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(Email only)

MMO Reference: DCO/2022/00001  
Planning Inspectorate Reference: EN010121  
Identification Number: 20049449

18 February 2025

Dear Robert Jackson,

## **Planning Act 2008, Floatation Energy, Proposed Morecambe Offshore Windfarm Generation Assets**

### **Deadline 4 Summary**

On 27 June 2024, the Marine Management Organisation (the “MMO”) received notice under section 56 of the Planning Act 2008 (the “PA 2008”) that the Planning Inspectorate (“PINS”) had accepted an application made by Morecambe Offshore Windfarm Ltd (the “Applicant”) for determination of a development consent order for the construction, maintenance and operation of the proposed Morecambe Offshore Windfarm (the “DCO Application”) (MMO ref: DCO/2022/00001; PINS ref: EN010121).

The DCO Applicant seeks authorisation for the construction, operation and maintenance of Morecambe Offshore Generation Assets. The proposal is located 30 kilometres (km) from the Lancashire coast, England. The windfarm Agreement for Lease area awarded by The Crown Estate spans 125 km squared (km<sup>2</sup>). The proposed windfarm site development area has been reduced to approximately 87km<sup>2</sup>. All project infrastructure will be located within the 87km<sup>2</sup> windfarm site. The project consists of up to 35 Wind Turbine Generators (WTG), UP TO TWO Offshore substations (OST), their associated foundations and platform link cables. Inter-array cables. Scour protection around foundations and subsea cable protection where required.

One Deemed Marine Licence (DML) is included in the draft DCO. The DML relates to offshore (WTG) and Associated Infrastructure and Associated Development.

As a marine licence has been deemed within the draft 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 an interest in ensuring that provisions drafted in a deemed marine licence enable the MMO to fulfil these obligations.



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This written representation is submitted without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. 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.

Yours sincerely,

[Redacted signature]

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## 1. Responses to Examiner's Questions (ExQ1)

1.1.1 The MMO has provided further responses to ExQ1 at Deadline 4. These mainly related to the Underwater Sound Management Strategy (UWSMS), the draft Marine Mammal Mitigation Protocol (MMMP), and micrositeing.

1.1.2 The MMO considers there to be outstanding issues regarding the UWSMS. These issues relate to the need for secondary mitigation due to potential impacts to cod.

1.1.3 The MMO will review any further responses to the ExQ1 and provide comments where necessary at Deadline 5.



## 2. Comments on PD1-011 Applicant's response to Relevant Representations from Marine Management Organisation

2.1.1 The MMO has provided further comments on PD1-011 in its Deadline 4 response.

2.1.2 The MMO notes there are a number of outstanding issues regarding the draft DCO and DML. This mainly regards the inclusion of the Force Majeure, Transfer of the Benefit of the Order and the wording of a number of other conditions. The MMO submitted comments regarding the draft DCO and DML in its Deadline 3 (REP3-085) response.

2.1.3 The MMO will review comments provided by the Applicant and will respond in an additional submission week commencing 3 March. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that for Force Majeure, Transfer of Benefit and Chemicals there is unlikely to be an agreement before the end of Examination.





### 3. Comments on Applicant's Deadline 2 Submissions

#### 3.1 Comments on the Outline Offshore Operation and Maintenance Plan (REP2-021)

3.1.1 Three new lines are added to Table 4.1 (page 15) referring to cable protection scenarios: (i) replacement or addition to protection installed during construction, and (ii) deployment of new areas of cable protection within 10 years of start of operations and (iii) new cable protection later than 10 years after the start of operations. The Applicant indicates that only the last of these might require an additional licence. The table quotes the assumed permitted quantities of replacement cable protection based on 10% of that installed during construction. The MMO's current understanding is that if scenarios (i) and/or (ii) were to exceed the 10% assumption, then both (i) and (ii) would also require a new licence. The MMO requests clarification on this.

3.1.1 The MMO would like to note that they do not disagree with the Applicant's suggestions that the removal of guano will not require an additional licence, it should be noted that, any chemicals that are to be used in the removal or re-painting of the structures would require prior notification and approval prior to their use on the offshore wind farm.

#### 3.2 Comments on Environmental Statement Chapter 7 Marine Geology, Oceanography and Physical Processes (REP3-013)

3.2.1 The MMO notes that the applicant does not state outright whether there are any specific locations of greater concern with regards to UXO locations. The MMO requests the Applicant provides clarification.

#### 3.3 Comments on the Environmental Statement Chapter 9: Benthic Ecology – Revision 02 (REP2-013)

3.3.1 The Applicant has amended Chapter 9 of the ES to include a high-level assessment for UXO and notes that a separate marine licence application would be made once the scale of the requirement is understood. Currently, the MMO agrees with this approach.

#### 3.4 Comments on Environmental Statement Chapter 8 Marine Sediment and Water Quality (REP2-011)

3.4.1 The Applicant has updated the ES Chapter 8 for references to potential UXO clearance. The MMO considers the updates to be consistent with the assessment provided in updates to Chapter 7.

#### 3.5 Comments on Commercial Fisheries Technical Report Revision 2 (REP2-015)

3.5.1 The MMO notes that in response to the NFFO's concerns that Appendix 13 Commercial Fisheries Technical Report at Deadline 2 will include further mapping of fishing grounds for commercial species which is welcomed. The MMO and Cefas welcome this approach.

#### 3.6 Comments on The Applicant's Comments on Written Representations – Revision 01 (Volume 9) (REP2-027)

3.6.1 The MMO maintains the position that a seasonal piling restriction during the cod spawning season must be included on the face of the DML.



3.6.2 The does not agree with the Applicant that the UWSMS would be sufficient to secure the necessary mitigation measures to limit impacts on fish receptors.

3.6.3 The MMO welcomes that the Applicant will consider the suggestion made by the MMO regarding the use of Effective Deterrent Ranges (EDR) in future Marine Licences for UXO clearance. However, the MMO maintains its previous comments and recommendations.

### **3.7 Comments on the Draft Marine Mammal Mitigation Protocol (APP-149)**

3.7.1 The MMO does not currently have further comments to make.

### **3.8 Comments on the Outline Underwater Sound Management Strategy (REP2-026)**

3.8.1 The MMO is largely content with the information within the Morecambe UWSMS. However, the MMO believes that unless project design refinements can significantly reduce or remove the likelihood of significant impacts occurring to cod from UWN from piling, then additional secondary mitigation will be needed.

3.8.2 The MMO has requested a number of updates are made to the UWSMS.

### **3.9 Comments on the Outline Scour and Cable Protection Plan (OSCPP) (APP-152)**

3.9.1 The MMO would like to see consideration of the use of plastic infrastructure when determining scour requirements, and whether better alternative materials can be used and that this is captured within the Commitments Register.

## **4. Comments on the Applicant's Deadline 3 Submissions**

4.1.1 The MMO notes the Applicant has submitted a number of updated documents at Deadline 3.

1.1.1 The MMO is currently reviewing REP3-043, REP3-044 , REP3-046, REP3-045, REP3-060, REP3-061 REP3-068, REP3-069 and may provide further comments at Deadline 5.

## **5. Comments on the Draft DCO and DML**

5.1.1 The MMO provided comments regarding the draft DCO and DML in section 3.2 of its submission for Deadline 3 (REP3-085). The MMO notes that the Applicant has provided further comments in regards to comments raised by the MMO's Deadline 2 response regarding the draft DCO and DML in the Applicant's Deadline 3 submission (REP3-069).

5.1.2 The MMO will review comments provided by the Applicant and will respond in an additional submission week commencing 3 March. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that for Force Majeure, Transfer of Benefit and Chemicals there is unlikely to be an agreement before the end of Examination.

Yours sincerely,



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Marine Licensing Case Officer



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Yours sincerely

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# 1. Responses to Examiner’s Questions (ExQ1)

1.1 The MMO has reviewed the Examiner’s Questions and provided responses in the below Table 1. The MMO has also reviewed interested parties responses and provided updates within the table. Anything in grey was responded to at Deadline 3 and the MMO has no further comments.

Table 1. MMO response ExQ1

ExQ1	Question	MMO response
General and Cross-topic Questions (GEN)		
1GEN1	<b>National Planning Policy Framework</b> A replacement National Planning Policy Framework was published on 12 December 2024. All parties are invited to make any comments they wish as to how any changes within this document affect the consideration of the Proposed Development.	<p>The MMO has reviewed the Applicant’s response to this question and notes that the Applicant does not consider the changes in the document to affect the consideration of the proposed development.</p> <p>After reviewing the updates in relation to the MMO’s remit, the MMO agrees that none of the updates impact the Application.</p>



Design, parameters and other details of the Proposed development		
1GEN10	<p><b>Decommissioning dates</b></p> <p>Table 5.1 of the Applicant's response to Actions from PM and ISH1 [REP1-086] sets out the distances and expected decommissioning dates for various windfarms in the vicinity. This indicates that the Barrow OWF is due to be decommissioned "by 2030".</p> <p>In their WR the Ørsted IPs [REP1-112] indicate that they are not aware of any requirement for additional consents or licences to continue operating this development beyond 2030.</p> <p><u>To Barrow Offshore Wind Limited</u></p> <p>Could Barrow Offshore Wind Limited please set out its understanding of the timing of its decommissioning processes, providing evidence to support this. The draft SoCG between the Applicant and the Ørsted IPs [REP1-073] indicates that the Applicant believes that a new Marine Licence would be required post 2030.</p> <p><u>To the MMO</u></p> <p>c) Could the MMO please confirm its understanding of the Marine Licensing situation concerning this site, with particular reference to any end date or decommissioning requirements?</p>	<p>The MMO has reviewed its internal systems as well as the Public Register and wishes to make the following comments regarding 1GEN10.</p> <p>The MMO is aware of the following Marine Licence applications related to Barrow Offshore Wind Farm:</p> <p><b>A.</b> Barrow Offshore Wind Farm (OWF) Array Operation &amp; Maintenance (L/2016/00297/4 or MLA/2016/00149/3). Licence end date: 01 July 2026.</p> <p><b>B.</b> Barrow Offshore Wind Farm Rock Placement (L/2018/00287/1 or MLA/2018/00208). Licence end date: 31 December 2019</p> <p><b>C.</b> Barrow Offshore Wind Farm (OWF) Operational Marine Licence for Export Cable Repair and Remediation (L/2015/00281/1 or MLA/2015/00077). Licence end date: 01 April 2030.</p> <p><b>D.</b> Barrow Offshore Wind Farm Operational Marine Licence - Array Cable Repair (L/2014/00214/4 or MLA/2014/00155/3). Licence end date: 01 May 2026.</p> <p>The MMO attended a meeting with Barrow Offshore Wind Limited on 15 January 2025 to discuss 1GEN10. The MMO notes that the Barrow Offshore Wind Limited is aware that it currently holds two active licences with the MMO (L/2016/00297/4 and L/2015/00281/1). The MMO and Barrow Offshore Wind Limited both agreed within this meeting that should works be required post 2030, then a new Marine Licence application</p>

		<p>will be submitted. A new licence would be submitted for any decommissioning activities.</p> <p>The MMO considers this issue resolved.</p>
<b>Environmental Statement (General)</b>		
<b>1GEN20</b>	<p><b>European Protected Species Licensing</b></p> <p>The Applicant's response to Actions from PM and ISH1 [REP1-086] paragraph 24 notes that the regulations surrounding EPS licensing are due to be updated at the end of 2024. Can NE advise on the scope of these changes and highlight potential matters that could have implications for the consenting process.</p>	<p>Previously the MMO advised that this question is directed to NE. However, these comments are likely in relation to the Unexploded Ordnance (UXO) and the EPS licence that will be required is provided by the MMO in consultation with Natural England (NE).</p> <p>The MMO has reviewed NE's response (REP3-092) submitted at Deadline 3 and note that NE advise that this question be directed to the MMO.</p> <p>The MMO would highlight that there is a <a href="#">Department for the Environment, Food and Rural Affairs (DEFRA) policy paper</a> has been published in relation to underwater noise along with papers on UXO clearance. The MMO has included the 'Reducing marine noise' paper in Annex 1 below.</p> <p>The MMO has discussed the potential changes with the Applicant and understands more information is being provided at Deadline 4 on the commitment to Noise Abatement Systems (NAS). Please note that this does not resolve all UWN issues please see Section 3.10 below for further information.</p>
<b>Need and assessment</b>		

1GEN21	<p><b>Application of s104 of the PA2008</b></p> <p>In paragraph 171 of the revised Planning, Development Consent and Need Statement [REP1-010] the Applicant states “NPS EN-5 sets out Policies concerning electricity transmission distribution systems. It is, therefore, not relevant to the Project”. However, NPS EN-5 is referenced in both ES Chapters 15 (paragraph 15.20, [REP1-034]) and 19 (paragraph 19.28, [REP1-040]).</p> <p>a) Having regard to the elements of offshore wind infrastructure identified within paragraph 2.8.4 of NPS EN-3, all parties are invited to give their views as to whether, for the purposes of sections 104(2)(a) or 104(3) of the PA2008, NPS EN-5 should be considered as ‘relevant national policy’ or whether it should be considered to be an ‘other matter’ for the purposes of section 104(2)(d) of the PA2008.</p> <p>b) Should any party hold the view that it should be regarded for the purposes of sections 104(2)(a) or 104(3) of the PA2008, they are asked to explain why they hold that view and identify any matters that should be particularly taken into account, providing references as necessary.</p>	<p>The MMO has reviewed the comments and updated documents the Applicant provided at Deadline 3 and has no comments to make.</p>
1GEN24	<p><b>Decommissioning</b></p> <p>ES Chapter 7, Table 7.2 (page 49) [REP2- 008] refers to a decommissioning plan. Could the Applicant please explain what would be in the plan and how the content of the plan would be secured?</p>	<p>The MMO believes that the Applicant did not fully answer the question other than to say it will be secured in the DCO.</p> <p>The MMO will provide an update on this week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that this may not be agreed by the end of Examination.</p>
<b>2. Biodiversity, Ecology and Marine Processes (BEM)</b>		
<b>Marine Sediment and Water Quality</b>		

1BEM20	<p><b>Disposal of sandwave material</b></p> <p>In the MMO's RR [RR-047] at paragraph 4.3.10 it says that the Applicant "... most likely would have to apply to the MMO to designate the area as a disposal site ...". In its response at RR-047-53 [PD1-011], the Applicant argues that this is unnecessary as "... the removal of and disposal of inert material is included as associated development ..." and is therefore authorised within the Order limits.</p> <p>The MMO's D2 response [REP2-035] says that it is currently in the process of designating disposal sites and states that "sites should be secured within the DML. Once this has been completed the MMO will inform the Applicant and request that this is updated in the DML as part of the Examination process."</p> <p>At what point in the Examination does the MMO envisage being in a position to inform the Applicant?</p>	<p>The MMO met with the Applicant on 14 February and were provided the most up to date shape file to enable the disposal site to be designated. The MMO has sent this to our scientific advisors to complete the final actions within the designation. The MMO believe this information will be provided prior to Deadline 5 and the MMO will share this information with the Applicant as soon as we have received it to ensure the disposal site reference number is secured within the DML.</p> <p>If there are any issues (which the MMO believes is unlikely at this point) and disposal sites are not approved within the Examination process the MMO will provide the Applicant updated wording before Deadline 5 to ensure there is a mechanism within the DML to confirm disposal sites post consent should this be required.</p>
1BEM23	<p><b>Operation and maintenance: underwater noise and vibration</b></p> <p>Operational vibration impacts were scoped out of assessment on the basis of evidence provided which related to monitoring studies undertaken for existing wind farms with relatively small turbines. However, paragraph 9.313 of ES Chapter 9 [REP2- 012] says that "... wind-induced vibration at high wind speeds, can be transmitted through the tower and foundations and radiate into the water column."</p> <p>Given the larger turbines to be used on this project:</p> <p>a) is this evidence relating to smaller turbines relevant; and</p> <p>b) does this alter the Applicant's assessment of noise and vibration impacts?</p>	<p>The MMO agrees that operation noise and vibration has no significant impact to the benthic ecology.</p>
<b>Fish and Shellfish ecology</b>		
1BEM24	<p><b>Mitigation: timing of works</b></p> <p>The MMO [REP2-035] has indicated that whilst an Underwater Sound Management Strategy [REP2-026] has been provided, a</p>	<p>The MMO had a meeting with the Applicant on 14 February to discuss outstanding issues with our scientific advisors.</p>



	<p>condition limiting piling during the cod spawning period is still necessary and will supply updated wording 'in due course'. Can the MMO confirm when the revised wording will be available.</p>	<p>The Applicant explained that further commitment and modelling will be provided at Deadline 4 in relation to the use of NAS. The MMO explained that full spatial modelling would be required to remove a seasonal restriction requirement on the DML. The Applicant explained that this would not be provided. The Applicant understood the MMO's position that without this modelling there is not enough evidence to remove the requirement for the seasonal restriction to be included on the face of the DML. The MMO believes that no new information can be provided by the Applicant during the remainder of Examination that will remove the requirement for a piling restriction on the face of the DML.</p> <p>However, there is still further discussion on the refinement of the seasonal restriction dates of the piling restriction and the MMO understands further evidence will be provided in relation to this at Deadline 4.</p> <p>The MMO and its scientific advisors are still reviewing all information provided at Deadline 3 and understands that some information will be superseded by Deadline 4 submissions. The MMO is aiming to have an update by early March and will share this with the Applicant as soon as possible to enable any further changes to documents to be included at Deadline 5.</p> <p>To clarify, the MMO and the Applicant are still working on the specific cod spawning period and</p>
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		<p>the MMO believes this will be <b>agreed by the end of Examination.</b></p> <p><b>The outstanding point that will be not agreed – material impact on the Applicant’s Statement of Common Ground (SoCG) will be the need for the seasonal restriction on the face of the DML.</b></p> <p>The Applicant believes there is no need as this is within the Underwater sound management strategy (UWSMS) and the plan is the correct mechanism to manage this.</p> <p>The MMO’s position is that not enough evidence has been provided to provide the confidence that a seasonal restriction can be removed at this point in the Examination and is unlikely to be provided until the post consent stage when the project has been refined. Without evidence the MMO’s position is a seasonal restriction should be on the DML, this is the appropriate place for a restriction to be in the absence of evidence.</p> <p>However, the MMO agrees that the UWSMS can be used as a mechanism to refine or remove the restriction post consent. This would be by providing further evidence and detailed mitigation can be put in place.</p> <p>The MMO believes that the agreed seasonal restriction is on the face of the DML with the UWSMS being able to be submitted to remove/change this requirement post consent. This allows the MMO to be confident that a restriction</p>
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		<p>will be in place in the first instance and shows that the Applicant has to provide evidence and further mitigation once details are known post consent through the UWSMS.</p> <p>The condition below is the most up to date condition, XX has been included as the dates of the condition are still in discussion and will be refined by the end of Examination.</p> <p><b><i>Underwater Sound Management Strategy</i></b></p> <ol style="list-style-type: none"><li>1. <i>— No piling associated with the authorised development may be undertaken between XX to XX inclusive, unless otherwise agreed in writing by the MMO.</i></li><li>2. <i>If activities are deemed necessary in this period and to confirm any additional mitigation requirements an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, must be submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.</i></li><li>3. <i>The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.</i></li><li>4. <i>The piling activities must be carried out in accordance with the approved</i></li></ol>
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		<i>underwater sound management strategy, unless otherwise agreed in writing by the MMO.</i>
<b>Marine Mammals</b>		
<b>1BEM40</b>	<p><b>Piling activity in the Irish Sea</b></p> <p>Annex 1, Table 2 of the MMO D2 representation highlights that the proposed Morecambe OWF piling duration is assumed to be 37 days (assuming 1 foundation per day). The assumption is 35 days each for the larger Morgan and Mona schemes. Explain why Morecambe has a longer piling duration than the two larger schemes.</p>	<p>The MMO has reviewed the Applicant's response.</p> <p>The MMO is content that the project has assessed for one pile to be constructed per day. This is 35 monopiles for the turbine foundations and two monopiles for the OSP foundations. The MMO has no further comments on this.</p>
<b>1BEM42</b>	<p><b>Draft Marine Mammals Mitigation Protocol (dMMMP): soft-start procedures: breaks in piling</b></p> <p>Section 3.1.4 of the dMMMP [APP-149] deals with breaks in piling and permits a reduced soft-start procedure provided that there are no marine mammals within the monitoring area.</p> <p>At paragraph 3.1.2 of it RR [RR-047], the MMO says that "If a watch has been kept during the piling operation, the Marine Mammal Observer or Passive Acoustic Monitoring Operative should be able to confirm the presence or absence of marine mammals, and it may be possible to commence the soft-start immediately. However, if there has been no watch, the complete pre-piling search and soft-start procedure should be undertaken ..." in accordance with the guidance, requesting that the guidance be adhered to.</p> <p>The Applicant's response at RR-047-27 [PD1-011] notes that "the wording proposed by the Applicant has previously been agreed for other offshore windfarm projects, including Dogger Bank A and Dogger Bank B ... finalisation of wording ... would be undertaken post-consent ...".</p> <p>Could the Applicant and the MMO jointly consider whether the wording of the dMMMP, particularly paragraph 143, needs updating, and if so, could it please be so updated?</p>	<p>The MMO and the Applicant are still in discussion on this point. The MMO notes that discussions on soft start do sometimes take place at the post consent stage during the condition discharge process. The MMO believes this can be resolved prior to Deadline 5.</p>



