

David Cliff
Lead Member of the Examining Authority
Planning Inspectorate
MorganandMorecambeOWFTA@planninginspectorate.gov.uk

(Email only)

MMO Reference: DCO/2022/00010
Planning Inspectorate Reference: EN020028
Identification Number: 20051136

08 August 2025

Dear Mr Cliff,

Planning Act 2008, Morgan Offshore Wind Ltd, Proposed Morgan and Morecambe Offshore Windfarm Transmission Assets Order

#### **Deadline 4 Summary**

On 12 December 2024, the Marine Management Organisation (the MMO) received notice under section 55 of the Planning Act 2008 (the PA 2008) that the Planning Inspectorate (PINS) had accepted an application made by Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (the Applicants) for determination of a development consent order for the construction, maintenance and operation of the proposed Morgan and Morecambe Offshore Windfarm Transmission Assets Order (the DCO Application) (MMO ref: DCO/2022/00010; PINS ref: EN020028).

The Applicants seeks authorisation for the construction, operation and maintenance of Morgan and Morecambe Offshore Windfarm Transmission Assets, comprising of two onshore substations, 6 offshore export cables, 18 onshore export cables (6 circuits), 12 400 kilovolt (kV) grid connection cables (4 circuits) as well as the associated cables corridors with associated onshore and offshore infrastructure and all associated development (the Project). This document comprises of a summary of the MMO's Deadline 4 submission.

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,



Marine Licensing Case Manager

@marinemanagement.org.uk







# 1. Comments on REP3-054 Applicants Response to IP submission at Deadline 2: Marine Management Organisation (Revision 1)

#### 1.1 General Comments

- 1.1.1 The MMO will provide comments at Deadline 5.
- 1.1.2 The MMO response to the Applicants Pre-Examination Procedural Deadline A Submission to the MMO; MMO Deadline 3 Response update can be viewed in Table 1.

### 2. MMO comments on the updated In Principal Monitoring Plan (IPMP) (REP3-032)

#### 2.1 General Comments

2.1.1 The MMOs Strategic Renewables Unit (SRU) has published guidance for offshore wind developers: <u>Standardisation of Post-Consent Environmental Monitoring for Wind</u> Farms in English Waters.

#### 2.2 Adaptative management

2.2.1 The MMO outlines the standard conditions to implement a more proactive process to manage issues should monitoring reveal a greater impact than originally assessed within the ES.

#### 2.3 Benthic Ecology

2.3.1 The MMO outlines the revisions and amendments made at Deadline 3 in which we're in agreement with. We also highlight monitoring objectives to be included within a suitable pre-construction characterisation report.

#### 2.4 Fish Biology and Fisheries

- 2.4.1 The MMO is generally content with the measures and monitoring laid out in the IPMP.
- 2.4.2 The Cumulative Effects Assessment is appropriate.

#### 2.5 Physical Processes

- 2.5.1 The MMO notes only one outstanding comment regarding cable burial yet to be resolved.
- 2.5.2 The IPMP doesn't explicitly consider impact assessments for the transmission assets, however, major impacts are unlikely.

#### 2.6 Marine Archaeology

- 2.6.1 The MMO notes that Archaeological Exclusion Zone monitoring has been updated, and we defer to Historic England for its suitability.
- 3. MMO Comments on Stage 2 MCZ Assessment Rev F01 Annex A: Review of potential measures of equivalent environmental benefit (MEEB) (APP-227)





#### 3.1 General Comments

3.1.1 The MMO agrees with Natural England that any cable protection will result in habitat change/loss. The MMO defers comment to Natural England on the Stage 2 MCZ Assessment.

# 4. MMO Comments on J13 Outline Fisheries Liaison and Coexistence Plan (REP3-028)

#### 4.1 General Comments

4.1.1 The MMO believes the FLCP is appropriate, and we defer final comments to IFCA and NFFO.

# 5. MMO Comments on J22 Dredging and Disposal - Site Characterisation Plan (APP-227)

#### 5.1 General Comments

5.1.1 The Applicants have provided adequate information to characterise the disposal site.

#### **5.2 Mitigation Measures**

- 5.2.1 The MMO notes the amendments the Applicants have made in response to a Section 42 comment from Natural England
- 5.2.2 The MMO is satisfied that alternative use and best protocols have been considered and implemented.

#### 5.3 Baseline Environment

- 5.3.1 The MMO defers to the relevant advisors regarding physical ecology characteristics.
- 5.3.2 The MMO outlines the chemical characterisations provided by the Applicants and provide analyses of the contaminant levels.
- 5.3.3 All data from sampling should be provided in an MMO template for use with Cefas Action Level Viewer.
- 5.3.4 The MMO reminds the Applicants that if works have not commenced within 3-5 years of the 2022 data provided, the MMO may suggest additional surveys and chemical characterisation would be required prior to construction.

#### 5.4 Cumulative Impacts

5.4.1 The MMO broadly agree with the in-combination characterisation report, but we defer to the relevant advisors with specialist knowledge of the receptors assessed.

# 6. MMO Comments on updated Outline Offshore Operations and Maintenance Plan (OOOMP)

#### **6.1 General Comments**

6.1.1 The MMO notes that an updated OOOMP will now be submitted at Deadline 4, and we aim to provide comments on this at Deadline 5.





### 7. MMO Comments on the Without Prejudice Benthic Compensation DCO Schedule

#### 7.1 General comments

- 7.1.1 The MMO highlights Natural England's disagreement with the Applicants assessment of small-scale losses not hindering the conservation objectives of the Fylde MCZ.
- 7.1.2 The MMO note some wording amendments required by the Applicants.
- 7.1.3 Benthic compensation will be updated at Deadline 4 within the IPMP.

### 8. MMO comments on the Change Request – Indicative Overview Plan)

#### 8.1 General Comments

8.1.1 The MMO recognises that the Applicants have notified the ExA that they intent to submit a request to make changes to the application. The changes do not appear to relate to the marine environment; therefore, we have no further comment at this time.

### 9. MMO Comments on Issue Specific Hearing (ISH) 2

9.1.1 The MMO highlights areas of interest to matters within their remit. There were no specific action points for the MMO at this stage.

### 10. MMO Comments on Issue Specific Hearing (ISH) 3

10.1.1 The MMO highlights areas of interest to matters within their remit. There were no specific action points for the MMO at this stage, however, we acknowledge that further ExA written questions will be submitted to us shortly.

### 11. MMO comments on the Statement of Common Ground (SoCG) (REP3-049)

#### 11.1 General Comments

11.1.1 The MMO had a meeting with the Applicants on 21 June 2025, following this meeting an amended version of the SoCG will be submitted at Deadline 4 by the Applicants.

#### 11.2 Fish Ecology

11.2.1 The MMO confirms the remaining issues from previous Deadlines which have been resolved.

#### 11.3 Coastal Processes

11.3.1 The MMO confirms the remaining issues from previous Deadlines which have been resolved, and highlights issues which should remain open.

#### 11.4 Benthic Ecology

11.4.1 The MMO confirms the remaining issues from previous Deadlines which have been resolved, and which we will defer comment to Natural England.

### 12. Comments on other Stakeholder's Deadline 3 Responses







The MMO has reviewed and provided comments on the following Stakeholder Deadline 3 Responses:

#### 12.1 Blackpool Borough Council (BBC) (REP3-076)

12.1.1 The MMO notes outstanding areas of concern between the Applicants and BBC.

#### 12.2 Environmental Agency (EA) (REP3-079 & REP3-081)

12.2.1 The MMO highlights issues regarding contamination and the updated Ecological Management Plan, and will be keeping a watching brief over these developments.

#### 12.3 Maritime and Coastguard Agency (MCA) (REP3-086)

12.3.1 The MMO notes that the MCA is satisfied with the post-construction bathymetry surveys and monitoring for cable burial.

#### 12.4 Natural England (NE) (REP3-090 - 092)

12.4.1 The MMO highlights areas of concern still outstanding between these parties and we will be keeping a watching brief over these matters.

#### 12.5 The Corporation of Trinity House of Deptford Strond (TH) (REP3-111)

12.5.1 The MMO notes the amendment to 'Arbitration' in Schedule 14 & 15, Condition 14 (18(b)) and Condition 15, and that TH are satisfied with these amendments.

Yours Sincerely,

Marine Licensing Case Manager

@marinemanagement.org.uk





T +44 (0)300 123 1032 www.gov.uk/mmo

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Planning Inspectorate
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#### **Deadline 4 Submission**

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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.

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Marine Licensing Case Manager

marinemanagement.org.uk





### **Contents**

1. Comments on REP3-054 Applicants Response to IP submission at Deadline Management Organisation (Revision 1)	
1.1 DCO and DML Major Comments	
1.2 General Comments	
2. MMO comments on the updated In Principal Monitoring Plan (IPMP) (REP3-	
2.1 General Comments	•
2.2 Adaptive Management	
2.3 Benthic Ecology	
2.4 Fish Biology and Fisheries	
2.5 Physical Processes	
2.6 Marine Archaeology	
3. MMO Comments on Stage 2 MCZ Assessment - Rev F01 Annex A: Review of measures of equivalent environmental benefit (MEEB) (APP-227)	27
3.1 General Comments	
4. MMO Comments on J13 Outline Fisheries Liaison and Coexistence Plan (RE	:P3-028) 28
4.1 General Comments	28
5. MMO Comments on J22 Dredging and Disposal - Site Characterisation Plan	
5.1 General Comments	
5.2 Mitigation Measures	28
5.3 Baseline Environment	29
5.4 Cumulative Impacts	30
6. MMO Comments on updated Outline Offshore Operations and Maintenance (OOOMP)	
6.1 General Comments	
7. MMO Comments on the Without Prejudice Benthic Compensation DCO Sche (REP3-066)	
7.1 General Comments	30
8. MMO comments on the Change Request – Indicative Overview Plan)	31
8.1 General Comments	
9. MMO comments on Issue Specific Hearing (ISH) 2	31
10. MMO Comments on Issue Specific Hearing (ISH) 3	
11. MMO comments on the Statement of Common Ground (SoCG) (REP3-049	
11.1 General Comments	
11.2 Fish Ecology	
11.3 Coastal Processes	
11.4 Benthic Ecology	
12. Comments on other Stakeholder's Deadline 3 Responses	
12.1 Blackpool Borough Council (BBC) (REP3-076)	
12.2 Environmental Agency (EA) (REP3-079 & REP3-081)	
12.3 Maritime and Coastguard Agency (MCA) (REP3-086)	



12.4 Natural England (NE) (REP3-090 – 092)	35
12.5 The Corporation of Trinity House of Deptford Strond (TH) (REP	3-111).36

1. Comments on REP3-054 Applicants Response to IP submission at Deadline 2: Marine Management Organisation (Revision 1)

#### 1.1 DCO and DML Major Comments

1.1.1 The MMO submitted comments at Deadline 3 (REP3-085) regarding the DCO and DML and will wait on the Applicant's review of these before providing further comments. The MMO will provide comments at Deadline 5.

#### 1.2 General Comments

1.2.1 The MMO has reviewed and have provided comments to the Applicants responses from Deadline 3, in Table 1 below.



Table 1: MMO Response to the Applicants' Pre-Examination Procedural Deadline A Submission to the MMO; MMO Deadline 3 Response update

2 a	Major Comments UXO  2.1.1 The MMO does not agree with the approach of the Applicants to include UXO clearance within the DML.	The Applicants thank the Marine Management Organisation (MMO) for this submission. The Applicants	The MMO welcomes the Applicants'		
2 Umir ir i	2.1.2 The MMO's general position is that UXO activities are sought within a separate marine licence due to the nature of the impacts.  2.1.3 The MMO is content for the UXO investigation activities to be included and recommend this is a clearly identifiable activity within the DML.  2.1.4 However, the MMO is reviewing the DML further on a without prejudice position if the Secretary of State (SoS) is minded to include UXO clearances. The DML should be updated to ensure these activities are set out as a separate activity taking into account activities 10-13 under section 66(1) (licensable marine activities) of the 2009 Act. This would also include any lift and shift opportunities	confirm that high order unexploded ordnance clearance (UXO) clearance (i.e. involving detonation) will be explicitly excluded from the draft Development Consent Order (DCO) and all deemed marine licences (DMLs) (AS-004). Should high order clearance be required, it would be the subject of a separate marine licence application to the MMO. The draft DCO and DMLs will be updated and submitted at Deadline 1. The Applicants confirm that low order unexploded ordnance clearance will remain within the scope of the DMLs. The list of licenced activities will therefore be updated to include "low order unexploded ordnance clearance" as a distinct licensable activity under paragraph 2 and for the purposes of Condition 20 of the DMLs at Schedules 14 and 15 of the draft DCO (AS-004). The DMLs will also be amended to clearly distinguish between low and high order UXO clearance, to confirm that high order UXO detonation is not permitted and to specify the maximum number of low order UXO clearances authorised by each DML. The Applicants acknowledge that the MMO intends to provide further comments on the DMLs in due course and will continue to engage constructively on this matter.	The MMO welcomes the Applicants' commitment to remove high order UXO clearance from the DCO and DMLs.  The MMO notes that the Applicants recognises that separate marine licenses will be required should they need high order UXO clearance, and low order UXO clearance will remain within the DMLs.  The MMO will review the updates to the DML submitted at Deadline 1 and provide further comments in due course.  The MMO believes that the Outline Marine Mammal Mitigation Protocol (Document reference J18) will also be updated and will provide comments upon review.  Deadline 2 Update  The MMO notes the updates made to the DMLs at Deadline 1 and will provide detailed comments at Deadline 3.  The MMO notes that the Outline Marine Mammal Mitigation Protocol was not updated at Deadline 1 and will review this once this has been submitted.	The Applicants note that the MMO will provide detailed comments on the updates made to the DMLs at Deadline 3. The Outline Marine Mammal Mitigation Protocol (MMMP) was updated and submitted at Deadline 2 (REP2-026).	The MMO notes that the Outline Marine Mammal Mitigation Protocol was not updated at Deadline 3. The MMO provided comments at Deadline 3 (REP3-085) and will maintain a watching brief. The MMO may provide further comments at Deadline 5 if required.
T s D C C U U C C S M C C C C C V C C b Y th M th is y	Description (APP-024) and throughout various ES Chapters in the Application. Scenario 3 is made up of two sub options: 3a – Immediate sequential construction with no gap between construction of the first project and commencement of construction of the second project; and 3b – Sequential construction with a gap of up to a maximum of four years between completion of construction of the first project and commencement of the second.  We highlight that the worst-case scenario for 'Construction Scenario 3b' states that there could be sequential construction with a gap of up to four years between the completion of construction of the transmission assets for the first project (i.e. Morgan) and commencement of construction for	Please refer to the Rule 9 – ES assessment of Construction Scenarios (AS-070) which sets out how sequential construction with a maximum gap of up to four years has been considered as part of the impact assessment of each Environmental Statement topic.  Staged Discharge of Requirements/Conditions  The Applicants note that the MMO is not opposed in principle to partial discharge of DCO requirements. Providing a mechanism for a staged approach to discharge of requirements is entirely proportionate and a reasonable approach to take for large linear projects where works have to be completed in stages along the route. This established approach is reflected in multiple DCOs with linear connections including the joint SEP and DEP DCO. It does not prevent proper consideration against the findings of the ES, nor does it prevent collaborative working with other projects, where appropriate. Whilst the Applicants intend to work collaboratively where practical and reasonable, it is not possible for the Applicants to commit to joint delivery as set out in the Rule 9 – ES assessment of Construction Scenarios (AS-070).	The MMO welcomes the response to the Rule 9 letter and is currently reviewing the detail with our scientific advisors.  The MMO will provide further comments at Deadline 3.  Deadline 2 Update: The MMO notes NE is still not content on this approach and the MMO is reviewing all the information and will provide an update at Deadline 3.	The Applicants note that MMO is reviewing all information including the Applicants submissions at Deadline 2 and will provide an update at Deadline 3.	The MMO provided comments at Deadline 3 (REP3-085) and will maintain a watching brief.  The MMO may provide further comments at Deadline 5 if required.

