



Marine
Management
Organisation

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

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

Sheringham and Dudgeon Extension
Projects Case Team
Planning Inspectorate
sadep@planninginspectorate.gov.uk

MMO Reference:
DCO/2019/00004
Planning Inspectorate
Reference: EN010109

by email only

13 June 2023

Dear Sir/Madam,

Planning Act 2008, Proposed Sheringham Shoal Offshore Wind Farm Extension Project (SEP) and Dudgeon Offshore Wind Farm Extension Project (DEP).

Deadline 5 Submission

This document comprises the Marine Management Organisation's (MMO) Deadline 4 response in respect to the above Development Consent Order (DCO) Application. This is without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This is also 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.

The MMO reserves the right to modify its present advice or opinion in view of any additional matters or information that may come to our attention.

Yours Faithfully

Laura Ashforth
Marine Licensing Case Officer

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

Copies to:

Nicola Wilkinson (MMO) Case Manager: [REDACTED] [@marinemanagement.org.uk](mailto:[REDACTED]@marinemanagement.org.uk)

Christie Powell (MMO) – Senior Case Manager:
[REDACTED] [@marinemanagement.org.uk](mailto:[REDACTED]@marinemanagement.org.uk)



Contents

1	General Comments.....	3
2	Comments on any other information and submissions received at Deadline 3.....	3
3	Responses to the Examining Authority's Third Written Questions (WQ3)	4
4	Responses to the Examining Authority's proposed changes to the draft Development Consent Order (DC1).....	8
5	References	10



1 General Comments

1.1 The MMO would like to highlight that Deadlines 6 and 8 are only 1 week after the previous Deadlines. This has created a short review period for interested parties to provide comments on representations made.

1.2 The MMO noted in our Deadline 4 response (REP4-048) that we would aim to provide an update on the SoCG for Deadline 5. The MMO can confirm progress is being made on the SoCG and we are aiming to provide an updated copy for Deadline 6

1.3 The MMO is still in the process of reviewing the draft Development Consent Order (REP3-012), and as such will provide any additional comments for Deadline 6.

2 Comments on any other information and submissions received at Deadline 3

2.1 REP3-115 Marine Mammals Technical Note and Addendum

1.1.1. The MMO welcome the use of the dose response approach for assessing disturbance. The applicant makes reference to appropriate peer-reviewed literature. Specifically, the dose response relationship for harbour porpoise is based on data from Graham et al. (2017). The dose response for harbour and grey seal has been derived from data from Whyte et al. (2020).

1.1.2. The MMO would like to point out that paragraph 83 of the Marine Mammal Technical Note states that “to estimate the number of animals disturbed by piling, SELSS contours at 5 decibel (dB) increments (generated by the noise modelling – see ES Appendix 10.2 - Underwater Noise Modelling Report [APP-192]) were overlain on the relevant species density surfaces to quantify the number of animals receiving each SELSS, and subsequently the number of animals likely to be disturbed based on the corresponding dose-response curve”. The MMO have reviewed Appendix 10.2 and the SELSS contours at 5 dB are not actually provided. The MMO request that this information is provided for review or signposting provided to where the information can be located.

1.1.3. The MMO defer to Natural England as the marine mammal specialists for comments on whether they are content with the use of the density estimates from Waggitt et al. (2020) for harbour porpoise, and from Carter et al. (2022) for seal species.

2.2 The Applicant's Response to the Marine Management Organisation's Deadline 3 Submission (REP4-037)



- 2.2.1 *ID6 – Marine Mammal Ecology* - The MMO notes the Applicants response and have provided comments on the Marine Mammals Technical Note and Addendum (REP3-115)
- 2.2.2 *ID7 – Marine Mammal Ecology* - The MMO note the Applicants comments and recommend that the report is corrected to remove the erroneous statement.
- 2.2.3 *ID8 – Appendix 10.2 Underwater Noise Modelling Report* – The MMO have reviewed the updated information and can confirm we do not have any outstanding concerns at this stage regarding this point. The MMO recommend that ‘Appendix 10.2 Underwater Noise Modelling Report’ is updated to contain this important information.
- 2.2.4 *ID9 - Appendix 10.2 Underwater Noise Modelling Report* – The MMO note the Applicants response and have no further comments.
- 2.2.5 *ID10 - Appendix 10.2 Underwater Noise Modelling Report* – The MMO would like to highlight that we have requested (for some time now) a plot showing the predicted received levels versus range for all offshore wind farm developments (as a standard request). The MMO acknowledge that the locations monitored may not necessarily be the same as the locations modelled in the EIA. Nevertheless, the noise modelling should be transparent, so the MMO recommend that such a plot is provided, as requested. Alternatively, if the Applicant can provide plots of the single-strike maximum and minimum (1st strike) energies at fixed dB intervals, as they propose, then this would also be appropriate, provided that these plots are clear with corresponding scales. Essentially, it is important that the necessary evidence is provided which demonstrates a transparent modelling process.