Offshore Ornithology		
1BEM51	<p><b>Use of alternative ways of working and technology to reduce effects</b></p> <p>Paragraph 2.8.214 of NPS EN-3 encourages alternative ways of working and use of technology to be employed to avoid environmental impacts. For example, construction vessels may be rerouted to avoid disturbing seabirds. Paragraph 37 of the outline Vessel Traffic Management Plan (oVTMP) [REP2-022] references minimising impacts on seabirds once ports are known but provides limited information in section 7 regarding how routes to the site would be determined to minimise seabird disturbance.</p> <p>a) Could the Applicant please explain how seabird disturbance would be considered within the route selection process, amending any documents as necessary to ensure it would be secured.</p> <p>b) Can NE and MMO comment on any necessary measures that should be secured relating to vessel movements to ensure that impacts are minimised.</p>	<p>The MMO wishes to defer to NE on the location and details of the routes. Generally, if the routes are agreed pre-consent then this would be added within the outline plan and this is enforceable post consent. If the routes are not known then an agreed process should be included in the outline plan and the MMO would approve this document post consent. It should be clear that the MMO would not want to be in a position where this could not be agreed post consent and would welcome further discussions with both NE and the Applicant.</p> <p>The MMO has no further updates on this point.</p>
5. Commercial Fisheries (CF)		
1CF3	<p><b>In Principle Monitoring Plan - Landings Data and Monitoring</b></p> <p>Paragraph 13.302 of ES Chapter 13 [APP-050] states that the IPMP includes for the monitoring of commercial fisheries data pre, during and post construction. Paragraph 39 of the IPMP states that this is likely to be managed outwith of the IPMP. Table 2.5 of the IPMP [APP-148] states that monitoring would be carried out for a minimum period of 5 years and does not include monitoring during or following decommissioning. Assuming an approximate construction period of 2.5 years, it is assumed that pre and post construction monitoring would therefore equate to approximately 1.25 years each. Please also see ExQ1GEN11Error! Reference source not found.</p> <p><u>To the Applicant:</u></p>	<p>The MMO is content with the Applicant's response. The MMO is still reviewing this with or scientific advisors and will provide any updates to the Applicant to be taken into account in Deadline 5 submissions.</p> <p>d) The MMO believes as long as there is reference to the monitoring within the In Principle Monitoring Plan (IPMP) the MMO is content that the detail of monitoring is captured within the FLCP. Those present as part of the FLCP are the most appropriate interested parties to agree the monitoring.</p>

	<p>a) Can the Applicant explain why a commitment to monitoring landings data is proposed to sit outwith the IPMP and, if so, how would this be secured?</p> <p>b) Rather than sit outwith of the IPMP, could the IPMP and/ or the oFLCP be amended to secure this and if not, why not?</p> <p>c) Can the Applicant explain why monitoring of landings data is not proposed during or post decommissioning given the potential impact of activities during decommissioning have been assessed as being the same as those during construction? To address this can the IPMP be amended to make clear monitoring would be carried out during and post decommissioning and for how long?</p> <p><u>Other IPs:</u></p> <p>d) Do any other IPs have any comments or views on how the commitment to monitoring should be secured?</p> <p>e) Is monitoring on landing data sufficient?</p> <p>f) Could NE confirm whether 1.25 years of data would be sufficient to evaluate the effect of the construction and operation of the proposed development on the fisheries resources at or near the site, or whether a longer post construction monitoring period is necessary.</p> <p>g) Should monitoring be extended to include during and post decommissioning activities and if so, can other IPs explain with reasons how long it is considered such monitoring would be required following completion of the works?</p>	<p>g) The MMO believes that any monitoring required at the decommissioning stage will be refined from the results of the construction/post construction monitoring, and this would be set out within the decommissioning programme.</p>
<b>7. Draft Development Consent Order [REP2-002] (DCO)</b>		
<b>1DCO1</b>	<p><b>Transfer of benefit of Order</b></p> <p>Without concluding on the matter, in order to ensure that the MMO is satisfied as to the drafting of Article 7, could it provide a revised draft of Article 7, and also set out any other associated changes to the dDCO it would consider appropriate, were the SoS to conclude that they did not wish to include transfer of the benefit of the DML within the Order.</p>	<p>The MMO provided comments in Section 3.2 of the MMO's Deadline 3 submission (REP3-085). The MMO is reviewing the Applicant's response (REP3-069) and any comments submitted at Deadline 4 will provide further comments week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be</p>

		provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that this is likely to be not agreed – material impact at the end of Examination.
<b>Schedule 6- Deemed Marine Licence</b>		
<b>1DCO7</b>	<p><b>Pre-construction plans and documentation</b> (Schedule 6, Part 2, condition 9(1)(c))</p> <p>Could the Applicant and NE provide an update on any progress made regarding the timescales included in the dML conditions for approval of pre-construction documentation and agreement of documents, where 4 months can remain and those where 6 months can be accepted.</p>	<p>The MMO's position is that it remains that all documents should be submitted at 6 months and that there should not be a requirement for the MMO to respond within a time period.</p> <p>However, without prejudice, has provided comments on the Applicant's proposal for timescales of submission below.</p> <p>For this project, the MMO is content with the following timescales subject to the relevant interested parties also being content (i.e. Statutory Nature Conservation Body (SNCB), Historic England (HE), Maritime and Coastguard Agency (MCA), Trinity House (TH)):</p> <ul style="list-style-type: none"> <li>• <b>Design Plan:</b> 6 months prior to start of construction</li> <li>• <b>Construction Programme:</b> 4 months prior to start of construction</li> <li>• <b>Monitoring Plans in line with IPMP:</b> 6 months prior to start of surveys / construction / operation as relevant</li> <li>• <b>Project Environmental Management Plan (PEMP):</b> 4 months prior to start of relevant works</li> <li>• <b>Offshore Written Scheme of Investigation (WSI):</b> 4 months prior to start of construction</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Aids to Navigation Plan:</b> 4 months prior to start of construction</li> <li>• <b>MMMP:</b> 6 months prior to start of foundation installation</li> <li>• <b>Vessel Traffic Management Plan (VTMP):</b> 4 months prior to start of construction</li> <li>• <b>Fisheries Liaison and Co-Existence Plan (FLCP):</b> 6 months prior to start of construction</li> <li>• <b>UWSMS:</b> 6 months prior to start of foundation installation</li> <li>• <b>Decommissioning Plan:</b> 6 months prior to start of construction</li> <li>• <b>Outline Offshore Operations and Maintenance Plan (OOMP):</b> 4 months prior to start of operation</li> </ul> <p>The MMO would like to understand further from the Applicant on the reason the Offshore Cable Management System has remained at 4 months. The MMO would highlight that there are usually concerns in relation to the Design plan and the Scour and Cable Management plan that link together. If this stays at four months there could be delays to the discharge.</p> <ul style="list-style-type: none"> <li>• <b>Offshore Cable Management System (CMS):</b> 4 months prior to start of relevant works</li> </ul> <p>As above the MMO would like to understand further from the Applicant on the reason this has remained at 4 months. The MMO would highlight that there are usually concerns in relation to the Design plan</p>
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		<p>and the CMS that link together. If this stays at four months there could be delays to the discharge, however the MMO notes the project is not impacting with any MPA or benthic features so the likelihood of this is reduced.</p> <ul style="list-style-type: none"> <li>• <b>Scour &amp; Cable Management Plan:</b> 4 months prior to start of cable/scour protection installation works</li> </ul> <p>The MMO notes the Applicant is updating the DCO to reflect this at Deadline 4 and will continue to work with the Applicant for a without prejudice agreement.</p>
1DCO8	<p><b>Micrositing</b></p> <p>a) Within condition 9(1)(a)(ii) should there be a maximum limit for micrositing within the two lines of orientation? If so, what should this be?</p> <p>b) Should this be allowed to be varied by consent, and if so, who should grant this consent, and should there be any limits on variation?</p>	<p>a) The MMO understands MCA highlighted in REP2-034 that they would be content with micro-siting distances of 50m for micro-siting and 5m for tolerance.</p> <p>b) The MMO notes anything can be varied within a DML, it is up to the MMO to consult any relevant parties on a variation.</p> <p>The MMO has reviewed MCAs response (REP3-084) to this question. The MMO notes that MCA have proposed the condition is amended as follows:</p> <p><i>“...and offshore substation platform subject to up to 55m micro-siting in any direction unless otherwise agreed in writing with the MMO in consultation with the MCA and Trinity House.”</i></p>

		<p>The MMO notes that the Applicant has said they will add micrositing of up to 55m in any direction to the version of the draft DCO submitted at Deadline 4 (REP3-068). The MMO notes that the 55m limit aligns with the response from MCA and Trinity House (REP3-099). The MMO will review the updated draft DCO submitted at Deadline 4 and provide comments at the Deadline 5, noting this is likely to be agreed.</p>
<b>1DCO9</b>	<p><b>Schedule 6, Condition 9(k) - Fisheries Liaison and Co-existence Plan (FLCP)</b>  To the Applicant:  a) The Applicant's response to the NFFO Relevant Representation ([PD1-011], RR-059-02) states that the FLCP is secured in Schedule 6 Condition 9(1)(k), which would be approved by the MMO with consultation with the fishing industry. However, the pretext within Condition 9(1) only references approval by the MMO in consultation with the relevant statutory nature conservation body, Trinity House and the MCA. Can the Applicant amend the drafting so as to include reference to representatives of the fishing industry? If not, at what stage and how would the fishing industry be consulted on the final FLCP as indicated? How would this be secured?  Other IPs:  b) Do the parties have any comments on the drafting of Condition 9(1)(k) or the scope and content of the oFLCP at this stage?</p>	<p>The MMO is content that the condition does not require to be updated to reference all relevant parties. Generally, the FLCP is agreed with all parties prior to the submission to the MMO for approval and this is set out within the document.</p> <p>The MMO would highlight that if there should be no major outstanding issues at the close of Examination. The MMO believes that major issues should be dealt with during the decision and only the final details – influenced by the final design should be managed post consent. The MMO notes there are still a number of issues in relation to fishing outstanding and will review updates submitted at Deadline 4. The MMO's concern is to manage conflicting opinions and positions at the post consent stage which should have been agreed at the time of the decision, which would delay the discharge process.</p>
<b>Schedule 8 – Documents to be Certified</b>		
<b>1DCO11</b>	<p><b>Documents to be Certified</b>  It has been noted that while the Applicant has renumbered the tracked versions of the documents submitted at D1 with an extra .1, for example the D1 tracked version of the HRA without prejudice derogation case [REP1-014] is now 4.11.1, this does not</p>	<p>The MMO welcomes this request. The MMO would request that this Schedule is split into 3 parts:</p> <p>Part 1 — Documents Forming The Environmental Statement (ES) to be Certified</p>

	<p>tally with the list of documents to be certified at Schedule 8 of the dDCO where document 4.11.1 is currently shown as the outline Compensation Implementation and Monitoring Plan.</p> <p>Could the Applicant please ensure that all documents in Schedule 8 are correctly referenced. This should be updated with each submission of a dDCO.</p>	<p>Part 2 — Examination Documents Forming Part of the Environmental Statement to be Certified</p> <p>Part 3 — Other Documents to be Certified</p> <p>This is to ensure it is clear which documents were added during Examination.</p> <p>The MMO has reviewed the Applicant's response to this point. The MMO notes that the addition of '.1' in the tracked versions allows these to be separated from the clean versions and will not be listed in the final DCO for the Project. The Applicant will also apply the current Examination Library reference to each document included in Schedule 8 in the version of the draft DCO submitted at Deadline 4.</p> <p>The MMO will review the Schedule 8 in the version of the draft DCO submitted at Deadline 4 and provide further comments if necessary.</p>
<b>8. Habitats Regulations Assessment (HRA)</b>		
<b>1HRA28</b>	<p><b>Cumulative effects relating to Invasive Non-Native Species (INNS)</b></p> <p>The Applicant's assessment for INNS cumulatively with the M&amp;MTA project focuses on the impact of vessels (such as ballast water) but does not consider the potential stepping stone effect of introduced hard standing from the M&amp;MTA project. This could enable propagation of species from the shore to the site.</p> <p>Can NE and the MMO provide commentary on the risk of such propagation, the likelihood of a significant effect relating to INNS and any measures required to avoid or minimise such effects.</p>	<p>The MMO notes NE is content that INNS has been acknowledged within Outline Project Environmental Management Plan. and has no further comments at this time. The MMO will provide an update on any other general comments from our scientific advisors at Deadline 5. The MMO will provide any comments to the Applicant early March so these can be taken into account, noting any comments will be minor at this stage and likely to be agreed by the end of Examination.</p>

<p><b>1HRA29</b></p>	<p><b>Co-ordination/communication between projects during construction to minimise effects</b></p> <p>The Applicant's 'Report on Interrelationships with Other Infrastructure Projects - Revision 01 (Volume 9)' [REP1-078] explains why the Applicant considers that a legal obligation to co-ordinate with other developments in the Irish Sea could impede delivery of the Morecambe OWF. Paragraph 86 of the report concludes that opportunities for coordination would be explored where relevant and in respect of project timescales as these develop further. In the absence of a legal obligation, explain what formal mechanisms exist to ensure that there would be meaningful engagement around coordination and that it would happen in a timely fashion. The ExA is particularly concerned about mechanisms to minimise the impact of noise on marine receptors at a cross project level.</p> <p><u>To Mona Offshore Wind Ltd and Morgan Offshore Wind Limited</u></p> <p>a) These IPs are invited to make comments in relation to the above and to point to any provisions set out within their respective applications which would provide such co-ordination.</p> <p><u>To the Applicant, Mona Offshore Wind Ltd and Morgan Offshore Wind Limited</u></p> <p>b) While noting the issues identified in paragraph 43, should one (or more) of the other projects not proceed, could this be resolved by ensuring that any secured co-ordination was only relevant for those projects under implementation?</p> <p><u>To NE and MMO</u></p> <p>c) Would a mechanism to ensure co-ordination of OWF construction activities assist in reducing the cumulative effect of the Proposed Development with other projects and, if yes, do NE and MMO have examples of how such a mechanism would function and be secured?</p>	<p>The MMO has reviewed the Applicant's and NE's (REP3-092) response.</p> <p>The MMO notes that the Applicant does not consider that any coordination needs to be legally secured between the projects.</p> <p>NE notes that a 'coordination forum' has been set up and facilitated by the MMO for projects in the North Sea to coordinate their underwater noise generating activities. Commitments to the Coordination Forum has been secured through the inclusion of 'Coordination conditions' on relevant projects' marine licences. NE considers a similar approach could also be adopted for the Irish Sea.</p> <p>The MMO would highlight that the Coordination Forum was set up to assist multiple industries in managing the Southern North Sea (SNS) Special Area of Conservation (SAC). This was secured through requirements in the SNS SIP and on UXO marine licences with a condition.</p> <p>The MMO will review all interested parties' comments and provide comments at Deadline 5.</p>
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1HRA38	<p><b>Ecosystem effects due to ocean stratification</b></p> <p>The RR from the RSPB [RR-073] references the ecosystem impact of water column stratification on prey availability. The Applicant's comments on WR at D2 item WR-112-11 [REP2-027] suggests that this issue may have been resolved in SoCG discussions with MMO.</p> <p>a) Is the RSPB able to provide specific evidence to demonstrate that such an effect is likely for example, the provision of the Isaksson et al (2023) reference, where relevant?</p> <p>b) The Applicant's response to RR item RR-073-16 [PD1-011] responds to the RSPB comments, cross referencing ES Chapter 12 [REP1-032]. Neither of the cross-referenced sections of text explicitly address stratification.</p> <p>c) Can the MMO confirm that it is satisfied with the Applicant's approach to consideration of water column stratification?</p> <p>d) Could the Applicant please address this point (it is noted that ES Chapter 7 [REP2-008] does include reference to stratification).</p>	<p>The MMO confirms that it is satisfied with the Applicant's approach to consideration of water column stratification.</p> <p>The MMO considers this point resolved.</p>
<b>10. Seascape, Landscape and Visual (SLV)</b>		
1SLV6	<p><b>Detailed array layout</b></p> <p>Under condition 9(1) of Part 2 of Schedule 6 of the dDCO [REP2-002], the Applicant needs the consent of the MMO, following consultation with the relevant statutory nature conservation body, Trinity House and the MCA, for the detailed array layout.</p> <p>a) Could the MMO please explain how its internal procedures would ensure that its consideration of the layout would take account of seascape, landscape and visual effects from coastal regions (including inland locations with a view of the Application site) as considered within the ES, particularly as it is noted in the SoCG with the MMO [REP1-060] that the MMO defers to other parties in respect of seascape, landscape and visual impact assessment.</p>	<p>The MMO wishes to note that if consent is granted for this application, appropriate post consent returns would be set up on our case management system to ensure consultation with the relevant statutory nature conservation body, Trinity House and the MCA for the detailed array layout. In relation to SLV the MMO would be open to other parties being consulted such as the relevant planning authorities.</p> <p>The MMO considers this issue resolved.</p>

	b) Does the Applicant, or any other IP, consider that there is a case for widening those bodies the MMO needs to consult to include relevant planning authorities falling within the Zone of Theoretical Visibility to ensure that any harm is minimised in line with paragraph 2.8.351 of NPS EN-3?	
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## 2. Comments on PD1-011 Applicant's response to Relevant Representations from Marine Management Organisation

### 2.1 General Comments

2.1..1 The MMO provided comments on the Applicant's comments at Deadline 1 (REP1-096) and 2 (REP2-035). After discussions with the Applicant the MMO notes it wasn't quite clear what was closed and what remained open at Deadline 2. Table 2 below has been updated to highlight which issues are closed. The MMO notes the Applicant will respond to all relevant comments at Deadline 3, to assist the ExA at Deadline 4 only open/new issues will be included in the response.