the topic areas. The MMO questions this approach. The Applicants has stated that the Transmission Assets may adopt a staged approach to the approval of DCO requirements to allow flexibility. Whilst the MMO is not in disagreement with part discharges of documents, we are concerned that this will not allow for the impacts to be considered holistically or against the findings of the Environmental Statement. The MMO would also question how this would work in practice as it was our understanding that the transmission assets to be delivered together. This approach would mean that the activities would be completed at different times. 2.1.9 The MMO is still reviewing the overall impact of this proposal and will provide further comments in due course. RR-1414-06 Article 6 Benefit of the Order The Applicants note the MMO's concerns regarding Please see Section 10.3 in REP1-086 This is noted by the Applicants. The The MMO and the Applicants Article 6 of the draft DCO (AS-004), which provides for response document. Applicants responded to matters set believes that we are unlikely to come 3.2.1 The MMO understands that Article 6 the transfer of the benefit of the DCO, including the out under section 10.3 of the MMO's to an agreement on this matter. Benefit of the Order is drafted in a similar way to The also deemed marine licences (DMLs) in Schedules 14 to 17 written response at Deadline 2 in previous consents granted by the Secretary of covers of the draft DCO (AS-004). As set out in the Annex 3.2 to Applicants' Response to State (SoS), however the MMO has major RR1414-07 to If we have any new comments, we Explanatory Memorandum (AS- 007) at sections WRs from Statutory Consultees: concerns over the wording. 3.2.2 Article 6 (1)-(3) RR1414-14 may provide further comments at 1.6.3.12 to 1.6.3.15, the Applicants consider that there is Marine Management Organisation gives the right to permanently transfer the and those lines future deadlines. clear legal basis for the inclusion of Article 6 and the (REP2-033). benefits of the DCO including the DMLs in have not been disapplication of sections 72(7) and 72(8) of the Marine Schedules 14-17 to a third party with the repeated here. and Coastal Access Act 2009 (the 2009 Act). consent of the SoS. The MMO considers that There is no legal barrier to including these provisions in this is a clear departure from the 2009 Act, the draft DCO (AS-004). Specifically, section 149A of which would normally require the licence holder the Planning Act 2008 (the 2008 Act) authorises marine (here 'the undertaker') to make an application to the MMO for a licence to be transferred. Instead, licences to be deemed in a DCO in appropriate areas. this provision operates to make the decision that Section 120(3) of the 2008 Act provides that a DCO of the undertaker, with the Secretary of State may include such further provisions ancillary to the (SoS) providing consent to the transfer, rather proposed development, and which in practice includes than the MMO as the regulatory authority for transfer or grant of the benefit of any DML. Section marine licences considering the merits of any 120(5)(a) allows for statutory provisions to be applied, application for a transfer. modified or excluded, whilst section 120(6) provides that a DCO may include a provision where necessary 3.2.3 Parliament has already created a statutory or expedient to give full effect to any other provision of regime for such a process, and it is unclear what the DCO. The power to transfer or grant the benefit of a purpose the written consent of the SoS actually DML is related to it being deemed under the draft DCO serves. If the intention is for the undertaker to be (AS-004). It is therefore a sensible, expedient part of able to transfer the benefits under the terms of the wider power to transfer or grant the benefit of the the DCO outside the established procedures draft DCO (AS-004). There is accordingly no legal under 2009 Act, the MMO queries why is it barrier or regulatory restriction for including these considered necessary or appropriate for the SoS provisions in the draft DCO (AS004) and there is to 'approve' the transfer of the DML. established precedent in other made DCOs for offshore 3.2.4 It is also unclear what criteria the SoS wind projects in English waters. This position has been would be taking in determining whether to repeatedly adopted by the SoS, has not been subject to approve any transfer, and how this would differ legal challenge as to its competency, and reflects from a consent granted by the MMO under the standard practice. Whilst Article 6 of the draft DCO (ASexisting 2009 Act regime. 004) does not set out any specific criteria that the SoS must consider in determining whether to approve any 3.2.5 Because of this confusion and potential duplication, it is the position of the MMO that transfer or grant, this aligns with section 72 of the 2009 Act, which also does not prescribe specific criteria these provisions are removed and that any which must be taken into consideration by the licensing transfer should be subject to the existing regime authority before making their decision. As is standard under the 2009 Act, with the decision maker practice under the 2009 Act, where a transfer of the remaining the MMO

- 3.2.6 Article 6(2)(b) and 6(3)(b) gives the right to temporarily transfer the benefits of the DCO (including DML) to a third party.
- 3.2.7 The MMO resists the inclusion of this article. Here the written consent of the SoS is not required. The MMO does not recognise that this would create a more streamlined system. Rather, it operates simply to create an additional administrative procedure for marine licences (and one not envisaged by Parliament) and with no clarity in how it will operate.
- 3.2.8 The MMO has concerns regarding Article 6(4). The MMO notes that there is no obligation for the SoS to take into account the views of the MMO when providing its consent. Furthermore, there is no obligation for the MMO to be informed of the decision of the SoS, notwithstanding its impact on the MMO as the licencing authority. From a regulatory perspective it is highly irregular that a decision to transfer a licence should not be the decision of the regulatory authority in that area (the MMO) but instead should be subject to such a cursory process as is set out in Article 6(1)-(3).
- 3.2.9 The MMO thus resists this change as unworkable. As explained above, Articles 6 (1)-(3) sets out what is effectively a new non-legislative regime for the variation and transfers of marine licences. In support of these provisions Article 6(12) explicitly disapplies sections 72(7) and (8) of the 2009 Act, which would otherwise govern these procedures.
- 3.2.10 This conflicts with the MMO's stated position that the DML granted under a DCO should be regulated by the provisions of the 2009 Act, and specifically by all provisions of section 72.
- 3.2.11 Section 72(7)(a) of the 2009 Act permits a licence holder to make an application for a marine licence to be transferred, and, where such an application is approved, for the MMO to then vary the licence accordingly (s. 72(7)(b)). This power that should be retained and used in relation to the DML granted under the DCO and the MMO therefore resists the inclusion of this Article 6(12) to disapply these provisions.
- 3.2.12 The key concern held by the MMO is that Article 6 operates to override and/or unsatisfactorily duplicate provision that already exist within the 2009 Act for dealing with variations to marine licences. Such provisions are also inconsistent with the PINS Guidance on how DMLs should operate within a DCO. Advice Note Eleven, Annex B, provides that where the undertaker choses to have a marine licence deemed by a DCO, the MMO, "will seek to ensure wherever possible that any deemed licence is generally consistent with those issued independently by the MMO." Article 6 as drafted

DML is sought under Article 6 of the draft DCO (AS-004), the SoS 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 where relevant. From a commercial and regulatory perspective, it is important that the transfer or grant of powers or authorisations under the draft DCO (AS004) and associated DMLs be aligned. Separating the transfer of the draft DCO (AS-004) from the transfer of the DMLs could lead to inconsistencies and create unnecessary complexity, as there is considerable overlap between the authorisations and the requirements/conditions. This justifies a departure from the procedure under the 2009 Act by way of Article 6(12). In that context, it is appropriate that the SoS has the ability to approve the transfer or grant of a DML such that the transfer or grant can fully reflect the relevant DCO and DML powers. It is undesirable to separate the transfer or grant of the benefit of the order and the transfer or grant of the benefit of the DML, as doing so presents the risk of transfers of the draft DCO (AS-004) provisions and transfers of the DMLs occurring at different times and could result in inconsistency in position. It would make any transfer or grant from one undertaker to another more complicated to manage, and commercially it would be unhelpful and unnecessary to create uncertainty around the date (or indeed likelihood of approval) for any such transfer taking place. The Applicants disagree that there is any issue from a regulatory perspective. With regards to the identity of DCO undertakers, this falls within the regulatory remit of the SoS to consider the draft DCO (AS-004) as a whole, including the DMLs, when deciding whether to grant development consent, and for the reasons already explained it does not make sense to separate out the responsibility for any transfer approvals to two separate regulatory bodies.

The Applicants also disagree that the transfer provisions are not in compliance with Advice Note Eleven, Annex B, noting the use of the words 'wherever possible' which acknowledges that departures may need to be made. The Applicants have sought to align the drafting of the DMLs overall to ensure consistency with those issued independently by the MMO. For the reasons already set out, the transfer provisions are a reasonable, necessary and a justified departure. The Applicants do not consider that any confusion will arise by virtue of the transfer or grant of benefit mechanism sitting in the draft DCO (AS004).

Indeed, the Applicants are aware that to date relatively limited use has been made of transfer provisions in offshore wind DCOs and, where they have been used, is unaware that any significant issues or prejudice has arisen from the use of those provisions in practice. It is common practice for a variation application to be made to the MMO either at the same time as applying to the SoS for consent to transfer the benefit or immediately following

the approved transfer, in order to vary the name of any new DCO undertaker(s). Indeed, as an acknowledgement of this position, the Applicants are



RR-1414-18	is not in compliance with this guidance.  3.2.13 The MMO objects to the provisions relating to the process of transferring and/or granting the deemed marine licences set out in the draft DCO at Part 2, Article 6 insofar as these are intended to apply to the MMO and requests paragraphs 6(4), 6(8) and 6 (12)be removed in their entirety, with a clarification added to specifically exclude these provisions from applying to the MMO (with corresponding wording amended in the Deemed Marine Licences).  3.2.14 The MMO is concerned that the procedure proposed represents an unnecessary duplication of the existing statutory regime set out in s72 of the 2009 Act and that it will give rise to significant enforcement difficulties for the MMO. The MMO also considers that it has the potential to prejudice the operation of the system of marine regulatory control in relation to the proposed development. The MMO also regards the proposed procedure as cumbersome, more administratively burdensome, slower and less reliable than the existing statutory regime set out in s72 of the 2009 Act.  3.2.15 To summarise, the MMO considers that little advantage is gained for the Applicants by these provisions, and the tangible risks and disadvantages that it poses can be avoided by retaining the existing statutory regime in full.  Use of 'Maintain' and 'Materially'  3.2.60 The MMO is reviewing the use of Maintain and materially within the DML and will provide		The MMO strongly considers that the activities authorised under the DCO and DML should be limited to those that are	The Applicants note that the definition of 'Maintain' has already been updated in Article 2 and in the	The MMO notes and thanks the Applicants for providing the requested changes and removing
	comments in due course.		assessed within the EIA.  The MMO considers that the definition of maintain should be updated to include reference to any activities that do not give rise to any new or different environmental effects to those assessed in the environmental statement.	DMLs contained in Schedules 14 and 15 of the draft DCO submitted at Deadline 1 (REP1-008) in line with the Applicants' response to Natural England - Appendix A (PDA-015)	references to 'materially', noting that the definition of maintain has been amended to: "maintain" includes inspect, upkeep, repair, adjust and alter the authorised project, and further includes remove, reconstruct, and replace any part of the authorised project, to the extent assessed in the environmental statement and any derivative of "maintain" shall be construed accordingly.  The MMO considers his matter closed.
RR-1414-19	Determination Dates 3.2.61 The MMO strongly considers that it is inappropriate to put timeframes on complex technical decisions of this nature. The time it takes the MMO to make such determinations depends on the quality of the application made, the complexity of the issues, and the amount of consultation the MMO is required to undertake with other organisations to seek resolutions. The MMO's position remains that it is inappropriate to apply a strict timeframe to the approvals the	The Applicants highlight that the conditions of the DMLs (condition 19 of the DMLs at Schedules 14 and 15 and condition 17 of the DMLs at Schedules 16 and 17) (AS-004) sets out a four-month determination period but that this period can be extended by agreement in writing with the undertaker. This provides built-in flexibility, enabling extensions to be agreed where additional time is required for consultation, the provision of further information, or the resolution of any outstanding issues. It is in the undertaker's interest to facilitate such extensions where reasonable,	The MMO acknowledges the Applicants' comments. The MMO has two concerns with timelines.  1. Approval timescale (Schedule 14, Part 2, Condition 19(2) and similar conditions in Schedule 15, 16, & 17 and throughout the DML).  2. 4-month submission timescale throughout Condition 19 and	at a meeting arranged for 21 July 2025 to allow for updated positions to be presented at Deadline 4.	The MMO notes that the Applicants position is that inclusion of condition 19 (2) in Schedules 14 & 15 is important for programming.  The MMO's position has not changed and the MMO believes 19(2) should be removed.  IF this is not removed the MMO believes this should be 6 months to align with the 6 month submission

MMO is required to give under the conditions of the DML given this would create disparity between licences issued under the DCO process and those issued directly by the MMO, as marine licences issued by the MMO are not subject to set determination periods.

Whilst the MMO acknowledges that the Applicants may wish to create some certainty around when it can expect the MMO to determine any applications for an approval required under the conditions of a licence, and whilst the MMO acknowledges that delays can be problematic for developers and that they can have financial implications, the MMO stresses that it does not delay determining whether to grant or refuse such approvals unnecessarily. The MMO makes these determinations in as timely a manner as it is able to do so. The MMO's view is that it is for the developer to ensure that it applies for any such approval in sufficient time as to allow the MMO to properly determine whether to grant or refuse the approval application.

particularly where they are necessary to ensure approval can be granted. Should key consultees raise concerns or require more time, the MMO is not bound to approve submissions within the initial four months period and can request additional information or ultimately refuse the application to approve on the basis of insufficient information. The Applicants note that this drafting is well precedented and has been accepted in all previous offshore wind DCOs.

throughout the DML.

4 months has been standard in a number of offshore windfarms, especially round 3 projects. However, the MMO along with our consultees have noticed a change in the submission information and required rounds of consultation to ensure the MMO is confident to discharge the documents submitted.

The MMO would highlight that this has been requested by the MMO since the Hornsea Project Three Offshore Wind Farm Examination. Since this examination, there is even more of a concern that more and more time is being spent working to determine documents submitted. There are a number of instances on projects where the submission at the four- or sixmonth date does not include everything that is required or within the outline plans and is more of a compliance requirement to ensure something is submitted in line with the consent. This leads to requests for additional information and multiple rounds of consultation and updates to ensure enough information is provided for the MMO to make a determination. It is becoming increasingly difficult to review the first submission of a document and therefore delays to the determination could cause significant impact to both the MMO and the Applicants.