3 Responses to the Examining Authority’s Third Written Questions (WQ3)

3.1 **Q3.1.1.1 Marine Plan Policy Review.** *In the SoCG with the MMO [EL ref], the ExA notes an entry stating that a more in-depth review of marine planning policy may be undertaken.*

- a) *Provide further information on the review and anticipated timescales.*
- b) *What, if any, would be the implications for this application, and this Examination?*

The MMO have reviewed the Applicant’s Marine Plan Policy Review [REP1-060] and is satisfied that it is adequate. The MMO would have preferred to have consideration of each marine plan policy considered within the document, rather than signposting to relevant sections of the ES, however, the MMO considers further modifications are not required.

3.2 **Q3.3.1.2 Noise - Fish and Shellfish.** *Is there any concern with regards fish and shellfish receptors?*



The MMO have no further concerns which are not already highlighted within the SoCG or this response.

3.3 Q3.3.1.3 Electro-Magnetic Fields. *If cables were to be buried, but not at a depth of 1.5m and with no cable protection used, would there be an adverse impact from electro-magnetic fields on fish, shellfish or other forms of benthic ecology?*

The MMO would like to reiterate our comments from REP3-133 regarding comments relating to electro-magnetic fields. The MMO consider that burial to 1.5m+ should prevent adverse impacts to benthic ecology receptors via electromagnetic field and/or heating. The MMO defer to Natural England, as the lead statutory consultee for the Cromer Shoal Chalk Beds Marine Conservation Zone (CSCB MCZ), to comment further on the appropriateness of buried cables in relation to any impacts on MCZ features.

3.4 Q3.3.3.3- Coastal Erosion Impacts- *Is the point where the HDD exit is proposed at landside set sufficiently far back from the coast to ensure against impact from coastal erosion for the lifetime of the development?*

The MMO have no concerns regarding coastal erosion impacting the proposed HDD exit point at landside.

3.5 Q3.3.4.5 Jack-Up Vessel use in MCZ. *The Applicant has explained [REP3-107] that the use of a jack-up vessel would only be required at the HDD exit pit for construction. The Applicant has also stated that due to the position of the exit-pits there would be no impact to sub-cropping chalk. NE, respond to these points with an assessment of the potential impacts from this jack-up vessel in this approximate location.*

The MMO note that this point is directed at Natural England. The MMO defer to Natural England regarding impacts to CSCB MCZ from the use of a jack-up vessel.

3.6 Q3.12.2.1 Scientific Advisors - *Are there any comments from your advisors, CEFAS, that remain outstanding and may be of a material consequence for the Examination?*

The MMO have no further concerns which are not already highlighted within the SoCG or this response.

3.7 Q3.12.2.2 PTS and TTS. *The Applicant has responded to your concerns regarding the screening out/ in of these effects [REP4-037, ID5] including citation of a number of recent DCOs that share a similar approach being used in the assessments for the Proposed Development. In light of this response, are you content with the approach to PTS and TTS? Explain with reasons.*



It is the MMO's understanding that PTS is screened out from the Cumulative Impact Assessment (CIA) on that basis that since PTS is expected to occur relatively near to operations, particularly pile driving, PTS is addressed at the level of the EIA, whereas the CIA is looking at the broader impacts of combined windfarms, which are more likely to combine in terms of disturbance (since this can occur at much greater distances).

Point 13 in 10.3.2.1 of the CIA Screening states that "if there is the potential for any PTS, from any project, suitable mitigation would be put in place to reduce any risk to marine mammals". However, this is reliant on other developments actually having appropriate mitigation in place to reduce the risk of PTS, which may not necessarily be the case.