**Table 2: MMO Response to Applicants Pre-Examination Procedural Deadline Submission**

Applicant's Reference	Relevant Representation Comment	Applicant's Response	MMO's Deadline 3
<b>Draft DCO</b>			
RR-047-10	MMO has reviewed the draft DCO and provided comments below. MMO are currently undertaking a detailed review and will produce further comments on the DCO at Deadline 1 and during the course of the examination.	The Applicant notes this response and looks forward to receiving further comments on the draft DCO and Deemed Marine Licence (DML) at Deadline 1.	<p>The MMO provided additional comments in in Section 3.2 of REP3-085 and will review the Applicant's response submitted at Deadline 4.</p> <p>The MMO notes that the Applicant has responded to the MMO's comments regarding the draft DCO submitted at Deadline 2 in the Applicant's submission at Deadline 3 (REP3-069).</p> <p>The MMO has discussed all outstanding DCO issues within a meeting on 14 February and has resolved some issues within he SoCG. Only some of the issues will be agreed by the end of Examination and these have been summarised in Section 5 of this response.</p>

RR-047-12	<p>Section 2(d) states: ‘the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation’</p> <p>The MMO notes that geophysical surveys may require a separate licence. If so the wording in 2(d) must be clear that such activities are excluded from this licence</p>	<p>The Applicant notes that the removal of sediment samples was included in section 2 in error and, as such, this has been deleted in the revised draft DML submitted at Procedural Deadline A.</p>	<p>The MMO previously noted that ‘if these surveys were assessed within the ES then this could be part of the DML, it would just have to be clear within the DML when commencement begins in relation to the surveys and when method statements would be agreed and how the conditions are worded for any submissions post consent.’</p> <p>The MMO has reviewed the Applicant’s (REP3-069) and notes the Applicant does not consider further action required.</p> <p>Currently, the MMO does not consider further action necessary.</p>
RR-047-13	<p>Section 8 states: “With respect to any condition which requires the licensed activities be carried out in accordance with the details, plans or schemes approved under this licence, the approved details, plans or schemes are taken to include any amendments that may subsequently be approved in writing by the MMO”</p> <p>MMO recommends that the following be included in addition: “subsequent to the first approval of those plans, protocols or statements provided it has been</p>	<p>The Applicant considers that this additional text is not required as it is secured by paragraph 9(1) of Part 1 (Licensed marine activities of Schedule 6 (Deemed Marine Licence under the 2009 Act: Morecambe Offshore Windfarm Generation Assets) to the draft DCO (APP-012).</p>	<p>The MMO will provide an update on this week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO believes this will likely be agreed.</p>

	demonstrated to the satisfaction of the MMO that the subject matter of the relevant amendments do not give rise to any materially new or materially different environmental effects to those assessed in the environmental information.”		
RR-047-14	<p>Details of the marine license activities 9(1) states:  “Any amendments to or variations from the approved details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statement. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.”</p> <p>Due to a lack of regulatory certainty and risk of applying lower standards than those approved in the environmental statements the above wording should be amended to the following:  “Any amendments to or variations from the approved</p>	<p>The Applicant does not consider that the wording proposed in paragraph 9(1) of Part 1 (Licensed marine activities of Schedule 6 (DML under the 2009 Act: Morecambe Offshore Windfarm Generation Assets) to the draft DCO (APP-012) lacks regulatory certainty or risks applying a lower standard than those approved in the Environmental Statement (ES). The proposed condition reflects the wording used in the environmental impact assessment process (of ‘likely’ significant effects). Additionally, the wording of paragraph 9(1) proposed by the Applicant reflects the wording used in other offshore wind precedents, including the Sheringham Shoal and Dudgeon</p>	<p>The MMO will provide an update on this week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO believes this will likely be agreed.</p>

	details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statements. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.”	Extensions Offshore Wind Farm Order 2024, the East Anglia ONE North Offshore Wind Farm Order 2022, the East Anglia TWO Offshore Wind Farm Order 2022, the Norfolk Vanguard Offshore Wind Farm Order 2022 and the Norfolk Boreas Offshore Wind Farm Order 2021.	
RR-047-15	The MMO requests that the conditions include a sediment sampling plan.	As noted in the Sediment Disposal Site Characterisation Report (APP-024), the Applicant plans to designate the entirety of the windfarm site as a disposal area. The Sediment Disposal Site Characterisation Report (APP-024) includes details on sampling that was carried out during the pre-application process. No further sampling is considered to be required. As such, the Applicant does not consider that a DML condition is required.	The MMO is content a new condition is not required. The MMO considers that this can be closed as disposal sites has been discussed in Section RR-047-53.
RR-047-16	The MMO requests that a reporting condition in relation to ‘Reporting of Impact Pile Driving/Detonation of Explosives’	Noted. The Applicant has added a new condition 19 (Marine Noise Registry) in the DML submitted with the	The MMO is waiting on the Applicant’s position on the changes proposed in Section 3.2 of REP3-085.

	for reporting to the Marine Noise Registry is included.	updated draft DCO at Procedural Deadline A. As UXO clearance and detonation of explosives are not licensable activities for the purposes of the application, the proposed reporting condition is in only in relation to pile driving.	
RR-047-17	<p>Condition 2(3) states:            “No maintenance works authorised by this licence may be carried out until an offshore operation and maintenance plan substantially in accordance with the outline offshore operation and maintenance plan has been submitted to and approved by the MMO in writing”</p> <p>The MMO notes that whilst it is helpful that the maintenance plan must be approved by the MMO, it does not indicate that the maintenance works should be undertaken in accordance with this. The MMO request that the additional wording is included for confirmation:            “All maintenance works must be carried out in accordance with the approved operations and maintenance plan unless</p>	<p>Noted. This has been added (with a minor change to refer to the ‘offshore operation and maintenance plan’ to reflect the document title) as a new sub-paragraph (4) to Condition 2 of the DML submitted with the updated draft DCO at Procedural Deadline A.</p>	<p>The MMO provided further amendments to this condition in Section 3.2.13 of its Deadline 3 response.            The MMO will review the Applicant’s response and provide comments where necessary.</p>

	otherwise agreed in writing by the MMO.”		
RR-047-18	<p>Condition 7(6) states: “The undertaker must ensure that any rock material used in the construction of the authorised project is from a recognised source, free from contaminants and containing minimal fines.”</p> <p>The MMO requests the following is included in addition:  “Details of the source of the rock materials to be used must be submitted to the MMO at least six weeks prior to the commencement of the licenced activity. The licenced activity [or specific activity] must not commence until written approval is provided by the MMO”</p>	<p>The Applicant does not consider that condition 7(6) requires to be updated.</p> <p>The wording of condition 7(6) reflects the wording used in other offshore wind precedents, including the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024, the East Anglia ONE North Offshore Wind Farm Order 2022, the East Anglia TWO Offshore Wind Farm Order 2022, the Norfolk Vanguard Offshore Wind Farm Order 2022 and the Norfolk Boreas Offshore Wind Farm Order 2021.</p>	<p>The MMO does not agree that precedent is enough justification in relation not changing a condition. The MMO would like to understand what the process will be on deciding the source of the rock to ensure there is no navigational concerns or contaminants risk and where this detail will be provided post consent.</p>
RR-047-19	<p>Condition 7(10) states:</p> <p>“All dropped objects which may reasonably be expected to cause a hazard in the marine environment must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the Dropped Object Procedure Form</p>	<p>The Applicant does not consider that condition 7(10) requires to be updated.</p> <p>Noting that the MMO’s preferred wording has been included in several offshore wind DMLs, the Applicant considers that the wording proposed by the MMO is too wide. It places an unnecessary burden on the Applicant to report even</p>	<p>The MMO has agreement from MCA on the following wording, noting the telephone number stated in (a) is to be confirmed:</p> <p><i>(7) (10) (a) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (add</i></p>



	<p>the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so."</p> <p>The MMO requests condition 7(10) is amended to the following: "(1) The undertaker must report all dropped objects to the MMO using the dropped object procedure form as soon as reasonably practicable and in any event within 24 hours of becoming aware of an incident. (2) On receipt of the dropped Object Procedure Form, the MMO may require, acting reasonably, the undertaker to carry out relevant surveys. The undertaker must carry out surveys in accordance with the MMO's reasonable requirements and must report the results of such surveys to the MMO. Receipt of such survey results, the MMO may, acting reasonably, require the undertaker to remove specific obstructions from the seabed. The undertaker must carry out</p>	<p>minor, immaterial instances of dropped objects. The Applicant considers a pragmatic and proportionate approach must be taken and only considers dropped objects which may reasonably be expected to cause a hazard in the marine environment to be those to which the MMO's dropped objects procedure should apply.</p>	<p>number), and the UK Hydrographic Office email: <a href="mailto:navwarnings@btconnect.com">navwarnings@btconnect.com</a>.</p> <p><i>(b) All dropped objects including those in (a), must be reported to the MMO using the Dropped Object Procedure Form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident, unless otherwise agreed in writing with the MMO.</i></p> <p><i>(c) On receipt of notification or the Dropped Object Procedure Form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.</i></p> <p>The MMO is currently reviewing the Dropped Object Procedure and there is a potential of a change of wording to align with Marine Directorate - <a href="https://www.gov.scot/publications/offshore-renewables-accidental-deposit-of-an-object-at-sea-form-and-guidance/">https://www.gov.scot/publications/offshore-renewables-accidental-deposit-of-an-object-at-sea-form-and-guidance/</a> (The MMO can PDF this webpage if requested by the ExA). This change shouldn't alter the requirement by the Applicant or any changes to the DML as (b) identifies what should be submitted it would just be a change in wording.</p>
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	removals of specific obstructions from the seabed in accordance with the MMO's reasonable requirements and at its own expense."		The aim of this update is to ensure that reports must be made no later than 6 hours after the incident has been discovered for more major 'deposits' i.e. those that may be hazardous to shipping and within 24 hours of the incident being discovered in all other cases. A defined list of major deposits cannot be provided due to the nature of the activity. If the Project is in doubt whether an object is a danger/hazard to navigation then we would encourage them to assume it is and report it within 6 hours as per the condition.
RR-047-20	The MMO does not consider that condition 8 Force majeure is necessary as it duplicates section 86 of the 2009 Act. The defence under Section 86 of MCAA has two limbs, and in the event that the undertaker fails to notify the appropriate licensing authority, in this case the MMO, within a reasonable time of their actions (Section 86(2) "matters") the defence cannot be relied upon in the event of any enforcement action. Therefore, the MMO recommends that this condition should be removed. In the event that you maintain that the proposed provision does not duplicate Section 86 MCAA	Condition 8 (force majeure) serves a slightly different purpose to section 86 of the Marine and Coastal Access Act 2009. Condition 8 imposes a duty on the undertaker to notify the MMO of the circumstances of such a deposit. This ensures that the MMO is provided with that information. Section 86 of the 2009 Act does not contain any such duty. It simply acts as a defence in the event a person is charged with an offence. The Applicant has added a new sub-paragraph (2) to include the wording proposed by the MMO in the	The MMO provided further comments in Section 3.2.18 of the Deadline 3 Response.  The MMO will review and respond to the Applicant's response submitted at Deadline 4 to this point and provide a response at Deadline 5. The MMO notes that this a position is unlikely to be agreed on this matter.

	<p>and instead introduces a reporting requirement which did not previously exist, the MMO require that it should be made clear that this provision is in addition to Section 86 and its requirements. If this is included the follow paragraph must also be included:</p> <p>“The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.”</p>	version of the DML submitted with the updated draft DCO at Procedural Deadline A.	
RR-047-21	The MMO requests that the inclusion of archaeological reports in within condition 9. The correct statutory historical body should be included as well as details of what the report should include.	Condition 9(1)(f) (pre-construction plans and documentation) requires the submission and approval of an offshore archaeological Written Scheme of Investigation (WSI) (in accordance with the outline offshore WSI (APP-154)). This includes archaeological reports (sub-paragraph (vii)) and also makes provision for Historic England to be notified (sub-paragraph (vi)). The Applicant does not consider that any further text is needed.	The MMO is discussing this with Historic England to ensure they are content. The MMO will provide an update in at Deadline 5.
RR-047-23	The provisions under article 7 Benefit of the Order are of	Article 7 of the draft DCO (APP-012) contains	Further comments have been provided in Section 3.2 of REP3-085.

	<p>concern to the MMO. The MMO requests that any reference to the MMO and DML should be removed from this article for transfer of the benefit of the DCO.</p>	<p>provisions for the transfer or lease of the provisions under the DCO. As set out in the Explanatory Memorandum (APP-013), these provisions are based on the Model Provisions, and the drafting has developed through the inclusion of a similar article in many offshore wind farm development consent orders.</p> <p>Following the precedent drafting from other offshore wind farm orders, Article 7(2) provides the transfer or grant of DCO powers to take place with the written consent of the Secretary of State (SoS) and for this transfer or grant to take place without the need for consent in the circumstances specified in paragraph 7(5). Both of the circumstances set out in Article 7(2) allow for the transfer or grant of powers under the DML. Article 7(3) requires the Secretary of State to consult with the MMO before giving consent to the transfer or grant to another person of the benefit of the DML. This ensures that</p>	<p>The MMO notes that the Applicant has responded to this point in (ID REO2035-25, Table 2, REP3-069) which has further comments in relation to Section 120(3) and 120(4). The MMO is reviewing this response and will provide an update at Deadline 5. The MMO believes this will remain a matter of disagreement at the end of Examination.</p>
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		<p>the MMO has the opportunity to participate in any decision to transfer or lease made under Article 7.</p> <p>Article 7(11) disapplies sections 72(7) and (8) of the Marine and Coastal Access Act 2009 in relation to a transfer or grant of the benefit of the DML. The drafting in the draft DCO reflects a long-established precedent regarding the transfer of DCO powers and deemed marine licences that has been endorsed by the SoS many times, including most recently in the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024. Where a transfer of the DML is sought under Article 7(2), the Secretary of State would consider the appropriateness of the party to whom the transfer or grant is proposed and would also take into account any representations made by the MMO before determining whether to grant consent.</p>	
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		<p>From a procedural perspective it is important that the DCO and the DML can be transferred together using the process set out in Article 7. It is considered important that the timing of any transfer or grant of powers/authorisations under the DCO and DML be aligned, as there is considerable overlap between the authorisations and the requirements/ conditions. In practice, the most common transfer scenario is when the offshore transmission infrastructure is transferred to the separate Offshore Electricity Transmission (OFTO) licence-holder following a public tender exercise via Ofgem, and it is important that an OFTO licence-holder have certainty that all consents, licences and permits will transfer concurrently via the same approval process.</p>	
Draft MMMP (APP-149) and Appendix 11.3 Marine Mammal Unexploded Ordnance Assessment (APP-067)			
RR-047-27	Further, Section 3.1.4 paragraph 143 regarding breaks in piling states	The Applicant acknowledges the request, however notes that the wording proposed by the Applicant has previously	The MMO has reviewed the updated MMMP submitted at Deadline 2.

	<p>“for any breaks in piling of less than 10 minutes, piling may continue as required (i.e. as if there was no break). For any breaks in piling of more than 10 minutes, but less than two hours, then the piling can recommence with a reduced soft- start procedure (e.g. five to six blows of the hammer at the starting hammer energy) before continuing as required, provided there are no marine mammals within the Management Area”. The Joint Nature Conservation Committee (JNCC) (2010) guidance recommends that if there is a pause in piling operations for a period of greater than 10 minutes, then the pre-piling search and soft-start procedure should be repeated before piling recommences. If a watch has been kept during the piling operation, the Marine Mammal Observer or Passive Acoustic Monitoring Operative should be able to confirm the presence or absence of marine mammals, and it may be possible to commence the soft-start immediately. However, if there has been no watch, the complete pre-piling search and</p>	<p>been agreed for other offshore windfarm projects, including Dogger Bank A and Dogger Bank B.</p> <p>The Applicant notes finalisation of wording in the Marine Mammal Mitigation Protocol (MMMP) would be undertaken post-consent alongside developed Project design information, in the event that piled foundations are selected as part of detailed design for the Project.</p>	<p>The MMO has provided further comments regarding the MMMP, see section 3.9 of this letter.</p>
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	<p>soft-start procedure should be undertaken. The guidance recommends that the soft-start duration should be a period of not less than 20 minutes. Any requested variation from a 20-minute soft-start should be agreed with the relevant agency and regulator. The MMO and Cefas request that the guidance is adhered to, and the full soft start is implemented (not 5 to 6 blows at the starting hammer energy as is proposed in the MMMP).</p>		
RR-047-28	<p>Table 3.1 in the MMMP presents cumulative sound exposure Level (SELcum) modelled impact ranges for piling of both monopile and pin-pile at the worst- case (south west) location. The MMMP refers the reader to Appendix 11.1 of the ES (Document Reference 5.2.11.1) for more details, which describes the underwater modelling undertaken. Please note that the impact ranges presented in Table 3.1 are vastly different to those presented in Appendix 11.1 (see Table 4-22 in Appendix 11.1 for example which presents the impact ranges for monopiles and Annex</p>	<p>Table 3.1 in the draft MMMP (APP-149) lists the worst-case impact ranges for the Project based on the maximum strike rate scenario listed in Appendix B of Appendix 11.1 Underwater Noise Assessment (APP-065) and would be the worst-case impact range to be mitigated. There is no discrepancy, but it is noted that Appendix 11.1 Underwater Noise Assessment (APP-065) also presents the lower strike rate scenario.</p>	<p>The MMO has reviewed the updated MMMP submitted at Deadline 2.</p> <p>The MMO considers that the MMMP has been appropriately updated to clarify this point.</p>

	7.1 and 7.2 of this document). These discrepancies must be checked and clarified.		
RR-047-29	With regard to Appendix 11.3 Marine Mammal Unexploded Ordnance Assessment, the MMO and Cefas note a minor discrepancy. In Table 4.8 and 4.9, the PTS (permanent threshold shift) and TTS (temporary threshold shift) criteria for UXO (unexploded ordnance) are based on the SPL <sub>peak</sub> (peak sound pressure level) metric, and the SEL <sub>ss</sub> (single strike sound exposure level) metric, not the SEL <sub>cum</sub> .	Noted, the error in the heading has been updated in The Applicant's Errata Sheet (Document Reference 8.4), submitted alongside this document at Procedural Deadline A.	<p>The MMO notes the Applicant's response, that the Appendix submitted at Deadline 1 (REP1-046 and REP1-047) was incorrectly amended and an updated version is anticipated to be submitted at Deadline 4.</p> <p>The MMO thanks the Applicant for their clarification/response and welcome that an updated version will be submitted.</p>
RR-047-30	Further, Table 5-1 confirms that 616 individual harbour porpoise are at risk of PTS during high-order detonation (353.6 kg Net Explosive Quantity (NEQ) plus donor charge) but this has been assessed as having a 'Medium' magnitude. For Low-Order clearance, 7 individual harbour porpoise are at risk of PTS, and this has also been assessed as having 'Medium' magnitude. The MMO and Cefas question whether 'Medium' magnitude is appropriate for the high order assessment. The MMO and Cefas understand that this	Noted, 0.986% will be rounded up to 1% and the magnitude will be amended from medium to high. This will be updated accordingly in a separate technical note to be submitted at Deadline 1. It is noted that the precautionary change in magnitude from medium to high would not change the overall significance and conclusions of the assessment.	<p>The MMO acknowledges that the Applicant will incorporate the updated assessment in an updated Chapter 11 Marine Mammals anticipated for submission at Deadline 4 and will likely consider this matter closed upon review of the document.</p> <p>This point was raised to highlight awareness. While the EIA categorises the 3.3% population impact on harbour porpoises as "Low" magnitude, the absolute number of 2,037 individuals at risk of TTS is significant. TTS can impair their ability to communicate, navigate, and detect predators or prey, which are critical</p>

	scoring is based on the fact that 1% of the reference population is anticipated to be exposed (which is 0.986 % of the Celtic and Irish Sea (CIS) Management Unit (MU) according to Table 5-1).		<p>for their survival. Given other existing threats to harbour porpoises, the additional burden of noise-induced hearing loss should not be underestimated.</p> <p>The MMO welcomes that low order clearance would be undertaken where possible in acknowledgment of the residual effects. Additionally, the recent policy papers on reducing marine noise published by DEFRA include an updated position statement on UXO clearance.</p>
RR-047-31	Following on from the previous point, the MMO and Cefas also question the Magnitude scoring in Table 5.2. Table 5-2 confirms that 2,037 individual harbour porpoise are at risk of TTS during high order detonation, but this has been assessed as only having a 'Low' magnitude (with 3.3 % of the CIS MU anticipated to be at risk of TTS).	As outlined in Appendix 11.3 Marine Mammal UXO Assessment (APP-067) Table 4.3 the definition of impact magnitude for a marine mammal receptor, a 3.3% population level impact falls within the 'Low' magnitude category for an intermittent and temporary effect.	<p>The MMO has nothing further to note, apart from maintaining our original comments and recommendations.</p> <p>The MMO has provided further comments in section 3.9.</p>
RR-047-32	With regard to Section 5.2, 'Disturbance from underwater noise associated with UXO clearance', Cefas and the MMO do not support the use of TTS as a proxy for disturbance. Therefore, the MMO and Cefas disagree with paragraph 84 that "the use of the TTS threshold	There are no agreed thresholds for the onset of a behavioural response from underwater noise generated by explosions during UXO clearance activities. Empirically-derived relationships between noise levels and the probability of a	The MMO has nothing further to note, apart from maintaining our original comments and recommendations.

