind Turbine Generator (WTG) array area is located within the English Offshore Marine Planning Area. It is important to make this distinction as "English territorial waters" only extend to 12 nautical miles offshore.

We appreciated the attention given in Section 3.4 (Technical consultation), Table 3.2 (Consultation Groups) to the Evidence Plan Process and the establishment of an Expert Working Groups (EWG) for the Offshore Historic Environment.

Chapter 6 (Description of the Project), Section 6.2 describes the adoption of a Design Envelope approach (i.e. the Rochdale Envelope approach), which we appreciate affords the Applicant flexibility in project design options, including foundations and WTG type in any eventual DCO application made to the Planning Inspectorate. Furthermore, that the Design Envelope approach should ensure that maximum design parameters will be assessed in the production of the Environmental Statement (ES), such as highest point of the structure, which could be 350m above Mean Sea Level (as set out in Table 6.2).

Section 6.3.2 (Wind turbine foundations), paragraph 107 describes how seabed levelling could be required to remove surface and subsurface debris e.g. boulders, fishing gear or "lost anchors". It is therefore important that we highlight the role of an accredited, professional and experienced archaeological consultant in assessing the risk that archaeological materials might be encountered and that such material is not treated as (contemporary) debris.





Part 2: Technical sections

Section 8.9 Marine archaeology and cultural heritage

Sub-section 8.9.3 (Existing environment), paragraphs 630 to 632 allude to the palaeoenvironmental potential of the proposed array area. The referral to studies conducted for the former Rhiannon Windfarm project is useful and provides important context for this proposed development. The brief description provided in paragraphs 634 and 635 outlines maritime archaeological potential and the possibility of encountering presently unknown archaeological and historic sites, including aircraft crash sites, as mentioned in paragraph 639.

The proposed location of the Morecambe Offshore Wind Farm (Generation Assets) project occurs within the North West Offshore Marine Plan area and therefore a key source of information will be records as held by the UK Hydrographic Office, as mentioned in paragraph 639. However, these records will require corroboration with commissioned geophysical survey investigations to support the production of the Preliminary Environmental Information Report (PEIR) and ES. It is therefore important that these data will be assessed by a marine archaeology specialist contractor. We add, that a crucial contributing factor to the EIA exercise will be optimising corroboration between desk-based sources of information (published and 'grey literature') and bespoke survey campaigns (geophysical and geotechnical) with analysis conducted by an accredited, professional and experienced archaeological contractor/consultant.

We noted in Table 8.28 (Data sources to inform marine archaeology and cultural heritage assessment) that while data and information generated by archaeological studies conducted for other renewable energy development will be utilised, there was no specific attention given to any legacy of survey data as produced by the oil and gas sector. For example, use of data generated by monitoring programmes for the South Morecambe Gas Fields infrastructure, which could assist the identification of other anomalies of possible archaeological interest.

Table 8.29 (Proposed baseline surveys) includes brief mention of geophysical survey conducted in 2021, comprising Multibeam Echo Sounder (MBES), Side Scan Sonar (SSS) and Sub-bottom Profiler (SBP) and that geotechnical survey work (including vibrocore and borehole) will be conducted in 2022/23. We concur that all these survey data generated are to be reviewed by an experienced archaeological consultant with the analysis reported to the ETG during pre-application consultation and included within any PEIR and/or ES produced. Detailed, technical reporting should be provided through accompanying appendices to the PEIR and ES.

Paragraph 645 mentions access by geo-archaeologists to any "...engineering led boreholes" that might be acquired and that "...allowance will be made for archaeological involvement in the planning of the survey..." However, in consideration of the desk-based sources of information already used to determine the risk of encountering in-situ prehistoric terrestrial environmental evidence, we recommend that to support realisation of the matters covered in Part 1, Section 7.4 (Embedded and additional mitigation, impact significance and residual impact), that archaeological-led geotechnical data acquisition may also be necessary with the requisite professional standards set for data acquisition that supports analysis to optimise all relevant techniques and methodologies available.





Regarding the guidance referred to in paragraph 651, we offer the following publication updates which should be used in the production of any subsequent PEIR and ES:

- Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects, as published by The Crown Estate in July 2021 (which now replaces the version published in 2010);
- Gribble J. and Leather S. (2011) Guidance for Offshore Geotechnical Investigations and Historic Environment Analysis: guidance for the renewable energy sector. Published by the former COWRIE Group; and
- Historic Environment Advice Note 15 Commercial Renewable Energy Development and the Historic Environment (2021). Published by Historic England¹.

Section 8.9.6 (Potential impacts) – we concur with the potential impacts identified, as summarised in Table 8.30. We add that it is our advice that in consideration of the risk of encountering presently unknown cultural heritage (prehistoric environmental evidence or historic vessels and aircraft), that measures and procedures are established at an early stage of project planning. The benefit of adopting this approach is to ensure capacity is built in to inform design and to best deliver UK policy objectives for the protection of underwater cultural heritage.

The attention given in Sections 8.9.6.4 (Potential cumulative effects) is important and we will consider such matters further as they are addressed through PEIR and in any ES submitted with any Development Consent Order (DCO) application. It is therefore relevant that full consideration is given to the following relevant publication:

COWRIE (2008), Guidance for Assessment of Cumulative Impacts on the Historic Environment from Offshore Renewable Energy. Commissioned by COWRIE Ltd (project reference CIARCH-11-2006). Project contractors: Oxford Archaeology with George Lambrick Archaeology and Heritage.

We agree with the impacts relating to marine archaeology and cultural heritage included in Section 8.9.6.6 (Summary of potential impacts) and Table 8.30 to be scoped into the EIA (paragraph 677).

It is stated in section 8.9.7 (Potential mitigation measures) that the mitigation measures adopted will focus on the implementation of archaeological exclusion zones, the development of a Written Scheme of archaeological Investigation and Protocol for reporting Archaeological Discoveries and the commitment to undertake a full archaeological review of geophysical and geotechnical data. We recommend a joinedup approach so that the geoarchaeologists and geophysicists are included in the design of these assessments to maximise opportunities and to ensure the information obtained is also suitable for archaeological assessments.

We agree that the potential mitigation measures, as described in this section, should be embedded within the design of the proposed development whereas other measures might be necessary in response to impact assessments, as they are conducted. We therefore consider such action as adaptive mitigation which should enable the project to continually adjust as the project develops through the EIA exercise.

¹ https://historicengland.org.uk/images-books/publications/commercial-renewable-energydevelopment-historic-environment-advice-note-15/







Regarding the outline provided in paragraph 679, it is important to distinguish the different roles played by a marine archaeological Written Scheme of Investigation (WSI) and a protocol system for reporting archaeological discoveries (PAD), such that:

- an outline marine archaeological Written Scheme of Investigation provides a suite of methodological approaches to optimise post-consent and preconstruction survey data acquisition programmes to best serve archaeological analysis and interpretation, a subsequent WSI, tailored accordingly, will be required for any operations and maintenance phases of the proposed development; and
- a protocol system for reporting archaeological discoveries is a means to ensure
 efficient lines of communication between key identified parties should the
 project encounter unexpected archaeological materials during construction or
 operations and maintenance phases of the proposed project.

To effectively deliver historic environment mitigation, we recommend that specialist palaeoenvironmental assessment is undertaken where the desk-based assessment and other surveys indicate potential for the survival of palaeoenvironmental remains. This will ensure that a detailed and informed archaeological mitigation strategy can be prepared and agreed. We also recommend that geoarchaeological considerations and requirements are built into any geotechnical investigations that are carried out to ensure that opportunities are maximised where possible. This should include providing the geoarchaeologist with direct access to the core material rather than just to the logs or to extruded samples.

An effective method for identifying the potential depth and character of Palaeolithic archaeology, as may occur in the proposed development area is to undertake a preliminary deposit model as part of the desk-based assessment. This should be prepared by a geoarchaeologist based on any available stratigraphic information, including archaeological and geotechnical data. The deposit model will help to illustrate the depth, characteristics and potential of the deposits of archaeological interest and should inform any subsequent evaluation strategy, borehole sampling and/or geophysical survey.

Chapter 8.12 Seascape, landscape and visual amenity

We note that this chapter refers to Section 8.9 regarding effects of the proposed project on cultural heritage. However, this section, in paragraph 774 states that it is thought that "...the Project is unlikely to result in significant effects at distances over 50km. Seascape, landscape and visual effects as a result of the Project are proposed to be scoped out beyond 50km." We appreciate that this EIA scoping report only addresses offshore generation assets and that Section 8.9 was for marine archaeology; we therefore wish to highlight that consideration should be given to the setting of heritage assets within the English coastal zone and included within any PEIR subsequently produced.

We noted the statement made in Paragraph 775 that there are other operational offshore wind farms off the Lancashire and Cumbria coasts (as illustrated in Figure 8.23); such developments should be considered in terms of cumulative effects on the setting the historic environment, as also mentioned in sub-section 8.12.4.6 (Cumulative windfarms and other relevant development).





Regarding the inclusion of historic environment assets and further consultation with heritage bodies, as mentioned in paragraphs 809 and 824, we consider this a matter which should be considered in detail within any PEIR and ES subsequently produced (i.e. impacts as summarised in Table 8.36) and we will look to provide further advice as relevant to any PEIR. We also offer the following reference for information:

 Historic England (2017) The Setting of Heritage Assets. Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)².

In conclusion, we concur with the potential impacts, as relevant to marine archaeology and cultural heritage that are to be scoped into the EIA exercise for the proposed Morecambe Offshore Wind Project Generation Assets project.

Yours sincerely,



Dr Christopher Pater Head of Marine Planning

Cc Dr Sam Rowe (Science Advisor – North West Region, Historic England)

² https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/



Stonewall DIVERSITY CHAMPION

Feekins-Bate, Laura

From: Jillian Whyte

Sent: 30 June 2022 16:46

To: Morecambe Offshore Wind Project

Subject: RE: EN010121 - Morecambe Offshore Windfarm (Generation Assets) - EIA Scoping

Notification and Consultation

Good afternoon Laura,

Thank you for consulting JNCC on the Morecambe Offshore Wind Farm, which we received on 23 June 2022. JNCC's role in relation to offshore renewables in English waters has been delegated to Natural England. Natural England is now authorised to exercise the JNCC's functions as a statutory consultee in respect of certain applications for offshore renewable energy installations in inshore and offshore waters (0-200nm) adjacent to England. Therefore, Natural England should provide a full response. As such JNCC have not reviewed this document and will not be providing further comment.

Kind regards, Jillian

Jillian Whyte BSc(Hons)

Offshore Industries Adviser Marine Management Team

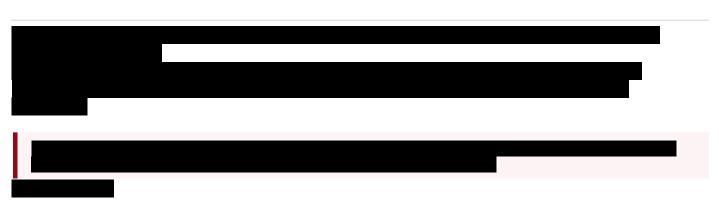
JNCC, Inverdee House, Baxter Street, Aberdeen, AB11 9QA

Tel: +44 (0)1224 083521

Email:

JNCC have been monitoring the outbreak of COVID-19 closely and developed a response plan. As a result, the vast majority of our staff are working from home and adhering to the government's advice on social distancing and travel restrictions. Whilst we are taking these actions we are available for business as usual. We will respond to enquiries as promptly as possible. However, there may be some delays due to the current constraints and we ask for your understanding and patience.





ct.



