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MMO Reference: DCO/2016/00005
Planning Inspectorate Reference: EN010078
Identification Number: 20024119

03 February 2021

Dear Rynd Smith,

Planning Act 2008, Scottish Power Renewables, Proposed East Anglia Two (EA2) Offshore Windfarm Order

MMO Deadline 5 Response

On 19 December 2019, the Marine Management Organisation (the “MMO”) received notice under section 56 of the Planning Act 2008 (the “PA 2008”) that the Planning Inspectorate (“PINS”) had accepted an application made by Scottish Power Renewables (the “Applicant”) for determination of a development consent order (DCO) for the construction, maintenance and operation of the proposed East Anglia Two Wind Farm (the “DCO Application”) (MMO ref: DCO/2016/00005; PINS ref: EN010078).

The Applicant seeks authorisation for the construction, operation and maintenance (O&M) of the DCO Application, comprising of up to 75 wind turbine generators together with associated onshore and offshore infrastructure and all associated development (“the “Project”). This includes two Deemed Marine Licences (DMLs) under Schedules 13 and 14.

This document comprises the MMO comments in respect of the DCO Application submitted in response to Deadline 5.

The MMO submits the following:

- 1. Summary of Oral Cases made during the Biodiversity and Habitats Regulations Assessment (HRA) Issue Specific Hearing (ISH) 3**
- 2. Summary of Oral Cases made during the Social, economic, land and sea use effects Issue Specific Hearing (ISH) 5**
- 3. Summary of Oral Cases made during the Draft development consent order Issue Specific Hearing (ISH) 6**
- 4. Action Points from ISH 3**
- 5. Action Points from ISH 5**
- 6. Comments on any additional information/submissions received at Deadline 4**
- 7. Comments on Applicants comments on MMO Deadline 3 Response**
- 8. Comments on Deadline 3 submissions not submitted at DL4.**
- 9. Other Comments**
- 10. Fish Ecology – Herring**
- 11. Marine Plan Review – ISH 5 Action Point 1**



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12. Notification of Hearings

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



Rebecca Reed
Marine Licensing Case Officer



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Enc.

Appendix_1_RoC_SNS_SAC_HRA_FINAL

Appendix_2_RoC_SNS_SAC_Decision_Letter

Appendix_3_JNCC-Report-652-FINAL

Appendix_4_Marine_East_Plan

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1. Summary of Oral Cases made during the Biodiversity and Habitats Regulations Assessment (HRA) Issue Specific Hearing (ISH) 3

Agenda Item 2: Effects on offshore ornithology (including HRA considerations)

1.1 Agenda Item 2 (a) (vi)

The MMO defers to Natural England (NE) on ornithological matters and will review any updated documents provided by the Applicant and provide comments when necessary.

1.2 Agenda Item 2 (d) (ii)

The MMO is largely content to defer any comment on any compensatory measures to NE but reminds the Examining Authority (ExA) that the MMO's current position is that any compensatory measure is secured within the DCO as a separate schedule and that any compensatory measure that requires a licensable activity should be secured by a separate marine licence post-consent when the details are identified.

The MMO is still reviewing the Hornsea Project Three Offshore Windfarm (HOW03) consent decision and is aiming to provide detailed comment on the implications of this decision on East Anglia One North (EA1N) and EA2 applications at Deadline 6.

Agenda Item 4: Effects on marine mammals (including HRA considerations)

1.3 Agenda Item 4 (a) (i)

The MMO advises that a meeting of the Southern North Sea (SNS) Regulators Forum was held on 20 January 2021, and it was agreed that noise management will be discussed with NE, who are due to attend the meeting on 18 February 2021. Please see Section 9.8 of this document.

1.4 Agenda Item 4 (a) (iv)

The MMO maintains the position that Unexploded Ordnance (UXO) clearance activities are better suited to a separate marine licence. This is largely due to the potential adverse effects from noisy activities on the project alone.

In section 5 of the MMO's Deadline 4 response the MMO highlighted that if the concerns raised could be clarified and secured then as long as there are no outstanding AEoI project alone impacts the MMO may be able to be content with UXO clearance activities being included within the DMLs. The MMO intends to carry on discussions with the Applicant on this issue and address how it could be dealt with in the long-term.

The MMO also maintains the position that should UXO clearance activities be included in the DML, the associated conditions should include a requirement that the relevant documents must be submitted to the MMO for approval in consultation with the relevant Statutory Nature Conservation Body (SNCB) no later than 6 months prior to the start of planned UXO clearance activities unless otherwise agreed with the MMO.

The MMO recognises that the Applicant considers 3 months to be sufficient but welcomes their commitment to readdressing the timescales and potentially changing them in the DCO/DML to ensure the MMO has adequate time to review necessary documentation, the most important of which in this regard is the Marine Mammal Mitigation Protocol (MMMP) and the Site Integrity Plan (SIP). The MMO notes the Applicant is pursuing potential amendments in relation to times scales and the MMO welcomes this and will respond as appropriate.

1.5 Agenda Item 4 (d) (i)

The MMO welcomes the inclusion of the additional wording for the cessation of piling within Condition 21(3) of Schedule 13 and Condition 17(3) of Schedule 14 [REP3-011], [REP3-013] as it was a requested from both NE and the MMO.