	<p>was appropriate for UXO disturbance because the noise from the UXO explosion would be only fleetingly in the environment". TTS constitutes a temporary reduction in the sensitivity of the auditory system. The characteristics of TTS are distinct from behavioural disturbance, in which an animal changes its behaviour in response to a stimulus. There is no cognitive impairment implicit in behavioural responses. TTS typically occurs at much higher sound exposures than the onset of behavioural disturbance, and so if behavioural disturbance is assumed to occur only at sound exposures where TTS would occur, this is likely to significantly underestimate the risk of disturbance.</p>	<p>response to pile driving noise (i.e. the 26km Effective Deterrence Radius (EDR)) are not appropriate to apply here due to the very different nature of the sound. Other assessments of UXO clearance activities have used the Temporary Threshold Shift (TTS)-onset threshold to indicate the level at which a 'fleeing' response may be expected to occur in marine mammals. This is a result of discussion in Southall et al. (2007) which states that in the absence of empirical data on responses, the use of the TTS-onset threshold may be appropriate for single pulses (like UXO detonation): "Even strong behavioural responses to single pulses, other than those that may secondarily result in injury or death (e.g., stampeding), are expected to dissipate rapidly enough as to have limited long-term consequence. Consequently, upon exposure to a single pulse, the onset of significant behavioural disturbance is proposed to occur at the</p>	
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		<p>lowest level of noise exposure that has a measurable transient effect on hearing (i.e., TTS-onset). We recognize that this is not a behavioural effect per se, but we use this auditory effect as a de facto behavioural threshold until better measures are identified. Lesser exposures to a single pulse are not expected to cause significant disturbance, whereas any compromise, even temporarily, to hearing functions has the potential to affect vital rates through altered behaviour” (Southall et al., 2007). Therefore, an estimation of the extent of behavioural disturbance is based on the sound levels at which the onset of TTS is predicted to occur from impulsive sounds. TTS thresholds are taken as those proposed for different functional hearing groups by Southall et al. (2019). It is noted that UXO clearance is not part of the DCO Application and assessment was provided for information, noting a marine</p>	
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		licence application for UXO clearance, if required, would be made separate from the DCO Application.	
RR-047-33	To quantify the risk of behavioural responses where there are no better alternatives, the effective deterrence ranges (EDRs) in place for noise management in harbour porpoise Special Areas of Conservation (SACs) could be used instead. Since harbour porpoise are relatively skittish and sensitive to underwater noise, the EDRs are likely to be conservative for other marine mammal species and are therefore a suitably precautionary option in the absence of other data (unlike using TTS as a proxy for disturbance). Thus, the MMO and Cefas welcome that the 26km EDR, as per the Statutory Nature Conservation Bodies (SNCB) guidance (JNCC et al., 2020) has also been considered in the assessment for harbour porpoise and disturbance. A 5km potential disturbance range for low-order clearance, for all marine mammal species, has also been considered (JNCC,	The Applicant acknowledges this response, noting, as stated in the draft MMMP (APP-149), the final MMMP for UXO clearance would be submitted for approval under a future marine licence application, separate from the DCO Application. As outlined in Southall et al. (2021) thresholds that attempt to relate single noise exposure parameters (e.g., received noise level) and behavioural response across broad taxonomic grouping and sound types could lead to severe errors in predicting effects. Differences between species, individuals, exposure, situational context, the temporal and spatial scales over which they occur, and the potential interacting effects of multiple stressors could lead to inherent variability in the probability and severity of behavioural responses. The 26km EDR is based on harbour porpoise	The MMO does not have further comments. The MMO maintains our original comments and recommendations.

	2023) and includes vessels associated with the activity.	disturbance for piling activities and is also used for high order clearance “despite there being no empirical evidence of harbour porpoise avoidance” (JNCC et al., 2020). Consequently, this EDR may not accurately represent UXO clearances. Applying this EDR to other species is deemed overly conservative and could lead to an overestimate of potential effect for other species. TTS has been used as a proxy for disturbance for assessing disturbance from high order UXO clearance for species where there is no recommended EDRs such as for dolphins, for other offshore windfarm projects such as Seagreen Offshore Wind Farm, Sheringham and Dudgeon Extension Projects, and Dogger Bank South Offshore Wind Farm Projects.	
RR-047-34	Additionally, Section 5.2, paragraph 90 states “In addition, the MMMP for UXO clearance will include ADD (acoustic deterrent device) activation prior to all UXO clearances, to ensure	The Applicant acknowledges this response, noting, as stated in the draft MMMP (APP-149), the final MMMP for UXO clearance would be submitted for approval under	The MMO is still reviewing the information with our scientific advisors and will provide any additional comments or confirm this point is closed at Deadline 5.



	<p>marine mammals are beyond the maximum potential impact range for PTS". There is no certainty or guarantee that animals will be deterred beyond the maximum impact ranges. In fact, the assessment later highlights in para 98 that "as per ADD review in the JNCC report No. 615 (McGarry et al., 2022), the ranges of deterrence distances can vary significantly from only a few meters to several kilometres (approximately 6km for VHF cetacean); these differed between devices and dependent on the acoustic properties of the environment (Rosemeyer et al., 2021)". Although an indicative assessment has been provided, the MMO and Cefas request that the ADD activation times (and mitigation in general) are revisited once further details of the proposed UXO works are known.</p>	<p>a future marine licence application, separate from the DCO Application. The Applicant will apply this advice when reviewing mitigation measures during the submission of the UXO clearance marine licence once further details of the proposed UXO works are known.</p>	
<b>Outline PEMP (APP-146) and IPMP (APP-148)</b>			
RR-047-35	<p>The MMO and Cefas do not have any major comments on the Outline Project Environmental Management Plan (PEMP).</p>	<p>The Applicant notes this response.</p>	<p>Please see comments in relation to Chemicals in Section 3.2 of REP3-085, however notes that this document is suitable.</p> <p>The MMO will provide an update to the Applicant on the chemicals condition and</p>

			requirements W/C 24 February with the aim to provide a position at Deadline 5. The MMO believes this is likely to be a not agreed – material impact position.
RR-047-36	The MMO and Cefas welcome further assessment be conducted prior to construction, based on the foundation type and installation method, to determine if there is the risk of significant disturbance to marine mammals. This would then be used to determine if further mitigation measures which reduce sound propagation and disturbance are required. If they are required, then a review would be conducted to determine what is the most appropriate and effective method based on the latest and available methods prior to construction. This would include a review of all suitable noise abatement measures at that time.	Noted, confirmation of requirements for mitigation would be agreed post-consent during the finalisation of the MMMP which is secured in Condition 9(1)(i) of Schedule 6 of the Draft DCO (APP-012). The Applicant is planning appropriately for the potential requirement for noise abatement systems (NAS), and this will be one of the options considered when developing the MMMP.	<p>The MMO understands the Applicant is updating multiple documents for Deadline 4 in relation to Noise abatement and the Defra policy.</p> <p>The MMO has provided comments regarding the MMMP and UWSMS in section 3.9 and 3.10 of this letter noting further comments will be provided at Deadline 5.</p>
RR-047-37	The MMO and Cefas does not have any major comments in regard to the In Principle Monitoring Plan (IPMP).	The Applicant notes this response.	Other than the comments raised within Section 6 on the IPMP of the Deadline 3 Response the MMO is largely content with the IPMP but will continue to review NE advice and support any requests from NE.

General comments

Chapter 7 Marine Geology, Oceanography and Physical Processes (APP-044)

Chapter 8 Marine Sediment and Water Quality (APP-045)

RR-047-46	<p>The MMO and Cefas request that section 8.61 be clarified to include the types of chemical analyses performed on samples (e.g. metals, PAHs, PCBs etc.) and which if any together with the location of those samples that exceeded AL (action level) 2, as stating there were no significant exceedance of AL2 does not provide adequate explanation of the contamination present. The MMO and Cefas are not suggesting these analyses are undertaken but require reasons as to why they were not selected.</p>	<p>Section 8.61 of Chapter 8 Marine Sediment and Water Quality (APP-045) relates to sediment data collected for other projects: Walney Extension IV Offshore Wind Farm (Dong Energy, 2013) (approximately 18.8km from the Project) and West of Duddon Sands offshore windfarms (Dong Walney (UK) Limited, 2006) (approximately 12.9km from the Project). Given the age of the Environmental Impact Assessment (EIA)s, distance to the Morecambe array area and age of the data, the MMO are guided to the site-specific data presented in sections 8.69 to 8.72 which was collected within the Morecambe array area and much more recently, in 2022. This data did not show any exceedances of Cefas Action Level (AL) 1 for any of the parameters for which analysis was undertaken and is considered the best and most relevant evidence regarding levels of contamination present that could potentially be disturbed. This aligns with</p>	<p>The MMO advised that it will provide confirmation on the status of this comment at Deadline 4. The MMO is still reviewing this point and hopes to have a position early March. The MMO will provide an update to the Applicant prior to Deadline 5 and to the ExA at Deadline 5.</p>
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		MMO comment ID RR-047-45.	
RR-047-47	The MMO and Cefas note that comparison of levels of arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc to Canadian quality standards should not be undertaken as the methods used to produce the results are not directly comparable in that the Canadian sediment quality guidelines use normalised metals analysis and likely a different digestion to that of the methods used for production of results of dredge material for determination of suitability for disposal for comparison to the UK Action Levels (e.g. aqua regia/nitric digest, no sieving, no normalisation).	Noted. The appropriate comparison against United Kingdom (UK) actions levels has been undertaken (MMO, 2015) (see Paragraph 8.25 of Chapter 8 Marine Sediment and Water Quality (APP-045)).	<p>The MMO advised that it will provide further updates.</p> <p>The MMO is still reviewing this point and hopes to have a position early March. The MMO will provide an update to the Applicant prior to Deadline 5 and to the ExA at Deadline 5, this will also include the disposal sites.</p>
<b>Chapter 5 Project Description (APP-042)</b>			
RR-047-48	You have suggested that for scour protection 'bagged solutions filled with grout or other materials. Protective aprons, mattresses with or without frond devices, and rock, concrete and gravel placement' (Chapter 5 section 5.53). Bags or mattresses may contain plastics. Concrete mattresses maybe linked polypropylene rope lattice,	The Applicant acknowledges the MMO consideration of the risks associated with the introduction of plastic infrastructure. The selection of scour protection methods, where required, will be evaluated and further considered post-consent in the Offshore Construction Method Statement, focusing	The MMO notes there is not an outline Offshore Construction Method Statement and requests that a commitment is captured in the commitments register (REP1-094) (and that this is a certified document) that the use of plastic will be fully taken into account in the offshore Construction Method Statement. If this is added the MMO is content this comment is closed.

	<p>and artificial fronds mattresses made of continuous lines of overlapping buoyant fronds consisting of polypropylene or similar have been used in the marine environment over the years. Placing plastic infrastructure into the marine environment could pose a risk should they degrade. The MMO and Cefas request that the final design of these frond mattresses should be detailed in the offshore construction method statement that will be submitted to and approved by the MMO prior to commencement of development. This can then be secured within the Draft DCO submitted with the application for consent.</p>	<p>on both engineering and suitability and environmental recoverability. The Offshore Construction Method Statement will be developed through consultation with the MMO and is secured in Condition 9(1)(d) of Schedule 6 of the Draft DCO (APP-012).</p>	
RR-047-49	<p>In line with OSPAR guidance on the construction operation maintenance and decommissioning of offshore windfarms notification should be given to the regulator where there is potential for chemicals used and or discharged where there is a pathway to the marine environment, including those used within closed systems that require frequent top up should provide full details of the risk and</p>	<p>The Applicant acknowledges the MMO comments. An Offshore Project Environmental Management Plan (PEMP) will be finalised post-consent, to include details of a chemical risk assessment, that shall include information regarding how and when chemicals are to be used, stored and transported in accordance</p>	<p>Please see comments in Section 3.2 of the MMO's Deadline 3 response on updates to the chemical condition.</p> <p>The MMO will review and comment on any response from the Applicant, if required.</p>

	<p>justification for use of chemicals. This guidance includes the use of paints and coatings. In addition, some piles may require pre-drilling (with a maximum drill penetration of 56m) therefore the use of drilling fluids cements or cement additives etc., should be notified to the MMO for approval prior to use (section 5.103).</p>	<p>with recognised best practice guidance. The PEMP is secured in Condition 9(1)(e) of Schedule 6 of the Draft Development Consent Order (APP-012).</p>	
RR-047-50	<p>For gravity base options where necessary ballast used maybe water or heavy material such as rock or both. It does not say whether there will be any antifouling or biocide used within the gravity base either on installation or potentially required in the future. The MMO request that this be clarified within the ES (section 5.100).</p>	<p>Should water be used as ballast, this would be locally sourced rather than imported, therefore the use of biocide is not considered necessary. The use of antifouling on solid ballast is again considered unnecessary. Implementation of biosecurity measures in line with international and national regulations and guidance will be listed within the PEMP, an Outline of which was submitted as part of the DCO Application (APP-146).</p>	<p>The MMO welcomes the commitment that locally sourced ballast would be used rather than imported.</p> <p>The MMO considers this matter closed but would highlight that there are still outstanding comments in relation to Chemicals. Please see comments in Section 3.2 of REP3-085.</p>
RR-047-52	<p>The MMO and Cefas find it encouraging that outline procedures for the management of mud produced during drilling activities or any material from the seabed preparation are to be disposed of in accordance with</p>	<p>The Applicant acknowledges the MMO comments. The PEMP will include reporting requirements and is secured in Condition 9(1)(e) of Schedule 6 of the Draft DCO (APP-012).</p>	<p>Please see comments in Section 3.2 of REP3-085 in relation to Chemicals. Although information will be captured in the PEMP the MMO requires further information.</p>

	<p>the limits of the Deemed Marine Licence for licensed marine activities including disposal location quantities measures for waste concrete etc.</p> <p>Reporting procedures for these were included as part of the Project Environmental Management Plan. The MMO and Cefas note that drilling fluids together with all chemicals with a pathway to the marine environment should be included in plans for reporting.</p>		<p>The MMO will review and provide comments on any response received by the Applicant.</p>
RR-047-53	<p>The MMO and Cefas note that if the sandwave clearance material is anticipated to be placed back within the array area you most likely would have to apply to the MMO to designate the area as a disposal site for the MMO to be able to fulfil its statutory obligations under OPSAR to be able to make accurate returns for dredge and disposal.</p>	<p>While surveys to date do not identify prevalence of sandwaves within the windfarm site, Chapter 7 Marine Geology, Oceanography and Physical Processes (APP-044), Chapter 8 Marine Sediment and Water Quality (APP-045) and Chapter 9 Benthic Ecology (APP-046) of the Environmental Statement (ES) assess the worst-case requirement for sandwave clearance/clearance of seabed sand features and disposal within the order limits. A Sediment Disposal Site Characterisation Report (APP-024) has been provided</p>	<p>The MMO has received the most up to date shape file to enable the MMO to designate a disposal site. This reference number should be stated on the DML and the MMO is aiming to have a response early March and will share this with the Applicant so this can be taken into account for Deadline 5.</p>

		<p>as part of the application in order for the area within the order limits to be designated as a disposal site through the DCO.</p> <p>The Applicant notes that the removal of and disposal of inert material is included as associated development for the purposes of the definition of the authorised project (Schedule 1, Part 1, Paragraph 1(c)) and for the purposes of the definition of the licensed marine activities (Schedule 6, Part 1, Paragraph 3(c)). These definitions state that such activities are authorised 'within the Order limits'. Accordingly, no separate application for designation is considered required.</p>	
<p>Chapter 9 Benthic Ecology (APP-046)</p> <p>Chapter 10 Fish and Shellfish Ecology (APP-047)</p>			
RR-047-57	<p>Figure 10.6 of Volume 5 Chapter 10 Fish and Shellfish Ecology Figures presents a 'heatmap; of herring larvae abundance date over the most recent 10 years of the NHLS (Northern Irish Herring Larvae Survey) (2012-2021) which has been overlaid with the mapped noise contours for the</p>	<p>The MMO are correct in their summary of the methods used to create heatmaps of herring larvae abundance from Northern Irish Herring Larvae Survey (NIHLS) data. The qualitative heatmap is intended to display how larval density distribution</p>	<p>The MMO considers this matter closed.</p>