In relation to precedented timescales within other offshore wind DCOs. The MMO, of course, accept that there is a need for consistency in decision making. However, a decision maker is not bound by previous decisions and can depart from them where there is good reason to do so. The MMO welcomes Condition 11 that extensions can be agreed but believes this is an additional step which could also take time to agree between parties.

The MMO would reiterate that it does not delay approvals unnecessarily and believes more realistic timescales should be included to allow for the Applicants to account for this within their programming.

The MMO also highlights that it is also unclear what consequences would result if this deadline was not met, and how that would impact on the MMO's regulatory function.

The MMO believes there is clear evidence with projects increasing in size as part of this discharge process that 4 months is not enough time to discharge a document and

date, otherwise the 6 month submission date is not 6 months but 4 months with condition 19(2).

the MMO requests that all timescales are updated to 6 months submission timescales and that Condition 19(2) is removed.

However, without prejudice to this position, the MMO believes that if time scales are included within the DML for plans then these should be six months not four months and is open to discussions on which documents must be six months, and which documents could be four months to take into account the concerns that the Applicants may have. The MMO will continue to work with the Applicants to advise on any plans or documents that could have a four-month timescale.

RR-1414-20

#### **Force Majeure**

3.2.63 The MMO believes the Force Majeure condition should be removed as it is not necessary to be included within the DMLs. as section 86 of the 2009 Act provides a defence for action taken in an emergency in breach of any licence conditions. The MMO requires justification or rationale as to why this provision is considered necessary. It is not something that the MMO Advice Note Eleven. Annex B says that DMLs should be broadly consistent with standalone marine licences.

3.2.64 The MMO understands that Force Majeure is about events, situations and circumstances that arise which are outside of a person's control. Currently the condition wording used is drafted to apply for stress of weather or any other cause which is very broad. It could cover anything, including causes which are entirely within the master's control such as negligence matters. Currently the MMO believes Condition 19 in Schedules 3 and 4 does not meet the five tests as set out in the National Planning Policy Framework for a number of reasons: • necessary: • relevant to planning; • relevant to the development to be permitted; • enforceable; precise; and • reasonable in all other respects.

Necessary 3.2.65 If you read Section 86(1)(b) and 86(2) of 2009 Act, for the defence to be relied on the person relying on it must inform the MMO that the act was carried out, tell it where it was carried out, the circumstances in which it was carried out. and what articles/objects were concerned. The inclusion of Condition 17 removes this defence and replaces it with a wider and less stringently controlled authorisation to deposit articles/substances and the MMO does not believe this is necessary.

Enforceable 3.2.66 The condition as it stands is too subjective and therefore unenforceable and

The Applicants disagree with the MMO's position on Condition 17 of the DMLs at Schedules 14 and 15 and Condition 15 of the DMLs at Schedules 16 and 17 of the Act and the inclusion of this condition and draft DCO (AS-004).

These force majeure conditions serve slightly different purposes to section 86 of the 2009 Act. This condition imposes a duty on the undertaker to notify the MMO within 48 hours if the master of a vessel determines that would include in standalone marine licences. PINS it is necessary to deposit authorised deposits within or outside of the Order Limits because the safety of human life or of the vessel is threatened due to stress of weather or any other cause. 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 Applicants will however update the drafting response still does not refute that the use in the force majeure condition to include a new subparagraph (2), which will be provided in an updated draft statement. Conditions must be precise, DCO at Deadline 1: "The unauthorised deposits must be which currently using this term, it is not removed at the expense of the undertaker unless written precise and could cover anything. approval is obtained from the MMO".

> This ensures that action must be taken to remedy any emergency deposits. This also addresses the MMO's concerns on enforcement as if removal is not undertaken and agreement is not reached with the MMO, the MMO can take enforcement steps against the undertaker to ensure such removal.

The MMO acknowledges the difference proposed between Section 86 of the 2009 notes the updated part (2) of the condition.

However, maintains its position regarding Force Majeure, as it is not necessary to be included within the DMLs. It is not something that the MMO would include in standalone marine

The MMO questions on if the inclusion of this condition is allowing an unknown licensable activity (deposit) that has not been assessed.

The MMO believes the Applicants' of 'any other cause' is a very broad therefore we believe this condition should be removed.

The Applicants maintain the position set out in its response to the MMO's Relevant Representation RR-1414.20 (PDA-013).

The recently confirmed DCO for the Rampion 2 Offshore Wind Farm contains this exact condition wording at Condition 10 to Schedules 11 and Schedule 12 to the DCO.

The Applicants therefore maintain that there is clear precedent for this wording and that this is necessary in order to ensure all potential scenarios where any risk to the safety of human life are within the remit of this condition.

The MMO does not believe that precedent alone is enough to maintain a condition. There is a clear issue in relation to vaqueness of 'and any cause' and therefore the MMO believes this should be resolved and if not, the condition should be removed.

The MMO notes that this is likely to be an agree to disagree position and a matter for the SoS to decide on.

The MMO may provide further comments at future deadlines.





	determine whether it is necessary to make the deposit and there are no defined criteria.				
	Precise 3.2.67 The condition is also not restricted to Force Majeure situations or 'no fault situations', due to the inclusion of 'for any other cause'. The MMO questions this wording and why this has been included?				
	3.2.68 In effect the only obligation the master would have if Condition 17 is included, is to notify the MMO within 48 hours that the deposits have been made. The MMO questions if this notification would be enough to allow enforceability and if it was to remain should there not be further requirements to then remove the items.				
	Reasonable 3.2.69 The test set in Condition 17 which must be met to allow these deposits to be made is a much lower threshold test to that set in Section 86 of MCAA. This is because the safety of human life and/or the vessel is threatened is not the same as for the purpose of saving life or securing the safety of the vessel. The MMO questions why these masters and vessels be treated more favourably than others in this situation?  3.2.70 The MMO also notes that 'any other cause' is the wording used in precedent licences, including the 2024 Sheringham and Dudgeon order and there is precedent set in other licences.  3.2.71 The MMO is reviewing the ExA's Recommendation Report and SoS decision to understand if any reasoning or further information was included on the inclusion of this and may provide an update at Deadline 6.  3.2.72 To summarise the MMO requests that condition 17 is removed from all DMLs, as the defence (Section 86 of 2009 Act) will apply if the Applicants or vessel masters needs to make a deposit for a Force Majeure reason.				
RR-1414-22	Benthic Subtidal and Intertidal Ecology (APP-045) The MMO has no concerns on the matters	The Applicants welcome the MMOs comments.	The MMO notes that the Applicants have confirmed that any requirement for	This is noted by the Applicants. The draft DCO (REP1-008) was updated	The MMO thanks for Applicants for confirming the MMO's understanding
	scoped out of the assessment.  The MMO currently does not consider there to be any information gaps that require attention.  The MMO notes that a comprehensive search of relevant data sources was undertaken during a		Order (DCO). The Applicants intends to	at Deadline 1 and the Outline Marine Mammal Mitigation Protocol (MMMP) was updated at Deadline 2 (REP2-026) to secure the commitments made by the Applicants. The Applicants note the MMO response regarding	in relation to the worst-case scenario assessed within the Environmental Statement.
	desk study and site - specific benthic surveys have been carried out in support of the application. The results of which have facilitated the identification and assessment of the potential impacts to benthic ecology receptors. Furthermore, pre - construction benthic surveys will be undertaken to determine the presence of protected habitats along the export cable corridor. The MMO considers these to be appropriate data sources.		order UXO clearance will be undertaken and that the number of permitted low order detonations will be detailed within each deemed marine licence. The MMO agrees with this approach, provided the required associated details e.g., location/habitat and potential impacts to benthic receptors because of confirmed UXO detonation are included with the marine licence application.	construction scenarios and can confirm the MMO's understanding is correct in relation to the worst-case scenario assessed within the Environmental Statement.	
	The MMO agrees with the proposed mitigation measures which include adequate burial of cables		The Applicants has also provided a response to clarify a query regarding the		
	and the same for a second				11

(to avoid requirement of remedial rock protection works), minimising the potential for introduction of non-native taxa through adherence to relevant guidelines (e.g., those relating to International Maritime Organisation ballast water management), use of low-profile cable protection when necessary to minimise any disturbance to natural sediment movements (e.g., at cable crossings).

4.2.5 The MMO considers there to be an adequate description of the potential cumulative and inter-related impacts in section 2.12 of the ES using a tiered approach to provide a clear assessment of the Transmission Assets alongside other relevant projects, plans and activities.

4.2.6 The MMO considers that the ES is a well written and comprehensive document that addresses relevant benthic ecological concerns arising from the project. This document includes useful signposting and cross referencing to related technical reports and topics with the impacts to benthic ecology receptors comprehensive and informed by proportionate assessment.

sequential construction (with a gap of up to four years) of the Morgan Offshore Wind Project and Morecambe Offshore Windfarm. It is the MMOs understanding that the worst- case scenario considered within the Environmental Statement (ES) relating to the construction activities associated with the Transmission Assets includes a development gap of up to four years and as such is appropriate. The Morgan and Morecambe Array Projects may develop differently, and each entity is likely to pursue Project specific milestones regarding their connection to the national grid. However, the Applicants are committed to working collaboratively, where practical and reasonable to do so, for the transmission assets.

proposed construction scenario for the

RR-1414-23 Coastal Processes (APP-42 – APP-44)

The MMO notes that for the specific areas (e.g., MCZs, SACs, SPAs, Ramsar and SSSI) in Table 1.10 of the ES, the physical processes that support these are not separately defined as receptor(s). Impacts to physical processes are scoped in, but the assessments rate only impacts on protected areas. There is a minor risk that this will result in impacts being assessed as negligible when long-term impacts are not easily projected to seascape feature scale. The assessment indicates that OWF developments such as this (multiple sites in close proximity) lead to accumulating low impacts over space and time. As observed on terrestrial sites, the environment is gradually degraded with impacts on biodiversity and environmental conditions which could not be attributed to individual pressures.

4.3.2 In the assessment of impact magnitude, the receptor value is based on conservation designation (Table 1.16 of the ES), so naturally any impact on a key process within a non-designated area would be rated as negligible; this is of particular relevance to the landfall site. Additionally, the assessment appears to rely on a blanket assessment of all receptors as low sensitivity (i.e., not differing between process/impact types), which means that significance is constrained to be insignificant unless magnitude is assessed as high – no impacts are given this magnitude, so all impacts are of low adverse, or negligible adverse significance.

4.3.3 The MMO considers the Applicants'

Response to 4.3.1

The Applicants note the MMO's comment regarding designated features. The impacts to physical processes are scoped into the assessment presented in Volume 2, Chapter 1: Physical processes (APP-042) with activities, impacts and receptors and their grouping agreed through the Scoping, PEIR and EWG processes as documented in the Consultation Report - Consultation Report Appendices (APP-170, APP-187) and Technical engagement plan Appendix B (APP-190). In this regard a holistic assessment has been undertaken to quantify the magnitude of these impacts throughout the study area and is not limited to those areas with designated features.

Response to 4.3.2

For clarification, the significance of the effect upon physical processes in Volume 2, Chapter 1: Physical processes (APP- 042) have been determined by considering the sensitivity of the receptor and the magnitude of the impact. In this way, coastal process and likely significant impacts on coastal features may be identified, regardless of designated status.

The Value is an additional parameter used to inform the assessment outcome where two levels of significance are present within the matrix or expert judgement is required. As such undesignated features are not rated as negligible by default. The Applicants confirm that a blanket assessment of all receptors as low sensitivity has not been applied. By way of explanation, the study area is comprised of active seabed features and is influenced by large variations in tidal currents and wave exposure. Therefore, features are naturally adaptable to minor changes in physical processes as detailed in section 1.5.4 of Volume 2, Chapter 1: Physical processes (APP-042). These natural variations in

The MMO notes that with regards to comment 4.3.5 in the document RR-1414. The Applicants have provided an explanatory discussion of the shoreline impact assessment at the landfall site. The explanation provided is sufficient to understand the assessment and satisfied the previous request.

The Applicants indicate a natural variability in beach level between 1-3m and hence define a target cable burial depth of 3m – as had been stated in the Environmental Statement (Volume 2 Chapter 1: Physical processes, paragraph 1.10.4.4) – and provides some explanation of the cause of this variability. The Applicants response highlights the spatial variability of the landfall site and the inconstant patterns of sediment transport and change – with a sediment transport divide located near the landfall site, migrating alongshore according to annually-varying wave distributions.

The MMO recognises that it is not reasonable to predict future beach changes in such conditions, and that the risk of cable exposure is a financial risk that the Applicants would be seeking to avoid. However, the discussion does indicate that "The updated National Coastal Erosion Risk Mapping (NCERM) (Environment Agency, 2024) indicates areas of recession at the landfall site, and ... the Shoreline Management Plan (SMP)... is assigned managed realignment of natural features", and so the to

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The Applicants note this response and that the MMO is satisfied with the information provided in the Applicants response.

The Applicants acknowledge the MMO's request for clarification on the risk of future cable exposure due to shoreline retreat at the landfall location. The detailed assessment of beach level variability, as set out in the Outline Cable Burial Risk Assessment (CBRA, APP-219), identifies intertidal variability of up to +-1.5m.

Accordingly, the target Depth of Lowering (DoL) for cable burial has been conservatively established at 3.0 m below beach surface level. This ensures that even under conditions of maximum recorded variability, the minimum burial depth would remain at least 1.5m, sufficient to prevent cable exposure and associated risks.

In terms of shoreline retreat, the analysis undertaken by the Applicants, to inform the CBRA also confirms a trend of sediment accumulation and dune migration seaward, rather than significant shoreline recession, at the selected landfall site. This indicates a limited likelihood of future shoreline retreat posing a risk to the buried cables.

The Applicants confirm that the potential for future shoreline changes,

The MMO will continue discussions with the Applicants outside of Deadlines and provide further comments to the ExA at Deadline 5.

assessment is proportionate to fully identify and assess the potential impacts.

- 4.3.4 The MMO does not consider there to be any information gaps that need highlighting. The evidence provided is extensive and in line with typical OWF applications.
- 4.3.5 The MMO notes that Section 1.5.4 of the physical processes chapter does not discuss the coastal context of the landfall (i.e., whether the site is even currently stable, or how the longshore processes here operate). The landfall is a key element of the coastal impact, and no receptor is defined here, subsequently there is no focus on the beach and open-trench methods for cable burial, because these will not affect the defined receptors. The assessment in Section
- 1.10.4 of the ES describes effects as negligible adverse, but it is not clear (due to absence of clear link to the baseline discussion), how this has been determined. The MMO requests justification for this assessment and a description of the coastal processes at the landfall site.
  4.3.6 The MMO considers that the approach to cumulative assessment that has become established is limited and focused on overlapping or directly interacting impacts and not on the actual cumulative, incremental impacts over large areas and time caused by increasing marine activity.
- 4.3.7 The Marine Enhancement Statement (APP-217) mentions various potential measures that are not required (because marine net gain is not yet a statutory requirement) but could be beneficial. In the absence of clear (long-term) knowledge as to the ecological effects of low-level marine process impacts following increasing marine development, any voluntary application of potential enhancements may be valuable.

baseline conditions give rise to low sensitivity. Therefore, within the context of this assessment, should a high magnitude of impact have been detected for these receptors then impacts of minor significance would have been identified in the rating, i.e. not constrained to low adverse, or negligible adverse significance.