Helen Lancaster
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol
BS1 6PN

Phone: 01772 534 558

Email:

Your ref: EN010121
Our ref: MH/RT

Date: 21 July 2022

Dear Ms Lancaster,

Planning Act 2008 and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 – Regulation 10
Application by Cobra Instalaciones y Servicios S.A. and Flotation Energy plc (the Applicant) for an Order Granting Development Consent for the Morecambe Offshore Windfarm (Generation Assets) (the Proposed

Morecambe Offshore Windfarm (Generation Assets) (the Development)

Scoping consultation with non-prescribed consultation bodies

Thank you for allowing the County Council the opportunity to make contributions on the above scoping consultation.

At this stage the County Council has no general comments or observations to make on the offshore development. Your attention is however drawn to the response by the County Council's drainage section below.

Lead Local Flood Authority Position

The Lead Local Flood Authority has no comments to make on the EIA Scoping Notification and Consultation.

What this response does not cover

This response does not cover highway drainage, matters pertaining to highway adoption (s38 Highways Act 1980) and/or off-site highway works (s278 Highways Act 1980). Should the applicant intend to install any sustainable drainage systems under or within close proximity to a public road network (existing or proposed), then they would need to separately discuss the use and suitability of those systems with the relevant highway authority.

The applicant is encouraged to discuss the suitability of any overland flow routes and/or flood water exceedance with the relevant highway authority should they have the potential to impact the public highway network and/or public highway drainage infrastructure (either existing or proposed).

Lancashire County Council

PO Box 100 • County Hall • Preston • PR1 0LD

I hope that you find these comments valuable and should you require any further information or clarification on the contents of this letter please contact me at the email address provided.

Yours sincerely



Marcus Hudson Head of Planning



Helen Lancaster
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol
BS1 6PN

Marine Licensing Lancaster House Hampshire Court Newcastle upon Tyne NE4 7YH

T +44 (0)300 123 1032 F +44 (0)191 376 2681 www.gov.uk/mmo

Your reference: EN010121

Our reference: DCO/2022/00001

21 July 2022

Dear Helen Lancaster

Formal scoping request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 for the Morecambe Offshore Windfarm (Generation Assets)

Thank you for your scoping opinion request of 23 June 2022 and for providing the Marine Management Organisation (MMO) with the opportunity to comment on HyNet North West Hydrogen Pipeline Project Environmental Impact Assessment (EIA) Scoping Report. Below outlines the MMO's Scoping Opinion under the Regulations 10 and 11 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

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 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 preapplication on those aspects of a project that may have an impact on the marine

² Section 149A of the 2008 Act







¹ Under Part 4 of the 2017 Act

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 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 West Marine 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



Ashley Endacott
Marine Licensing Case Officer

D: 0208 026 9426

E:

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





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

Scoping Opinion

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) ("the Regulations")

Title: Morecambe Offshore Windfarm (Generation Assets)

Applicant: Cobra Instalaciones y Servicios S.A and Flotation Energy plc

MMO Reference: DCO/2022/00001

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1 Proposal

Morecambe Offshore Windfarm (Generation Assets) (hereafter 'the project').

1.1 Project Background

- 1.1.1 The project is a proposal by Cobra Instalaciones y S.A and Flotation Energy plc. The Morecambe Offshore Windfarm will have an anticipated nominal capacity of 480 megawatts (MW) and is located in the east Irish Sea. At its nearest point, the windfarm site is approximately 30 kilometres (km) from the shore of the Lancashire coast.
- 1.1.2 Wind turbine generators and offshore substation(s) will be fixed to the seabed with foundation structures. The electricity generated by the wind turbine generators would be transported via subsea inter-array cables to offshore substation platform(s) which will then connect to the shore (at the landfall location) via offshore export cables.
- 1.1.3 From the landfall, onshore export cables will be routed underground to an onshore project substation which will in turn transform the power generated offshore to make it suitable to feed it into the National Electricity Transmission System (NETS) at the grid connection point (typically an existing National Grid substation).



2 Location

The project is located in the east Irish Sea. At its nearest point, it is 30km from the Lancashire Coast. Location is displayed in Figure 1 below.

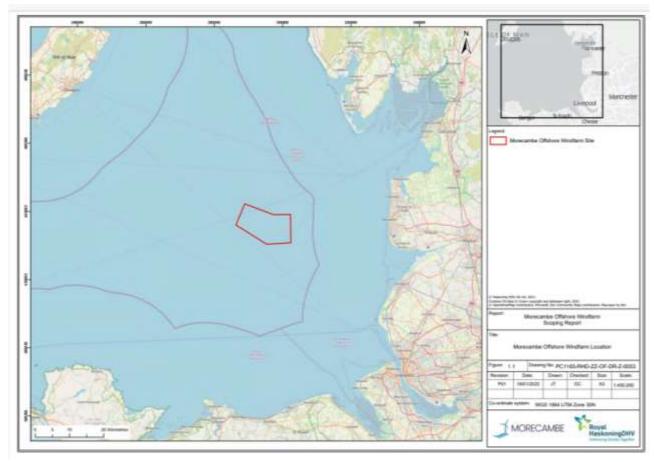


Figure 1: Location of works. Image taken from applicants Scoping Report



3 Scoping Opinion

Pursuant of regulations 10 and 11 of the Regulations, Cobra Instalaciones y Servicios S.A and Flotation Energy plc have requested a Scoping Opinion from the MMO. In so doing a Scoping Report entitled "Morecambe Offshore Windfarm Generation Assets 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 Marine Planning

3.1.1 The MMO highlights that the project is proposed to take place within the North West Inshore Marine Plan area. The MMO believes that for the final ES, a table is produced to highlight all policies within this plan area and whether these have been screened in or out, including justification. The MMO welcomes any further discussions with the applicant with regards to this.

3.2 Benthic Ecology

- 3.2.1 The existing datasets used to inform the benthic ecology assessment are provided in Table 8.8 of the draft scoping report. This list of datasets contains relevant and useful information from nearby developments and studies. The MMO recommend the list is checked against the datasets available in the Cefas OneBenthic data extraction tool to ensure other relevant datasets are not excluded (available online: https://rconnect.cefas.co.uk/onebenthic_dataextractiongrabcore/).
- 3.2.2 In addition to the existing datasets a series of geophysical, grab and video sampling surveys will also be conducted to identify benthic habitats and features. This approach is suitable and like that expected of other developments of this nature.
- 3.2.3 Section 8.3.6.2 includes relevant literature and the MMO agree with the scoping decision made regarding the interaction of the benthos with Electro Magnetic Fields (EMF). However, the MMO recommend the applicant refers to Scott et al., 2021, which contains additional evidence for scoping out the impacts of EMF, in section 8.3.6.2 of the scoping report. The MMO recommend that the applicant provides further evidence to support the decision to scope out the effects of EMF from the EIA.
- 3.2.4 While most of the relevant impacts have been scoped in, the MMO requires clarification regarding the scoping out of the impact of Introduction of Non-Native Species (INNS) from the construction phase of the development. Line 278 of the scoping report acknowledges that INNS are relevant at the construction phase, but the summary table (Table 8.10) excludes the impact form INNS from the construction stage (but includes the impact from INNS in the operation and maintenance phase). The increased presence of vessels in the area (particularly those used during construction that may operate globally) may lead to the introduction of INNS during construction and therefore appropriate mitigations and further evidence would be needed to scope this impact out at this stage.
- 3.2.5 It is proposed that the potential impacts on the benthic assemblage at the decommissioning phase are considered at a high level currently and that the applicant will therefore carry out a more detailed assessment subsequently to better understand the change the benthic assemblage at the time of decommissioning. The MMO agree that this approach is appropriate and reasonable.
- 3.2.6 The MMO notes that the latest literature will be included in the ES regarding the impact of noise and vibration and the scoping report refers to recent and appropriate literature (Stöber and Thomsen, 2021).
- 3.2.7 The MMO notes that the relevant datasets have been identified and acoustic and benthic (sediment sampling and imagery) surveys have been conducted with the Morecambe Bay OWF area to address data gaps and to better characterise the benthic assemblage.



- 3.2.8 The applicant has provided several example mitigation measures that may be appropriate for the Morecambe Bay OWF development (figure 2.) and further measures may be proposed in response to the outcome of the impact assessment and following stakeholder engagement. The MMO are therefore unable to determine if the mitigation measures are appropriate at this stage. However, the approach to mitigation appears appropriate and reasonable.
- 3.2.9 The MMO notes that an updated version (1.1) of the guidance document referenced in line 263 of the scoping report is available and recommend the applicant confirms the most recent version is used for the assessment and referenced accordingly.
- 3.2.10 Within the examples of mitigation measures it is stated that "where potential impacts on habitats and species of conservation importance cannot be avoided, it is likely that potential effects will need to be monitored" and that detailed monitoring methods will be included in an In-Principle Monitoring Plan (IPMP). Although not directly relevant at this stage, the MMO recommend that the IPMP includes benthic habitats of ecological importance i.e. any benthic habitat within the Morecambe Bay OWF area that may be impacted e.g., by scouring processes around infrastructure (line 200 of the scoping report states that consideration will be given to the "likely changes in seabed elevation due to deposition of suspended sediment"). The MMO also recommend that any assessment of seabed elevation changes (e.g., using acoustic methods) is reviewed in combination with associated physical samples of the benthic assemblage at these impacted areas to better understand the predicted impact of the Morecambe Bay OWF. The MMO require that at least 10% of proposed turbine locations are monitored within the IPMP.

3.3 Coastal Processes

- 3.3.1 The MMO notes the report proposes the use a large collection of old sources from OWFs dating back to 2002 (Table 8.1) plus new geophysical surveying of the development site itself. The sources appear to be relevant but the earlier OWF assessments predate much of the regional environmental study data i.e., the sediment study, regional monitoring wave analyses and shoreline management plans listed (which largely were developed 2010-2011), and so should be correspondingly less emphasised in the applicant's analysis. The MMO are not aware of any other major data sources which should be added to this list at present.
- 3.3.2 The data in these sources should be presented with reference to the local marine system processes to generate a baseline description of dynamics, not just the static state i.e., the baseline should represent both pathways and receptors to support the impact assessment model being applied. Paragraph 180 lists all important elements of the baseline environment the MMO would expect. It includes line items for morphological change and coastal processes, plus trends in baseline conditions, which would appear to indicate a pathways-based approach will be taken.
- 3.3.3 Section 8 paragraph 174, includes a quantified reference to the expected higher suspended sediment concentrations (SSC) at greater depth. This brings forward data already given in paragraph 219 on Water Quality. Other changes relating to SSC are also made in paragraph 239 on the causes of resuspension in O&M stages. The scoping retains reference to SSC as a pathway to benthic and fisheries impact in construction and operation (e.g., paragraphs 290, 343).
- 3.3.4 For OWF impact assessment there must be a discussion of vertical SSC profiles, especially in a zone of muddy sediment, given what is now known about the wakes that effect vertical redistribution of sediment plumes in the lee of monopiles. This should also include reference to the frequency of storm conditions and the settling periods for sediments raised to elevated levels. Wakes are not mentioned in the Scoping study, but the PEIR should discuss potential temporal impact on turbidity, relevant to Section 8.2, not only in respect of contaminants but for the overall extent and duration of any incidences of elevated SSC.
 - MMO request evidence to explain why SSC is considered only as an impact to mechanical works, rather than a hydroodyamic side effect
- 3.3.5 Section 8.1 paragraph 170 mentions Lune Deep and 'the deep-water channel'; paragraph 171 mentions many sandbanks and describes wave refraction but none of these features are marked on the reference Figure 8.1 (they are shown on Figure 8.2 but this is in a very different section and is not referenced). Paragraph 173 discusses sandwaves, also unmarked the PEIR should take care to map and reference all features discussed and specifically with reference to impact envelopes, to ensure that potential effects on regional processes are clearly understood.