	<p>three modelled pile locations (east, north-west and south-west) based on the maximum hammer energy of 6,600 kJ, based on the 135 dB SELss threshold. Cefas fisheries advisors have had previous discussions with the Applicant's consultants regarding your approach to presenting data on the abundance and distribution of herring larvae at the Manx spawning ground. The MMO and Cefas understand that their approach has taken the NIHLs point data at each station and weighted these points according to the relative abundance of larvae across the grid, then smoothed the points to generated areas of higher and lower density/heat. Whilst it was agreed that this approach was suitable, it should be recognised that the 'high' / 'low' colour scheme shown in the legend in Figure 10.6 does not provide any value to contextualise what 'high' abundance or 'low' abundance means in terms of the number of herring larvae (e.g. no. per m<sup>2</sup>), so the heatmaps have limited value to the reader (unless they have been made aware of how</p>	<p>corresponds with existing spawning ground maps. An update to the figure legend has been made to display larval abundance quantitatively, giving further context to the heatmap colour scheme, and is being submitted at Procedural Deadline A (5.3.10 Chapter 10 Fish and Shellfish Ecology Figures_Rev 02) alongside this document.</p>	
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	the data have been treated). The MMO alongside Cefas recommend that the legend is updated for transparency/clarity to all readers of the ES.		
RR-047-58	Cefas and the MMO do not support the conclusions made in the CIA (Cumulative Impact Assessment). The UWN modelling presented in Figures 10.8a and 10.8b present the piling noise impact range noise contours which overlap the spawning grounds of Atlantic cod. The modelling uses the hearing thresholds in Group 3 fish for piling of 207, 203 and 186 dB SELcum for mortality and potential mortal injury, recoverable injury and temporary threshold shift (TTS), respectively. Results of the underwater noise modelling presented in Table 10.25 (Chapter 10 Fish and Shellfish Ecology) quantify the area of impact to eggs and larvae during mono- and pin-piling, which is limited to an area of 0.32km <sup>2</sup> for monopiling and 0.19km <sup>2</sup> for pinpiling, though the impact range for this impact is not shown in Figures 10.8a and 10.8b. Figures 10.8a and 10.8b	The Applicant acknowledges the overlap of Group 3 noise effect thresholds from the Project and Atlantic cod spawning grounds displayed in Figures 10.8a and 10.8b. The Cumulative Effects Assessment (CEA) conclusions made in Section 10.7.3 of Chapter 10 Fish and Shellfish Ecology (APP-047) are drawn from the wide extent of cod spawning grounds across the Irish Sea and the temporary nature of piling effects in comparison to a four month spawning period. Effects on eggs and larvae are considered in Paragraphs 10.211 to 10.220 of Chapter 10 Fish and Shellfish Ecology (APP-047). In relation to the data sources mentioned by the MMO, the Applicant has considered these sources and is of the position that they are not sufficient to materially alter	The MMO had a meeting with the Applicant on 14 February to discuss outstanding issues with our scientific advisors.  The Applicant explained that further commitment and modelling will be provided at Deadline 4 in relation to the use of NAS and in relation to the dates of the seasonal restrictions. The MMO explained that full spatial modelling would be required to remove a seasonal restriction requirement on the DML. The Applicant explained that this would not be provided. The Applicant understood the MMO's position that without this modelling there is not enough evidence to remove the requirement for the seasonal restriction to be included on the face of the DML. The MMO believes that no new information can be provided by the Applicant during the remainder of Examination that will remove the requirement for a piling restriction on the face of the DML.  However, there is still further discussion on the refinement of the seasonal restriction dates of the piling restriction

	<p>show that piling noise overlaps the spawning grounds of cod for all impairments, i.e. mortality and potential mortal injury, recoverable injury and especially for TTS.</p> <p>Whilst suitable UWN modelling has been undertaken in respect of cod, it is disappointing to see that the assessment of impacts from UWN has assessed cod under the generic Group 3 fish in Section 10.245. The assessment seems to be missing the link between the cod as a Group 3 fish and the spawning activity they engage in at their spawning grounds. Meanwhile, the assessment of impacts from noise on spawning grounds in Sections 10.211 – 10.220, only considers impacts to the eggs and larvae, rather than the spawning fish. In our advice for PEIR we highlighted that piling works could have potential to significantly impact cod at a population level if piling was to occur during their spawning season (January – April inclusive). This is of particular importance, given ICES' latest advice on cod for the Irish Sea which states that 'when the</p>	<p>the understanding of cod spawning in relation to the Project, and subsequently would not materially affect the assessment of significance (or the MMO's position that they do not support the conclusions of the CEA in relation to cod spawning). The Applicant intends to follow the developments in the approach to piling of other nearby projects (in terms of timings, techniques, and mitigations), and will further develop the piling strategy, including any mitigations, in agreement with the MMO post-consent.</p> <p>The Applicant will seek to discuss further with the MMO (and NE) given their comment regarding this in their RR) the structure of an Underwater Sound Management Strategy as a mechanism of agreeing mitigation post-consent, which will also consider measures the Project may need to take in light of potential cumulative effects and in line with other projects on similar timescales.</p>	<p>and the MMO understands further evidence will be provided in relation to this at Deadline 4.</p> <p>The MMO and its scientific advisors are still reviewing all information provided at Deadline 3 and understands that some information will be superseded by Deadline 4 submissions. The MMO is aiming to have an update by early March and will share this with the Applicant as soon as possible to enable any further changes to documents to be included at Deadline 5.</p> <p>To clarify, the MMO and the Applicant are still working on the specific cod spawning period and the MMO believes this will be <b>agreed by the end of Examination.</b></p> <p><b>The outstanding point that will be not agree – material impact on the Applicant's Statement of Common Ground will be the need for the seasonal restriction on the face of the DML.</b></p> <p>The Applicant believes there is no need as this is within the UWSMS and the plan is the correct mechanism to manage this.</p> <p>The MMO's position is that not enough evidence has been provided to provide the confidence that a seasonal restriction can</p>
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	<p>maximum sustainable yield (MSY) approach and precautionary considerations are applied, there should be zero catch in 2023' and that 'Fishing pressure on the stock is below FMSY, and spawning-stock size is below MSY Btrigger, Bpa, and Blim' (ICES 2022). We also pointed to Fox et al. (2000) which reports high site fidelity in cod spawning grounds in the Irish Sea. For these reasons, the MMO and Cefas would have expected you to consider this information, and potentially other sources of data to inform their assessment such as data from the Northern Irish ground fish trawl survey which has been ongoing since 2009 and has several survey stations within the eastern Irish sea (data are available from ICES: <a href="http://datras.ices.dk/">http://datras.ices.dk/</a>). In the absence of any data to suggest that this part of the cod spawning ground is of lower importance than other areas, and in consideration of ICES advice on the cod population in the Irish sea, the MMO and Cefas recommend that piling is not permitted during the cod</p>	<p>The Applicant will provide an Outline Underwater Sound Management Strategy at Deadline 2 in order to take into account potential further comments from the MMO expected at Deadline 1. The Applicant has added a new condition 30 (Underwater Sound Management Strategy) in the DML submitted with the updated draft DCO at Procedural Deadline A to secure this. Additionally, the Outline Underwater Sound Management Strategy has been added as document to be certified in the draft DCO.</p>	<p>be removed at this point in the Examination and is unlikely to be provided until the post consent stage when the project has been refined. Without evidence the MMO's position is a seasonal restriction should be on the DML, this is the appropriate place for a restriction to be in the absence of evidence. However, the MMO agrees that the UWSMS can be used as a mechanism to change or remove the restriction post consent. This would be by providing further evidence and detailed mitigation can be put in place.</p> <p>The MMO believes that the agreed seasonal restriction is on the face of the DML with the UWSMS being able to be submitted to remove/change this requirement post consent. This allows the MMO to be confident that a restriction will be in place in the first instance and shows that the Applicant has to provide evidence and further mitigation once details are known post consent through the UWSMS.</p> <p>The condition below is the most up to date condition, XX has been included as the dates of the condition are still in discussion and will be refined by the end of Examination.</p> <p><b><i>Underwater Sound Management Strategy</i></b></p>
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	<p>spawning season and recommend that the following restriction is conditioned on the deemed marine licence:</p> <p>No piling of any kind shall take place during the cod spawning period from 1st January to 30th April (inclusive) of any year.</p> <p>Reason: To prevent disturbance to adult spawning cod during their spawning season.</p>		<ol style="list-style-type: none"> <li>1. — <i>No piling associated with the authorised development may be undertaken between XX to XX inclusive, unless otherwise agreed in writing by the MMO.</i></li> <li>2. <i>If activities are deemed necessary in this period and to confirm any additional mitigation requirements an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, must be submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.</i></li> <li>3. <i>The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.</i></li> <li>4. <i>The piling activities must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.</i></li> </ol>
RR-047-59	As per our advice on the PEIR, you may wish to consider the use of noise abatement measures such as big as big bubble curtains (BBC) or double	The Applicant is planning appropriately for the potential requirement for NAS but maintains the position that the effects may be suitably	Please see response to RR-047-58 above.

	<p>BBC during piling, to reduce the noise levels emitted during piling (see Würsig et al. (1999)). UWN modelling incorporating the use of noise abatement measures has been shown to reduce the range of effect for disturbance with sensitive habitats such as spawning grounds.</p>	<p>mitigated through further design refinement and other embedded mitigation. The Applicant will seek to discuss further with the MMO (and NE given their comment regarding this in their RR) the structure of an Underwater Sound Management Strategy as a mechanism of agreeing mitigation post-consent, which will also consider measures the Project may need to take in light of potential cumulative effects and in line with other projects on similar timescales. The Applicant will provide an Outline Underwater Sound Management Strategy at Deadline 2 in order to take into account potential further comments from the MMO expected at Deadline 1. The Applicant has added a new condition 30 (Underwater Sound Management Strategy) in the DML submitted with the updated draft DCO at Procedural Deadline A to secure this. Additionally, the Outline Underwater Sound Management Strategy has</p>	
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		been added as document to be certified as one referred to in the DCO.	
RR-047-60	<p>Cefas and the MMO do not support the conclusions made in the CIA that that the cumulative effects of piling noise are deemed to be no greater than project-alone effects 'minor adverse'. We would also add that recent advice for Morgan OWF (DCO/2022/00003) which is located entirely in the Irish sea cod spawning ground we highlighted the likelihood that a seasonal piling restriction to protect spawning adult cod and their eggs and larvae will be necessary during the spawning season (January – April inclusive). Whilst we have raised a number of points requiring further clarification on their UWN modelling, the modelling that was presented suggests that an extensive overlap of noise disturbance will occur at the spawning ground.</p>	<p>The Applicant acknowledges the overlap of Group 3 noise effect thresholds from the Project and Atlantic cod spawning grounds displayed in Figures 10.8a and 10.8b in Chapter 10 Fish and Shellfish Ecology Figures (APP-094). The CEA conclusions made in Section 10.7.3 in Chapter 10 Fish and Shellfish Ecology (APP-047) are drawn from the wide extent of cod spawning grounds across the Irish Sea and the temporary nature of piling effects in comparison to a four-month spawning period.</p> <p>The Applicant intends to follow the developments in the approach to piling of other nearby projects (in terms of timings, techniques, and mitigations), and will further develop the piling strategy, including any mitigations, in agreement with the MMO post-consent.</p> <p>The Applicant will seek to discuss further with the MMO (and NE given their comment</p>	Please see response to RR-047-58 above.

		<p>regarding this in their RR) the structure of an Underwater Sound Management Strategy as a mechanism of agreeing mitigation post-consent, which will also consider measures the Project may need to take in light of potential cumulative effects and in line with other projects on similar timescales. The Applicant will provide an Outline Underwater Sound Management Strategy at Deadline 2 in order to take into account potential further comments from the MMO expected at Deadline 1. The Applicant has added a new condition 30 (Underwater Sound Management Strategy) in the DML submitted with the updated draft DCO (3.1 Draft Development Consent Order_Rev 02) at Procedural Deadline A to secure this. Additionally, the outline Underwater Sound Management Strategy has been added as document to be certified as one referred to in the DCO.</p>	
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RR-047-63	<p>The MMO defers to the National Federation of Fishermen's Organisations (NFFO) along with standalone representatives on matters of commercial fisheries. The MMO will continue to be part of the discussions relating to securing any mitigation, monitoring or other conditions required within the DML.</p>	<p>The Applicant notes this response.</p>	<p>The MMO will continue a watching brief on these matters in relation to the DMLs but these may be in separate sections of the document rather than in a table.</p> <p>The MMO notes that the Applicant has responded to the commercial fisheries related comments from the MMO (Table 2.2 D D2-REP2035-07 and D2-REP2035-08, REP3-069). The Applicant has said they remain engaged with commercial fisheries stakeholders, with the draft SoCG submitted at Deadline 1 for the NFFO and Welsh Fisheries Association (WFA) and that an updated SoCG will be submitted at Deadline 4.</p>
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#### Chapter 11 Marine Mammals (APP-048)

RR-047-65	<p>With regard to Section 4.2.3 – SW location – installation of single monopile, the MMO and Cefas note that the received SELss versus range (transect curve in Figure 3-5), which are now explicitly included and thus are proving (together with the levels 750 m in Section 4-1) an additional point of reference for the sense checking process, are showing relatively high noise levels, which are well within the values we would expect for sandy seabed environments (i.e., with good propagation conditions). In this scenario,</p>	<p>Following the impact piling modelling presented in the main report Appendix 11.1 Underwater Noise Assessment (APP-065), further investigation into scenarios using higher strike rates were identified for the monopile and pin pile scenarios. A piling hammer is capable of more rapid strikes at lower blow energies. To show the differences between the maximum strike rate scenario and the results presented in Section 4 of Appendix 11.1 Underwater</p>	<p>The MMO has no further comments to make at this time.</p>
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	<p>however, the MMO and Cefas would expect overall larger injury effect ranges for marine mammals (e.g., the maximum PTS (permanent threshold shift) ranges for the LF (low frequency) and VHF (very-high frequency) receptors could be 2-3 times larger). We note that these larger impact ranges seem to align well with the predictions presented in the draft MMMP document (Table 3.1 from the draft MMMP), where, for example, the maximum PTS ranges are 13 km for minke whale and 8.1 km for harbour porpoise, while corresponding ranges from the current Appendix 11.1 are 5.0 km and 3.3 km, respectively. The predicted impact ranges presented in the draft MMMP differ to those ranges presented in Appendix 11.1.</p>	<p>Noise Assessment (APP-065), additional modelling was completed for the SW location.</p> <p>Table 3.1 in the draft MMMP (APP-049) lists the worst-case impact ranges for the project based on the Maximum strike rate scenario listed in Appendix B of Appendix 11.1 Underwater Noise Assessment (APP065) and would be the worst-case impact range to be mitigated and therefore currently used in the assessments.</p>	
RR-047-66	<p>The MMO and Cefas note a minor discrepancy in the project description. Table 5.5 in Chapter 5 Project description states that the maximum pile diameter (m) for multi-legged pin piled jacket WTF/OSP foundations is 3 m, whereas the underwater noise modelling in Appendix 11.1</p>	<p>The Applicant considers the worst-case scenario presented in the underwater noise modelling assessment is appropriate. It is noted that the worst-case for underwater noise modelling considers the largest hammer energy, and the highest strike rate, and</p>	<p>The MMO is content with the Applicant's response and understands a higher diameter has been modelled and has no further comments.</p>

	considers a worst-case scenario of installing 5m diameter pin piles.	includes either three sequential monopiles or four sequential pin piles in a 24hr period. The underwater noise assessment report (Appendix 11.1 Underwater Noise Assessment (APP-065)) presented modelling for larger pile sizes (14m for monopile and 5m for pin piles) as the modelling was undertaken prior to a Project refinement whereby pile diameters were reduced to 12m for monopile and 3m for pin-piles. The modelling is therefore precautionary and encompasses the worst-case scenario. The Applicant commits to updated underwater noise modelling post-consent to inform the final MMMP once the selection of foundations have been made. This will inform the appropriate mitigation post consent alongside final design details.	
<b>Chapter 14 Shipping and Navigation (APP-051)</b>			
RR-047-67	MMO defers to the Maritime and Coastguard Agency and Trinity House on matters of shipping	The Applicant notes this response.	The MMO will continue a watching brief on these matters in relation to the DMLs, but

	and navigation and supports any comments raised. The MMO will continue to be part of the discussions relating to the securing any mitigation, monitoring or other conditions required within the DML.		these may be in separate sections of the document rather than in a table.
<b>Chapter 15 Marine Archaeology and Cultural Heritage (APP-052)</b>			
RR-047-68	The MMO defers to Historic England (HE) on matters of marine archaeology and supports any comments raised. The MMO will continue to be part of the discussions relating to securing any mitigation, monitoring or other conditions required within the DMLs.	The Applicant notes this response.	The MMO will continue a watching brief on these matters in relation to the DMLs, but these may be in separate sections of the document rather than in a table.
<b>Chapter 18 Seascape, Landscape and Visual Impact Assessment (APP-055)</b>			
RR-047-69	The MMO defers to NE as the SNCB (Statutory Nature Conservation Body), along with HE and the Local Planning Authorities on matters of Seascape, Landscape and Visual Impacts and supports any comments raised. The MMO will continue to be part of the discussions relating to securing any mitigation and monitoring or other conditions required within the DML.	The Applicant notes this response.	The MMO will continue a watching brief on these matters in relation to the DMLs, but these may be in separate sections of the document rather than in a table.
<b>Chapter 12 Offshore Ornithology (APP-049)</b>			
RR-047-70	The MMO defers to NE as SNCB, and supports any	The Applicant notes this response.	The MMO will continue a watching brief on these matters in relation to the DMLs, but

	comments raised in relation to the Ornithology. The MMO will continue to be part of the discussions relating to securing any mitigation and monitoring or other conditions required within the DML.		these may be in separate sections of the document rather than in a table.
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### 3. Comments on Applicant's Deadline 2 Submissions

#### 3.1 General Comments

3.1..1 The Applicant submitted a number of documents at Deadline 2. Following review of the updated documents provided at Deadline 2 the MMO has the following comments to make regarding REP2-021, REP3-013, REP2-013, REP2-011, REP2-015, REP2-027, APP-149, and REP2-026.

#### 3.2 Comments on the Outline Offshore Operation and Maintenance Plan (OOMP) (REP2-021)

3.2..1 The inclusion of an assessment of general maintenance work, especially that detailing protective coating repair/re-painting, is welcomed as an increase in microplastic emissions from offshore wind farms (e.g., flaking of antifouling paint and erosion of turbine blade leading-edge protection materials) could subsequently impact upon benthic receptors (Tagg et al., 2024; Piarulli et al., 2024).

3.2..2 Three new lines are added to Table 4.1 (page 15) referring to cable protection scenarios:

- (i) replacement or addition to protection installed during construction, and
- (ii) deployment of new areas of cable protection within 10 years of start of operations and
- (iii) new cable protection later than 10 years after the start of operations.

3.2..3 The Applicant indicates that only the last of these might require an additional licence. The table quotes the assumed permitted quantities of replacement cable protection based on 10% of that installed during construction. The MMO's current understanding is that if scenarios (i) and/or (ii) were to exceed the 10% assumption, then both (i) and (ii) would also require a new licence. The MMO requests that the Applicant clarifies this point in Table 4.1.

3.2..4 The MMO would like to note that they do not disagree with the Applicant's suggestions that the removal of guano will not require an additional licence, it should be noted that, any chemicals that are to be used in the removal or re-painting of the structures would require prior notification and approval prior to their use on the offshore wind farm. Table 4.1 also considers grout and corrosion works including cathodic protection inspection and re-grouting. These chemicals should also be notified including the likely frequency and volume of use. The MMO will provide an update on this week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that for chemicals this may be unlikely but will set out full justification as requested for the ExA.

3.2..5 The MMO welcomes the Applicant's consideration in Table 4.1 of the recovery of dropped objects. The Applicant may wish to note that any information on the composition and nature of these objects during incidents and/or if documented previously can make the assessment of responses/actions required at the time of pollution response easier.

3.2..6 The MMO has no additional comments on the OOMP and once the above clarification is included considers the matter closed.



### **3.3 Comments on the Outline Scour and Cable Protection Plan (OSCPP) (APP-152)**

3.3..1 The MMO notes that the exact requirements for scour protection are to be identified post-consent. It should be noted that concrete and fronded mattresses, some gabion baskets and mats etc., may use plastics. The MMO would like to see consideration of the use of plastic infrastructure when determining scour requirements, and whether better alternative materials can be used to minimise plastics in the marine environments and the impact of such plastic should it degrade.