Response to 4.3.3 and 4.3.4 The Applicants welcome the MMO's comments in 4.3.3 and 4.3.4 with regards to the information used and the proportionality of the assessment.

Response to 4.3.5 Sediment supply along the coast is controlled in part by tidal currents that drive net onshore sediment transport of seabed sediment from sand banks offshore, and by alongshore sediment transport driven by littoral currents which are influenced by wave climate as detailed in section 1.5.4 of Volume 2, Chapter 1: Physical processes (APP-042). Sediment transport numerical modelling undertaken as part of the detailed sediment mobility study indicated there is a sediment divide in the vicinity of landfall (section 1.5.4 of APP-042 and APP-044). To the north of this divide, sediment is transported north. To the south, sediment is transported south towards the Ribble Estuary. These studies indicated low sediment transport rates at the landfall site. It is however noted that the exact location of the divide varies depending on wave climate and there is potential for this divide to move to the north and south. This is corroborated within the Morgan Offshore Wind Project: Generation Assets modelling study (APP-044) where littoral and residual currents were examined under a range of conditions. This could change net longshore sediment transport pathways on an annual basis and is further evidenced by coastal migration data (EMODnet) which indicates sections of seaward migration (accretion), landward migration (erosion) interspersed with stable sections of coastline in the vicinity of landfall. The updated National Coastal Erosion Risk Mapping (NCERM) (Environment Agency, 2024) indicates areas of recession at the landfall site, and it is noted under the Shoreline Management Plan (SMP) that this region (Cell 11B2.1) is assigned managed realignment of natural features. The detailed sediment mobility study undertaken for Morgan Offshore Wind Project: Generation and Transmission Assets (ABPmer, 2023) was used to inform the Outline CSIP (APP-220) and Outline Cable Burial Risk Assessment (APP-219).

They identify the risks to the offshore export cables such as those associated with sediment mobility, including details of target burial depths and depth of lowering required to provide asset security and ensure cables do not become exposed. The Outline CBRA (APP- 219) has demonstrated that a target depth of lowering of 1.5 m covers all external risk with the exception of specific areas, such as those with softer sediments or high mobility such as the beach, where a 3 m target depth is recommended. As such, a target depth of lowering of

complete the assessment the Applicants should indicate the maximum rate of shoreline retreat that could be anticipated and the resulting effect this might have on cable burial depth over the lifetime of the development i.e., to confirm their understanding of the risk of future cable exposure (necessitating reworking) under conditions of shoreline retreat; and whether the natural realignment is factored into the landfall location and burial depth design.

including the scenario of natural realignment and retreat, has been factored into the burial depth design. The design approach adopted incorporates a conservative burial DoL of 3.0m to mitigate the risk of cable exposure due to future beach-level variations, including scenarios involving shoreline retreat.

between 1 and 3 metres, with a proposed minimum of 0.5 m has been applied for the Project Design Envelope (see section 2, Outline CSIP (APP-220). At landfall, to ensure no exposure of cabling occurs in the event of opencut trenching, a target depth of 3 m for each of the six offshore export cables within the intertidal is recommended in the Outline CBRA (APP219). Given natural beach variability falls within 1 m to 3 m, it can be expected that trenching to this depth will avoid cable exposure. Trenches will then be backfilled to beach level. As such, there will be no interruption in sediment transport hence the effects being categorised as negligible adverse due to short term and temporary construction phase activities. The Applicants note that Condition 18(1)(e) of Schedules 14 and 15 of the draft DCO (AS-004) secures the submission and approval by the MMO of construction method statements, incorporating detailed CSIPs and CBRAs to be developed in accordance with the outline CSIP (APP-220) and outline CBRA (APP- 219).

#### Response to 4.3.6

The Applicants note the MMO's comment regarding the cumulative assessment methodology adopted for the assessment presented in Volume 2, Chapter 1: Physical processes (APP-042). In the first instance the purpose of the EIA is to identify and, if appropriate, mitigate for likely significant impacts. Therefore, it is appropriate when undertaking the cumulative assessment for physical processes to focus on overlapping or directly interacting impacts which are potentially of greatest consequence. It is also recognised that incremental low-level impacts over large areas and time may potentially be caused by increasing marine activity. By the low-level nature of these impacts, they would not be determined as likely significant impacts under the EIA definition. This is a complex issue as it is underpinned by the definition of baseline conditions and is also influenced by the adaptability of the active seabed features and processes that exist within the study area. It is however noted that as a result of the application of the mitigation hierarchy throughout the design process, which aims to avoid or reduce any impacts in the first instance, the contribution of the Transmission Assets to the cumulative impacts from each development is minimised to the level at which they are not significant in EIA terms.

#### Response to 4.3.7

The Applicants welcome MMOs comments on its marine enhancement proposals. As stated in the Marine Enhancement Statement (APP-217), the Applicants will seek to enhance biodiversity in the marine environment and will continue to explore marine enhancement opportunities, where possible, as the Transmission Assets' designs mature, in collaboration with stakeholders' post-consent.





#### RR-1414-24

#### Fish ecology (APP-048 - APP-049)

4.4.1 Regarding data sources, the MMO considers that the Applicants has appropriately defined the study area for the characterisation of fish and shellfish ecology. The key demersal, pelagic and migratory species, as well as several important elasmobranch species, have been generally well characterised. Generally, appropriate data sources have been used to characterise fish receptors in the region including the use of spawning and nursery ground data from Coull et al., (1998) and Ellis et al., (2012). The Applicants has acknowledged that these publications represent the most comprehensive studies of their type to date, and are considered to remain relevant, whilst acknowledging time since publication, which is acceptable. The Applicants has also drawn upon MMO commercial fishing data and data from scientific fishing surveys carried out in the region to support the characterisation of fish species present within the vicinity of the site. These include data from herring larvae surveys of the north Irish Sea by the Agri-food and Biosciences Institute (AFBI), the Northern Irish Ground Fish Trawl Survey published by the International Council for the Exploration of the Sea (ICES), and the pelagic ecosystem survey in the western English Channel and eastern Celtic Sea by Centre for Environment, Fisheries and Aquaculture Science (Cefas).

4.4.2 The MMO notes that the study area defined by the Applicants matches the fish and shellfish ecology study area used for the Morgan and Morecambe OWF (generation assets) projects and encompasses much of the Irish Sea region. The study area is large enough to account for the spatial and temporal variability of fish populations in the region, including migrations where relevant. This is considered suitable.

4.4.3 The MMO highlights that Popper et al., (2014) clearly defines three categories of hearing ability in fish, not four. In Popper et al., (2014) fish hearing classifications are not explicitly categorised as numbered groups but there are three clearly defined hearing categories • fish with no swim bladder (e.g., dab and other flatfish); • fish with a swim bladder not involved in hearing (e.g., Atlantic Salmon) and • fish with a swim bladder involved in hearing (e.g., Atlantic cod and clupeid species). Popper et al., explicitly group cod and herring together in their classification of fish with respect to sound exposure risk from noise. This classification is based on empirical evidence and audiograms reviewed by the authors. It is therefore unclear why the Applicants has separated cod and herring into different categories of hearing sensitivity when cod and herring are both 'Group 3' fish with a swim bladder involved in hearing. In

#### Response to 4.4.1

The Applicants welcome the agreement on the use of Coull et al. (1998) and Ellis et al. (2012), and the use of other research and datasets specific to the Irish Sea.

#### Response to 4.4.2

The Applicants welcome the agreement on the study area.

#### Response to 4.4.3

The Applicants note the comments made by the MMO with respect to the use of three fish hearing categories. For clarity, the definition of four groups was based on a refinement of the Popper et al. (2014) guidance published by Popper and Hawkings (2019), in which further detail on morphological features involved in hearing were presented for fish groups. However, the assessment modelling and conclusions within Volume 2, Chapter 3: Fish and shellfish ecology (APP-048) are not changed by the use of four separate groups, as the modelling was performed by treating group 3 and 4 fish as a single receptor group, in terms of impact thresholds. This is evidenced in Table 3.18 in section 3.11.4 of Volume 2, Chapter 3: Fish and shellfish ecology (APP-048), where these two groups are considered together. As such, the impact assessment and the overall conclusions within Volume 2. Chapter 3: Fish and shellfish ecology are unaffected by this difference in fish groupings.

#### Response to 4.4.4

The Applicants have already performed underwater sound modelling on mortality and potential mortal injury in fish at 229-234 decibels (dB) peak and have presented the upper and lower range limits for mortality in Table 3.17 of Volume 2, Chapter 3: Fish and shellfish ecology (APP- 048), based on the results presented in Table 1.22 of Volume 1, Annex 5.2: Underwater sound technical report (APP-036). This has been mistakenly labelled as PTS and will be included within the errata provided at Deadline 1 and should read "mortality and potential mortal injury". The Applicants would also note that as per the response to RR-1414.2, high order UXO detonation techniques have been removed from the draft DCO, and as such only the mortality and potential mortal injury ranges for low order UXO detonation (as presented in Table 3.17 of Volume 2, Chapter 3: Fish and shellfish ecology (APP- 048) are now relevant to the assessment with a much-reduced impact on fish and shellfish receptors.

#### Response to 4.4.5

As per the Popper et al. (2014) guidelines, TTS and recoverable injury impacts would likely be expected to occur at a range of tens to hundreds of meters (i.e. the near to intermediate fields; see Table 1.7 of Volume 1, Annex 5.2: Underwater sound technical report (APP-036) for the highest sensitivity group of fish which includes cod and herring. This qualitative assessment of impact ranges indicates that the potential sound impacts are unlikely to have any significant overlap

#### 4.4.3

The MMO would like to thank the Applicants for providing clarification regarding the origin of a fourth hearing category for fish, which was derived from Popper and Hawkins (2019). The MMO further notes that for the range of effect from vessel and construction noise, groups 3 and 4 fishes were modelled together using the appropriate thresholds from Popper et al. (2014) for the impacts of recoverable injury and temporary threshold shift (TTS) using 170 dB rms for 48 hours and 158 dB rms for 12 hours, respectively. The MMO considers this matter closed.

#### 4.4.4

The MMO thanks the Applicants for confirming that Table 3.17 of Volume 2, Chapter 3: Fish and shellfish ecology presents the modelled impact ranges for high and low order detonations for mortality and potential mortal injury in fish (all groups), rather than permanent threshold shift (PTS). The threshold of 229-234 dB peak used in the modelling is appropriate.

The MMO will confirm closure of this issue on review of the updated documents submitted at Deadline 1.

The MMO further notes that high order UXO detonation techniques have now been removed from the draft DCO, therefore only the mortality and potential mortal injury impact ranges for low order UXO detonation are now relevant to the assessment. The MMO agrees with the Applicants that the ranges for low order and low yield detonations are much reduced (<147m). We are therefore content that in the absence of high order detonations, significant impacts to fish receptors are not likely to occur at a population level.

The MMO will confirm closure of this issue on review of the updated documents submitted at Deadline 1.

#### 4.4.5 & 4.4.6

The MMO thanks the Applicants for signposting to the table of qualitative impact ranges found in Table 1.7 of Volume 1, Annex 5.2: Underwater sound technical report. Whilst the Applicants note that behavioural effects may occur and have potential to affect fish during spawning seasons, they highlight that the temporal overlap between UXO detonation and spawning periods is likely to be minimal because of the extremely short-term nature of the noise associated with

The Applicants have responded to each point below:

- 4.4.3: The Applicants note that the MMO consider this matter now closed.
- 4.4.4: The Applicants note that the threshold of 229-234 dB peak used in the modelling is appropriate and that the MMO considers that significant impacts are not likely to occur at the population level and that the MMO will confirm closure once it has reviewed the updated documents that the Applicants submitted at Deadline 1. The Applicants note the MMO's comment that given the ranges for low- order UXO, significant impacts to fish receptors are not likely to occur at a population level and that the MMO will confirm closure once it has reviewed the updated documents that the Applicants submitted at Deadline
- 4.4.5 and 4.4.6: The Applicants note the confirmation from the MMO that seasonal restrictions for cod and herring are not required during low- order UXO clearance.
- 4.4.7: This is noted by the Applicants.
- 4.4.8 and 4.4.9: The Applicants note that 4.4.8 and 4.4.9 relating to UXO clearance and seasonal restrictions have been addressed in the MMO comments above and that seasonal restrictions are not required for cod or herring during low order UXO clearance. The Applicants also would signpost to their response to hearing action point ISH1\_32 (see Applicants' response to Hearing Action Points due at Deadline 1 (REP1-037)).

4.4.4 The MMO confirms that they have reviewed the updated documents, and we provided further comment at Deadline 2 (REP2-061 Section 3.6).

The MMO has no outstanding comments on this point and consider the matter resolved.



the context of numbered groups, the Applicants has numbered groups 1 and 2 in line with the classifications of Popper et al., (2014), but has subdivided Popper et al.'s category of 'fish with a swim bladder involved in hearing' into groups 3 and 4 which is not appropriate. Therefore, the MMO requests the Applicants stops using this incorrect terminology, as cod and herring are both 'Group 3' fish with a swim bladder involved in hearing.

4.4.4 Regarding the Applicants' Underwater Noise (UWN) Assessment for Unexploded Ordnance (UXO) clearance activities, the Applicants has indicated that as many as 25 UXOs, ranging from between 25 kilograms (kg) up to 907 kg in size, may be cleared. In the UWN technical report, the Applicants appears to have presented the range of impact for Permanent Threshold Shift (PTS) in reference to fish receptors. This is not appropriate, as PTS is not relevant to fish receptors, only to marine mammals (see Popper et al., 2014). The Applicants has correctly identified the Popper et al., (2014) criteria for injury to fish due to explosives in Table 1.7 of the UWN technical report. It is therefore not clear why PTS ranges are expressed for fish in Tables 1.22 and 1.23 of the report. The range of impact from PTS to fish has also been incorrectly carried across to the Applicants' dedicated impact assessment in the fish ecology ES chapter (Table 3.17). Instead of PTS, these tables for fish should refer to 'mortality and potential mortal injury' as per the Popper et al., (2014) guidelines. The Applicants should amend this assessment by providing numerical modelling of the range of impact for mortality and potential mortal injury in fish (using the Popper et al., (2014) criteria for high hearing sensitivity fish, 229-234 decibels (dB) peak, to provide an indication of the range at which fish might experience a fatal response to UXO detonation. Given the project in close proximity to both the Isle of Man herring spawning grounds and the Irish Sea high intensity cod spawning ground, it is important that accurate predicted impact ranges are provided.