The MMO still have reservations with the justification presented, specifically the statement that "other activities such as dredging, drilling, rock placement, vessel activity, operational windfarms, oil and gas installations or wave and tidal sites will "emit broadband noise in lower frequencies and PTS from these activities is very unlikely" (see point 13 in 10.3.2.1 of the CIA Screening). The risk of PTS depends on several factors such as the noise levels emitted, the duration of the activity and exposure of the animal. Thus, it is the opinion of the MMO that the justification presented should be more robust.

Overall, cumulative effects are very difficult to assess, and EIA-based cumulative effects assessments (CEAs) led by developers of individual projects have clear shortcomings (when compared to CEAs led by government agencies on a regional and strategic level) (Willstead et al., 2017).

3.8 Q3.12.2.3 Outline Documents- *In relation to the OPEMP [REP3-060], OPIMP [REP4-015] and Outline Offshore Operations and Maintenance Plan [APP-296], confirm whether each document is fit for purpose and, if amendments or additions need to be made, bullet-list these for clarity as to what you expect and why.*

These documents will be developed and refined as SEP and DEP progress through the detailed design process, procurement and construction. The Deemed Marine Licence contains condition requiring these documents to be submitted to the MMO for approval. The MMO are satisfied that any refinements required to these documents can be completed post consent.

3.9 Q3.12.2.4 Site Integrity Plans. *At present, the MMO has expressed that the SIP is acceptable as drafted, would serve its purpose and could be enforced [REP3-133]. Meanwhile NE has said there is no confidence in the SIP process because SIP(s) have limited measures to mitigate the exceedance of seasonal threshold [REP3-146, point D18 and REP3-147 Q2.12.2.1]. The Applicant maintains that the SIP is the established mechanism to regulate and control underwater noise impacts. In this regard:*

Applicant:



- a) *NE has suggested [REP3-147, Q2.14.1.20] that all mitigation should be set out now, and the SIP is used to discount mitigation that no longer applies at the time the development is commenced. Do you think there is merit in this approach?*
- b) *Can you reassure the ExA that the SIP (either for this project or taken together with other SIPs) would be effective in its intended function?*

NE:

- c) *Due to your reservations on the SIP, your response [REP3-146, point D18] suggests that an AEoI cannot be ruled out for the harbour seal and grey seal feature of the SNS SAC. If not the SIP process, what other forms of regulatory control are available to reassure you that AEoI would not occur?*
- d) *Are you content with the MMMP and the mitigation therein? If so, would this not be enough to reassure you that sufficient mitigation exists to avoid an AEoI? Explain with reasons.*

MMO:

- e) *Do you have any further comments on the SIP that you wish to bring to the ExA's attention, taking into account all your own submissions and those of NE to date and all of the matters raised above in this question?*

The MMO notes that points A – D are directed at the applicant and Natural England.

The MMO are satisfied that the SIP is currently provides sufficient control over the timing and nature of noisy activities to ensure that the relevant in-combination disturbance impact thresholds for marine mammals would not be breached. The MMO understands NEs concerns regarding the in combination impacts to the SNS SAC and defer to them as the experts in this area. The MMO however are currently satisfied that the SIP and the subsequent SIP process are enforceable, and therefore have no further comment on the document.

- 1.1. **Q3.12.2.5 Piling Controls** - *The Applicant has confirmed that simultaneous piling (or other form of foundation installation) could occur within the project itself, and this has been taken into account in the worst-case scenarios assessed in the ES [REP3-101]. In respect of cumulative noise impacts to marine mammals, would there be a need to include a condition within the Deemed Marine Licences to prevent concurrent piling between the Proposed Development and other consented offshore windfarms? Explain with reasons.*

The MMO does not intend to add a condition to the Deemed Marine Licence to prevent concurrent piling between the Proposed Development and other consented offshore windfarms. The MMO are satisfied that the SIP (APP-290) provides sufficient control over the timing and nature of noisy activities to ensure that the relevant in-combination disturbance impact thresholds for marine mammals would not be breached. The aim of the SIP is to ensure that noise within the SNS SAC is managed and aligned with guidance from the Joint Nature Conservation Committee, which advises that noise must not exclude harbour porpoise from more



than 20% of the relevant area of the site in any given day, or an average of 10% of the relevant area of the site over a season.

The final SIP will be used to identify and assess any potential management or mitigation measures that could ensure 'no adverse effect' on the SNS SAC for the significant disturbance of harbour porpoise based on the final design of SEP and DEP. The MMO consider that this is a fair approach to all projects within the area generating underwater noise, and that a condition added to the DML of this project, if not included within other offshore windfarm DML's, would place an unfair burden on this project.