3.3..2 The MMO notes there is not an outline Offshore Construction Method Statement and requests that a commitment is captured in the commitments register (REP1-094) (and that this is a certified document) that the use of plastic will be fully taken into account in the offshore Construction Method Statement. If this is added the MMO is content this comment is closed.

### **3.4 Comments on Environmental Statement Chapter 7 Marine Geology, Oceanography and Physical Processes (REP2-009)**

3.4..1 Tracked changes in the ES chapter 7 Marine Geology, Oceanography and Physical Processes include additional reference to UXO and potential clearance requirements. Paragraph 7.17 indicates that a separate licence will be sought for UXO clearance after later surveys, but assessment of the impacts is included in the ES, based on assumptions arising from other windfarm installations – the MMO considers that this is an appropriate strategy. The MMO also notes that deletion of the (former) paragraph 7.377 implies that UXO clearance has been added to cumulative impact assessment considerations, which is also appropriate.

3.4..2 The new section 7.6.2.9 represents the new impact assessment based on high-level estimates (i.e., non-specific location) of UXO clearance expectations. The estimates presented are reasonably detailed, with scales of crater and justified estimates of crater infilling times. The impact assessments are referred to the specified receptors – which are designated conservation areas several kilometres distant, as coastal processes within the site itself are not considered receptors – meaning that assessment of negligible significance is inevitable.

3.4..3 Given the high level assessment and the lack of known locations of UXO at this stage, the MMO notes that the Applicant does not state outright whether there are any specific locations of greater concern within the windfarm area (e.g., reefs or large, stable bed features) that could justify local impact assessment (the MMO assumes this means that there are no such areas, but it is not stated explicitly). The MMO requests the Applicant provides clarification on this point.

### **3.5 Comments on the Environmental Statement Chapter 9: Benthic Ecology – Revision 02 (REP2-013)**

3.5..1 The Applicant has amended Chapter 9 of the Environmental Statement to include a high-level assessment for UXO and notes that a separate marine licence application would be made once the scale of the requirement is understood (through detailed survey and layout refinements). Currently, the MMO agrees with this approach and has no further comments to add.





### **3.6 Comments on Environmental Statement Chapter 8 Marine Sediment and Water Quality (REP2-011)**

3.6..1 The Applicant has updated the ES Chapter 8 Marine Sediment and Water Quality for references to potential UXO clearance. Paragraph 8.16 indicates that the additions are on the same basis as those to ES Chapter 7. Section 8.6.1.4 contains the added impact assessment of suspended sediment increases due to UXO clearance. This is consistent with the assessment provided in updates to Chapter 7. The resulting assessment of minor adverse (insignificant) effects is also consistent with the other assessments within the ES. The MMO has no further comments to make.

### **3.7 Comments on Commercial Fisheries Technical Report Revision 2 (REP2-015)**

3.7..1 The MMO notes that in response to the NFFO's concerns that Appendix 13 Commercial Fisheries Technical Report at Deadline 2 (REP2-014 and REP2-015) will include further mapping of fishing grounds for commercial species which is welcomed. The Cefas advisor has reviewed this report and welcomes the informative approach to fisheries mapping presented.

3.7..2 The MMO agrees with the shellfish species listed within the area including Whelk (*Buccinum undatum*), King scallop (*Pecten maximus*), Queen scallop (*Aequipecten opercularis*), Nephrops (*Nephrops norvegicus*), Lobster (*Homus gamarus*) and Brown crab (*Cancer pagurus*).

3.7..3 Consultation with the Fishing stakeholders through the project is important to understand and confirm limited impact assumptions. The MMO will maintain a watching brief on any outstanding issues.

### **3.8 Comments on The Applicant's Comments on Written Representations – Revision 01 (Volume 9) (REP2-027)**

3.8..1 With regards to WR-096-23 and WR-096-137; the MMO's position remains that a seasonal piling restriction during the cod spawning season must be included on the DML. The seasonal piling restriction will provide appropriate mitigation to ensure that cod engaged in spawning activity will not be adversely impacted by underwater noise (UWN) arising from piling.

3.8..2 The MMO does not agree with the Applicant's comment under WR-096-23 that the UWSMS would be sufficient to secure the necessary mitigation measures to limit impacts on fish receptors without the need for an additional and therefore unnecessary dML condition. The UWSMS sets out the decision-making process on how steps will be taken to mitigate UWN during construction, but it does not provide any evidence to inform our decisions at the consenting stage.

3.8..3 In the absence of evidence that a piling restriction is not required, we must apply the precautionary principle and thus a piling restriction should be included as licence conditions when the DML is granted. The MMO also highlights that project design refinements, the use of noise abatement systems (NAS), and secondary mitigation measures outlined in the UWSMS do not necessarily guarantee that a seasonal piling restriction is not required. Further comments on the UWSMS are provided in section 3.10 of this letter.

3.8..4 With regards to WR-096-112, and WR-096-64, the MMO advises that it is important to consider the implementation of Noise Abatement Systems (NAS) proactively and





understands the Applicant is submitting further updates and commitments to MMMP and UWSMS at Deadline 4 and potentially as an additional submission prior to Deadline 5.

3.8..5 In regards to WR-096-107, the MMO confirms that the MMMP (REP2-018) has been appropriately updated to clarify this point.

- In relation to WR-096-110, the MMO does not require further action at this time, this point was raised to highlight awareness. While the EIA categorises the 3.3% population impact on harbour porpoises as "Low" magnitude, the absolute number of 2,037 individuals at risk of TTS is significant. TTS can impair their ability to communicate, navigate, and detect predators or prey, which are critical for their survival. Given other existing threats to harbour porpoises, the additional burden of noise-induced hearing loss should not be underestimated.

3.8..6 The MMO welcomes that low order clearance would be undertaken where possible in acknowledgment of the residual effects. Additionally, the recent policy papers on reducing marine noise published by DEFRA include an updated position statement on UXO clearance. The MMO notes the Applicant is providing further information and commitment in relation to the publication of these documents.

3.8..7 Regarding WR-096-111 and WR-096-112, the MMO welcomes that the Applicant will consider the suggestion made by the MMO regarding the use of Effective Deterrent Ranges (EDR) in future Marine Licences for UXO clearance. However, the MMO maintains its previous comments and recommendations.

### **3.9 Comments on the Draft Marine Mammal Mitigation Protocol (APP-149)**

3.9..1 The MMO does not currently have further comments to make regarding the updated Draft Marine Mammal Mitigation Protocol (MMMP). Appropriate updates and clarifications have been made to the document. The MMO understands the Applicant is submitting further updates and commitments to the MMMP at Deadline 4 and potentially as an additional submission prior to Deadline 5. The MMO is working with the Applicant to review this updates as soon as possible.

### **3.10 Comments on the Outline Underwater Sound Management Strategy (REP2-026)**

3.10..1 The MMO notes that section 9 of the Morecambe UWSMS outlines further (secondary) mitigation measures which could be implemented to reduce the magnitude of any residual effects (that cannot be fully mitigated by project design changes, or through primary mitigation measures) to a non-significant level.

3.10..2 The MMO is largely content with the principle of the Morecambe UWSMS approach (as this approach is also being explored for the Morgan (DCO/2022/00003) OWF project in consultation with the MMO). However, the MMO believes that unless project design refinements can significantly reduce or remove the likelihood of significant impacts occurring to cod from UWN from piling, then additional secondary mitigation measures (likely in the form of noise abatement systems (NAS)) will be required.

3.10..3 However, the MMO must highlight that the use of NAS does not automatically remove the requirement for a seasonal piling restriction. The MMO would expect the Applicant to present evidence in the form of UWN modelling, based on the refined project design parameters and the use of NAS, to determine whether there is still a risk of significant adverse impacts to cod. The MMO maintains that a temporal restriction on piling activities



during the cod spawning season (1st January – 30th April inclusive) is conditioned on the face of the DML, because the UWSMS does not make the necessary assurances or provide the acquired confidence at this stage that impacts to cod during their spawning season from UWN will be removed or reduced to an acceptable level.

3.10..4 The Morecambe OWF project has been developed in close consultation with the Morgan and Mona OWF projects. Both the Morgan and Mona OWF projects have provided evidence to the respective regulators (the MMO and Natural Resource Wales (NRW)) which has allowed the recommended cod spawning period to be evidentially refined to cover the 'peak' of Irish Sea cod spawning activity. It would be possible for the Applicant of the Morecambe project to do the same providing that appropriate evidence is provided. Details of the evidence required to refine the cod spawning period to the 'peak' of spawning activity is detailed in Section 3.11 of this letter. The MMO understands the Applicant is providing this information at Deadline 4 and the MMO is hopeful the agreed restriction period will be agreed by Deadline 5.

3.10..5 The MMO request: the following updates are made to the UWSMS:

- The spawning period for Irish Sea cod – this period is a known annual event which occurs regardless of project design changes. Until the Applicant provides suitable evidence for the cod spawning period to be refined to the 'peak' of spawning activity, then the cod spawning period should be captured as 1st January – 30th April, inclusive. These dates should be included in the Morecambe UWSMS to ensure that any secondary mitigation measures being adopted that have a temporal aspect to them are based on the correct spawning period.
- Further, the MMO requests that 'Temporal phasing' is removed as a secondary mitigation measure from the UWSMS. As we have requested that temporal licence conditions restricting piling during the cod spawning season should be applied on the face of the DML at the consenting stage. To be clear, all parties should note that a seasonal piling restriction is not the same as 'temporal phasing' as described in the UWSMS, in that a seasonal piling restriction refers to an explicit, legally binding and enforceable condition attached to the Applicant's deemed marine licence with which they must comply. 'Temporal phasing' on the other hand does not carry the same level of binding requirement as specific licence conditions and refers more to voluntarily considerate scheduling of activities around defined periods in time, with the importance of phasing more likely to be driven by equipment availability than the cod spawning period.
- The MMO requests adding a short paragraph under the noise abatement part of Section 9, for completeness which states that where NAS may be required to reduce significant noise disturbances with respect to spawning cod, the appropriate investigations will be undertaken which will include UWN modelling to demonstrate the achievable noise reductions relative to the technologies available with respect to the cod high and low intensity spawning grounds.

3.10..6 In line with what has been advised for the Morgan OWF project, which is also located in the Irish Sea, in our experience, mitigation measures in the form of licence conditions are recommended for implementation at the consenting stage. The decision to recommend mitigation in the form of a licence condition is based on the information provided in the



Applicant's Environmental Statement (ES), which is based on the maximum design scenario (MDS). It is commonplace for project design parameters to be refined post-consent, and requests are often made to reconsider whether mitigation measures are still necessary when taking into account the changes that have been made to the project. When this happens, a variation to the marine licence may be requested and new evidence is presented for review, such as revised underwater noise modelling based on the refined project parameters.

- However, the MMO welcomes the information within the Applicant's UWSMS to manage any further mitigation post consent. The MMO understands the need for flexibility by the Applicant. The MMO has proposed that rather than variation to remove the restriction that the UWSMS can be used to provide the evidence and detailed information post consent. The MMO has provided a condition below that provided assurance to ourselves that the impact will be avoided in the first instance (seasonal restriction) and if the Applicant wants to work in that period the UWSMS will be submitted with the additional mitigation options and evidence (in the form of modelling) and the MMO will provide written approval to work in this period.

#### *Underwater Sound Management Strategy*

1. *— No piling associated with the authorised development may be undertaken between XX to XX inclusive, unless otherwise agreed in writing by the MMO.*
2. *If activities are deemed necessary in this period and to confirm any additional mitigation requirements an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, must be submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.*
3. *The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.*
4. *The piling activities must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.*

3.10..7 This condition is the most up to date condition, XX has been included as the dates of the condition are still in discussion and will be refined by the end of Examination.

3.10..8 The MMO understands that at this stage no new information can be provided to the MMO to provide confidence that the seasonal restriction can be removed from the face of the DML. However, there is still an ongoing discussion in relation to the dates of the restriction and further information will be provided at Deadline 4.

3.10..9 The MMO has requested that the same licence condition restricting piling during the spawning season of Atlantic cod is included in the DML for Morgan OWF. This request is evidence-based and were informed by the Applicant's ES and MDS. This is a standard MMO position– if no/not enough evidence has been provided to provided confidence in a reduction or removal of a restriction, the restriction must remain on the face of the DML.

#### **3.11 Evidence Necessary for Refining the Recommended Piling Restriction During the Cod Spawning Season**





3.11..1 The Applicant in their Environmental Impact Assessment and their UWSMS stated that potential moderate adverse effects to spawning cod at the Irish Sea high and low intensity spawning grounds during the spawning period are predicted as a result of the Morecambe project works. For this reason and based on the evidence presented thus far, a full temporal restriction has been requested on the face of the DML to prevent UWN from piling from causing physiological harm to spawning cod. However, it may be possible to refine a piling restriction covering the whole of the cod spawning season – provided that the correct evidence is supplied to support refinement. This approach has been followed for the Morgan OWF project and is an option should the Applicant of the Morecambe OWF wish to pursue it. The MMO has discussed this with the Applicant and believes the Applicant is going to provide this information at Deadline 4.

3.11..2 Firstly, adequate modelling of the range of impact for physiological effects (mortality and potential mortal injury, recoverable injury, and temporary threshold shift (TTS), as per the pile driving threshold guidelines described by Popper et al. (2014) with regard to cod, must be provided. Cod are broadcast spawners with pelagic larvae so are not reliant on spatially-confined areas of particular seabed habitat for reproduction. This means that cod have the ability to move throughout their spawning grounds and undertake spawning, without their ability to spawn being impaired if they cannot reach a specific area or habitat due to excessive noise disturbances. The high and low intensity cod spawning grounds are quite extensive in the region, and therefore behavioural responses to UWN in cod are not a concern, as in theory, cod could move away from the affected area and spawn elsewhere within their spawning ground.

3.11..3 In this sense, the risks of physiological effects in cod from UWN are of greater concern and it is important that the range of impact from UWN based on the thresholds for Group 3 fish with high hearing sensitivity for mortality and potential mortal injury (207 cumulative sound exposure level cumulative sound exposure level (SELcum), recoverable injury (203 SELcum), and TTS (186 SELcum), as per the pile driving threshold guidelines described by Popper et al. (2014), are presented so that the physiological risks to cod can be properly assessed.

3.11..4 The Applicant should provide a discussion which draws on upon suitable peer-reviewed sources and data which provides supporting evidence that cod spawning activity peaks in February and March. For example, Ellis et al., (2012) denotes the cod spawning season as taking place from January to April inclusive, with peak spawning taking place in February and March. The Applicant should consult Maxwell et al., (2012) and Armstrong et al., (2012) to support their discussion of peak months for cod spawning in the Irish Sea. Maxwell et al., (2012) used ichthyoplankton survey data from 2008 for Irish Sea plaice, cod and haddock to estimate annual egg production during the 2008 spawning season using advanced generalized additive models (GAM).

3.11..5 As part of this study, spatial patterns of modelled and observed egg production (no. m<sup>-2</sup> day<sup>-1</sup>) for cod, based on survey data collected we presented in a ‘heat’ map format showing areas of higher/lower egg production within in the Irish Sea region. For cod, there were clear hot spots for egg production in the east and west Irish Sea. The authors also correlated spatial patterns of modelled and observed egg production with the timing of the ichthyoplankton surveys to examine when cod egg production for the 2008 spawning season peaked.



3.11..6 Armstrong et al., (2012) then summarised the results of applications of annual egg production methodologies (including those used by Maxwell et al.,) to estimate the spawning stock biomass of cod and other species in the Irish Sea in 1995, 2000, 2006, 2008 and 2010. Armstrong et al., (2012) expanded the GAM analyses to present the spatial patterns of daily egg production of cod (no. m<sup>-2</sup> day<sup>-1</sup>) for the years 2006 – 2010. Armstrong et al., (2012) also examines the seasonal patterns in egg production fitted by the GAM for spawning in the east and west of the Irish Sea. The authors note that the timing of spawning between the east and west tended to differ and the results of the analyses show considerable interannual variation in timing and level of productivity in cod egg production.

3.11..7 It should be noted that both studies recognise that egg production by Irish Sea cod has declined over time, with a sharp drop recorded 2010 (Armstrong et al., 2012) and the International Council for the Exploration of the Sea (ICES) advises there should be zero catch for Irish sea cod in 2025 when the maximum sustainable yield approach and precautionary considerations are applied (ICES, 2024). This indicates that the Irish Sea cod stock is already under pressure. Maxwell et al., (2012) and Armstrong et al., (2012) are appropriate sources for informing discussions on temporal refinement of the recommended piling restriction but given the age of these publications, it would strengthen the Applicant's position for a refinement if updated data were presented in a similar format.

3.11..8 This data may take the form of ichthyoplankton data for the Irish Sea to indicate areas of higher or lower cod larval abundance, or Northern Irish Ground Fish data (NIGFS) which could be filtered to separate out female cod caught within each trawl per year and the maturity classes of interest (spawning and spent fish) taken as a subset to characterize where spawning-ready and post-spawning adult female cod are located. The MMO recommends the Applicant contact the Agri-Food and BioSciences Institute (AFBI) in Northern Ireland to find out what survey data is available for this purpose.