4.4.5 The MMO also notes that Temporary Threshold Shift (TTS) and recoverable injury may also be experienced by fish receptors, but the predicted range of effect for TTS from UXO in Popper et al., 2014, is expressed qualitatively ('near', 'intermediate' and 'far'), rather than quantitatively which means numerical modelling of impact ranges for TTS and recoverable injury is not possible. It would be beneficial, given the location of the project in close proximity to both the Isle of Man herring spawning grounds and the Irish Sea high intensity cod spawning ground, if a qualitative predicted range of impact for TTS and recoverable injury is provided.

with the nearby herring and cod spawning grounds, as concluded in section 3.11.4 of Volume 2, Chapter 3: Fish and shellfish ecology (APP-048). The Applicants still consider the modelled injury and mortality ranges to be the key impact assessment criteria for fish species. Although behavioural effects may occur and have potential to affect fish during spawning seasons, the temporal overlap between UXO detonation and spawning periods is likely to be minimal because of the extremely short-term nature of the noise associated with UXO clearance activities (i.e. seconds).

Response to 4.4.6

The Applicants will be removing high order UXO detonation from the draft DCO (AS-004) (see RR-1414.2), and therefore further mitigation is not required. Should high order UXOs detonation be required, this would be licensed under a separate marine licence.

As low order UXO detonation will lead to significantly reduced impact ranges (see Table 3.17 of Volume 2, Chapter 3: Fish and shellfish ecology (APP-048)), further mitigation measures such as noise abatement are not required.

Response to 4.4.7

The Applicants welcome the agreement on the interrelated impacts and effects on the physical and biological environment and reiterates that the Applicants will be removing high order UXO detonation from the draft DCO/DMLs (AS-004) (see RR-1414.2). Due to the exclusion of high order UXO detonation from the draft DCO/DMLs (AS-004), effects on fish and shellfish IEFs, including fish spawning habitats, will be greatly reduced from those predicted in Volume 2, Chapter 3: Fish and shellfish ecology (APP- 048) and therefore further mitigation (including scheduling with other project activities during fish spawning seasons) is not required to ensure significant effects are avoided. The Applicants note that all the projects (Morgan Offshore Wind Project: Generation Assets, Morecambe Offshore Wind Farm: Generation Assets, the Transmission Assets and Mona Offshore Windfarm) have endeavoured to take a consistent approach to DCO (including DML) drafting and will continue to maintain consistent approaches to post consent matters wherever practicable. It is simply not in the commercial interests of the projects to do otherwise. The draft DCOs for Morgan Offshore Wind Project: Generation Assets, and Mona Offshore Windfarm include UXO clearance conditions which require each project to submit for approval by the MMO a method statement which will include a programme of works for low order clearances, and the Morecambe Offshore Wind Farm: Generation Assets has assessed UXO clearance but will be applying for a separate marine licence which will have its own method statement. The MMO will therefore maintain an element of control and influence over each project's UXO campaigns because they cannot proceed without the MMO's approval. In discharging those conditions, the MMO will be able to consider and manage the potential for cumulative impacts arising. This is no different to the

UXO clearance activities (i.e. seconds). In light of high order UXO detonation being removed from the draft DCO, the MMO is content that mitigation for low order and low yield detonation during the cod and herring spawning season is not required under the draft DCO and therefore no seasonal restriction is required.

Should high order UXOs detonation be required, this would be licensed under a separate marine licence and further assessment will be undertaken at time of the licence application.

4.4.7

The MMO welcomes the Applicants considered response to our concerns raised on potential cumulative and interrelated impacts from the construction of Morgan.

4.4.8 & 4.4.9 have been addressed above. Deadline 2 Update

The MMO notes updates haven't been provided at Deadline 1 and will review these once submitted.

role the MMO usually has when discharging conditions 4.4.6 In addition to this, the Applicants has also where a number of projects are coming forward in a not discussed the use of additional noise certain area and there is the potential for cumulative mitigation strategies (for example noise impacts. The Applicants further note for clarity that the abatement systems such as bubble curtains) in undertakers for the Morgan Offshore Wind Project: relation to fish where high order detonation Generation Assets DCO and the Morgan element of the techniques are needed. The MMO therefore Transmission Assets (Project A in the draft DCO (ASrequests that this is reviewed and updated. 004) are the same and whilst consent for those two 4.4.7 The MMO considers the description of elements has been sought separately, the two elements potential cumulative and inter-related impacts of the Morgan Offshore Wind Project will be delivered by and effects on the physical and biological the same Undertaker as one coordinated project postenvironment to be appropriate. However, the consent. The same is true for the Morecambe MMO strongly requests that the projects' UXO Generation Assets DCO and the Morecambe element of detonation campaign be mindfully scheduled to the Transmission Assets (Project) in the draft DCO (ASprevent overlap with other impulsive noise 004), which together comprise the Morecambe Offshore generating activities (e.g., piling activities and Windfarm. UXO detonation) happening at nearby Offshore Response to 4.4.8 Windfarm (OWF) developments (such as the Morgan, Morecambe and Mona OWF The Applicants have clarified these points in response to generation assets projects), and to coordinate paragraphs with the relevant developers to manage noise 4.4.4 and 4.4.5. emissions where developments are concurrent. Response to 4.4.9 The MMO is currently reviewing how this will be managed across the other projects in The Applicants maintain the position that the seasonal Examination and would welcome the Applicants restrictions are not necessary for the reasons set out in comments on this matter. the response to RR-1414.24 and due to high- order UXO detonation being removed from the draft DCO/DMLs 4.4.8 As per the MMO comments above, the (AS-004) (see RR-1414.2). MMO does not consider that the Applicants has appropriately assessed the range of effect for mortality or potential mortal injuries to fish and has not fully discussed the potential for recoverable injury and TTS effects in fish with high hearing sensitivity. Therefore, the MMO requests that a seasonal restriction is conditioned on the face of the DML. Draft wording has been provided below but this can be discussed with the Applicants further: UXO clearance must not take place during the herring spawning season from 01 September to 31 October inclusive and the cod spawning season from 01 January to 30 April inclusive. This condition will prevent significant adverse effects to spawning Cod and Herring along with their eggs and larvae from underwater noise. If the Applicants provides updated modelling along with the requested clarifications, then the MMO may refine this restriction. RR-1414-25 Shellfish Ecology (APP-48 - APP-49) The MMO believes there are no The Applicants note that the MMO The MMO will continue to maintain a The Applicants note and welcome this response outstanding issues related to shellfish does not have any outstanding issues watching brief. The MMO has no concerns in relation to the relating to shellfish ecology but will ecology. assessment of shellfish ecology. The Applicants maintain a watching brief over any has provided a clearly presented, well justified concerns raised by IPs during the assessment for shellfish with sufficient evidence Deadline 2 Update examination. and no information gaps. The MMO will continue to maintain a The MMO notes that there is no mitigation watching brief in relation to any concerns on measures proposed specifically for shellfish, this is commercial shellfisheries and may provide considered acceptable as shellfish were assessed comments in future responses. as experiencing minor adverse impacts as a result of the proposed works. Mitigation measures are not required for impacts assessed as minor adverse.



4.5.3 The Applicants has stated that "The assessment of impacts on fish and shellfish ecology as a result of the construction, operation and maintenance, and decommissioning phases of the Transmission Assets are predicted to be not significant in EIA terms. Based on the predicted impacts to fish and shellfish ecology receptors, it is concluded that no specific monitoring to test the predictions made within the impact assessment is required." The MMO agrees with this statement which is in line with the expectations for when monitoring is required.

#### RR-1414-26 **Commercial Fisheries (APP54 – APP55)**

The MMO suggests that there should be the creation of a monitoring programme on the impacts to the nearby Bass and other commercial fisheries to benefit local fishers as there is the possibility that the noise and disturbance from the construction of the transmission assets, as well as the incombination effects from the other windfarms in the area, could impact the migratory routes of these species.

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 DMLs.

Potential impacts to migratory routes (4.6.1)

No significant impact on any fish and shellfish, including bass, has been identified for the Transmission Assets, either alone or in combination with other plans or projects (section 3.11 and section

3.13 respectively in Volume 2, Chapter 3: Fish and shellfish ecology (APP-048)), with no monitoring identified as being required (section 3.11.11). The largest potential impact from the Transmission Assets to migratory routes would be from underwater sound as a result of pre- construction surveys (i.e. UXO clearance and surveys, as assessed in section 3.11.3 of APP-048)) and construction activities (e.g. vessel sound emissions. cable burial (assessed in section 3.11.4 of APP-048)), however the Applicants maintain for the reasons set out below, that this would not be a barrier to migration, and monitoring is not justified. As detailed in Volume 2, Chapter 3: Fish and shellfish ecology (APP- 048), UXO clearance sound is very short (seconds) whilst geophysical survey is short term and spatially limited. Other noise from vessels and construction is intermittent and spatially and temporarily limited, occurring within a marine environment of anthropogenic ambient background sound. There is no piling associated with the Transmission Assets and the Applicants will be removing high- order UXO detonation from the draft DCO/DMLs (AS-004) (see RR-1414.2). As such, there is a limited spatial extent and durations in which noise would occur, and the construction of the Transmission Assets would not be a barrier to migration.

Engagement with commercial fisheries (4.6.2)
The Applicants note the MMO's response in 4.6.2. The Applicants are working to facilitate co- existence with existing commercial fishing activity and minimise disruption as far as is practicably possible. Early and extensive engagement was established with the NFFO and other fisheries stakeholders in June 2021 as detailed in section 1.4.1 of the Technical Engagement Plan (APP- 189) to understand stakeholder requirements for co-existence and will continue throughout the lifetime of the projects. Detailed Fisheries Liaison and Coexistence Plans (FCLP) will be developed by the Applicants through ongoing consultation with fisheries stakeholders and in accordance with the outline FCLP (APP-218).

4.6.1

The MMO welcomes the Applicants' response. The MMO is reviewing this internally and will provide a response at Deadline 3.

4.6.2

The MMO welcomes this engagement and will maintain a watching brief on the discussions.

The MMO has provided comments on the FLCP in Section 9.1 of REP1-086 document.

Regarding 4.6.1, the Applicants note this response and note that the MMO will provide a response at Deadline 3.

Regarding 4.6.2, the Applicants note that the MMO will maintain a watching brief on commercial fisheries and any submissions by IPs.

The Applicants responded to comments by the MMO on the FLCP at Deadline 2 (REP2-033).

Note that the Applicants have submitted an updated Outline Fisheries Liaison and Co- existence Plan (J13\_F02) at Deadline 3 to address comments made by the MMO in their written representation (REP1-086).

The MMO has provided comments in Section 5 of this document.

The MMO highlighted to the Applicants in a meeting on 21 July 2025 that there is currently ongoing engagement with the fishing industry in relation to Bass fishing and the impact from vessel disturbance in relation to the geophysical surveys. The MMO has recommended the industry become an Interested Party within this examination if they have concerns. This is an ongoing matter and if the ExA request the MMO can provide further details once the matter is resolved.



		This is secured by Condition 18(1)(f) within Schedules 14 and 15 of the draft Development Consent Order (AS-004).		
RR-1414-27	Underwater Noise  4.7.1 The MMO considers that the appropriate impacts have been considered in the ES with the assessment being proportionate to fully identify and assess the potential impacts.  4.7.2 The MMO has noted that Section 4.11.2.11 of the ES states that Southall et al., (2007) recommended the use of TTS as the most appropriate proxy disturbance from single pulses (such as UXO detonation) and therefore this has been applied to inform the assessment. The MMO does not consider it appropriate to use TTS- onset thresholds as a proxy for disturbance. TTS occurs at much higher sound exposures and so will underestimate the risk of disturbance.  4.7.3 The document concludes that "All marine mammals are deemed to have some resilience to TTS, exhibit high recoverability and are considered of international value. The sensitivity of the receptor to TTS is therefore, considered to be low" (see Section 4.11.2.21 of the ES). The MMO notes that while the document provides a detailed justification for assigning a low sensitivity score to marine mammals for TTS and underwater noise, it is important to recognise that TTS is still a form of temporary injury. TTS may impair essential life functions such as foraging, navigation, communication, and predator avoidance, even if the effects are temporary and reversible. Repeated exposure to sound levels that cause TTS can lead to prolonged periods of hearing impairment, potentially impacting individual health and fitness. Given these considerations, a more precautionary approach is warranted, and the sensitivity score should be reevaluated to better reflect the potential impacts on marine mammals.  Underwater Sound Technical Report (APP- 036) 4.7.4 The MMO considers that the underwater sound technical report provides a detailed assessment of noise generating activities that will be undertaken for the Morgan and Morecambe Transmission Assets.  4.7.5 Overall, the MMO has no major concerns with the noise assessment presented. However, the MMO has previously raised concerns	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 lowest level of noise exposure that has a measurable transient effect on hearing (i.e., TTS-onset). We recognise 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).	Regarding points 4.7.2 and 4.7.3, the Applicants note that the MMO is still reviewing information and will provide a response at Deadline 3.	The MMO has provided a response at Deadline 2 (REP2-061) and Deadline 3 (REP3-087).  The MMO will keep a watching brief on the Applicants response and will provide further comments to the Applicants as soon as possible and provide an update to the ExA at Deadline 5.
	- James and the second	Therefore, an estimation of the extent of behavioural	1	10

estimated based on the properties of Table 1.18 in the PEIR consultation for the acoustical properties of the sediments. There is a mention in the report of a single set of values being used to represent the seabed acoustic parameters. The MMO therefore requests the Applicants clarifies which approach was taken.

4.7.6 In addition to this, the MMO requires further clarification from the Applicants as to whether absorption in water was included/considered in the model. The Weston model does not include this effect implicitly. The absorption in water is especially relevant for the sources with substantial high frequency spectral components and neglecting it could lead to the overestimation of impact ranges. We assume that the model included this effect as an additional term to the Weston model equations (Table 1.17) although this was not mentioned explicitly in the report.

4.7.7 The MMO notes that Section 3.11.4.7 states that "SELs have been estimated for each source based on 24 hours continuous operation, although it is important to note that it is highly unlikely that any marine mammal or fish would stay at a stationary location or within a fixed radius of a vessel (or any other sound source) for 24 hours. Consequently, the acoustic modelling has been undertaken based on an animal swimming away from the source (or the source moving away from an animal)". For fish, the Popper et al.. (2014) thresholds for continuous sources have been adopted in the assessment for recoverable injury and TTS (specifically 170 dB Root Mean Square (rms) for 48 hours and 158 dB rms for 12 hours for TTS respectively). The Sound Pressure Level (SPL)rms metric is instantaneous and therefore there would be no fleeing element involved. Please could the Applicants provide further clarity.

disturbance was 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) in Volume 2, Chapter 4: Marine Mammals (APP-050).