- 3.3.6 The cumulative methods section demonstrates a Tier system for other developments to be considered (paragraph 154). The MMO require the assessment maintains the application of an SPR model approach and focuses on cumulative changes to sources and pathways, rather than simplistically mapping overlapping impact envelopes.
- 3.3.7 Paragraph 129 states that one 'repowering' is anticipated over the lifetime. The MMO are unaware of what this implies and whether it has coastal process (or any other) implications for the MMO advice, therefore this should be clarified (i.e., a description of repowering should be added). Further, since this text makes clear that repowering is an inherent and clearly foreseen part of the operation and hence the development. The MMO cannot see that it is appropriate to omit this form the scope of the impact assessment, as is proposed by the applicant.
- 3.3.8 Paragraph 140 states "The assessment of impacts on some receptors will be predicated on a source-pathway-receptor model" in stating only 'some', the statement does not explain which impacts will use another method and nor does it state what other method(s) will be used. However, for marine processes, paragraph 184 indicates the SPR model will be used and this is appropriate. Paragraph 139 refers to the use of a consistent framework but with specific definitions of sensitivity and magnitude tailored to the receptors, which the MMO also fully support.
- 3.3.9 Paragraph 185 indicates that two approaches to marine process assessment will be taken: (1) for impacts to morphology of intrinsic value, which the MMO understand to mean for features, defined as receptors; and (2) for changes to processes, significance will be assessed elsewhere (e.g., via the subsequent impact on benthic receptors). The MMO consider this a valid approach but would add that it is important to identify the possible pathways of process changes, even if not defining 'receptors' as such and if not expecting significant changes. For example, discursive description such as "a reduction in bedload transport [over a given area] could potentially affect downstream sediment supply [toward another area], though it is thought that this would not result in directly detectable impacts".
- 3.3.10 Cumulative assessment should recognise that zones of influence (ZoI) of separate developments need not directly overlap to result in a combined effect i.e., multiple adjacent areas of impact could lead to a cumulative effect by affecting connected processes over a wide area; thus, wave energy lowered by 5% over 30% of bay is a cumulative impact, and discussion should not be confined only to the (e.g.,) 2% of the Bay where ZoIs overlap and the energy is lowered by 8%. In defining the ZoI, some consideration of the 'process envelope' is required. For example, consideration of the combined effect on the major system pathways. It is noted that paragraph 419 indicates assessment of cumulative impact to prey resources (incl. habitat loss) is to be conducted and it will be important that the assessment of spatial changes has considered systemic impacts on habitat maintenance processes and not simply the zones of overlapping ZoI.



- 3.3.11 Mitigation for any potential systemic (i.e., source or pathway) impacts is not discussed e.g., changes to key sediment transport pathways. A worst-case assessment assuming that works such as cable protection or bed levelling may be required on significant pathways should be included to address this as well as the potential need for (and methods of, if appropriate) mitigation.
- 3.3.12 As also noted in 3.3.4 above, the MMO consider that the impact assessment should address the question of possible changes in the vertical distribution of suspended sediment as a consequence of the hydrodynamic effect of the presence of the OWF piles during the operations phase (as a pathway to impact on water quality, and hence ecology).
- 3.3.13 Further, paragraph 155 of the scoping report suggests that cumulative assessments will be conducted assuming that any projects "sufficiently implemented during the site characterisation ... will be considered as part of the baseline for the EIA". The MMO consider this approach to EIA methodology flawed as it permits the neglect of any accumulation of incremental changes due to regional development contradicting the meaning of 'cumulative'.
- 3.3.14 It is stated in several places (e.g., paragraph 77) that the potential to demonstrate OWF co-existing with oil/gas fields is a major factor in siting. It is not totally clear why this is considered helpful, since the development should also be assessed in respect of the impact of the transmission assets and the potential for minimising overall impact. It is suggested that this siting is minimising impacts on other users, and uses pre-developed seabed, but this suggests that the impact of doing so on optimising the wind resource and environmental constraints should be assessed for significance
- 3.3.15 Paragraph 128 indicates Operation and Maintenance (O&M) activities "including but not limited to...". Activities not included in this list at DCO would therefore not be covered by the ES and would need separate licensing if later required. Further, any assessment of reburial / remediation / repair / replenishment of rock protection for cables should be based on realistic estimates and be based on 'worst case' potential locations i.e., assessments of significance should not be based simply on volumes or lengths of material disposed. Thus, 10km of rock protection is not necessarily worse than 1km of protection affecting a key marine process pathway.
- 3.3.16 There is a notable decline in the quality/resolution of Plate 8 and Table 7.1.



3.4 Fish Ecology and Fisheries

- 3.4.1 The Scoping Report is very high level for a Nationally Significant Infrastructure Project. Whilst the MMO appreciate that much of the project's design and infrastructure has not yet been determined, and that there will be further opportunity to comment on the appropriateness of the EIA at Preliminary Environmental Information Report (PEIR) stage, the MMO would still have expected a more detailed characterisation of fisheries and fish ecology to be included in the report, together with a more extensive list of data and resources proposed for use in the assessment. The scoping report lacks information on the proposed methods and approaches to the assessment of herring spawning habitat suitability, sandeel habitat suitability, and underwater noise modelling. Please see the comments below for further detail.
- 3.4.2 The MMO recommend that in using and interpreting some of the existing data indicated in Table 8.12, the limitations of some of the data sources proposed for use are acknowledged. For example, in terms of the vintage of data, some of Environmental Statements (ES) are well in excess of 10 years old (e.g., Barrow, Ormonde, Walney, and West of Duddon Sands offshore wind farms). The fishing methods (i.e., gear type) and the (seasonal) timing of past surveys are likely to influence the fish species caught and the size of catches, therefore data should be interpreted with caution.
- 3.4.3 Underwater noise and vibration generated by piling has the potential to propagate over vast areas, potentially beyond UK jurisdictional waters. With this in mind, the MMO recommend that potential transboundary effects of underwater noise and vibration on fish during the construction phase are scoped into the assessment. Table 8.13 shows that Transboundary Impacts have been scoped out. This comment is also applicable to shellfish below.
- 3.4.4 Impacts arising from Temporary habitat loss / physical disturbance during the operational phase should also be scoped in to the EIA. There is currently no justification as to why this has been scoped out.
- 3.4.5 The MMO notes that whilst the Project is not situated within a herring spawning ground, there is a spawning ground located 40km to the north west of the project site. With this in mind, for the purpose of the characterisation and the assessment of impacts of noise and vibration from construction activities (e.g., piling), the MMO recommend that the Agri-Food and Biosciences Institute (AFBI) of Northern Ireland is contacted to request Irish Sea herring larvae survey data. Herring larvae surveys of the northern Irish Sea are conducted around the Isle of Man and eastern coast of Northern Ireland herring spawning grounds by AFBI. Please also refer to the ICES WGSINS (2020) report for further details of this survey.
- 3.4.6 The MMO note that the Applicant is not proposing to undertake any fisheries specific surveys to inform the baseline characterisation. The MMO consider this to be acceptable given the available data and publications for the Project area.

- 3.4.7 However, the MMO note that benthic grab surveys are proposed to be carried out to inform the seabed characterisation. The MMO recommend that the Applicant carries out particle size analysis (PSA) on the sediment samples collected as these can be used to determine herring spawning habitat suitability. The MMO also recommend that the Applicant adapts their herring spawning habitat suitability assessment using the method described by MarineSpace (2013a) which uses a suite of data to determine habitat suitability including PSA data, British Geological Survey (BGS) data, Regional Seabed Monitoring Plan (RSMP) data, herring larval survey data, as well as fishing fleet data and scientific publications, and then assigns a score to the heat map outputs based on confidence of the data.
- 3.4.8 The MMO recommend recommend the Applicant uses the PSA data to inform their sandeel habitat suitability assessment using the methods described by Latto et al. (2013) and MarineSpace (2013b) which also uses data layers assigned with scores to produce a heat map based on the confidence of data.
- 3.4.9 The MMO note the Applicant has assigned fish according to the hearing groups described by Popper et al. (2014) for the purpose of the assessment of underwater noise and vibration. However, there is no further information on how the hearing thresholds will be applied in the underwater noise modelling. Please note that the MMO recommend that all underwater modelling is based on a stationary rather than a fleeing receptor for fish, for the reasons outlined below:
 - i. The MMO know that fish will respond to loud noise and vibration, through observed reactions including schooling more closely; moving to the bottom of the water column; swimming away, and; burying in substrate (Popper et al. 2014). However, this is not the same as fleeing, which would require a fish to flee directly away from the source over the distance shown in the modelling. We are not aware of scientific or empirical evidence to support the assumption that fish will flee in this manner.
 - 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 spawn in a specific location due to its substrate composition.
 - 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.
- 3.4.10 For the purpose of modelling behavioural responses in herring at their spawning ground, the MMO recommend the inclusion of a 135dB threshold based on startle responses observed in sprat by Hawkins et al. (2014). Sprat is considered a suitable proxy species for herring for the purpose of modelling likely behavioural responses in gravid herring at the spawning ground. It would be useful if the 135dB noise contour was presented in mapped form (i.e., as an additional contour to the 186dB, 203dB and 207dB, as per Popper et al., 2014).



- 3.4.11 In relation to commercial fishing activity in the Eastern Irish Sea, this project will impact most significantly on the potting and dredging activity which is prominent in this area. It may also displace/disrupt fishing activity to other parts of the Irish Sea, potentially putting extra pressure on stocks. It may also, once constructed, provide habitat creation opportunities and nursery/feeding grounds for fish.
- 3.4.12 There is the possibility cables could be damaged by dredging activity if not buried and maintained sufficiently deep under the seabed.



3.5 Shellfish Ecology

- 3.5.1 The MMO note Section 8.4.3.2 (paragraph 313) gives a clear description of the shellfish important to the area. Lockwood (2005) has been used as a reference for shellfish resources in the eastern Irish Sea, though it is unclear if the applicant has considered more recent data which may be more representative of current shellfish population dynamics.
- 3.5.2 The MMO acknowledge that the Northern Ireland Ground Fish Survey (NIGFS) has been used to support Lockwood's findings, though this might provide an indication of species presence/absence at best, given many shellfish are usually caught by traps (inshore cuttlefish, crabs, lobsters, whelks). The MMO requests that the date of the NIGFS data is provided.
- 3.5.3 The MMO note that our own landings data have been analysed, and is satisfied that key shellfish species have been identified. Specifically, paragraph 530 details that "Landings of shellfish species account for approximately 95% of total landings values across the 2016 to 2020 period. Landings data indicate that queen scallops *Aequipecten opercularis* and king scallops *Pecten maximus* are primarily landed by Scottish-registered dredgers of over 10m length; whelks *Buccinum undatum*, brown crab *Cancer pagurus* and lobster *Homarus gammarus* by primarily English-registered vessels deploying pots and traps; and prawns *Nephrops norvegicus* by Northern Irish and English-registered otter trawlers; and brown shrimp *Crangon crangon* by English beam trawlers. Nonshellfish, primarily demersal species, are primarily landed by vessels registered in England using a variety of gear types, including fixed nets, trawls and gears using hooks."
- 3.5.4 The MMO is satisfied that all relevant impacts have been scoped in. The MMO notes Section 8.4.5 that states it is envisioned that the impact assessment will use existing and additional noise survey data to assess the level of potential noise impacts upon shellfish, and that site specific underwater noise modelling will be undertaken for all potential noise sources that could impact shellfish species.
- 3.5.5 The MMO welcome the inclusion of Table 8.13 that summarises the potential impacts which have been scoped in or out. For the construction phrase, permanent habitat loss, electromagnet fields, introduction/removal of hard structure, cumulative permanent habitat loss, and transboundary impacts have been scoped out. For the operation and maintenance phase, temporary habitat loss/physical disturbance and transboundary impacts have been scoped out. For the decommissioning phase, permanent habitat loss, electromagnetic fields and transboundary impacts have been scoped out. The MMO consider that these decisions are justified.
- 3.5.6 The applicant has provided example mitigation measures that may be appropriate for the Morecambe Bay OWF development and further measures may be proposed in response to the outcome of the impact assessment and following stakeholder engagement, such as with the commercial fishing industry. The measures adopted as part of the project are detailed in paragraph 568. The MMO believe these measures to be appropriate, though their effectiveness will be determined at a later stage.