## 4. Comments on the Applicant's Deadline 3 Submissions

### 4.1 Comments General Comments

4.1.1 Dd The MMO notes the Applicant has submitted a number of updated documents at Deadline 3 including:

- REP3-004 4.8 Planning, Development Consent and Need Statement - Revision 03 (Volume 4) (Clean)
- REP3-005 4.8.1 Planning, Development Consent and Need Statement - Revision 03 (Volume 4) (Tracked)
- REP3-012 Morecambe Offshore 5.1.7 Environmental Statement Chapter 7 Marine, Geology, Oceanography and Physical Processes - Revision 04 (Volume 5) (Clean)
- REP3-013 5.1.7.1 Environmental Statement Chapter 7 Marine Geology, Oceanography and Physical Processes - Revision 04 (Volume 5) (Tracked)
- REP3-014 5.1.9 Environmental Statement Chapter 9 Benthic Ecology - Revision 03 (Volume 5) (Clean)
- REP3-015 5.1.9.1 Environmental Statement Chapter 9 Benthic Ecology - Revision 03 (Volume 5) (Tracked)
- REP3-016 5.1.10 Environmental Statement Chapter 10 Fish and Shellfish Ecology - Revision 03 (Volume 5) (Clean)
- REP3-017 Morecambe Offshore Windfarm Ltd 5.1.10.1 Environmental Statement Chapter 10 Fish and Shellfish Ecology - Revision 03 (Volume 5) (Tracked)
- REP3-018 Morecambe Offshore Windfarm Ltd 5.1.13 Environmental Statement Chapter 13 Commercial Fisheries - Revision 02 (Volume 5) (Clean)
- REP3-019 Morecambe Offshore Windfarm Ltd 5.1.13.1 Environmental Statement Chapter 13 Commercial Fisheries - Revision 02 (Volume 5) (Tracked)
- REP3-020 Morecambe Offshore Windfarm Ltd 5.1.14 Environmental Statement Chapter 14 Shipping and Navigation - Revision 02 (Volume 5) (Clean)
- REP3-021 Morecambe Offshore Windfarm Ltd 5.1.14.1 Environmental Statement Chapter 14 Shipping and Navigation - Revision 02 (Volume 5) (Tracked)
- REP3-036 Morecambe Offshore Windfarm Ltd 5.3.7 Environmental Statement Chapter 7 Marine Geology, Oceanography and Physical Processes Figures - Revision 03 (Volume 5)
- REP3-040 Morecambe Offshore Windfarm Ltd 5.5.1 Schedule of Mitigation - Revision 03 (Volume 5) (Tracked)
- REP3-041 Morecambe Offshore Windfarm Ltd 6.2 Outline Project Environmental Management Plan - Revision 03 (Volume 4) (Clean)
- REP3-042 Morecambe Offshore Windfarm Ltd 6.2.1 Outline Project Environmental Management Plan - Revision 03 (Volume 4) (Tracked)
- REP3-043 Morecambe Offshore Windfarm Ltd 6.3 Outline Fisheries Liaison and Co-Existence Plan - Revision 02 (Volume 6) (Clean)
- REP3-044 Morecambe Offshore Windfarm Ltd 6.3.1 Outline Fisheries Liaison and Co-Existence Plan - Revision 02 (Volume 6) (Tracked)
- REP3-045 Morecambe Offshore Windfarm Ltd 6.4 In Principle Monitoring Plan - Revision 02 (Volume 6) (Clean)





- REP3-046 Morecambe Offshore Windfarm Ltd 6.4.1 In Principle Monitoring Plan - Revision 02 (Volume 6) (Tracked)
- REP3-060 Morecambe Offshore Windfarm Ltd 9.25 Marine Mammal Technical Note 1 (EIA) - Revision 02 (Volume 9) (Clean)
- REP3-061 Morecambe Offshore Windfarm Ltd 9.25.1 Marine Mammal Technical Note 1 (EIA) - Revision 02 (Volume 9) (Tracked)
- REP3-062 Morecambe Offshore Windfarm Ltd 9.26 Marine Mammal Technical Note 2 (HRA) - Revision 02 (Volume 9) (Clean)
- REP3-063 Morecambe Offshore Windfarm Ltd 9.26.1 Marine Mammal Technical Note 2 (HRA) - Revision 02 (Volume 9) (Tracked)
- REP3-068 Morecambe Offshore 9.41 The Applicant's Response to ExA's Written EN010121 – Morecambe Offshore Windfarm Generation Assets Examination Library Document Index Windfarm Ltd Questions 1 - Revision 01
- REP3-069 Morecambe Offshore Windfarm Ltd 9.42 The Applicant's Comments on Deadline 2 Submissions by Interested Parties - Revision 01 (Volume 9)

4.1..2 At this time the MMO has no comments to raise regarding REP3-006, REP3-007, REP3-009 REP3-013, REP3-012, REP3-014, REP3-015, REP3-016, REP3-016, REP018, REP3-019, REP3-039, REP3-40, REP3-042, REP3-041, REP3-049, and REP3-048 as these are minor updates to the documents.

4.1..3 The MMO is currently reviewing REP3-043, REP3-044, REP3-046, REP3-045, REP3-060, REP3-061 REP3-068, REP3-069 and may provide further comments in due course. The MMO notes that these documents may be updated further at Deadline 4 and as an additional submission following meetings with the MMO and SNCB. The MMO will provide comments on the latest version of the documents.



## 5. Comments on the Draft DCO and DML

5.1..1 The MMO provided comments regarding the draft DCO and DML in section 3.2 of its submission for Deadline 3 (REP3-085). The MMO notes that the Applicant has provided further comments in response to comments raised by the MMO's Deadline 2 response regarding the draft DCO and DML in the Applicant's Deadline 3 submission (REP3-069). The MMO believes further information will be provided by the Applicant at Deadline 4 in response to REP3-085.

5.1..2 The MMO will review the Applicant's response and provide further comments direct to the Applicant and to the ExA as an additional submission week commencing 03 March or at Deadline 5. The MMO and the Applicant had a meeting on 14 February to discuss the SoCG and DCO/DML matters and are aiming to get everything that will be agreed by Deadline 5. The MMO would highlight that there is likely to be a number of matters not agreed – material impact.

5.1..3 This will likely be:

- Transfer of Benefit
- Force Majeure
- MMO Determination date
- Chemical requirements
- Decommissioning requirements
- Adaptive management





## 6. Comments on Deadline 3 Submissions from Other Stakeholders

### 6.1 Joint Nature Conservation Committee (JNCC) (REP3-082)

6.1..1 The MMO notes that JNCC has concerns that the draft MMMP would not sufficiently reduce the risk of injury from piling noise and that the MMMP is not sufficient to support the conclusions of the Report to Inform Appropriate Assessment conclusions and have requested further consideration of the MMMP.

6.1..2 The MMO defers to the Statutory Nature Conservation Body (JNCC and NE) with regards to matters relating to designated sites.

6.1..3 The MMO will review any updates made to the draft MMMP and provide comments where required.

### 6.2 Natural England (REP3-091)

6.2..1 The MMO notes that there are major/complex comments raised by NE regarding the UWSMS. NE advises that the UWSMS does not address the need for additional mitigation measures and that the UWSMS should contain a commitment to the use of NAS to mitigate residual impacts.

6.2..2 The MMO has noted that NAS must be used proactively and understands the Applicant is updating documents on the back of further discussions with NE.

6.2..3 NE has also drawn attention to the publication of DEFRA's new measures to curb underwater noise and accelerate renewable energy. The MMO has also highlighted these documents.

### 6.3 Corporation of Trinity House (TH) Deptford Strond (REP3-100)

6.3..1 The MMO notes TH has requested that Schedule 6, Part 2, Paragraph 6 (Colouring of structures) sub-paragraph (1) is amended. The MMO is in support of this request.



## 7. Response to Rule 17 Letter

Reference	Question to	Question	MMO Response
R17.1.1	Natural England (NE) Marine Management Organisation (MMO)	<p><b>Written Ministerial Statement of 29 January 2025 and associated guidance documents</b></p> <p>NE and the MMO are invited to make comments on the following:</p> <ul style="list-style-type: none"> <li>• the Written Ministerial Statement number UIN HCWS394</li> <li>• the DESNZ guidance on 'Strategic compensation measures for offshore wind activities: Marine Recovery Fund interim guidance'</li> <li>• the Defra Policy Paper 'Reducing Marine Noise'</li> <li>• the JNCC 'Guidelines for minimising the risk of injury to marine mammals from unexploded ordnance (UXO) clearance in the marine environment'.</li> </ul> <p>insofar as they may affect the consideration of the Proposed Development.</p> <p>Could NE and MMO respond both generally and with particular reference to:</p> <ul style="list-style-type: none"> <li>• Unexploded Ordnance</li> <li>• Permanent Threshold Shift</li> <li>• Offshore wind piling noise limit.</li> </ul>	<p>In relation to Morecambe the MMO understands that there is a disagreement on the need for compensation and the Assessment conclusions. The MMO defers to NE on these matters. However, the MMO notes the Applicant has provided a without prejudice compensation position which is in line with the guidance. This does reference the MRF as an option should compensation be included but this would be agreed at the post consent stage as other project specific options are also retained, which is in line with expectations and current practice. The MMO would highlight that the MRF does not currently include a compensatory measure for Red Throated Diver and this should be reflected within the documents.</p> <p>The MMO notes that UXO is not included within the DCO and that a new Marine Licence will be applied for post consent. The MMO is content with this approach, as this is the best way for UXO's to be licenced.</p> <p>The MMO notes the Applicant is reviewing the policies and papers in relation to UWN and updates will be provided at Deadline 4. The MMO will provide any comments to the ExA on these updates at Deadline 5 and will continue working with the Applicant to enable any updates to be included in documents submitted at Deadline 5.</p> <p>In relation to piling the expectation is that NAS will be committed to as the primary mitigation and further evidence should be provided at this stage on the use of NAS.</p> <p>In relation to UXO (Defra policy Paper - <a href="#">Marine environment: unexploded ordnance clearance Joint Position Statement</a>) the MMO notes the main update for UXO is that low order tools will be used as standard and high order will only be used in exceptional circumstances. There is also a two-step licensing approach, this means there is a requirement for the UXO investigations licence to be completed prior to submission of the UXO clearance licence.</p>

		<p>The Applicant will need to plan this within their programming. In addition to this</p> <p>In relation to JNCC 'Guidelines for minimising the risk of injury to marine mammals from unexploded ordnance (UXO) clearance in the marine environment', the MMO would expect the Applicant to review this as part of the submission to the MMO for the separate UXO marine licence. The MMO has not further comments on Permanent Threshold Shift.</p> <p>In relation to the Offshore wind piling noise limit, the MMO notes DEFRA is leading this project and it is at the early stages as consultation is the next step. If any changes are implemented that impact the conditions set out within the DML then the MMO will discuss this with DEFRA and DESNZ to understand if a review of consents is required at the time of any new guidance. The MMO notes that if NAS is utilised there may not be a requirement to change any DML. Until further information on the limits is provided the MMO cannot provide further comments.</p>
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R17.1.2	MMO	<p><b>Outstanding information</b></p> <p>The MMO is asked to ensure that all responses which were stated as being provided either by Deadline 4 or “in due course” are provided at Deadline 4. Should information not be provided at Deadline 4, a full explanation as to why this is the case must be provided at Deadline 4 and a specific date given for provision. Please note the comments in the covering letter.</p>	<p>The MMO has provided updates to previous responses throughout this letter. Where an update has not been provided, the MMO has been specific about which deadline this will be submitted at. The MMO understands the ExA has requested no updates to documents by the Applicant after Deadline 5 so all parties can comment on these updates. The MMO understands the need to comment on the documents but notes that there is over a month between Deadline 5 and Deadline 6 and this is valuable time to continue to resolve issues with the Applicant. These may require additional updates to the documents at Deadline 6.</p> <p>The MMO would highlight that there are a number of NSIPs (offshore wind farm projects and other industries) in Examination at this time and even with the Rule 6 requests of staggering deadlines and working with other ExAs there are a number of overlapping deadlines. Capacity for all interested parties is limited and the MMO had to make the decision to stagger responses to enable case teams and our scientific advisors the time to effectively provide a detailed response. The MMO also made the decision that attendance at ISH was not required – as this is a written process the MMO would utilise the written process as the main priority. The MMO understands that any delay impacts the ExA’s understanding, but the position interested parties in at this time means this is the only option. Reducing Examination further causes additional impacts to the capacity.</p> <p>The MMO is working closely with the Applicant to agree as much as possible as soon as possible but would also highlight that a lot of the technical issues have been outstanding since prior to submission.</p>
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R17.1.3	MMO	<p><b>Disposal site(s)</b></p> <p>The MMO response to the Applicant's response RR-047-47 says that the MMO is "currently working to designate disposal sites and will provide further comments in due course". A full update should be provided at D4, including the extent of any proposed designated sites.</p>	<p>The MMO and the Applicant had a meeting on 14 February, the MMO received a shape file of the red line boundary (assessed disposal site area) after this meeting and is reviewing all information and working with our scientific advisors to designate the disposal site. The MMO is aiming to receive confirmation early March and will provide the reference number to the Applicant to be updated in the disposal conditions on the DML for Deadline 5.</p>
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R17.1.4	MMO	<p><b>In Principle Management Plan [REP3-045]</b>  Bearing in mind the MMO's current timetable for its standardisation project, what further information would the MMO like to see included within the In Principle Management Plan, other than a general commitment to ensuring that any standards or best practice adhered to during monitoring are outlined clearly within the relevant monitoring reports? Please be as specific as possible.</p>	<p>The MMO would like to see a clear commitment to ensuring that any standards or best practice will be adhered to during monitoring in the IPMP. Any standards will be accepted by industry through the project so all future submissions would be required to follow the same approach and the MMO is just asking that this is highlighted within the IPMP.</p> <p>The MMO understands the Applicant is going to update the IPMP and will review the updates and discuss any changes required prior to Deadline 5.</p>
R17.1.5	MMIO	<p><b>MMO Response to ExQ1 BEM24</b>  The MMO [REP2-035] has indicated that, whilst an Underwater Sound Management Strategy [REP2-026] has been provided, a condition limiting piling during the cod spawning period is still necessary, and that MMO will supply updated wording 'in due course'. Please ensure that this is submitted at Deadline 4 or equivalent wording to inform the Underwater Sound Management Strategy.</p>	<p>The MMO has provided further comments including a condition regarding the Underwater Sound Management Strategy in Section 3.10 of this letter.</p> <p>The MMO has included XX as the dates as these are still in discussion with the Applicant in relation to the refinement of these. The MMO understands the Applicant is provided evidence set out in Section 3.11 above at Deadline 4.</p> <p>Once the agreement has been provided then the dates can be updated within the condition.</p> <p>As above there is a disagreement with the Applicant on the requirement for the restriction on the Face of the DML – this will likely be a 'Not agreed – material impact' at the end of examination.</p>

			<p>Until suitable evidence is provided to provide confidence to remove the restriction (the MMO understands this will not be possible by the end of the Examination), the restriction must remain on the face of the DML as the main form of avoidance/mitigation of impacts to cod.</p>
R17.1.6	NE	<p><b>Unexploded Ordnance Assessment</b>  In NE's Risk and Issues log [REP3-093] at reference RE_E11 the UXO assessment remains outstanding. The Applicant indicates that the UXO clearance will be dealt with outside the DCO process. Consequently, NE is requested to give its position as to whether at this stage sufficient information has been provided in light of the recent Guidance (see R17.1.1).</p>	<p>The MMO notes that this question is directed to NE and will not be providing a response.</p>

R17.1.7	NE and MMO	<p><b>Thresholds for the onset of behavioural responses</b></p> <p>NE's Risk and Issues log [REP3-093] in D40 notes that the dose-response curve approach has not been used to determine the number of common dolphin impacted at White Cross. This is contrary to what is stated in Paragraph 11.760. The approach used (TTS) is not sufficiently precautionary for a disturbance impact and is not consistent with how the other projects in the area have been assessed.</p> <p>NE and the MMO are requested to provide further information in light of the Applicant's view that the assessment is sufficiently precautionary.</p>	<p>The MMO does not consider it appropriate to use TTS onset thresholds as a proxy for disturbance and maintains the original comments and recommendations (see REP1-096, Section 2, Table 1, RR-047-32).</p> <p>The MMO notes that for quantifying the risk of behavioural responses, assessments may apply dose-response curves for proximity to the sound source and received sound level. Approaches based directly on the "distance of effect" reported for in situ behavioural studies (e.g., Merchant et al., 2018) can also be used as an empirical estimate of the risk of behavioural responses (Gomez et al., 2016), provided that the sound level of the noise source in the cited study is not substantially exceeded in the assessment scenario. Similarly, the SNCB guidance (JNCC, 2020) lays out advice on the assessment of significant disturbance in UK SACs for harbour porpoise. The advice is to use fixed disturbance distances (in the form of EDRs) for different activities, based on empirical evidence. These EDRs could also be used in impact assessments in the absence of more bespoke scientific evidence for the species and noise source concerned. Since harbour porpoise are relatively skittish and sensitive to underwater noise, the EDRs are likely to be conservative for other marine mammal species and are therefore a suitably precautionary option in the absence of other data (unlike using TTS as a proxy for disturbance).</p>
R17.1.8	MMO	<p><b>Draft Marine Mammal Mitigation Protocol and outline Underwater Sound Management Strategy</b></p> <p>Please provide your comments on the draft Marine Mammal Mitigation Protocol [REP2-018] and outline Underwater Sound Management Strategy [REP2-026] and how these will interact with each other.</p>	<p>The MMO does not currently have further comments to make regarding the updated draft MMMP. The MMO have provided comments regarding the outline Underwater Sound Management Strategy (REP2-026) in Section 3.10 of this letter.</p> <p>However, the MMO notes the Applicant is due to submit updated versions of these documents either at Deadline 4 or as an additional submission prior to Deadline 5. The MMO has requested early sight of these documents to be able to provide further comments with the aim of agreeing the detail for Deadline 5.</p>



R17.1.9	NE	<p><b>Effects on Red Throated Diver</b></p> <p>Please set out an explanation for the 10km buffer from the edge of the original Liverpool Bay SPA boundary for the effects on Red Throated Diver, and explain why any lesser distanced buffer would not be acceptable given that Red Throated Divers have been noted within 10km of existing windfarms.</p>	<p>The MMO notes that this question is directed to NE and will not be providing a response.</p>
R17.1.10	MMO	<p><b>Article 7: Benefit of Order</b></p> <p>The Marine and Coastal Areas Act 2009, and in particular Part 4 which deals with Marine Licences, is relevant. Section 113 of that Act is under the heading “the appropriate licensing authority” and determines who is the appropriate licensing authority for any given area. Subsections (2), (4) and (6) deal with Scotland, Wales and Northern Ireland waters respectively, and subsection (8) sets out “In relation to any area not mentioned in subsection (2), (4) or (6), the appropriate licensing authority is the Secretary of State. Please could the MMO indicate whether its powers in respect of licensable activities were transferred from the Secretary of State or whether it acts under delegated powers from the Secretary of State.</p>	<p>As per the Explanatory Memorandum <a href="https://www.legislation.gov.uk/ukxi/2015/1674/pdfs/ukxiem_20151674_en.pdf">https://www.legislation.gov.uk/ukxi/2015/1674/pdfs/ukxiem_20151674_en.pdf</a> (the MMO can add this as a PDF if required by the ExA), the MMO acts under delegated powers from the secretary of state in respect of licensable activities.</p>

R17.1.12	MMO	<p><b>Deemed Marine Licence</b></p> <p>The MMO has indicated a desire for a condition 7(1) relating to all chemicals and substances used below MHWS.</p> <p>The MMO is asked to explain:</p> <ul style="list-style-type: none"> <li>• why such a provision is necessary, noting it has not been requested on recent examinations</li> <li>• why it requires ten weeks in which to make any approvals (this needs to be fully justified, setting the MMOs internal procedures involved)</li> <li>• whether it would be possible to set out a schedule of materials that, for want of a better expression, have deemed approval and if so could this please be provided.</li> </ul>	<p>The MMO will provide an update on this week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that for chemicals this may be unlikely but will set out full justification as requested for the ExA.</p>
R17.1.13	MMO	<p><b>Deemed Marine Licence</b></p> <p>The MMO has indicated that it is looking for revised drafting for condition 7(10) in respect of dropped objects. Could this please be provided at D4.</p>	<p>The MMO has agreement from MCA on the following wording, noting the telephone number stated in (a) is to be confirmed:</p> <p><i>(7) (10) (a) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (add number), and the UK Hydrographic Office email: <a href="mailto:navwarnings@btconnect.com">navwarnings@btconnect.com</a>.</i></p> <p><i>(b) All dropped objects including those in (a), must be reported to the MMO using the Dropped Object Procedure Form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker</i></p>