#### Response to 4.7.3

TTS is identified as the received levels and auditory weighting functions (or criteria) at which individual marine mammals are predicted to experience temporary changes in their hearing sensitivity. The NMFS (2024) "Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Underwater and InAire Criteria for Onset of Auditory Injury and Temporary Threshold Shifts)" clearly differentiate auditory injury and TTS; the assessment presented in Volume 2, Chapter 4: Marine mammals (APP-050) highlighted that there is an important distinction between a Permanent Threshold Shift (PTS) and TTS, given that TTS is only temporary hearing impairment, is less likely to lead to acute effects and will largely depend on recoverability. Whilst the Applicants acknowledge the MMO's point that "Repeated exposure to sound levels that cause TTS can lead to prolonged periods of hearing impairment", the assessment presented in Volume 2, Chapter 4: Marine mammals (APP-050) was based on the potential for marine mammals to experience temporary changes in their hearing sensitivity as a result of a maximum design scenario (MDS) of 25 individual UXO clearance events, each occurring over a matter of seconds (rather than repeated impulsive events over 24 hours). The behavioural disturbance response to these events is likely to be limited to 'a short-lived startle reaction' (Finneran and Jenkins. 2012), which is further supported by the statement that "the magnitude of the consequence is likely to be related to the duration and magnitude of the TTS" (Kastelein et al., 2012), noting the removal of high order UXO detonation from the draft DCO (see RR1414.2). Given that TTS is a temporary and reversible hearing impairment, it is anticipated that any animals experiencing this shift in hearing would recover once the animal had moved beyond elevated sound levels which could result in TTS. The assessment set out in Volume 2, Chapter 4: Marine mammals (APP050) considered the available evidence in the context of the MDS, focusing on susceptibility of an animal to TTS, the biological effects of TTS, and recoverability following cessation of the activity. Based on these considerations, it was concluded that animals would be able to recover hearing after they are no longer exposed to elevated sound levels (which occur over seconds only) and it is expected that animals would be able to tolerate TTS without any impact on reproduction or survival rates, with the ability to return to previous behavioural states or activities once the activity had ceased. It was therefore concluded in Volume 2, Chapter 4: Marine mammals (APP- 050) that "All marine mammals are deemed to have some resilience to TTS, exhibit high recoverability and are considered



of international value. The sensitivity of the receptor to TTS is therefore, considered to be low." (paragraph 4.11.2.21). The Applicants are therefore confident that the assessment of low sensitivity is robust and appropriate, and a more precautionary assessment would not be proportionate to the potential impact being assessed.

Furthermore, the Applicants highlight that the existing assessment of the number of animals predicted to experience TTS as a result of UXO clearance is likely an overestimate of the potential for an ecologically significant effect. This is because the TTS-thresholds (criteria) applied (from Southall et al., 2019) describe the thresholds at which the onset of TTS is observed, which is, per their definition, a 6 dB shift in the hearing threshold, usually measured four minutes after sound exposure, which is considered as "the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability", and which "is typically the minimum amount of threshold shift that can be differentiated in most experimental conditions." As such, it is expected that not all animals within the modelled TTS range would experience the predicted temporary hearing shift. Finally, see the Applicants response to RR- 1414.2 (regarding the removal of high order UXO detonation from the draft DCO).

#### Response to 4.7.4 to 4.7.7

Within the Underwater Sound Technical Report (APP-036), the attenuation term (alpha, hereafter referred to as) in the Weston model is defined in units of dB per radian and is derived from the acoustical properties of the top layer of the seabed.

Therefore, the water and sediment sound speed, densities and attenuation coefficient (in dB per wavelength) are inputs to the Weston model in order to determine using standard acoustic theory. The attenuation term can be calculated as:

$$a_{dB} = \frac{a_s}{\pi} \frac{p_s c_w^2}{p_w c_s^2 sin^3 \theta_c}$$

Where  $P_s$  and  $P_w$  are the densities of the sediment and water respectively,  $^c$  and  $^c$  are the s w sound speeds in the sediment and water respectively and  $^\theta c$  is the critical angle. The water and sediment sound speed, densities and attenuation coefficients in Table 1.18 of the Underwater Sound Technical Report (APP-036) are also used in the calibration of the site-specific Weston Energy Flux sound propagation model. In order to carry out this calibration, the model results were compared against the results from the Parabolic Equation solver (Collins, 1991; Jensen, 1994) and the Normal Mode solver (Jensen, 1994; Pedersen and Keane, 2016).

Further, the Applicants confirm that the effect of water absorption was included in the modelling as a separate

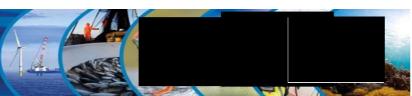
		term to those included in the Weston model, based on the method described in Ainslie and McColm (1998) (The Journal of the Acoustical Society of America 103, 1671 (1998); doi: 10.1121/1.421258). As stated in section 3.11.4.7 of the Underwater Sound Technical Report (APP-036), the thresholds based on the SEL metric have been estimated based on source operating continuously for 24 hours: this includes PTS and TTS for marine mammals. The thresholds based on the rms metric have been modelled as a single instantaneous level, however it should be noted that although levels are assessed against the rms metric, the thresholds assume 12 to 48 hours continuous exposure to sound of this level (Popper et al., 2014), which is considered an unlikely scenario and therefore a precautionary assessment.			
RR-1414-28	Shipping and Navigation (APP-56)  4.8.1 The MMO defers to the Maritime and Coastguard Agency and Trinity House on matters of shipping and navigation 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.	Plan (APP-189) and will continue to engage with the MCA through the Examination.	agreed DML conditions with Trinity House	The Applicants have updated the draft DCO at Deadline 2 (REP2-004) to address the comments raised by MCA and Trinity House (see also the Applicants responses at Deadline 2 to the MCA and Trinity House in the Applicants' Response to Written Representations from Statutory Consultees and other Organisations (REP2-031).	has updated the draft DCO to address
RR-1414-32	General comments  5.1.1 The MMO is still reviewing the following documents and will provide comments in due course: • Marine Enhancement Statement (APP-217) • Outline Fisheries Liaison and Coexistence Plan (APP218) Outline Cable Burial Risk Assessment (APP-219) • Outline Offshore Cable Specification and Installation Plan (APP-220) • Measures to minimise disturbance to marine mammals and rafting birds from vessels (APP-221) • Outline Offshore Written Scheme of Investigation and Protocol for Archaeological Discoveries (APP- 222) • Outline offshore operations and maintenance plan (APP-224) • Offshore In Principle Monitoring Plan (APP-225) • Outline Vessel Traffic Management Plan (APP-226) • Dredging and disposal - site characterisation plan (APP-227) • Cable Statement (APP-228).	The Applicants acknowledge that further comments will be provided through Written Representations where necessary.	The MMO has provided further comments at Deadline 1 REP1- 086 and will continue to review future updates.	The Applicants have provided a response to the MMO's Deadline 1 submission (REP1-086) at Deadline 2 in Annex 3.2 to Applicants' Response to WRs from Statutory Consultees: Marine Management Organisation (REP2-033).  Note that the Applicants have submitted an updated Offshore in Principal Monitoring Plan (J20_F02) and Outline Fisheries Liaison and Coexistence Plan (J13_F02) at Deadline 3 to address comments made by the MMO in their written representation (REP1-086). The Applicants have also submitted updated Outline Vessel Traffic Management Plan (J21_F02), Outline Offshore Written Scheme of Investigation and Protocol for Archaeological Discoveries (J17_F02) at Deadline 3.  However, the Applicants have not submitted an updated Outline Offshore Operations and Maintenance Plan (OOMP) (APP-224) at Deadline 3 as the Applicants is still engaging with the MMO on the changes required and anticipates submitting and updated Outline OOMP at Deadline 4.	Outline Fisheries Liaison and Coexistence Plan (REP3-028)  The MMO has provided comment in Section 5 of this document.  Measures to minimise disturbance to marine mammals and rafting birds from vessels (APP-221)  The MMO notes that at Deadline 3 we stated "The MMO notes that further consideration must be made to address the overall disturbance from elevated underwater sound due to other sound producing activities within the Offshore Environmental Management Plan, as the mitigation measure to minimise disturbance to marine mammals are only relevant to the transiting vessel."  The Applicant's requested clarification on the noise sources of concern.  The MMO responded to the Applicant's via email on 23 July 2025 to confirm that no further information was required for this topic.  Offshore in principle Monitoring Plan (OIPMP) (APP-225)



The MMO notes that section 1.7 has been revised to clarify the Applicants position regarding the conclusions of the ES, and how these relate to benthic monitoring. The MMO notes that Table 1.3 has been updated to clarify the benthic monitoring approach within the Fylde Marine Conservation Zone, specially to state that the potential effects on the MCZ because of the works will occur during the operations and monitoring phase of the Project. The MMO notes the Applicants are committed to monitor the recovery of sediments and associated benthic assemblage within the MCZ and this will be secured through relevant conditions within the Development Consent Order (DCO). RR-1414-33 **Outline Marine Mammal Mitigation Protocol** The Applicants note the submission. The MMO welcomes the update to remove The Applicants note this response. The MMO notes that the Outline high order UXO clearances from the The Outline Marine Mammal Marine Mammal Mitigation Protocol (MMMP) (APP-223) project. The MMO will review the updated Mitigation Protocol (MMMP) was will be submitted at Deadline 4. 5.2.2. and 5.2.3 Please see the Applicants response to document and provide comments Deadline updated and submitted at Deadline 2 including updates to address MMO Please see the comments in Section 2.1 for 1414.2 (regarding the removal of high order UXO (REP2-026) to reflect the removal of comments made at Deadline 3. UXO inclusion on a DML. detonation from the draft DCO). The removal of high high-order UXO clearance from the order UXO detonation from the draft DCO (AS-004) (as draft DCO at Deadline 1 (REP1-008). detailed in RR-1414.2) means that the maximum design Therefore, the MMO will review this Regarding the Outline Marine Mammal Mitigation scenario for UXO clearance is low order clearance. The following Deadline 4 submission and Protocol (MMMP), the MMO notes that Table 1.6 largest modelled PTS ranges for low order UXO provide updates at Deadline 5. in the document shows the minimum Acoustic clearance is for Very High Frequency (VHF) cetaceans Deterrent Devices (ADD) duration for high order (such as harbour porpoise) at a maximum of 2,290 UXO Clearance and the associated displacement m. Whilst mitigation will therefore still be required beyond distances. The table highlights that for a UXO embedded mitigation, to ensure animals are out with the size of 26 kg to 130 kg, a 60- minute ADD duration will not be sufficient to deter Very High injury zone, the application of an ADD for 30 minutes would be sufficient to deter all marine mammals from the Frequency (VHF) cetaceans, such as harbour relevant injury zones. Detailed Marine Mammal Mitigation porpoises, out to 8,045 metres, which is the Protocol(s) (MMMPs) (and ADD parameters) will be maximum PTS range. It is important to note that developed in lines with the outline plan (APP- 223) and in while a UXO size of 130 kg is considered the consultation with relevant stakeholders, post- consent, most likely scenario, the worst-case scenario of and will be informed by the most recent guidance. The up to 907 kg is not addressed in Table 1.6. Applicants will therefore update the Outline MMMP (APP-However, other tables in the MMMP, such as 223) to focus on low order UXO clearance only, removing Table 1.5, do consider a UXO size of 907 kg. mitigation for high order UXO detonation including the This should be amended in Table 1.6. use of scare charges as a mitigation option for high order detonation. 5.2.3 The MMO notes that section 1.5.5.3 of the MMMP states that "for UXO sizes larger than 130 Mitigation for high order UXO detonation will still be kg, the use of NAS as an additional secondary included as an Addendum to the Outline MMMP (APPmitigation technique will be considered as an 223) to align with the assessment of high order UXO in option post- consent." Please note that Noise Volume 2, Chapter 4: Marine Mammals (APP-050) and Abatement Systems (NAS) (e.g., a bubble to support a separate standalone marine licence if high curtain) must be deployed for ALL high order order clearance is required. Should Noise Abatement clearance, not just for UXO sizes over 130 kg. Systems (NAS) for high order clearance be required, Additionally, it is the MMO's position that that this will be discussed and agreed with the MMO and deploying a bubble curtain is mandatory for high relevant stakeholders if and when a separate Marine order UXO clearance and cannot be considered Licence application may be required for high order UXO as an option post-consent, unless other noise

	5.2.4 The MMO notes that the MMMP includes the standard measures such as the implementation of a mitigation zone (the mitigation zone will be determined considering the largest injury zone across all species) and Marine Mammal Observers, the potential requirement for Passive Acoustic Monitoring (PAMs) and the use of ADDs. The MMO welcomes that the Applicants has committed to the prioritisation of low order clearance methods in the first instance, where possible.	Therefore, the Applicants confirm that Table 1.6 (Minimum ADD duration for high order UXO clearance and associated displacement distance, showing whether the individual can move away from the injury range during ADD activation) of the outline MMMP will be updated to "Table 1.6: Minimum ADD duration for low order UXO clearance and associated displacement distance, showing whether the individual can move away from the injury range during ADD activation" and therefore does not include details on high order UXO detonation for UXO of 907 kg. The Applicants highlight that the detailed MMMP(s), which will be developed in accordance with the outline MMMP (APP-223), are intended to operate as a live document which will be updated through discussions with stakeholders and agreed with the MMO prior to commencement of construction. The detailed MMMPs (and ADD parameters) will be developed in consultation with relevant stakeholders and will be informed by the most recent guidance.  5.2.4 The Applicants note the submission and highlight the responses to 5.2.3 and 5.2.4 (regarding the removal of high order UXO clearance from the draft DCO (AS-004)).			
RR-1414-35	Marine Conservation Zone Assessment (APP-019)  The MMO defers to and supports NE as SNCB regarding impacts to Marine Conservation Zones for the project.  The MMO will keep a watching brief on this document and discussions in relation to MCZs and would remind the Applicants that any mitigation secured through these assessments will need to be included within the conditions on the DML.	The Applicants note this response.	The MMO will maintain a watching brief on the assessments.  The MMO would highlight that we are currently reviewing the impacted MCZ's in relation to our protection legislative requirements and may provide further comments at Deadline 3.	The Applicants note this response and that the MMO are reviewing the affected MCZ against the MMOs protective legislation and may provide further comments at Deadline 3.	The MMO provided a response at Deadline 3 (REP3-085) in section 2.11. The MMO review the Applicant's comments at Deadline 4 and provide a response at Deadline 5.





### 2. MMO comments on the updated In Principal Monitoring Plan (IPMP) (REP3-032)

#### 2.1 General Comments

- 2.1.1 The MMOs Strategic Renewables Unit (SRU) has published a <u>Standardisation of Post-Consent Environmental Monitoring for Wind Farms in English Waters</u> which is guidance for offshore wind developers on post-consent monitoring standards. Please ensure the IPMP is updated to reference the specific guidance.
- 2.1.2 The monitoring required for each offshore wind farm project will continue to be agreed on a case-by-case basis through discussions between Applicants, the relevant Statutory Nature Conservation Body (SNCB), and the MMO to deem what is applicable for the project area.