3.6 Underwater Noise

- 3.6.1 The MMO note that in the Fish and Shellfish ecology section of the Scoping Report, underwater noise and vibration has been appropriately identified as a potential impact during the construction, operation and maintenance phases.
- 3.6.2 As per para 338: "underwater noise generated by pile driving and other construction activities may result in disturbance and displacement of fish species and have the potential to affect spawning behaviour, nursery areas and migration patterns". The MMO advises that underwater noise may also have the potential to injure fish species.
- 3.6.3 The MMO welcome that acoustic barrier effects (noting the potential presence of Annex II migratory species) which may also arise as a result of underwater noise during construction, will be included as part of the underwater noise assessment (para 339).
- 3.6.4 The MMO welcome that the potential impacts (including barrier effects) of underwater noise and vibration during the operational phase (e.g. from wind turbines, surface vessels and maintenance activities) will be scoped in to allow for further consideration with full baseline information (see paras 345 and 347).
- 3.6.5 The MMO note that the relevant impacts have been scoped in for marine mammals. The installation of foundations, other construction activities (e.g. seabed preparation, cable laying and rock placement) and vessels during the construction phase can all generate underwater noise. The potential impacts associated with underwater noise during operation and maintenance (including PTS, TTS, disturbance and behavioural effects, and acoustic barrier effects) will also be considered further in the EIA, taking into account the most recent and robust research, guidance and information available. In keeping with other wind farm developments, the MMO recommend that auditory injury (i.e. PTS and TTS) is also considered, using appropriate criteria from Southall et al. (2019) and NOAA (NMFS, 2018). The MMO acknowledged however, that the risk of auditory injury from other (non-piling) construction activities is likely to be low, if a fleeing (marine mammal) receptor is considered.
- 3.6.6 Point 3.6.5 above is also relevant for fish ecology, but the MMO note that Unexploded Ordnance (UXO) clearance will be assessed as part of a separate Marine Licence and not part of the DCO submission. A more detailed assessment will be undertaken for this separate Marine Licence (para 413). The MMO request that UXO disposal is considered within the ES. The MMO remind the applicant that UXO surveying will be required prior to a marine licence being sought.
- 3.6.7 As for UXO clearance, the MMO also recommend consideration of underwater noise during the installation of foundations for turbines and substations with and without mitigation options, so that the regulator is informed of the risk reduction options available. This is particularly important for the assessment of cumulative impact from multiple activities where regulators need to be informed of the measures available to reduce cumulative risk for specific populations and habitats (Faulkner et al., 2018).



- 3.6.8 The proposed EIA approach for marine mammals is considered to be appropriate. Section 8.5.5.1 of the marine mammal ecology chapter confirms that site specific underwater noise modelling will be undertaken for the Project for all potential noise sources including the following activities (bullet points below). It is appropriate that noise modelling will be used to determine the potential risk of physical injury, auditory injury, disturbance and any barrier effects resulting from underwater noise.
 - Installation of foundations for turbines and substations
 - Other construction activities, including seabed preparations, rock placement and cable installation
 - Vessels
 - Operational noise
 - Maintenance activities, including rock placement, cable installation and vessels
- 3.6.9 The MMO consider it appropriate that underwater noise modelling will be undertaken using the latest and best available information, in particular relating to criteria and thresholds for predicting the noise impact ranges for marine mammal species (Southall et al., 2019) and turtles (Popper et al., 2014):
 - The peak Sound Pressure Level (SPLpeak), Sound Exposure Level for a single strike (SELss) and cumulative exposure (SELcum) thresholds based on Southall et al. (2019) criteria for Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS) in very high, high and low frequency cetaceans and pinnipeds in water.
 - The SELcum scenarios for marine mammals and turtles will be completed assuming a fleeing receptor.



- 3.6.10 Para 329 states the following: "It is envisioned that the impact assessment will use existing and additional noise survey data (ambient noise) combined with appropriate guidance such as Popper et al. (2014); and the Environment Agency Informed Approach (Navitus Bay, 2014). This approach uses a combination of Popper et al. (2014), Hawkins & Popper (2014), and Hawkins (2014), to assess the level of potential noise impacts upon fish, including migratory fish and shellfish....site specific underwater noise modelling will be undertaken for all potential noise sources that could impact fish and shellfish species". The Popper et al. (2014) criteria are the most current, peer-reviewed criteria for fish.
 - 3.6.11 The MMO advises the Applicant provide further information/context on the specified 'Environment Agency Informed Approach' (Navitus Bay 2014).
 - 3.6.12 The MMO notes that there are currently no noise exposure criteria for marine invertebrate / shellfish species. The MMO recommend that the assessment draws upon the peer-reviewed literature to support conclusions.
 - 3.6.13 The MMO notes that mitigation measures will be developed as site specific information becomes available, the project design is refined and the Preliminary Environmental Information Report (PEIR), and ultimately the Environmental Statement (ES), are prepared.
 - 3.6.14 The MMO is satisfied that a Marine Mammal Mitigation Protocol (MMMP) will be produced to reduce the risk of physical injury or permanent auditory injury (PTS) in marine mammals from underwater noise. A draft MMMP will be provided with the submitted DCO application. The final MMMP will be developed in the preconstruction period.
 - 3.6.15 Potential measures will be consulted upon with stakeholders throughout the EIA process. Examples of additional measures that could be considered include noise abatement systems, use of Acoustic Deterrent Devices, lower impact methods of construction such as low-order detonation for UXO, and seasonal timing restrictions. Reducing noise at source through noise abatement systems will also likely reduce the potential risk of impact on other non-marine mammal species.

4 Conclusion

The topics highlighted in this scoping opinion must be assessed during the EIA process and the outcome of these assessments **must** be documented in the ES in support of the DCO application. This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.



5 References

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Maritime and Coastguard Agency

UK Technical Services – Navigation 105 Commercial Road Southampton SO15 1EG www.gov.uk/mca

Your ref: EN010121

14 July 2022

Vinu John

Helen Lancaster

The Planning Inspectorate Environmental Services Central Operations Temple Quay House 2 The Square Bristol, BS1 6PN

By email to: morecambeoffshorewindproject@planninginspectorate.gov.uk

Dear Ms Lancaster

Application by Morecambe Offshore Wind Limited for an Order granting Development Consent for the Morecambe Offshore Wind Project (the Proposed Development)

Scoping Report Consultation: Morecambe Offshore Windfarm

Thank you for your letter dated 23 June 2022 requesting comments on the scoping report provided by Morecambe Offshore Wind Limited. The MCA welcomes the opportunity to provide comments under the above Environmental Impact Assessment Regulations, and we would comment as follows: The Environmental Impact Report should supply detail on the possible impact on navigational issues for both commercial and recreational craft, specifically:

- Collision Risk
- Navigational Safety
- · Visual intrusion and noise
- Risk Management and Emergency response
- Marking and lighting of site and information to mariners
- Effect on small craft navigational and communication equipment
- The risk to drifting recreational craft in adverse weather or tidal conditions
- The likely squeeze of small craft into the routes of larger commercial vessels.

The development area carries a significant amount of traffic with a number of important commercial shipping routes to/from UK ports and the Irish Sea, particularly lifeline ferries between UK, Isle of Man and Ireland. Attention needs to be paid to routing, particularly in heavy weather routeing so that vessels can continue to make safe passage without large-scale deviations. The likely cumulative and in combination effects on shipping routes should be considered which will be an important issue to assess for this project. It should consider the proximity to other windfarm developments, other infrastructure, and the impact on safe navigable sea room.

It is noted that a Navigational Risk Assessment will be submitted in accordance with MGN 654. This should be accompanied by a detailed MGN 654 Checklist which can be found at: https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shippingb

We note that a vessel traffic survey will be undertaken to the standard of MGN 654. We also note the winter vessel traffic survey was intended to be carried out in February 2022 and the second survey is planned for summer 2022. The surveys will consist of a minimum of 28 days of seasonal



data (two x 14-day surveys) collected from a vessel-based survey using AIS, radar and visual observations to capture all vessels navigating in the study area.

The proximity to other offshore windfarms will need to be fully considered, with an appropriate assessment of the distances between OREI boundaries and shipping routes as per MGN 654. The cumulative impacts of other windfarms in close proximity, in particular the proposed Morgan and Mona offshore wind farms will change routing. Attention must be paid for ensuring the established shipping routes in the Irish sea, particularly ferry routes, can continue safely without unacceptable deviations.

The turbine layout design will require MCA approval prior to construction to minimise the risks to surface vessels, including rescue boats, and Search and Rescue aircraft operating within the site. Any additional navigation safety and/or Search and Rescue requirements, as per MGN 654 Annex 5, will be agreed at the approval stage.

Attention should be paid to cabling routes and where appropriate burial depth for which a Burial Protection Index study should be completed and subject to the traffic volumes, an anchor penetration study may be necessary. If cable protection measures are required e.g. rock bags or concrete mattresses, the MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase, such as at the HDD location.

Particular consideration will need to be given to the implications of the site size and location on SAR resources and Emergency Response Co-operation Plans (ERCoP). The report must recognise the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)) that can cover the entire wind farm sites and their surrounding areas. A SAR checklist will also need to be completed in consultation with MCA, as per MGN 654 Annex 5 SAR requirements.

MGN 654 Annex 4 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. Failure to report the survey or conduct it to Order 1a might invalidate the Navigational Risk Assessment if it was deemed not fit for purpose.

On the understanding that the Shipping and Navigation aspects are undertaken in accordance with MGN 654 and its annexes, along with a completed MGN checklist, MCA is likely to be content with the approach.

Yours sincerely, Vinu John

Navigation Policy Advisor UK Technical Services - Navigation



Your Ref: EN010121-000028

Our Ref: DIO10054567

Helen Lancaster Environmental Services Central Operations Temple Quay House 2 The Square Bristol BS1 6PN

By email only

Teena Oulaghan
Ministry of Defence
Safeguarding Department
St George's House
DIO Headquarters
DMS Whittington
Lichfield
Staffordshire
WS14 9PY

Геlephone [MOD]:	
E-mail:	

21 July 2022

Dear Helen,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11

Application by Cobra Instalaciones y Servicios S.A. and Flotation Energy plc (the Applicant) for an Order granting Development Consent for the Morecambe Offshore Windfarm (Generation Assets) (the Proposed Development)

Scoping consultation and notification of the Applicant's contact details and duty to make available information to the Applicant if requested

Thank you for consulting the Ministry of Defence (MOD) on the above scoping opinion request in respect of the Morecambe Offshore Windfarm development. The consultation was received by this office on 23 June 2022.