			<p><i>becoming aware of an incident, unless otherwise agreed in writing with the MMO.</i></p> <p><i>(c) On receipt of notification or the Dropped Object Procedure Form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.</i></p> <p>The MMO is currently reviewing the Dropped Object Procedure and there is a potential of a change of wording to align with Marine Directorate - <a href="https://www.gov.scot/publications/offshore-renewables-accidental-deposit-of-an-object-at-sea-form-and-guidance/">https://www.gov.scot/publications/offshore-renewables-accidental-deposit-of-an-object-at-sea-form-and-guidance/</a> (The MMO can PDF this webpage if requested by the ExA). This change shouldn't alter the requirement by the Applicant or any changes to the DML as (b) identifies what should be submitted it would just be a change in wording.</p> <p>The aim of this update is to ensure that reports must be made no later than 6 hours after the incident has been discovered for more major 'deposits' i.e. those that may be hazardous to shipping and within 24 hours of the incident being discovered in all other cases. A defined list of major deposits cannot be provided due to the nature of the activity. If the Project is in doubt whether an object is a danger/hazard to navigation then we would encourage them to assume it is and report it within 6 hours as per the condition.</p>
R17.1.14	MMO	<p><b>Deemed Marine Licence</b></p> <p>Please can the MMO look at its response at D3 [REP3-085] pdf page 70. In paragraphs 3.2.18 to 3.2.28. There are a couple of references to condition 19 in Schedules 3 and 4. Give Schedules 3 and 4 do not relate to the marine licence, what is this referring to?</p>	<p>The MMO has reviewed paragraphs 3.2.18 to 3.2.28 of its Deadline 3 response (REP3-085). Reference to condition 19 in Schedule 3 and 4 was made in error. This should have been reference to Schedule 6, part 2, condition 8 Force Majeure.</p>

R17.1.15	MMO	<p><b>Deemed Marine Licence</b></p> <p>Condition 8 deals with Force Majeure. At D2 the MMO indicated it would respond further at D3, but no response was received. Could you please confirm its position either way, and if you are not content please review the recording from the hearing and provide a response.</p>	<p>The MMO provided further comments regarding Condition 8 within Section 3.2 (3.2.18 to 3.2.28) of its Deadline 3 Response (REP3-085). Please note condition 8 was mistakenly referred to as condition 19 in paragraphs 3.2.18 to 3.2.28 of REP3-085.</p> <p>The MMO maintains its position regarding Force Majeure, and does not consider it necessary to be included within the DML. The MMO will review the Applicant's response to REP3-085 and continue discussions with the Applicant. However, the MMO believes this will likely be 'not agreed – material impact' at the end of Examination.</p>
R17.1.16	MMO NE	<p><b>Deemed Marine Licence</b></p> <p>In condition 9(1)(c) there is a reference to a four month prior approval period. The MMO and NE are asked to justify why they each need a six month period. This needs to be fully justified, setting out the MMOs and NE's internal procedures involved.</p>	<p>The MMO notes the Applicant has agreed to a six month approval period as set out in Section 1, Table 1, 1DCO7, above therefore has not provide further comments on this response.</p> <p>The MMO is still discussing some of the other documents that are set at four months and will provide further comments at Deadline 5 if this is still a concern.</p> <p>The MMO still maintains a major concern on Condition 10(2) as set out in Section XX of this document.</p>
R17.1.17	MMO NE	<p><b>Deemed Marine Licence</b></p> <p>Please could the MMO confirm either way whether the current drafting of condition 9(1)(e) is satisfactory. If not, please explain why, providing alternative wording.</p>	<p>The MMO is largely in agreement with the wording, however, is providing further information in relation to chemical assessments (as per R17.1.12) which links with 9(1)(e)(ii) – confirmation will be provided week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO will work with the Applicant to try and agree a position for Deadline 5. The MMO does note that for chemicals this may be unlikely but will set out full justification for each update required.</p>

R.17.1.1 8	MMO	<p><b>Deemed Marine Licence</b></p> <p>A number of conditions suggested by the MMO include the phrase “unless otherwise agreed in writing by the MMO”. In light of the High Court decision in <i>Midcounties Co-operative Ltd v Wyre Forest DC</i> [2009] EWHC 964 the MMO is asked to justify why this wording is required in each case. Examples include conditions 14 and 20.</p>	<p>The MMO is still considering the High Court decision and will provide any comments or updates week commencing 03 March as part of an additional submission. The MMO notes the ExA may not accept an additional submission and if so the information will be provided at Deadline 5. However, the MMO note the Applicant also agrees with the flexibility of this wording.</p> <p>The MMO believes the inclusion of ‘<i>unless otherwise agreed in writing by the MMO</i>’ allows flexibility post consent in relation to the submission timescales and information within documents. This is currently set out in Conditions 2(4), 7(1), 9(1)(c), 10, 14, 15, 16 and 20.</p> <p>The reason for this inclusion is not to change the agreed parameters within the DML or approve more than has been assessed at the post consent stage, but to allow for flexibility in processing or as part of the discussions in relation to the MMO’s regulatory duties in discharging documents. This provides a clear audit of any decisions or changes to the specified wording – rather than a full variation being required. All documents have a requirement for consultation but on occasion this has been short notice as issues have occurred during construction or while conducting surveys. Another example could be due to weather and Health and Safety impacts the survey was due to take place 1 March within the approved document but this couldn’t start and the MMO in consultation with relevant interested parties could decide that it was ok to start 5 March.</p> <p>The MMO requests if the ExA requires any further clarification on this matter that another questions is provided with specifics.</p>
R17.1.19	MMO	<p><b>Deemed Marine Licence</b></p> <p>The MMO has indicated it will provide an update to condition 15(1) in due course. Please provide a full response by Deadline 4.</p>	<p>The MMO is still in discussion with SNCBs in relation to the condition and the standard agreed condition is unlikely to be ready within this Examination. Due to this the MMO raised this within the meeting with the Applicant on 14 February. The MMO has requested within the first 4 piles 2 piles to be the worst case scenario and is awaiting further information from the Applicant on this request. The MMO would note that this request has been discussed on the Morgan OWF project. Although they cannot do</p>

			the first four piles further discussion has been undertaken and as they have 16 worst case piles identified they have agreed to monitor the first two of these piles. The MMO notes that this is slightly different to the Applicant's project but hopes to continue the discussion with the aim to agree any changes by Deadline 5.
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Yours sincerely,

[Redacted Signature]

Victoria Hindmarsh  
Marine Licensing Case Officer

D [Redacted]  
E [Redacted] [@marinemanagement.org.uk](mailto:[Redacted]@marinemanagement.org.uk)

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## 9. Annex 1

9.1 The Underwater Noise policy below has been submitted into examination to inform both the Applicant and the ExA. The policy has been taken from <https://www.gov.uk/government/publications/reducing-marine-noise/reducing-marine-noise>.

### The issue

Our seas are becoming increasingly busy. They support our fisheries, tourism, and shipping industries, as well as being a crucial source of renewable energy.

Our seas are also home to diverse and precious marine life including a breadth of marine mammals that play a vital role in maintaining a healthy ecosystem. This includes 28 species of cetacean which have been recorded in the UK. Twelve are regularly seen, including:

- harbour porpoise
- bottlenose dolphin
- killer whale
- humpback whale

We are home to around 38% of the global population of grey seals and up to an estimated 449,000 harbour porpoise. As such, the UK government has pledged to protect the marine environment.

Marine mammals are facing a range of pressures. A key concern is the level of noise generated from a range of human activities including:

- pile driving for offshore wind farm foundations
- seismic surveys
- the detonation of unexploded ordnance from the seabed
- shipping

There is also a growing recognition that noise is impacting upon a wide range of other species, including fish and invertebrates.

In May 2023, international experts came together in a [call for governments to take action to reduce man-made noise in our oceans](#).





# What we mean by 'marine noise'

Natural sound is an important cue within the marine environment. It is used by animals to:

- navigate
- communicate
- find food
- locate mates
- avoid predators

Sounds made by human activities, here referred to as 'marine noise', are increasing and can interfere with or obscure the ability of marine animals to hear natural sounds.

Marine noise is made up of impulsive and continuous noise.

## Impulsive noise

Impulsive noise is characterised by sounds of short duration and high peak sound pressures (levels) across a broad frequency range. They can be generated by certain human activities such as:

- geophysical surveys
- impact pile driving
- active sonar
- acoustic deterrent devices
- explosive use

## Continuous noise

Continuous noise refers to sounds of long duration in the marine environment, such as shipping or the operation of wind turbines.

Both impulsive and continuous noise have the potential for negative effects on marine mammals.



The UK government's ambition is to be a global leader in managing and reducing marine noise. We want UK waters to be a safe haven for the wealth of marine mammals and noise sensitive species that are resident in our seas.

## The UK's commitments

The UK government has pledged to protect the marine environment and has made a number of commitments.

We have a target to restore at least 70% of protected features in relevant Marine Protected Areas to a favourable condition by 2042, with the rest in a recovering condition under the [Environmental Targets \(Marine Protected Areas\) Regulations 2023](#). For marine noise, to maintain favourable conditions in harbour porpoise Special Areas of Conservation, we aim to keep noise disturbance below set thresholds.

Under the [Marine Strategy Regulations 2010](#), we are required to take the necessary measures to achieve or maintain Good Environmental Status in UK waters. This includes achieving Good Environmental Status for underwater noise by reducing both impulsive and continuous noise to levels that do not adversely affect populations of marine animals, as laid out in the [UK Marine Strategy](#).

As the UK is a contracting party to the [Convention for the Protection of the Marine Environment of the North-East Atlantic \(OSPAR\)](#), we have commitments to reduce anthropogenic underwater noise to levels that do not adversely affect the marine environment as set out in the [North-East Atlantic Environment Strategy 2030](#).

More recently, the [Kunming-Montreal Global Biodiversity Framework](#) was adopted in 2022. It sets out an ambitious pathway to reach the global vision of a world living in harmony with nature by 2050. One target is to reduce the negative impact of pollution from all sources by 2030 to levels that are not harmful to biodiversity and ecosystem functions and services. Noise is considered to be a source of marine pollution.

We have ambitious targets to meet and therefore are setting out here Defra's ongoing work and upcoming plans to minimise noise in our seas.



## What we have done so far

Across the UK, we are taking action to tackle marine noise.

### Managing noise in harbour porpoise Special Areas of Conservation in England, Wales and Northern Ireland

The UK government is committed to ensuring an ecologically coherent and well-managed network of Marine Protected Areas. This means working to ensure the conservation objectives for each protected area are met. The UK has seven Special Areas of Conservation for harbour porpoise, the species often regarded as the most sensitive to marine noise.

To support the existing licensing regime for regulated activities, [guidance](#) was published by our statutory nature conservation bodies (SNCBs) in 2020. The guidance introduced noise disturbance thresholds in harbour porpoise Special Areas of Conservation in England, Wales and Northern Ireland and recommended Effective Deterrent Ranges representing the spatial extent of harbour porpoise disturbance from different noisy activities. Recent scientific evidence shows that adherence to the noise disturbance thresholds should avoid a potential adverse effect on the integrity of the protected area.

To maintain the habitat, it is essential that all licensing authorities and industries work together, and industry operates in line with their licence conditions and the mitigation hierarchy to avoid, reduce and mitigate impacts. This includes industries working together to consider the noise they are producing, both individually and collectively, to ensure noise levels do not breach the thresholds.

### Preventing harmful blasts at sea

After both World Wars, large numbers of explosives were left undetonated in the marine environment. An increase in marine development is leading to greater detail on the location of these unexploded ordnance (also termed UXO) which need to be cleared to protect human life and infrastructure.

UXO clearance has previously been undertaken through high order detonation. The resulting blast can produce high levels of energy which can result in considerable impacts on the marine environment, including seabed damage, and injury and disturbance to marine species from the associated noise.



In 2021, Defra worked together with devolved governments, licensing authorities and SNCBs to provide the first UK government Joint Position Statement on minimising environmental impacts from UXO clearance. In 2024, a revised [Joint Position Statement](#) was published that set out stricter expectations in relation to high order detonations. The Joint Position Statement and its associated guidance should be considered ahead of any marine licence application related to UXO clearance from the seabed.

There are low noise alternatives to high order detonation that are safe, commercially available and cause less environmental harm. As set out in the revised [Joint Position Statement](#), low noise methods of clearance should be the default method used to clear any type of UXO in the marine environment.

If there are extraordinary circumstances which mean a low noise method of clearance cannot be undertaken, applicants should discuss this with the appropriate licensing authority and SNCBs at the earliest opportunity.

The following UK marine licensing authorities have confirmed that they expect to take this general approach when determining marine licence applications for activities relating to UXO clearance:

- Marine Management Organisation (MMO)
- Marine Directorate of the Scottish Government
- Natural Resources Wales
- Department of Agriculture, Environment and Rural Affairs in Northern Ireland
- Offshore Petroleum Regulator for Environment and Decommissioning.

## Monitoring and Research

Monitoring programmes established since 2012 have provided an improved understanding of the levels of impulsive and continuous noise pollution in UK waters, with the UK Marine Noise Registry recording data on impulsive noise sources since 2015.

Defra has been working closely with scientists and advisors to deliver a dedicated programme of research. Since 2021, over 30 noise-related research projects have been funded through the Offshore Wind Enabling Actions Programme, with many more projects being steered and overseen through Defra's involvement in a wide variety of other initiatives and programmes across the UK. This will continue to build our understanding of marine noise impacts on a wide range of species and identify where interventions are required. This will provide valuable evidence to support our decision-making.

The research reports published to date can be viewed online:





- [Impacts of underwater noise from offshore wind - ME5610](#)
- [Management of underwater noise from offshore wind - ME5611](#)

## Next steps

It is vital that biodiversity is protected whilst meeting the important commitments to achieving net zero and supporting thriving industry. The UK government encourages all marine industries to take all necessary steps to reduce their noise. We plan to implement a series of further actions to support this which are set out below.

### Reducing noise from offshore wind

The UK government has ambitions to radically increase renewables deployment to deliver our Clean Power by 2030 Mission whilst effectively supporting thriving marine and coastal ecosystems. In Defra, we recognise the impact construction on such a large scale can have on our environment, including through noise generated from piling during the installation of wind turbine foundations and offshore substations.

Due to the increased levels of noise anticipated over the coming years, it will be increasingly more difficult to determine no adverse effects on site integrity for harbour porpoise SACs. Industry should expect to see changes in the way noise is managed in the marine area. Industry's adoption of noise reduction methods during piling will be vital for ensuring that licensing authorities can continue consenting works to go ahead, whilst remaining below the noise disturbance thresholds.

The UK government intends to consult on an offshore wind piling noise limit. Significantly reducing the noise produced during the construction of offshore wind developments will contribute to ensuring our Clean Power by 2030 Mission is delivered sustainably and in a way that continues to protect and enhance our marine environment.

Following the consultation on an offshore wind piling noise limit, Defra intends to work with offshore wind developers throughout 2025 and 2026 to gather data during piling activities to test and refine the outcomes of the consultation. We would welcome offshore wind developers joining this pilot programme. For further information, email: [offshorewind@defra.gov.uk](mailto:offshorewind@defra.gov.uk).

From January 2025, given the expected increase in noise levels over the coming years, and the above outlined policy commitments, we expect that all offshore wind pile driving activity across all English waters will be required to demonstrate that they have utilised



best endeavours to deliver noise reductions through the use of primary and/or secondary noise reduction methods in the first instance.

Primary methods aim to reduce noise emissions at the source through modifications of the piling process (for example, alternative hammer types, alternative foundation types). Secondary methods aim to reduce the noise propagated through the water column during pile driving by employing systems such as casings, resonators and bubble curtains.

Applicants can propose the use of any noise reduction method (primary, secondary, or a combination of methods) in their marine licence application and/or their post-consent requirement discharge request. Technologies with more robust evidence regarding their efficacy and noise reduction capabilities are likely to face smoother consenting journeys with regard to noise related matters. Furthermore, given the current evidence gaps regarding harbour porpoise disturbance, developers can propose alternative Effective Deterrent Range values in their licence applications and/or post-consent requirement discharge requests, provided they are supported by robust evidence appropriate to the case in question. This will be considered by the relevant regulator during application determination in consultation with the relevant SNCBs. The greater the level of evidence provided to support justification of a lower Effective Deterrent Range, the more likely this will be accepted by the regulator. Early engagement with the relevant regulator is strongly encouraged. It remains the case that any and all applications for marine licences will be determined on a case-by-case basis, on the basis of the application that has been made and the individual circumstances.

Amongst other things, a wildlife licence may also be required to undertake piling and may only be granted where the licensing authority is content that it meets the legislative tests: for example, where there is no satisfactory alternative and the activities licensed are not detrimental to the maintenance of the population of the species concerned, at a favourable conservation status in their natural range.

Thorough consideration of noise reduction methods should therefore be undertaken by the applicant, including justification as to why applying noise reduction methods to your activity may not be considered a satisfactory alternative. The additional cost of a noise reduction system is unlikely to be a sufficient justification on its own merit to discount a satisfactory alternative, unless the cost renders the project financially unviable. Any additional justification such as lack of supply chain, contractual obligations, financial milestones, or technological incompatibility should be provided to explain why noise reduction systems are not a satisfactory alternative. Note that as technology develops and the supply chain improves, these arguments are likely to become less valid. This should be submitted to the relevant licensing authority for their consideration when undertaking a review of any application for a wildlife licence.

Developers who have secured the greatest possible noise reductions are less likely to face requests to further explore satisfactory alternatives and therefore delays in consenting, as they have demonstrated they have utilised best endeavours to secure a satisfactory alternative. Any applications for wildlife licences will be determined on a case-by-case



basis, on the basis of the application that has been made and the individual circumstances.

Read the [joint statement from statutory advisors](#).

## Reducing noise from other sources

Defra recognises the impact that both continuous noise and impulsive noise from other sources can have on marine mammals and is committed to minimising these impacts. Innovations across all industries to minimise noise impacts are therefore encouraged.

We are supportive of the International Maritime Organisation's [Revised guidelines for the reduction of underwater radiated noise from shipping to address adverse impacts on marine life](#). We will be working across UK government and through research and industry engagement to understand where improvements and changes can be made. As per the [Maritime and Coastguard Agency's Marine Information Note](#), ships are encouraged to use the International Maritime Organisation's guidelines in order to minimise the effects of underwater radiated noise and provide feedback on their use, where possible.

We are considering where improvements can be made across all industries undertaking geophysical and seismic surveying activities so that impacts are minimised as far as possible.

## Consideration of UK wide noise threshold values

As part of ongoing work to meet our commitments through the [UK Marine Strategy](#) to achieve or maintain Good Environmental Status on underwater noise, Defra and the devolved administrations will be considering noise threshold values for introduction across all UK waters for both impulsive and continuous noise sources.

These threshold values would be levels below which Good Environmental Status on underwater noise is expected to be achieved. These new values would be in addition to what currently exists in some harbour porpoise SACs. Introduction of such new threshold values may lead to changes to how activities are managed in the future, to keep noise below such levels.

We will be working together with devolved administrations, licensing authorities, SNCBs and scientific advisors such as the Centre for Environment, Fisheries and Aquaculture Science to evaluate options for these thresholds. Future introduction of



thresholds across all UK waters would cement our existing commitments to reduce marine noise and protect UK waters.

## International Cooperation

Many of the cetaceans found in UK waters are part of much larger populations whose range extends beyond UK waters. It is therefore important that we work together with other nations to take action. The UK government will continue working with all other contracting parties to OSPAR to agree a regional action plan for the North-East Atlantic by 2025, setting out a series of national and collective actions to reduce underwater noise pollution.

Outside of the North-East Atlantic, we are working closely with our international counterparts including the US and Australia through international multilateral fora to share information and collaborate on scientific, technological, and regulatory issues as they relate to marine noise.

## Who we are working with

We will continue to work closely across the UK government, devolved governments, licensing authorities and SNCBs, as well as international organisations such as OSPAR, to develop and implement deliverable, robust and effective policies.

To develop and refine our work, Defra engages with relevant:

- licensing authorities
- SNCBs
- scientific advisors
- a wide range of industries
- environmental non-governmental organisations
- charities
- research institutions and academics

We will be engaging with industries to determine where noise reductions or modifications can be made. We look forward to continuing to work closely with all interested parties.