#### 2.2 Adaptive Management

- 2.2.1 The MMO has a standard condition for adaptive management, noting a similar condition has been implemented in Sheringham and Dudgeon Offshore Wind farm. This has been requested in the more recent OWF examinations due to issues occurring in older OWF that are in the post construction monitoring phase.
- 2.2.2 The MMO wishes to implement a more proactive process to manage issues in the event that monitoring shows a greater impact than that assessed in the Environmental Statement and enable the Applicants to start discussions at the earliest opportunity alongside the monitoring report submission (or before in some circumstances).
- 2.2.3 The MMO proposes updates to the Post Construction Condition 26 drafting is below:
  - "(6). In the event that the reports provided to the MMO under sub-paragraph (4) identify a need for additional monitoring, the requirement for any additional monitoring will be agreed with the MMO in writing and implemented as agreed.
  - (7). In the event that monitoring reports provided to the MMO under sub-paragraph (4), identifies impacts which are beyond those predicted within the Environmental Statement/Habitat Regulations Assessment, adaptive management/mitigation may be required. An Adaptive Management/Mitigation Plan to reduce effects to within what was predicted within the Environmental Statement/Habitat Regulations Assessment, unless otherwise agreed in writing by the MMO, must be submitted alongside the monitoring reports submitted under sub-paragraph (4), including timelines and associated monitoring to test effectiveness. This plan must be agreed with the MMO in consultation with the relevant SNCBs to reduce effects to a suitable level for this project.
  - (8) Any such agreed or approved adaptive management/mitigation should be implemented and monitored in full. In the event that this adaptive management/mitigation requires a separate consent, the Applicants shall apply for such consent."
- 2.2.4 The additional conditions ensure that all parties are clear what is required if the monitoring shows greater impacts than predicted during the assessment stage. It also allows the Applicants to themselves provide potential solutions when reviewing the results of monitoring, to be discussed with the MMO and SNCBs.





- 2.2.5 The aim of the condition is to provide a clear process to the Applicants, the MMO and any consultees, if in preparing the monitoring reports the Applicants identifies greater impact that the Environmental Statement (ES) predicted rather than just a discussion upon review of the reports.
- 2.2.6 The MMO notes that if impacts are greater than predicted we can utilise Section 72 of 2009 Act and vary the marine licence to request and required additional monitoring or adaptive management, but believes this Condition gives a clear process to all and allows for proactive management rather than reactive management by the MMO.

#### 2.3 Benthic Ecology

- 2.3.1 The MMO notes that section 1.7 has been revised to clarify the Applicants position regarding the conclusions of the ES, and how these relate to benthic monitoring.
- 2.3.2 The MMO notes that Table 1.3 has been updated to clarify the benthic monitoring approach within the Fylde Marine Conservation Zone, specially to state that the potential effects on the MCZ because of the works will occur during the operations and monitoring phase of the Project.
- 2.3.3 The MMO note the Applicant is committed to monitor the recovery of sediments and associated benthic assemblage within the MCZ and this will be secured through relevant conditions within the Development Consent Order (DCO).
- 2.3.4 Suitable mitigation measures have been proposed by the Applicants and include minimising the requirement for cable crossing within the MCZ, ensuring adequate cable burial depths are achieved through appropriate assessment, and a commitment to attempt reburial prior to installation of cable protection measures. The MMO agrees with these mitigations and the approach taken to minimise the requirement for cable protection measures within the MCZ.
- 2.3.5 The monitoring objectives for benthic receptors include the impacts on benthic sediments and the associated benthic assemblage within the Fylde MCZ. Following consent, detailed monitoring plans will be submitted to the MMO and relevant stakeholders for review and comment. The MMO would expect this to include suitable pre-construction characterisation of the potentially impacted areas within the MCZ to enable subsequent comparison of post-construction condition.

#### 2.4 Fish Biology and Fisheries

- 2.4.1 The IPMP does not propose additional fisheries-specific measures or monitoring, however, the MMO is generally content with this.
- 2.4.2 The MMO notes that the Applicants have committed to updating the Draft DCO to restrict any Unexploded Ordnance (UXO) required to be cleared to 'low order' methods only. The MMO is satisfied that additional mitigation for this impact is not required. However, should high order UXO detonation be required, this will fall under a separate marine licence and further assessment will be undertaken at time of the licence application.
- 2.4.3 The MMO believes the list of projects screened into the Cumulative Effects Assessment (CEA) in the EIA is appropriate and we do not expect that the construction and operation of the Morgan and Morecambe transmission assets is likely to have a significant impact to fisheries or fish ecology, alone or cumulatively with other projects.

#### 2.5 Physical Processes







- 2.5.1 The MMO notes that there is only one unresolved comment from previous advice:
  - To ensure that target cable burial at the nearshore/landfall was defined with consideration for natural shoreline retreat and hence potential shoreline realignment (natural or managed).
  - The Applicant's provided a response at Deadline 2 and the MMO are still in the process of reviewing these comments. We will provide an update to the Applicants as soon as we receive this information and to the ExA at Deadline 5.
- 2.5.2 The Cable Burial Risk Assessment (CBRA) in the sections KP0 KP0.75 refers to a lack of geophysical survey coverage and notes that sediment morphology is to be confirmed, but "intertidal variability [is] understood to be +-1.5m". The assessment then adds that a "minimum [depth of lowering of] 3.0m is considered adequate at this stage". The MMO take this reference to depth of lowering to mean burial depth, in which case the assessment does not indicate any allowance for shoreline retreat at this location. However, this assessment may need to be clarified in the CBRA.
- 2.5.3 No further mitigation measures are provided in the IPMP regarding cable monitoring, only the commitment to monitor cables and their burial status during the operations and maintenance phase (Table 1.2, 'Offshore in Principle Monitoring Plan').
- 2.5.4 The cable route characterisation is generally adequate, noting the specific details of the cable route remain to be determined by detailed surveying and risk assessment for cable laying.
- 2.5.5 The IPMP does not explicitly consider impact assessment for the transmission assets. However, in our previous advice, it was noted that major impacts from cable installation are not likely to occur, while recognising that specific detailed risk assessments may identify localised areas of concern.

#### 2.6 Marine Archaeology

- 2.6.1 The MMO notes the monitoring approach for Archaeological Exclusion Zones (AEZs) in the pre-construction phase has been updated. The MMO will defer comment to Historic England (HE) on the suitability of this.
- 2.6.2 Additionally, the MMO notes the inclusion of the same AEZ monitoring approach as above, but for the Operations and Maintenance phase. The MMO welcomes this addition, and we will be deferring comment on the suitability of this to HE.
- 3. MMO Comments on Stage 2 MCZ Assessment Rev F01 Annex A: Review of potential measures of equivalent environmental benefit (MEEB) (APP-227)

#### 3.1 General Comments

- 3.1.1 The MMO welcomes that the Applicants have undertaken a Stage 2 MCZ Assessment and without prejudice MEEB.
- 3.1.2 The MMO agrees with Natural England (NE) that whilst the cable protection is in situ, the extent and distribution attribute of the site features can neither be maintained or restored. It is advised that the impacts will result in 'lasting' habitat change from mud and sand to hard substrata which may result in habitat loss as removal and/or recovery post removal is not guaranteed.





- 3.1.3 The MMO defers to NE for comments regarding the measure 'Planting of native oyster beds. The MMO agrees with NE's comment regarding the creation of reef is not considered to provide comparable ecological function for subtidal sand and subtidal mud systems within Fylde MCZ.
- 3.1.4 The MMO defers to NE for comments regarding the measure 'Subtidal seagrass bed creation'. The MMO notes Natural England's concerns about the deliverability of seagrass restoration, as there has been no long-term success with seagrass restoration in the UK. The MMO notes that the extent of the measure has not been presented which considers seagrass mortality.
- 3.1.5 The MMO defers to NE and Joint Nature Conservation Committee (JNCC) for comments regarding the measure 'Bivalve seeding' inside the MCZ and outside of designated sites. The MMO notes that the area which bivalves would be deployed has not yet been determined.
- 3.1.6 The MMO notes that within A.1.7.3.6, the Applicants reference 'Pogoda *et al.*, 2019', however, this reference does not appear to be listed within the reference list.

### 4. MMO Comments on J13 Outline Fisheries Liaison and Coexistence Plan (REP3-028)

#### 4.1 General Comments

- 4.1.1 The MMO believes the scope of the Outline Fisheries Liaison and Co-existence Plan (FLCP) is appropriate and will be informed by suitable best practice guidance.
- 4.1.2 The MMO welcomes the inclusion of 'The MMO will not act as an arbitrator or be involved in any commercial negotiations with any association, organisation and/or individual fisheries stakeholder'.
- 4.1.3 We strongly advise that the Applicants seeks input from the Northwest Inshore Fisheries and Conservation Authority (NWIFCA) and the National Federation of Fishermen's Organisation (NFFO) in the formulation of the final fisheries liaison strategy.

# 5. MMO Comments on J22 Dredging and Disposal - Site Characterisation Plan (APP-227)

#### **5.1 General Comments**

- 5.1.1 The MMO confirm that the Applicants have provided adequate information for the designation of the disposal site area.
- 5.1.2 Should the MMO permit a licence application for disposal of the material within the transmission assets offshore order limits for the transmission assets, the Applicants should provide an appropriate shape file of the area for designation, with the exclusion of the generation assets that will be subject of an additional application/licence(s).
- 5.1.3 The disposal site was designated in February 2025, and the MMO provided the disposal site in REP1-086. This disposal site code must be referenced within the DML.

#### **5.2 Mitigation Measures**





- 5.2.1 The MMO notes that seabed preparation includes UXO, sand wave, and boulder clearance. A total of 1,426,800 metres cubed (m³) of spoil arisings from sandwave clearance is required in the cable corridors to ensure adequate burial of the assets over their lifetime, of which 270,000 m³ would be within the Fylde MCZ. In response to a section 42 comment from Natural England, the Applicants have reduced the requirements for sandwave clearance from 60% to 5% for Morgan export cables, and from 30% to 5% for the Morecambe export cables, and a reduction in the cable corridors from 104 m to 60 m for Morgan, and to 48 m for Morecambe.
- 5.2.2 The MMO is satisfied that the Applicants have considered alternative use and the best protocol for the use of the material to be disposed in the direct vicinity of the original location.
- 5.2.3 The proposed mitigation regarding the outline bentonite breakout plan appears to be appropriate as per previous advice from the MMO.

#### 5.3 Baseline Environment

- 5.3.1 Section 1.5 of the characterisation report summarises and signposts the physical characteristics including bathymetry, tidal and wave ranges, benthic subtidal and intertidal ecology, fish and shellfish ecology, marine mammals, and human environment including commercial fisheries, very well. The MMO defer to the relevant specialist advisors' and SNCBs' expertise regarding these areas and comments that they would have provided following review of the Environmental Statement (ES).
- 5.3.2 The MMO notes that a summary of shipping and navigation and marine archaeology were also provided within this report, and we defer to the relevant specialist advisors regarding these areas and comments.
- 5.3.3 Chemical characterisation is provided in Section 1.6.3.1. Figure 1.2 shows the location of 39 samples taken and analysed in the transmission cable corridors, and sediment samples were analysed for metals, organotins, total organic carbon, polycyclic polyaromatic hydrocarbons (PAHs) and poly chlorinated biphenyls (PCBS) by SOCOTEC, which is an MMO validated laboratory for the analyses listed.
- 5.3.4 Levels of contaminants were appropriately compared to UK Action Levels (ALs). Most of the contaminants were below AL1, and no contaminant was observed at levels in excess of AL2. Levels of organotins were all below the limit of detection. The report describes levels of PCB recorded in sediments at 13 out of the 39 stations sampled, the majority of which were in the nearshore area approaching landfall. However, levels of PCBs, for all samples analysed, were found to be below the sum of the ICES 7 AL1. PAH analysis showed the levels to be below the Canadian probable effect and the threshold effects levels.
- 5.3.5 The sediment chemistry was signposted to Volume 2, Annex 2.1: Benthic Subtidal and intertidal ecology technical report of the ES Appendix A (APP-046), which indicates that the risk of contaminants, as a result of disturbance from the clearance and dredging works on the marine environment, is likely to be low.
- 5.3.6 The MMO notes that all data from sampling provided in the characterisation report, for clarity and to avoid ambiguity, should also be provided in an MMO template (xlsx format only) for use with the Cefas Action Level Viewer and for use by the MMO in providing accurate annual disposal returns. In addition, this helps efficient assessment and interpretation of data without introduction of things like transcription error. This should be rectified.







5.3.7 The MMO reminds the Applicants of the requirement for timely sample data to characterise the disposal area. The results had been provided from sampling in 2022, and if works have not commenced within 3-5 years of this date, depending on potential issues (other construction works, spills etc.,) that may give cause to question whether the chemical characterisation remains representative of the area to be dredged or disturbed in accordance with OSPAR guidance on the management of dredged material (OSPAR Agreement 16-0e as amended 2024). The MMO may suggest additional surveys and chemical characterisation would be required prior to the commencement of construction.

#### **5.4 Cumulative Impacts**

5.4.1 The MMO notes that Table 1.8 of the characterisation provides a summary of the key impacts in physical, biological, and human receptors assessed within the ES with signposting, and the impacts range from Negligible to Minor. Section 1.7.2.4 concluded that, "Based on the findings of the Stage 1 MCZ Assessment (document reference E4), it can be concluded that temporary habitat disturbance, increases in SSCs, associated deposition, and the potential remobilisation of sediment-bound contaminants, will not lead to a significant risk of hindering the achievement of the overall conservation objective of maintaining the subtidal sand and subtidal mud protected features of the Fylde MCZ." The MMO broadly agrees with this statement but defers to NE as the SNCB.

Consideration of the likely cumulative impacts on receptors either from sequential or simultaneous construction maintenance and decommissioning of these works should be included in the report, or at a minimum, signposting to the relevant sections of the ES.

# 6. MMO Comments on updated Outline Offshore Operations and Maintenance Plan (OOOMP)

#### **6.1 General Comments**

6.1.1 The MMO was expecting an updated OOOMP to be submitted at Deadline 3, however, following conversations with the Applicants, we have been informed that this will now be provided at Deadline 4. Therefore, the MMO will keep a watching brief and may provide further comments at Deadline 5.

The MMO has confirmed with the Applicants that the scope of artificial lighting assessment is sufficient, and we do not require any further information on this topic.

# 7. MMO Comments on the Without Prejudice Benthic Compensation DCO Schedule (REP3-066)

#### 7.1 General Comments

- 7.1.1 The MMO notes that this draft is provided on a without prejudice basis. The Applicants' position is that there is no significant risk to the achievement of the conservation objectives of the Fylde MCZ, and that benthic compensation is not required. The MMO notes that NE have highlighted their disagreement with the Applicants in relation to small scale losses not hindering the conservation objectives of the MCZ.
- 7.1.2 The MMO questions on if this should be called compensation or if it should be Measures of Equivalent Environmental Benefit (MEEB) as it is related to a MCZ.







- 7.1.3 The MMO notes that the Applicants has stated that 'Fylde MCZ' is defined as 'Fylde Marine Conservation Zone Compensation'. The MMO advises that this should be amended to 'Fylde Marine Conservation Zone'.
- 7.1.4 The MMO notes a typographic error in 11 (4): "Fyle MCZ".
- 7.1.5 In a meeting on the 21 July 2025, the Applicants noted that benthic compensation will be updated at Deadline 4 within the IPMP. Therefore, we will keep a watching brief over these additions, and we may provide further comments at Deadline 5.
- 7.1.6 The MMO notes that this document was discussed at Issue Specific Hearing 3 (ISH3), and we have provided comments in section 10 of this document.