I write to confirm the safeguarding position of the MOD regarding information that should form part of any Environmental Statement submitted in support of an application.

The applicant has prepared a scoping report for the proposed development. The scoping report recognises the principal defence issues relevant to MODs consideration of the proposed development.

The use of airspace in the vicinity of the proposed development for defence purposes has been appropriately identified. The scoping report highlights the aviation and radar systems that may be affected by the proposed wind farm and the MOD is identified as a relevant receptor in 8.10 Civil and military aviation of the scoping report.

The report correctly identifies that the proposed turbines will be detectable to Primary Surveillance Radars (PSR) at Warton Aerodrome and has been scoped in. The report also notes that the development would have no impact on the operation and capability of any Air Defence Radars (ADR), this has also been scoped out.

Impact on military activity has been considered in 8.8.3 of the scoping report. The report correctly identifies that there are no military Practice and Exercise Areas (PEXA) and therefore the MOD has no concerns. However, the development zone does occupy an area containing highly surveyed routes which support defence maritime navigational interests which we would need to take into consideration when reviewing any development proposal.

The potential presence of unexploded ordnance (UXO) has been identified as a relevant consideration in section 8.11.3.5 Ministry of defence activities. The potential presence of UXO and disposal sites is also a relevant consideration to the installation of cables and other intrusive works that may be undertaken in the maritime environment. I acknowledge that the scoping report in 8.9 Marine archaeology and cultural heritage has identified the presence and potential for locating wrecks of vessels and /or aircraft.

Impact on military low flying has been scoped in and the applicant states in the scoping report that they are committed to lighting and charting the turbines. In the interests of air safety, the MOD would request that the development be fitted with MOD accredited aviation safety lighting in accordance with the Civil Aviation Authority, Air Navigation Order 2016.

MOD acknowledge that this consultation request relates to the proposed Section 36 consent and Marine Licence applications and not the onshore elements of the works. MOD request that we are consulted once more detail is available relating to the cable route and onshore landfall location.

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours sincerely

Teena Oulaghan Safeguarding Manager





Complex Land Rights

Ellie Laycock
Development Liaison Officer
UK Land and Property

Tel: +44 (0)7989 208211

www.nationalgrid.com

SUBMITTED ELECTRONICALLY:

More cambe Off shore Wind Project @planning in spectorate.gov.uk

11 July 2022

Dear Sir/Madam

APPLICATION BY COBRA INSTALACIONES Y SERVICIOS S.A. AND FLOTATION ENERGY PLC (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE MORECAMBE OFFSHORE WIND FARM (GENERATION ASSETS) (THE PROPOSED DEVELOPMENT)

SCOPING CONSULATION REPONSE

I refer to your letter dated 23rd June 2022 in relation to the above proposed application. This is a response on behalf of National Grid Electricity Transmission PLC (NGET). Having reviewed the scoping report, I would like to make the following comments regarding NGET infrastructure within or in close proximity to the current red line boundary.

NGET has no apparatus within or in close proximity to the proposed offshore site boundary but I am aware that there will be NGET apparatus affected by the onshore stage of the Morecambe Offshore Wind Farm proposals.

I note that a separate application to consent the construction, operation and maintenance and decommissioning of the transmission assets required to enable the export of electricity is to follow. NGET will provide a response to that subsequent Scoping Consultation.

The information in this letter is provided not withstanding any discussions taking place in relation to connections with electricity customer services.

Yours faithfully

Ellie Laycock
Development Liaison Officer, Complex Land Rights

Feekins-Bate, Laura

From: ROSSI, Sacha

19 July 2022 15:47 Sent:

Morecambe Offshore Wind Project To:

Cc: **NATS Safeguarding**

Subject: RE: EN010121 - Morecambe Offshore Windfarm (Generation Assets) - EIA Scoping

Notification and Consultation [SG33585]

Dear Sirs,

I refer to the Consultation for a Scoping Opinion for the Application reference above. Following a preliminary assessment, NATS anticipates an unacceptable impact from the proposal. Accordingly, it wishes to raise the Applicant's awareness in respect of identifying and assessing the potential impact on Aviation in its supporting documentation and planning application.

NATS remains at the Applicant's and the Inspectorate's disposal in respect of providing further advice. To this effect it also recommends a wind farm pre-planning assessment is undertaken so that NATS's position can be confirmed. Details are available through the Safeguarding Office or our website.

Regards S. Rossi

NATS Safeguarding Office



Sacha Rossi

ATC Systems Safeguarding Engineer

D: 01489 444205

4000 Parkway, Whiteley, Fareham, Hants PO15 7FL www.nats.co.uk









NATS Internal

Date: 21 July 2022 Our ref: 18251/399738 Your ref: EN010121

Helen Lancaster
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol
BS1 6PN

BY EMAIL ONLY

NATURAL ENGLAND

Customer Services Hornbeam House Crewe Business Park Electra Way Crewe Cheshire CW1 6GJ

T 0300 060 3900

Dear Ms Lancaster,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11

Application by Cobra Instalaciones y Servicios S.A. and Flotation Energy plc (the Applicant) for an Order granting Development Consent for the Morecambe Offshore Windfarm (Generation Assets) (the Proposed Development)

Scoping consultation and notification of the Applicant's contact details and duty to make available information to the Applicant if requested

Thank you for your letter dated 23 June 2022 consulting Natural England on the Scoping Roeprt for Morecambe Offshore Windfarm Generation Assets. The following constitutes Natural England's formal statutory response; however, this is without prejudice to any comments we may wish to make in light of further submissions or on the presentation of additional information.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

The advice contained within this letter is provided by Natural England, which is the statutory nature conservation body within English territorial waters (0-12 nautical miles). It should be noted that pursuant to an authorisation made on the 9th December 2013 by the JNCC under paragraph 17(c) of Schedule 4 to the Natural Environment and Rural Communities Act 2006, Natural England is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters (0-200 nm) adjacent to England. This application was included in that authorisation and therefore Natural England will be providing statutory advice in respect of that delegated authority.

Case law¹ and guidance² has stressed the need for a full set of environmental information to be available for consideration prior to a decision being taken on whether or not to grant planning permission. Annex 1 to this letter provides Natural England's advice on the scope of the Environmental Impact Assessment (EIA) for this development.

¹ Harrison, J in R. v. Cornwall County Council ex parte Hardy (2001)

² Note on Environmental Impact Assessment Directive for Local Planning Authorities Office of the Deputy Prime Minister (April 2004) available from

http://webarchive.nationalarchives.gov.uk/+/http://www.communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/environmentalimpactassessment/noteenvironmental/

Summary of Main Points

Approach to EIA scoping

Natural England notes that the project has adopted a similar approach to EIA scoping as other offshore windfarm (OWF) Nationally Significant Infrastructure Projects (NSIPs) by consulting on a large scoping boundary. The rationale for the inclusion of these large boundaries is due to substantial components of the projects remaining undetermined at the point of scoping, in particular regarding the location of the grid connection but also other aspects including incomplete data collection. Thereby, the EIA scoping reports are extremely high level, especially when compared non-OWF NSIPs.

This makes it difficult to provide targeted advice on the scope of the EIA at this stage, and given the EIA scoping opinion from PINS is binding as regards the scope of the Environmental Statement (ES), this risks creating difficulties with identifying and resolving consenting issues further down the line.

Additionally, we highlight that because we are unable to confirm with a high level of confidence that the data collection proposed is sufficient to inform the ES/areas of search, we are also unable to advise on the potential scale and level of risk this project may pose to nature conservation receptors. Without having this understanding it is unclear to Natural England how this project will now progress towards submission and ensure that there is sufficient time in the pre-application phase to identify and address all of the potential environmental concerns. There is a risk with premature EIA scoping that consenting issues are identified late in the day and are not resolved in advance through pre-application discussions or data collection, and that Examinations are then unable to resolve these issues. This runs counter to the increased emphasis on 'front-loading' issues in the NSIP process, and the ambition of the British Energy Security Strategy as regards speeding up the consenting process.

We note the Preliminary Environmental Information Report (PEIR) for the Morecambe OWF project will not be able to present data analysis of the full 24 months of the digital aerial surveys for both birds and marine mammals. Natural England highlight the risk that the additional data analysis could have the potential to change the conclusions of the ES from those set out in the PEIR, which could cause delays to the project. More generally, Natural England advises that 24 months of survey effort is the minimum expected evidence standard for bird and marine mammal data.

Proposed separate DCO applications for generation and transmission assets

Whilst welcoming the proposed coordinated grid connection between Morgan and Morecambe OWF, this does raise some potential concerns regarding the consenting process. Natural England has encountered such issues previously during the separate examinations of the Triton Knoll generation and transmission assets and offers some initial advice on the matter based on these experiences. Please see the attached paper.

The advice within this letter is provided with respect to the generation assets scoping report provided, but we consider that the transmission assets are an integral part of the project and therefore the ES should, at the point of submission, be in a position to consider the project as a whole. Therefore the final ES, when considering the project as a whole, will include additional impacts and designated sites than those mentioned within the Morecambe OWF Generation Assets Scoping Report.

Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards

Natural England has been leading the 'Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards' project, funded by Defra's Offshore Wind Enabling Actions Programme (OWEAP).

The project is providing up-front best practice advice on the way data and evidence is used to support offshore wind farm development and consenting in English waters, focussing on the key ecological receptors which pose a consenting risk for projects, namely seabirds, marine mammals, seafloor habitats and species and fish.

The project aims to facilitate the sustainable development of low impact offshore wind by increasing clarity for industry, regulators and other stakeholders over data and evidence requirements at each stage of offshore wind development, from pre-application through to post-consent.

The advice documents are currently stored on a SharePoint Online site, access to the SharePoint site needs to be requested from neoffshorewindstrategicsolutions@naturalengland.org.uk. Please allow up to three working days for requests to access the site to be granted. Natural England is currently reviewing ways of making the advice more accessible and open access.

The ES should be fully informed by the recommendations in the Best Practice Advice and we will increasingly be appraising ESs with respect to the extent to which the guidance has been followed.

Physical Processes

It is vital that the marine and coastal physical processes within, and in the vicinity of, the proposed development are well understood in order to provide robust estimates of the temporal and spatial scale of changes to hydrodynamic and sediment transport regimes and to the subtidal, intertidal and supratidal environments. This should describe both contemporary conditions as well as longer-term historical change.

Little information is provided on seabed preparation activities (e.g. sandwave clearance, material disposal) and the impacts on sediment transport patterns and morphological change, due to the early stage of the project. Natural England reserve the right to make future detailed comments once further information is known, this could include scoping in of additional impacts.

Underwater noise

We recommend that underwater noise modelling of the operational wind farm noise is undertaken using the best available evidence and reasonable assumptions based on wind turbine generators that are of representative size for the Morecambe OWF.

In regard to modelling fish for the purpose of exposure, we advise that all fish hearing groups (Group 1 to 4 fish) should be assessed as static receptors.

Benthic subtidal and intertidal ecology

We do not agree, at this stage, that sufficient evidence has been provided to scope out impacts to benthic invertebrates due to electromagnetic fields or the release of sediment-bound contaminants. In addition we are unclear whether impacts from temperature changes due to heating from cables on benthic communities has been considered and whether it is scoped into or out of the project assessment.

Marine Mammals

Marine Mammal Management Units should be used as the regional study area for the purposes of calculating the reference populations, the screening extent as regards Special Areas of Conservation, and for cumulative impacts spatial screening extent.