3.10 Q3.12.2.6 Monitoring - NE [REP1-136] originally raised concern regarding the OPIMP, particular at points A8 and A19 [REP3-146]. Now that the Examination has moved on, do you agree that appropriate measures are secured, or could potentially be secured in the future, by way of the OPIMP [REP4-015]?

With regard to point A8 - The MMO share Natural England's concerns that the wording of condition 20 is only for the provision of monitoring, and would be satisfied if amendments were made to ensure that appropriate action is sought should impacts exceed what has already been assessed within the ES.

With regard to A19 – Again the MMO agree with this point and would welcome amendments to the DCO to include the need for the development of countermeasures should this be identified during post-consent monitoring.

The MMO acknowledge that this document will be developed and refined as SEP and DEP progress through the detailed design process, procurement and construction. The MMO are satisfied that any refinements required to these documents can be completed post consent.

4 Responses to the Examining Authority's proposed changes to the draft Development Consent Order (DC1)

4.1 DC1.3.1.1 The role of MMO - The ExA notes the amendments proposed by the Applicant to Article 5, particularly sub paragraphs 2, 6 and the addition of sub-paragraph 3, to ensure that MMO is consulted by the SoS should the SoS consider a transfer of benefit of a DML, and only the whole of the DML could be transferred, not allowing a transfer of part of a DML. The ExA finds it reasonable that where a transfer of a DML would be proposed, the SoS would be required to look at the proposed transfer in the context of all the provisions of the dDCO, including some Articles and Requirements relating to offshore matters which overlap with the DMLs. In that context, the ExA finds it is reasonable that the SoS would have the ability to approve the transfer of a dDML, in consultation with MMO [RR-053] [REP1-036, Q1.11.3.2] [REP3-112] [REP3-133] [REP4-028] [REP4-037] [REP4-048]. However, the ExA proposes the following edits:

A) Applicant, provide edits to Article 5 (or signpost if already included) to ensure that the provision only provides for the transfer of the benefit of the dDML and not a lease.

b) Applicant, provide corresponding justification and any other relevant updates in the EM.



c) MMO, provide further justification if you find that the provision in Article 5(6) would not enable you to ensure compliance with the provisions of the MACAA2009, when responding to the SoS.

The MMO note that points (a) and (b) are directed at the applicant.

The MMO will therefore, focus on point (c) are currently considering the ExA's suggestion, however, due to the short turnaround times between deadlines, will be unable to provide a formal response until Deadline 6.

4.2 DC1.8.2.1 Activities Authorised under the DMLs. *The Marine Management Organisation continue to raise objection to the use of the phrase “materially” within the context of the DMLs [REP2-059, Paragraph 8.9] [REP4-037]. While the ExA awaits further discussion on this matter and resolution on this issue, the following alternative suggestions are proposed. Applicant and MMO to comment:*

- a) *Consider a fuller explanation in the EM which sets out that the undertaker would be restricted to carrying out works that do not give rise to any new or different environmental effects to those assessed in the EIA; or*
- b) *Consider and adding a provision in the dDML to restrict activities that do not give rise to any new or different environmental effects to those assessed in the EIA.*

The MMO are currently considering the ExA's suggestion, however, due to the short turnaround times between deadlines, will be unable to provide a formal response until Deadline 6.

4.3 DC1.8.3.1 Potential Part 4 of Schedule 17 regarding MEEB implementation. *Part 4 of the without prejudice DCO wording [REP2-011] provided by the Applicant, sets out that there should be no external cable protection works within the MCZ until the MIMP has been agreed by the SoS.*

NE, do you consider that further works would need to be prevented within or adjacent to the MCZ until the MIMP has been agreed?

NE, are you content with the timings stated within the draft wording of Part 4, or should additional clauses requiring an implementation timetable be considered, including reference to when the MIMP would be necessary?

The MMO note that both questions are directed at Natural England. The MMO defer to Natural England on the timings stated within Part 4 and whether further works are required to be prevented within or adjacent to the MCZ until the MIMP has been agreed.



5 References

Willstead, E., Gill, A. B., Birchenough, S. N. R., & Jude, S. (2017). Assessing the cumulative environmental effects of marine renewable energy developments: Establishing common ground. *Science of the Total Environment*, 577, 19–32.