# 8. MMO comments on the Change Request – Indicative Overview Plan)

#### 8.1 General Comments

8.1.1 The MMO notes that the Applicants has notified the Examining Authority that they intend to submit a request to make changes to the application. The MMO has reviewed the indicative overview plan and note that the changes do not appear to relate to the marine environment. Therefore, the MMO has no comments, however, will keep a watching brief.

### 9. MMO comments on Issue Specific Hearing (ISH) 2

- 9.1.1 The MMO has reviewed 'Issue Specific Hearing 2 Transcript' which occurred on 29 and 30 July 2025 and notes that there are no action points for the MMO.
- 9.1.2 The MMO notes that during the hearing it was commented that both MMO and Natural England have required that the deployment of cable protection is limited to 10 years, or to limit the cable protection maximum design scenario (MDS) outside the Fylde MCZ. The MMO also notes that it was commented that both MMO and Natural England have requested no cable protection is deployed.
- 9.1.3 The MMO notes that it was commented that the Applicants have now made a commitment to Natural England and the MMO that they will not be placing any scale protection within the intertidal zone between mean low water springs and mean high water springs. The MMO notes that this will be submitted into examination at Deadline 4.
- 9.1.4 It was commented that it is Natural England's position, in addition to the MMO's, that all UXO, including 'low order', should be removed from the DCO. The MMO welcomes this and notes that this will likely be a matter for the SoS to decide on the inclusion of 'low order' UXO clearances. The MMO will provide a without prejudice position on the information within the DML and plans in relation to 'low order' UXO should the SoS decide to include 'low order' UXO clearance.
- 9.1.5 The Applicants are updating Condition 11 in the marine licences to remove reference to 'substantially', and they will also carry out a review of Schedules 14 to 17 to make sure this is updated accordingly. The MMO welcomes this and updated Schedules are expected at Deadline 4.





- 9.1.6 In regard to the Cable Burial Risk Assessment (CBRA) and the Outline Cable Specification and Installation Plan (CSIP), the MMO acknowledges the Applicants' statement "plowing, jetting, and cutting a suitable installation techniques for sandy and clay sediments found in shallow waters within the transmission assets order limits, a combination of burial techniques are likely to be adopted within the Outline CSIP covering all of the necessary techniques to allow for appropriate methods to be selected based on the expected sediment density and strength. Ploughing has been the predominant methodology that's been used successfully throughout our 25-year experience". The MMO will review these comments with our scientific advisors and provide further comment at Deadline 5.
- 9.1.7 The MMO notes that's an updated OOOMP will be submitted at Deadline 4, and that the Applicant's will be asking to deploy cable protection for the first 2 years of the Operations and Maintenance phases before a new marine licence is required. This is to allow for any snagging of cable protection that should have been deployed during construction. The Applicants acknowledged that this marine licence could take up to 6 months or longer to reach determination.
- 9.1.8 In the CSIP, the final design of the offshore export cable routing will be seeking to identify areas where there's greater potential to bury cables, therefore, eliminating the need for cable protection. Natural England have requested this as a commitment in the commitments register. This is due to be submitted at Deadline 4.

### 10. MMO Comments on Issue Specific Hearing (ISH) 3

- 10.1.1 The MMO notes that the next draft DCO (dDCO) will be updated at Deadline 4.
- 10.1.2 The MMO notes that during the Hearing it was noted that the MMO have confirmed that they are satisfied with the definition of maintain. The Applicants will be reviewing the wording used in the Mona Offshore Wind Project to facilitate this amendment.
- 10.1.3 The MMO notes that the ExA did not propose any questions at the Hearing in regard to Article 6 matters and have acknowledged that they have enough information before them to make a decision on this matter.
- 10.1.4 The ExA noted that there are some outstanding points to address in relation to Schedules 14 17. The outstanding matters are in relation to transfer of benefit provisions, force majeure, and removal of all UXO clearances. The Applicants confirmed to the ExA that these matters would be subject to determination by the SoS.
- 10.1.5 The ExA highlighted that the wording 'substantially' has been removed from the requirements and confirms this should also be removed from Condition 11 (3) in Schedules 14-17 marine licences. The Applicants confirmed that this will be removed at Deadline 4.
- 10.1.6 The Applicants confirmed to the ExA that the Without Prejudice Benthic Compensation DCO Schedule (REP3-066) was developed as a variation on compensation measures that have been secured for other offshore windfarm projects, including Hornsea 3 (Schedule 14). The main difference between these documents is that the Marine Recovery Fund is now at a more advanced stage, and that this is Natural England's preference for compensation. The Applicants confirmed that Natural England will provide further comments at Deadline 4.
- 10.1.7 The MMO acknowledges that further ExA written questions will be submitted to us soon for clarification.







# 11. MMO comments on the Statement of Common Ground (SoCG) (REP3-049)

#### 11.1 General Comments

- 11.1.1 The MMO had a meeting with the Applicants on 21 July 2025 to discuss the outstanding concerns regarding the SoCG.
- 11.1.2 The Applicants submitted an amended SoCG to the MMO on 31 July 2025, and the MMO provided their comments to support the Applicants Deadline 4 submission.
- 11.1.3 The amended version of the SoCG will be submitted at Deadline 4 by the Applicants.
- 11.1.4 The MMO notes that in ISH3, the SoS reminded interested parties that for any outstanding DCO matters not agreed, parties may wish to provide alternative drafting for the SoS to consider. The MMO will review these and aim to provide these by Deadline 6 to allow time for discussions with the Applicants.

#### 11.2 Fish Ecology

- 11.2.1 With respect to the points raised regarding fish and shellfish ecology in the SoCG, the MMO's updated comments on the remaining points to be agreed are as follows.
- 11.2.2 Reference MMO.FSF.3: The MMO have reviewed J28.2 Marine policies tracker (APP-235) and we are satisfied the marine plan policies have been considered sufficiently.
- 11.2.3 References **MMO.FSF.6**, **MMO.FSF.11**, **MMO.FSF.13**: The MMO defers to NE in relation to LSE effects and AEoI for SACs and should be marked as 'Not Applicable'.
- 11.2.4 References MMO.FSF.7, MMO.FSF.8, MMO.FSF.9, MMO.FSF.10, and MMO.FSF.12 can be considered as having been agreed.
- 11.2.5 Reference **MMO.FSF.14**: The MMO wish to keep this comment open for discussion. Whilst we defer final say to Natural England, the MMO would still like to review the cumulative assessments and keep a watching brief over developments between NE and the Applicants
- 11.2.6 Reference **MMO.FSF.15**: The MMO notes that low order mitigation is proposed which is appropriate. The MMO is still reviewing the monitoring measures and will provide comments at Deadline 5.

#### 11.3 Coastal Processes

- 11.3.1 With respect to the points raised regarding Physical Processes in the SoCG, the MMO's updated comments on the remaining points to be agreed are as follows:
- 11.3.2 References MMO.PP.3, MMO.PP4a, MMO.PP8, MMO.PP.9, MMO.PP.10, MMO.PP11a, MMO.PP.12 can be considered as having been agreed.
- 11.3.3 Reference MMO.PP.4b: The MMO defers to NE in relation to HRAs
- 11.3.4 Reference **MMO.PP.11b**: The MMO requests clarification from the Applicants on beach landing depth. This is an ingoing point of discussion.





11.3.5 Reference MMO.PP.13 refers to mitigation and monitoring and the welcome reduction in overall impacts. This comment should remain open as further detailed cable burial risk assessments are signposted by the Applicants and should be reviewed to ensure that there is no substantial negative impact on the outline proposals.

#### 11.4 Benthic Ecology

- 11.4.1 With respect to the points raised regarding Benthic Subtidal and Intertidal Ecology in the SoCG, the MMO's updated comments on the remaining points to be agreed are as follows:
- 11.4.2 References **MMO.BE.3**, **MMO.BE.8**, and **MMO.BE.9** can be considered as having been agreed.
- 11.4.3 Reference **MMO.BE.13**: The MMO notes that it was assessed within the Environmental Impact Assessment (EIA) and the Project was found to have no significant impacts on benthic receptors, when considered alone or cumulatively. However, we will defer comment to NE on in-combination effects.
- 11.4.4 Reference **MMO.BE.14**: the MMO understands that suitable mitigation measures have been proposed and include minimising the requirement for cable crossing within MCZ, ensuring adequate cable burial depths are achieved through appropriate assessment, and a commitment to attempt reburial prior to installation of cable protection measures. The MMO agrees with these mitigations and the approach taken to minimise the requirement for cable protection measures within the MCZ.
- 11.4.5 The monitoring objectives for benthic receptors include the impacts on benthic sediments and the associated benthic assemblage within the Fylde MCZ. Following consent, detailed monitoring plans will be submitted to MMO and relevant stakeholders for review and comment. The MMO would expect this to include suitable pre-construction characterisation of the potentially impacted areas within the MCZ to enable subsequent comparison of post-construction condition.

### 12. Comments on other Stakeholder's Deadline 3 Responses

#### 12.1 Blackpool Borough Council (BBC) (REP3-076)

- 12.1.1 The MMO notes that the BBC advise of revised construction working hours to 08:00– 18:00 (Monday– Friday) and 08:00–13:00 (Saturday), with no works on Sundays or Bank Holidays. This is due to the current proposed times being excessive, in and close to residential areas.
- 12.1.2 In the Applicant's response to the Examining Authority's (ExAs) Questions 1 (REP3-056 Q16.1.1), they state:
  - "Allocating additional resources (e.g. labour, plant and/or equipment) is not a simple solution to addressing reduced Saturday working hours, as the primary constraint is the available working time within a given day, rather than the resources available. Mobilisation and demobilisation, health and safety briefings and required breaks remain fixed daily activities required by CDM requirements and contractual agreements. These activities become disproportionately significant within a shorter working window, leading to an overall greater loss of productive on-site working time.



Additionally, including additional plant or workforce within already constrained working areas and temporary cable corridors could lead to greater mobilisation/demobilisation periods, increased congestion and logistical challenges, potentially offsetting any potential gains. The Applicants maintain that Saturday afternoon working enables more efficient and timely completion of works at each specific location, thereby minimising disruption to local communities and landowners over the total programme duration of construction."

12.1.3 The MMO deems this an ongoing discussion which has been raised by other Interested Parties (Fylde Council (REP3-082), and South Ribble Borough Council (REP3-109)) also. We will keep a watching brief over this issue in relation to the intertidal and believes that for offshore works this is 24/7.

#### 12.2 Environmental Agency (EA) (REP3-079 & REP3-081)

- 12.2.1 In the EA's Deadline 3 submission (REP3-079), the MMO notes that for Requirement 12 Ecological Management Plan, the EA are not satisfied with the revised wording, 12. (1) (b) "the Environment Agency where works have the potential to impact wetland habitats". The EA requested that they are listed as an unqualified consultee for the Ecological Management Plan.
- 12.2.2 The MMO notes that with regards to the sand dunes habitat, the EA's interest lies specifically with the groundwater, and the groundwater dependant terrestrial habitat it supports. EA is satisfied that the detailed design of the trenchless crossing will be informed by a hydrogeological risk assessment (HyRA), secured by Requirement 8. EA awaits the submission of the outline HRA for review.
- 12.2.3 Regarding contamination, remediation and mitigation, the EA notes that any as-yet unidentified contamination would require characterisation and the development of a management strategy. Without knowing the detail of that strategy, EA can't at this stage be certain that it can be controlled in full within the order limits. However, the following considerations regarding the nature of the development provide confidence that remediation would be possible within the Order limits:
  - Depth of excavation, and number and size of related infrastructure means the overall volumes of excavated material are likely to be comparatively low.
  - The linear nature of the development means there wouldn't necessarily be an
    expectation to fully remediate the full extent of any contamination that extends
    beyond the footprint of the development. The focus would more likely be on
    providing local remediation and preventing the infrastructure acting as a
    migration pathway for the contamination.
- 12.2.4 The MMO will keep a watching brief over matters of contamination and the updated Ecological Management Plan and may provide further comments at future deadlines.

#### 12.3 Maritime and Coastguard Agency (MCA) (REP3-086)

- 12.3.1 The MMO notes that regarding cable laying burial surveys, MCA is satisfied with the Applicant's response in REP2-031 that the requirements for post-construction bathymetry surveys and monitoring are secured in the DCO conditions.
- 12.3.2 The MMO has no further comments on these matters.
- 12.4 Natural England (NE) (REP3-090 092)





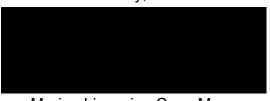


- 12.4.1 The MMO notes that in the Applicants response, the Applicants have noted that they are currently engaging with NE are committed to providing sufficient information to satisfy that there will be no adverse effect on site integrity for the Ribble and Alt Estuaries SPA/Ramsar terrestrial waterbirds.
- 12.4.2 The MMO notes that in the Applicants' Response to ExAs Written Questions (ExQ1) (REP3-056), it states that the Applicants and NE have agreed to meet on 22 July 2025 to discuss outstanding offshore matters between the parties. The 22 July 2025 has been targeted to allow for the parties to review submissions made at Deadline 3, but with sufficient time to allow for provision of updates to the ExA at any relevant issue specific hearings in week commencing 28 July 2025 and for submissions at Deadline 4. Therefore, the MMO will keep a watching brief over these developments and may provide further updates at Deadline 5.
- 12.4.3 The MMO notes that NE have advised that reef creation/enhancement is not considered to provide comparable ecological function and is therefore not an appropriate measure for subtidal sand and subtidal mud systems within Fylde MCZ.
- 12.4.4 The MMO notes that it remains unclear what additionally the measure for bivalve seeding inside Fylde MCZ would provide and therefore, NE has questions this as being compensation for lasting habitat/loss change to subtidal sand and subtidal mud. NE has highlighted that bivalves are associated with biogenic reef communities on mixed sediment and not subtidal sand and subtidal mud.
- 12.4.5 The MMO notes that NE does not consider the bivalve seeding outside of designated sites as viable within the projects' timeframe.
- 12.4.6 The MMO notes that NE have noted with regards to the measure for seagrass habitat creation/restoration concerns towards the deliverability as there have been no long-term successes with seagrass restoration in the UK. NE highlight that long term implementation and success/ability to provide additionality is yest to be considered in detail and agreed with the SNCBs.

#### 12.5 The Corporation of Trinity House of Deptford Strond (TH) (REP3-111)

12.5.1 Regarding 'Arbitration', TH previously requested that the wording be amended to reflect the 'Savings Provisions for Trinity House' clause, plus an amendment to the wording for Schedule 14, Part 2, and Schedule 15, Part 2 Condition 14 (18(b)) and Condition 15 (see REP1-209). TH has now confirmed that they are content with the amendments made by the Applicants to the dDCO, and that the amendments made accurately reflect their written representation.

Yours Sincerely,



Marine Licensing Case Manager

marinemanagement.org.uk