We have provided some additional evidence sources within our advice, and recommend that consideration of the use of these sources in establishing the baseline characterisation.

We advise that geophysical surveys should be included as a source of underwater noise in the cumulative impact assessment.

Offshore ornithology

Tracking studies should also be used where available to evidence connectivity, or lack thereof, they should also be used to aid screening where possible.

Natural England has provided some advice to the applicant directly), stating that within the upcoming Statutory Nature Conservation Bodies (SNCB) guidance there will be a clear recommendation to use the stochastic CRM (sCRM). As detailed in the CRM technical note, Natural England advise that CRM is not undertaken according to the existing guidance as this will in all

likelihood be superseded at the point of submission.

The SNCB guidance note and supporting evidence are still being prepared and finalised, however Natural England have provided the applicant with avoidance rates and updated parameters to inform the approach to sCRM. Further discussions on the appropriate methodology including parameterisation of models can be discussed at the Offshore Ornithology Expert Topic Group (ETG) through the Evidence Plan process.

Seascape, landscape and visual resources

We advise that a 60km buffer to assess seascape impacts is used due to the elevated viewpoints within the local area. This will enable any impacts to be fully assessed, although we acknowledge that the Morecambe OWF may be visible but not dominant within the seascape.

We have provided guidance on EIA requirements and specific comments to sections of the Morecambe Offshore Windfarm Scoping Report in the following annexes of this letter:

Annex 1 Advice related to EIA Scoping Requirements Annex 2 Comments on Chapters 1-7 Annex 3 Comments on Part 2: Technical sections

Further guidance is set out in Planning Practice Guidance on <u>environmental assessment, natural</u> environment and climate change.

In accordance with Section 4 of the Natural Environment and Rural Communities Act 2006, Natural England should be consulted again if the proposal is amended in any way which significantly affects its impact on the natural environment.

Please note that Natural England must be consulted on Environmental Statements.

Please send any new consultations or further information on this consultation to <u>consultations@naturalengland.org.uk</u>.

For clarification of any points in this letter, please do not hesitate to contact Natural England using the details provided below.

Yours sincerely Laurence Browning

Marine Senior Adviser Cumbria Area Team

Annex 1 Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 / Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (Regulation 10) sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development including physical characteristics and the full marine use requirements of the site during construction and operational phases:
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development;
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen:
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors,

material assets, including the architectural and archaeological heritage, landscape/seascape and the interrelationship between the above factors;

- A description of the likely significant effects of the development on the environment this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment;
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment;
- A non-technical summary of the information;
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

1.2 Cumulative and in-combination effects

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure and activities should be included within the assessment.

An impact assessment should identify, describe, and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment (subject to available information):

- a. existing completed projects:
- b. approved but uncompleted projects;
- c. ongoing activities;
- d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

Natural England's advice on the scope and content of the ES is given in accordance with the National Infrastructure Planning Advice Notes:

https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

1.3 Environmental data

Natural England is required to make available information it holds where requested to do so. National datasets held by Natural England are available at http://www.naturalengland.org.uk/publications/data/default.aspx.

Detailed information on the natural environment is available at www.magic.gov.uk.

Natural England's Site of Special Scientific Interest (SSSI) Impact Risk Zones are a GIS dataset which can be used to help identify the potential for the development to impact on a SSSI. The dataset and user guidance can be accessed from the Natural England Open Data Geoportal.

Natural England does not hold local information on local sites, local landscape character, priority habitats and species or protected species. Local environmental data should be obtained from the appropriate local bodies. This may include the local environmental records centre, the local wildlife trust, local geo-conservation group or other recording society.

2. Biodiversity and Geology

2.1 Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. <u>Guidelines</u> for Ecological Impact Assessment (EcIA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EcIA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The <u>National Planning Policy Framework (NPPF)</u> sets out guidance in paragraphs 174-175 and 179-182 on how to take account of biodiversity and geodiversity interests in planning decisions and the framework that the responsible authority should provide to assist developers. Further guidance is set out in Planning Practice Guidance on the <u>natural environment</u>.

2.2 Internationally Designated Sites

The ES should thoroughly assess the potential for the proposal to affect designated sites. Internationally designated sites (e.g. designated Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) fall within the scope of the Conservation of Habitats and Species Regulations 2017 (as amended). In addition paragraph 181 of the National Planning Policy Framework requires that potential Special Protection Areas, possible Special Areas of Conservation, listed or proposed Ramsar sites, and any site identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs and Ramsar sites be treated in the same way as classified sites (NB. sites falling within the scope of regulation 8 of the Conservation of Habitats and Species Regulations 2017 are defined as 'habitats sites' in the NPPF).

The ES should include a full assessment of the direct and indirect effects of the development on the features of special interest within these sites, and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

Internationally designated site conservation objectives are available on our internet site http://publications.naturalengland.org.uk/category/6490068894089216.

2.3 Habitats Regulations Assessment

If the proposal outlined within the scoping document has the potential to significantly effect features of the internationally designated sites and the activity is not directly connected to the management of any designated site it should be assessed under Regulation 63 the Conservation of Species and Habitats Regulations (2017) (as amended) and Regulation 28 of the Conservation of Offshore Species and Habitats regulations (2017) (as amended). Should a Likely Significant Effect on an internationally designated site be identified or be uncertain, the competent authority for the licence/consent (the Marine Management Organisation / Government Department) should undertake an Appropriate Assessment of the implications for the site in view of its conservation objectives, in addition to consideration of impacts through the EIA process. Noting recent case law (People Over Wind³) measures intended to avoid and/or reduce the likely harmful effects on an internationally designated sites cannot be taken into account when determining whether or not a plan or project is likely to have a significant effect on a site, therefore consideration is required at Appropriate Assessment. Natural England wishes to be consulted on the scope of the Habitats Regulations Assessment and the information that will be produced to support it and should be formally consulted on any Appropriate Assessment provided for the proposal (Regulation 63).

The consideration of Likely Significant Effects should include any functionally linked habitat outside the designated site. These areas may provide important habitat for mobile species populations that are qualifying features of the site, for example birds and bats. This can also include areas which have a critical function to a habitat feature within a designated site, for example by being linked hydrologically or geomorphologically. Further guidance is set out in Planning Practice Guidance on appropriate assessment here: https://www.gov.uk/guidance/appropriate-assessment.

³ People Over Wind and Sweetman vs Coillte Teoranta (ref: C 323/17).

Further information on the special interest features, their conservation objectives, and any relevant conservation advice packages for designated sites is available on our website https://designatedsites.naturalengland.org.uk/; and the Joint Nature Conservation Committee (JNCC) website About Marine Protected Areas | JNCC - Adviser to Government on Nature Conservation.

Natural England notes that the Crown Estate's plan level Habitat Regulations Assessment (HRA) has concluded that there will be no Adverse Effect on Site Integrity for the National Site Network sites relevant to the Morecambe project. This conclusion relates to The Offshore Wind Leasing Round 4 Plan only and individual projects must complete a detailed Project-Level HRA as part of the application for development consent through the statutory planning process. This advice is therefore given on a without prejudice basis pending any further project specific evidence that will inform the Proeject Level HRA for Morecambe Offshore Windfarm.

2.4 Nationally Designated Sites

Sites of Special Scientific Interest - The Generation assets of the Project do not fall within or adjacent to any Sites of Special Scientific Interest (SSSI).

Marine Conservation Zones - Marine Conservation Zones (MCZ) are areas that protect a range of nationally important, rare or threatened habitats and species. You can see where MCZs are located and their special interest features on www.magic.gov.uk. Factsheets that establish the purpose of designation and conservation objectives for each of the MCZ's are available at https://www.gov.uk/government/collections/marine-conservation-zone-designations-in-england.

The ES should include a full assessment of the direct and indirect effects of the development on the site and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects.

The ES should consider including information on the impacts of this development on MCZ interest features, to inform the assessment of impacts on habitats and species of principle importance for this location. Further information on MCZs is available via the following link: http://publications.naturalengland.org.uk/category/1723382.

Further information on the special interest features, the conservation objectives, and relevant conservation advice packages for designated sites is available on our website https://designatedsites.naturalengland.org.uk/.

2.5 Protected Species - Species protected by the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 (as amended) The ES should assess the impact of all phases of the proposal on protected species (including, for example, pinnipeds (seals), cetaceans (including dolphins, porpoises whales), fish (including seahorses, sharks and skates), marine turtles, birds, marine invertebrates, bats, etc.). Information on the relevant legislation protecting these species can be reviewed on the following link https://www.gov.uk/government/publications/protected-marine-species. Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, MBN Atlas, groups and individuals; and consideration should be given to the wider context of the site, for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 <u>Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System</u>. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

In order to provide this information there may be a requirement for a survey at a particular time of year. Surveys should always be carried out in optimal survey time periods and to current guidance by suitably qualified and where necessary, licensed, consultants.

2.6 Habitats and Species of Principal Importance

The ES should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available here https://www.gov.uk/guidance/biodiversity-duty-public-authority-duty-to-have-regard-to-conserving-biodiversity.

Government Circular 06/2005 states that Biodiversity Action Plan (BAP) species and habitats, 'are capable of being a material consideration...in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

2.7 Contacts for Local Records

Natural England does not hold local information on local sites, local landscape character and local or national biodiversity priority habitats and species. We recommend that you seek further information from the appropriate bodies (which may include the local records centre, the local wildlife trust, local geoconservation group or other recording society and a local landscape characterisation document).

3. Designated Landscapes and Landscape/Seascape Character

3.1 Landscape/Seascape and visual impacts

Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area, landscape and seascape together with any physical effects of the development, such as changes in topography.

The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape/seascape assessment methodologies. We encourage the use of Landscape and Seascape Character Assessment (LCA/SCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA/SCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

Natural England supports the publication *Guidelines for Landscape and Visual Impact Assessment*, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment. For National Parks and Areas of Outstanding Natural Beauty (AONBs), we advise that the assessment also includes effects on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the particular landscape and related characteristics which underpin the natural beauty of the area and its designation status.

In order to foster high quality development that respects, maintains, or enhances, local landscape / seascape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The EIA process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.

The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant <u>National Character Areas</u> which can be found on our website. Links for Landscape / Seascape Character Assessment at a local level are also available on the same page.

https://www.gov.uk/government/publications/seascape-assessments-for-north-east-north-west-south-east-south-west-marine-plan-areas-mmo1134

https://data.gov.uk/dataset/3fed3362-2279-4645-8aaf-c6b431c94485/mmo1037-marine-characterareas.

Where the development may have impact on St Bees Head Heritage Coast, Natural England advises that use national and local policies, together with local landscape expertise and information to determine the proposal. The policy and statutory framework to guide your decision and the role of local advice are explained below.

Your decision should be guided by paragraph 178 of the National Planning Policy Framework. It states:

178. Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 176), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.

The NPPF continues to state in a footnote (footnote 60) that "For the purposes of paragraph 176 and 177, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined."

Alongside national policy you should also apply landscape policies set out in your development plan, or appropriate saved policies.

Where available, a local Landscape Character Assessment can also be a helpful guide to the landscape's sensitivity to this type of development and its capacity to accommodate the proposed development.

4. Water Quality

Increases in suspended sediment concentrations (SSC) during construction and operation (e.g. future dredging works) have the potential to smother sensitive habitats. The ES should include information on the sediment quality and potential for any effects on water quality through suspension of contaminated sediments. The EIA should also consider whether increased SSC resulting are likely to impact upon the interest features and supporting habitats of the designated sites.

The ES should consider whether there will be an increase in the pollution risk as a result of the construction or operation of the development.

5. Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition (<u>England Biodiversity Strategy</u>, Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which

may give rise to pollution, either directly or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System (www.apis.ac.uk). Further information on air pollution modelling and assessment can be found on the Environment Agency website.

6. Climate Change Adaptation

The <u>England Biodiversity Strategy</u> published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' (<u>NPPF</u> Para 174), which should be demonstrated through the ES.

Further information is available from the <u>Committee on Climate Change's</u> (CCC) <u>Independent Assessment of UK Climate Risk</u>, the <u>National Adaptation Programme</u> (NAP), the <u>Climate Change Impacts Report Cards</u> (biodiversity, infrastructure, water etc.) and the UKCP18 climate projections.

Annex 2 Comments on Chapters 1-7

Section	Paragraph/Table	Comment	Recommendations
General		National Policy Statements (NPS)	The ES will need to take account of anything in
			the revised NPS. We advise that early consideration should be given to policies in draft
			NPS updates out to consultation in case these
			are adopted.
General		Plan level HRA	The Morecambe OWF project should have
Ocholai		T Idil level i livit	regard to the outcome of the plan level HRA for
			The Offshore Wind Leasing Round 4 Plan.
General		EIA guidance	Natural England would expect the guidance
			provided in Annex A to be taken into account.
General		Strategic Environmental Assessment (SEA)	We note that there is a new offshore energy
		, ,	SEA, the consultation period for which closed in
			May 2022. The OESEA may have useful
			information that should be taken into account by
			the Morecambe OWF project.
6.3.4	114	Natural England has recently produced advice ⁴ on scour and	Review and consider for scour and cable
		cable protection, we advise that solutions that result in no, or	protection measures.
		minimal environmental impact to the seabed should be	
		considered. This could therefore be considered to remain in	
		situ at the end of the project lifetime on the basis that this	
704		results in the most cost effective and sustainable approach.	The second finitions observed by section to the section of the sec
7.2.1		Identification of receptors and the sensitivity of receptors to	These definitions should be set out within the ES.
		impact scale definitions should be discussed and agreed as part of the Evidence Plan process with the relevant EWG.	E5.
7.3	Table 7.1	A matrix for assessment of significance is provided as an	Discuss and agree with the relevant EWGs and
1.5	Table 7.1	example, demonstrating how the sensitivity of receptor	definitions should be provided in the ES.
		against magnitude of impact can determine the significance	definitions should be provided in the Eo.
		of effect. As with above comments, sensitivity of receptor,	
		magnitude of impact and the matrix of significance of effect	
		should be discussed and agreed through the Evidence	
		Planning process.	
7.3	Table 7.1	The significance matrix covers potential beneficial impacts,	Natural England would welcome the exploration

⁴ <u>Scour and Protection Decommissioning Study Natural England Commissioned Report NECR403 March 2022</u> Page **11** of **19**

	but this is not developed further within the scoping.	of opportunities to develop enhancement options or other measures that could lead to beneficial environmental outcomes.
7.4	Ideally, most potential impacts could be avoided, or effects reduced at the design stage of the project, through early consideration of ecological constraints, which along with consideration of other environmental features would be used to refine scheme layout, siting and design. Further impacts could also be avoided through siting of infrastructure at the construction stage.	We advise that the ES demonstrates that the mitigation hierarchy has been followed wherever appropriate.

Annex 3 Comments on Part 2: Chapter 8 Technical sections

8.1 Marine geology, oceanography and physical processes

Section	Paragraph/Table	Comment	Recommendations
8.1.3.2	170	Further evidence on the tidal current directions in addition to speed, for both flood and ebb currents would be beneficial. It would be beneficial to have a mapped display of this information. This would support a clear baseline of the hydrodynamics within the study area.	Include in ES.
8.1.4	179	We advise that there may be additional potentially relevant data available from Environment Agency LiDAR survey data.	Review and include in ES.
8.1.6.1		Little information is provided on seabed preparation activities, due to the early stage of the project. Natural England reserve the right to make future detailed comments once further information is known, this could include scoping in of additional impacts.	To note. Further discussion would be welcomed through the Evidence Plan process via the relevant ETGs.
8.1.6.1	191	The potential requirement for sand wave levelling is referenced, but no information is provided on the presence of any sand wave features within the area. It would be beneficial to have a clear understanding of sand wave height, wave lengths and migratory rates, should they occur in the study area in order to understand any potential impacts.	Clarify evidence base concerning sand waves post-scoping.

8.3 Benthic ecology

Section	Paragraph/Table	Comment	Recommendations
8.3.2	251	The study area only covers the area of the OWF. Scoping in a	Consider data from a wider area within the PEIR
		wider area may be useful in consideration of indirect impacts.	and ES
8.3.3.1	253	Description of the benthic habitats is very limited	Include a map with UKSeaMap / EUSeaMap data in PEIR and ES
8.3.4	256, table 8.8	Data from existing windfarms is relevant as context but will not be relevant to the Morecambe footprint.	To note.
		More detailed regional data sets such as NBN network, Marine	Include these within the PEIR.
		Recorder, Regional Seabed monitoring plan baseline	
		assessment should be included.	
		Data relating to benthic species of conservation importance is	

		not covered.	
8.3.4	257	Natural England has provided discretionary advice to the	To note. NE's advice and the applicants response
		applicant on the benthic survey plan.	to the issues raised can be supplied on request.
8.3.4	259	No detail has been given on data analysis for benthic survey.	Consult NE and the relevant ETG on the analysis of these data.
8.3.6.1	274	Hard to ascertain relative footprint when details of construction and cabling are not yet known. Will also depend on specific habitat in the location, and how this compares to habitat extent in the wider area	To note and refine in ES when parameters of project and affected habitats are better understood.
8.3.6.2	286	The surface area introduced by the turbine foundations is substantially greater that that lost under the footprint of the turbine. This will vary depending on foundation type, but it is not an insignificant change. Lindeboom <i>et al</i> 2011 is dated and there are still gaps in our knowledge with work still ongoing to understand how offshore wind farm construction and operation effects benthic habitats and communities.	Further consideration of the total area of habitat introduced should be made in the ES when the parameters of the project are better understood.
8.3.6.2	288	We do not agree that impacts to benthic invertebrates due to EMF should be scoped out at this stage. We note this issue is covered in a draft revised energy NPS that was consulted on in late 2021.	Include in ES
8.3.6.2	292	Evidence for the effects of underwater noise on benthic fauna is inconclusive.	Underwater noise should not be scoped out at this stage and should considered in the ES.
8.3.6.2		Potential for localised benthic temperature changes has not been considered here.	Include in PEIR
8.3.6.7	305	Bullet point 6 – need to know what options are being considered for decommissioning to understand the potential risks to the benthos.	Include more detail on decommissioning options and assessment of the risk of each in the ES.
8.3.6		In conjunction with the information to be gathered on the proposed offshore array through survey work, the ES should include details on the following technical aspects relating to the construction and operation of the Morecambe OWF: • Footprint of area affected by inter-array electrical cables; • Footprint of area affected by inter-array cable protection; • Estimation of electromagnetic fields (EMF) potentially arising from cables both at exterior of cables and at surface of seabed above buried cables; • Footprint of area affected by installation of Wind Turbine	To be further considered and set out in the ES.

Generator foundations; • Footprint of area affected by installation vessels; • Duration and rate of cable-laying;	
 Number and types of vessels to be used in cable-laying 	
operations;	
 Routes of vessels for cable works. To be further considered 	
and set out in the ES.	

8.4 Fish and shellfish ecology

Cefas is the technical specialist on fish and shellfish ecology, particularly concerning commercial species and we defer to their advice on this topic.

We are content that the correct migratory fish species protected in designated NSN and MCZ sites have been scoped in.

8.5 Marine mammal ecology

Section	Paragraph/Table	Comment	Recommendations
General		We express our concern that the full results of the digital aerial surveys will not be available in time for the submission of the PEIR. This will hamper our ability to agree the final list of species and density estimates to be used in the assessments.	
General		We welcome continued engagement on the assessment parameters, for example whether concurrent or sequential piling is being included within the assessment envelope, and the mitigation of piling or UXO noise being considered by the applicant as part of their project design. These will have implications for the underwater noise modelling required.	
8.5.2		Several of the Management Units (MUs) for relevant cetacean species being scoped in are greater than the spatial extent of the study area (wider Irish Sea). We advise that the full extent of	Consider the full MU extents in the ES

8.5.3	the MUs should be considered in the EIA e.g. for reference populations and context to local densities. Based on the literature presented, several other marine mammal species are present in the wider Irish Sea study area but are scoped out of the assessment e.g. short-beaked common dolphin. If such species are observed during the project-specific aerial surveys, then we advise that they should be considered	Scope in to ES dependent upon results of project specific surveys
8.5.3	for scoping into the assessment. We note that the decision to scope leatherback turtles in or out has not yet been made. Once a decision is made, the evidence to support that decision should be presented.	Include in ES
8.3.5.2	We advise that the draft seal MUs can also be used as a tool for screening in designated sites. The MUs can also be used for determining the appropriate reference population for seals in the EIA, though consideration will need to be given as to the appropriate MUs to include.	Use draft seal MUs to screen relevant protected sites and determine reference population for the ES. Develop this approach through consultation with the relevant ETG.
8.3.5.2	There is an additional NCMPA for minke whale in the relevant CGNS MU, the Southern Trench NCMPA, which should also be considered.	Include this NCMPA in the ES
8.5.4	 Additional sources for consideration by the Applicant include: A revised Atlas of the Marine Mammals of Wales is due to be published soon. It should be included if available in time and relevant to the project area. The Hilbre Island Observatory produces annual reports on grey seal haul out data for the West Hoyle sandbank (in the Dee Estuary). Such reports should be considered for inclusion. If available in time, there is also due to be a new Offshore Energy Strategic Environmental Assessment (OESEA) which could be of relevance. 	Consider evidence from these source within the ES.

	 Data from aerial surveys undertaken by other Round 4 projects in the region. Manx Marine Environmental Assessment (2018). Joint Cetacean Data Programme (JCDP) online database should be reviewed for any relevant data. 	
	Section 8.5.5.1: We advise that decommissioning noise should be given high-level consideration by the underwater noise modelling. It is imperative that the worst-case scenarios for noise, such as concurrent or sequential piling, are modelled. Consideration should also be given to the ADD as a source of underwater noise for the purpose of underwater noise modelling.	
8.5.5.1 and 8.5.6.1	We understand that a separate Marine Licence for UXO clearance will be sought. However, as UXO clearance is a foreseeable impact associated with offshore windfarm construction, we are supportive of a high-level assessment of this pathway being included in the ES.	Include consideration of impacts from UXO clearance in ES
8.5.5.1	The area over which TTS could occur should be modelled, and the number of animals in the TTS zone estimated, although we do not expect an assessment of impact significance from TTS	Include this modelling in the ES
8.5.6.2	Based on our recent experience with another offshore wind farm, we do not agree with the assumption that fewer vessels will be present during the operation and maintenance phase relative to the construction phase. The Applicant should assess the vessel numbers/density/movements of each phase in the ES.	Include consideration of vessel activities during operation within the ES
8.5.6.4	We welcome continued engagement with the Applicant on pathways that they intend to screen out of the CIA.	To note

8.5.7	mitigation measure to minimise impacts from vessel on marine mammals. Also potentially mitigation measures related to water	Consider these measures within the ES.
	quality.	

8.6 Offshore Ornithology

Section	Paragraph/Table	Comment	Recommendations
	Figure 6.1	Details 2 offshore platforms within the project area and a further platform close by.	Ascertain if seabirds are breeding on these platforms.
7.7	154	3 tiers of project development status are proposed.	See Phase III best practice advice (as referenced in main letter), Table 11.1 which suggests using seven tiers
7.7	155	"Where possible the Project will seek to agree with stakeholders the use of as-built project parameter information (if available) as opposed to consented parameters to reduce over-precaution in the cumulative assessment."	Although NE are actively engaged with industry to consider using as-built parameters within assessments, currently we advise that the 'asbuilt' turbine parameters cannot be used in an assessment unless they are legally secured through the DCO licence.
8.6.3	Table 8.21	As many as 253 birds in a single survey remain unidentified (No ID).	Do these unidentified birds include unidentified auks that are yet to be apportioned? Presumably many of these records can at least be refined to groups such as 'large gull' or 'tern' and this should be presented in the ES where possible. It is of particular importance to understand if any of these unidentified birds are divers.

8.7 Commercial fisheries

Cefas is the technical specialist on commercial fisheries and we defer to their advice on this topic.

8.12 Seascape, landscape and visual amenity

Section	Paragraph/Table	Comment	Recommendations
8.12.4.4	Table 8.35	Where applicable, once the location of the generation assets	To note.
		has been determined, Natural England should also be consulted	
		to determine the suitability of the viewpoints.	
8.12.2		We advise that a 60km buffer is used to assess seascape	We advise that this is discussed and agreed
		impacts, based on the proposed wind turbine height for the	through the Evidence Plan Process with the
		Morecambe OWF and the elevated viewpoints onshore.	relevant ETG.

Natural England initial draft advice in relation to taking into account all aspects of offshore windfarm projects which may be subject to determination across multiple separate NSIPs with different owners for the array ('generation assets'), cable ('transmission assets') or other offshore windfarm NSIP where there are joint/shared infrastructure which may have cumulative impacts to nature conservation features.

Natural England welcomes the potential progression of an 'coordinated' approach to grid connection. In reducing the number of cables required for energy transmission, we recognise the potential for significantly reducing the area of impact created from multiple projects, thereby increasing options available to the projects to avoid, reduce and mitigate impacts to designated site features and the wider marine environment.

However, Natural England notes the potential consenting challenges this new approach is likely to have for offshore windfarms where there is likely to be separate NSIP applicants for the generations assets (offshore windfarm arrays), but also for the transmission asset. Should there be a requirement to sell the cable linking the array to the transmission asset to an Offshore Transmission Owner (OFTO) post-construction, this could present additional complexities. We observe such a scenario could potentially result in up to three Development Consent Orders (DCOs) and five deemed Marine licences being intrinsically linked.

Therefore, we advise that prompt consideration is required by the relevant parties to consider how the National Grid 'Coordinated Approach' can be implemented and robustly consented to ensure that OWF projects impacts can be considered and consented holistically (rather than 'salami sliced'), the risk of stranded assets can be avoided, and that offshore windfarm energy can be delivered in a timely manner.

Drawing from our experiences of the consenting process for both the Triton Knoll offshore windfarm 'array' NSIP and the Triton Knoll Electrical System NSIP, we provide the following advice on a without prejudice basis. This is with a view to identifying and helping to address the challenges that may be faced by offshore windfarm projects where i) multiple NSIPs are required but timeframes are unlikely to align, ii) the merits of the applications are unlikely to be considered by the same examining authority and iii) there are subsequent implications for DCO requirement and marine licence discharge.

Consideration of indirect, secondary and cumulative impacts

Natural England advises that in order for any one of the examining authorities to assess the direct, indirect, secondary and cumulative impacts from multiple NSIPs there will need to be sufficient information submitted on the indirect, secondary and cumulative impacts of the grid connection works. We draw your attention to paragraph 4.9.3 of the overarching National Policy Statement for Energy EN-1 ("EN-1") which provides that Applicants:

"must ensure they provide sufficient information to comply with the EIA Directive including the indirect, secondary and cumulative effects, which will encompass information on grid connections. The IPC must be satisfied that there are no obvious reasons why the necessary approvals for the other element are likely to be refused."

Natural England accepts that EN-1 provides for a scenario where the grid connection and offshore array consents do not come forward in the same consenting process – that is clear from para. 4.9.1. However, it is Natural England's case that EN-1 envisages a situation where the Applicant has a detailed grid connection scheme worked up, but for administrative or other reasons does not join the two consents and progress them through the same process, but instead brings them forward via separate consenting processes.

However, unless the transmission assets consent is progressed in advance of the generation assets, it is anticipated in such cases that the Applicant will have a fully worked up scheme for the grid connection works, with complete assessments of its individual impacts and those cumulative impacts with the offshore array/s. Natural England draws support for this reading of EN-1 from the fact that para. 4.9.1 states that:

"it may be the case that the applicant has not received or accepted a formal offer of a grid connection from the relevant network operator at the time of the application, <u>although it is likely to have applied for one and discussed it with them.</u>" (emphasis added).

Nevertheless it remains unclear to Natural England how this would work in practice when the generation asset applicant is not the same as the transmission asset applicant. There is a risk that due to timeframes the coordinated approach may well result in a detailed offshore array scheme, but may not have detailed proposals relating to the transmission assets. This would not comply with EN-1.

Natural England advises that it cannot be reasonably contended that a cumulative assessment does not need to be carried out of a project that is not only intrinsically linked to the proposed development but is necessarily required to come forward for the proposed development to have any meaningful existence, resulting in a stranded asset - be that the generation asset or the transmission asset. This aligns with para. 4.9.3. of EN-1.

Consenting of associated NSIPs

In relation to the second requirement in para. 4.9.3 of EN-1 (where it must be satisfied that there are no obvious reasons why the necessary approvals for the other elements are likely to be refused), we highlight is that it is difficult for stakeholders such as Natural England to advise the ExA whether there were, or were not, any obvious reasons why the necessary approvals would be likely to be refused. This was certainly our experience at Triton Knoll OWF.

For Triton Knoll OWF, Natural England also advised that a condition was required that prevented the offshore works associated with the generation asset commencing until the necessary grid connection consents had been obtained. Such an approach could ensure that any significant indirect, secondary, and cumulative impacts that were identified during the consideration of the grid connections works effectively prevent the authorised development coming forward, as they would result in the necessary grid connection consents being refused.

Natural England considers that without such a condition being included in the relevant DCOs, it is very difficult to see how decision-makers could robustly consent the generation asset applications. This is because the ExA/decision-maker wouldn't have before it sufficient information on the indirect, secondary and cumulative effects of the proposed development with the grid connection works which the ExA is required to have under the EIA Regulations and EN-1. In addition, without the suggested condition, we are concerned it would theoretically allow the offshore works to be built without any means of connecting them to the grid.

Natural England highlights the risk that such a situation may pose to the ExA/decision-maker, as the rationality of the decision could be questioned were it to allow the Applicant to construct an offshore array that had no meaningful existence

because it could not be connected to the national grid. The proposed condition for Triton Knoll therefore ensured that such a perverse situation could not result.



Feekins-Bate, Laura

From: Stephen Vanstone

Sent: 21 July 2022 16:53

To: Morecambe Offshore Wind Project

Subject: RE: Morecambe Offshore Wind Farm - consultation on scoping opinion

Good afternoon Helen,

With reference to the above consultation, I can advise that Trinity House would expect the following to form part of the Environmental Statement:

Navigation Risk Assessment

- Comprehensive vessel traffic analysis in accordance with MGN 654.
- The possible cumulative and in-combination effects on shipping routes and patterns should be adequately assessed, with particular regard to both existing and planned developments.

Risk Mitigation Measures

- We consider that this development will need to be marked with marine aids to navigation by the developer/operator in accordance with the general principles outlined in IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) Guideline G1162 The Marking of Offshore Man-Made Structures as a risk mitigation measure. In addition to the marking of the structures themselves, it should be borne in mind that additional aids to navigation such as buoys may be necessary to mitigate the risk posed to the mariner, particularly during the construction phase. All marine navigational marking, which will be required to be provided and thereafter maintained by the developer, will need to be addressed and agreed with Trinity House. This will include the necessity for the aids to navigation to meet the internationally recognised standards of availability and the reporting thereof.
- Assessment of impact on existing aids to navigation.
- A decommissioning plan, which includes a scenario where on decommissioning and on completion of
 removal operations an obstruction is left on site (attributable to the wind farm) which is considered to be a
 danger to navigation and which it has not proved possible to remove, should be considered. Such an
 obstruction may require to be marked until such time as it is either removed or no longer considered a danger
 to navigation, the continuing cost of which would need to be met by the developer/operator.
- The possible requirement for navigational marking of the export cables and the vessels laying them. If it is
 necessary for the cables to be protected by rock armour, concrete mattresses or similar protection which lies
 clear of the surrounding seabed, the impact on navigation and the requirement for appropriate risk mitigation
 measures needs to be assessed.

Kind regards,

Stephen Vanstone

Navigation Services Officer | Navigation Directorate | Trinity House

| 0207 4816921

www.trinityhouse.co.uk





Environmental Hazards and Emergencies Department Seaton House, City Link London Road Nottingham, NG2 4LA nsipconsultations@phe.gov.uk www.gov.uk/ukhsa

Your Ref: EN010121 Our Ref: CIRIS 59677

Ms Helen Lancaster
Senior EIA Advisor
The Planning Inspectorate
Environmental Services Central Operations
Temple Quay House
2 The Square
Bristol BS1 6PN

20th July 2022

Dear Ms Lancaster

Nationally Significant Infrastructure Project
Morecambe Offshore Windfarm (Generation Assets) [PINS Reference EN01021]
EIA Scoping Notification and Consultation

Thank you for including the UK Health Security Agency (UKHSA) in the scoping consultation phase of the above application. *Please note that we request views from the Office for Health Improvement and Disparities (OHID) and the response provided below is sent on behalf of both UKHSA and OHID.* The response is impartial and independent.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report we understand this EIA Scoping Notification and Consultation relates to its offshore renewable windfarm energy generation assets and

activities only. As such, we do not have any comments to make relating to onshore public health impacts.

As the Project and the Environmental Statement (ES) develops and is co-aligned with neighbouring NSIPs to consider onshore public health impacts, we recommend the Developer considers the detail in our *Advice on the content of Environmental Statements accompanying an application under the NSIP Regime*'. Further detail is contained in the paragraph below.

In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. UKHSA and OHID's predecessor organisation Public Health England produced an advice document 'Advice on the content of Environmental Statements accompanying an application under the NSIP Regime', setting out aspects to be addressed within the Environmental Statement¹. This advice document and its recommendations are still valid and should be considered when preparing an ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

Yours sincerely

On behalf of UK Health Security Agency nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

1

https://khub.net/documents/135939561/390856715/Advice+on+the+content+of+environmental+statements+accompanying+an+application+under+the+Nationally+Significant+Infrastructure+Planning+Regime.pdf/a86b5521-46cc-98e4-4cad-f81a6c58f2e2?t=1615998516658



Together we make a difference....

Helen Lancaster Senior EIA Advisor Central Operations Temple Quay House 2 The Square Bristol BS1 6PN **Ask for:** Steve Smith

Email:

Tel No:

01253 887243

Our Ref: N/A

Date: 12 July 2022

By Email Only

Dear Helen

Scoping Consultation with non-prescribed consultation bodies – EN010121

Thank you for consulting Wyre Council on the above Environmental Impact Assessment (EIA) scoping request.

At this stage Wyre Council has no comments.

I trust all of the above information is helpful to yourself in dealing with the scoping opinion request.

Yours sincerely,



Steve Smith
Head of Planning & Regeneration
Wyre Council