The MMO's concern regarding this condition is largely related to the use of the word 'significantly'. The MMO needs to assess whether this condition meets the five tests and as such, the condition must be necessary, relative to the development, enforceable, precise and reasonable. The MMO considers this to be a minor issue that will hopefully be able to be dealt with, within the contents of the In Principle Monitoring Plan (IPMP).

Regarding the inclusion of a monopile foundation type for Offshore platforms, the MMO have some concerns regarding Underwater Noise and Fisheries, however, the MMO consider this could be addressed through further information from the Applicant. The MMO will continue discussions as part of the Statement of Common Ground meetings with the Applicant.

2. Summary of Oral Cases made during the Social, economic, land and sea use effects Issue Specific Hearing (ISH) 5

Agenda Item 2: Offshore social and economic effects

2.1 Agenda Item 2

The MMO notes the ExA raised questions on the Marine Policy Statement and the Marine Plans to ensure this had been adequately covered. The ExA question: *Can the MMO outline their latest position on this, and whether any work is outstanding, how any outstanding work is being progressed or whether we can these matters having been brought to compliance?*

The MMO advised that Section 3.1 of the MMO's Relevant Representation (RR) (RR-052) requested the Applicant to consider the policies highlighted in Table 1 that were scoped in but did not appear to have further consideration.

The MMO notes that the Applicant provided a Marine Policy Clarification Note (AS-38) in response to these RR comments. The MMO reviewed this document and confirmed the document provided further clarification and there were no more issues at Deadline 1.

The MMO advised that generally in terms of marine plans specifically their purpose here is to ensure co-existence and the MMO is broadly content that the Applicant is engaging with other users of the sea, therefore we are content that this matter is being addressed and resolved. The MMO will review the status in relation to compliance with the Policy and Plan and this response can be found in Section 11.

2.2 Agenda Item 2 (a)

The ExA asked if the MMO had any concerns in relation to co-existence with the Oil and Gas Industry. The MMO advise that they have reviewed this and provided a response in Section 5 of this document.

The MMO also confirmed that additional offshore protective provisions would not be required.

2.3 Agenda Item 2 (b)

The MMO acknowledges the Applicant's work with various organisations including the Commercial Fisheries Working Group and the NFFO/Visned and has reviewed the Statement of Common Ground (SoCG) submitted at Deadline 4. The MMO is broadly content and believes there are minor issues outstanding. The MMO will keep a watching brief and respond where necessary.

The MMO is currently content with the Outline Fisheries Co-existence and Liaison Plan.

2.4 Agenda Item 2 (c)

The MMO is not aware of any recreational or other sea users who have commented or raised issues with the EA1N or EA2 projects. If any issues were to arise the MMO will provide comment at that time.



2.5 Other Comments

The MMO noted Cllr Marianne Fellowes from Aldeburgh Town Council requested a response from the MMO in relation to strategic planning and coexistence. The MMO understands this will be included in the Council's Deadline 5 submissions and potentially provided as one of the next ExA written questions. The MMO confirmed that a response in relation to the MMO's remit will be provided at Deadline 6.

3. Summary of Oral Cases made during the Draft development consent order Issue Specific Hearing (ISH) 6

Agenda Item 3: Provisions for Projects Definitions and Elements

3.1 Interpretations – Offshore Preparation Works

The MMO is content with most of the suggested interpretations put forward by the Applicant in the dDCO, however, the MMO does not consider it appropriate that in the definition of 'Offshore preparation works' the words 'within the order limits of MHWS' have been omitted. The MMO notes the Applicant stated that this was an administrative error and that the wording will be included in the updated iteration of the DCO to be submitted at Deadline 5, the MMO welcomes this and will review any updated DCO and provide comments at deadline 6.

3.2 Article 36 – Certification of Plans

The MMO understands the utilisation of the numbering system within the dDCO and notes the Applicant's previous comments in relation to this. As raised in earlier deadline submissions the MMO has concerns regarding the extra clarification notes, such as the Fisheries and numerous Ornithology documents, and how they can be related to the Environmental Statement submitted by the Applicant. The MMO is concerned as to how the contents of these documents will be reflected in the certified documents to ensure the final assessments in relation to project updates within the limits of the Rochdale envelope have been captured and all parties are aware of any updates at the post consent stage.

The MMO wishes to point out to the ExA that in the Norfolk Boreas dDCO, submitted at Deadline 18 (REP2-050 of this Examination), Norfolk Boreas Limited included Schedule 18 which set out the list of certified documents. Schedule 18 included more detail on the relationship between the documents submitted during examination and the environmental statement and what should be certified if the Secretary of State granted consent. The MMO suggests that this be used as an example of best practice for how to manage certified documents in the DCO process and would recommend that any pathfinder applications use this method.

3.3 Article 37 – Arbitration

The MMO is content with the current draft of the DCO in relation to Arbitration and agree that the MMO should not be subject to arbitration.

3.4 Schedule 13, Condition 16(2) & 17(2) and Schedule 14, Condition 12(2) & 13(2) Southern North Sea Southern North Sea Site Integrity Plan condition

The MMO is currently reviewing these conditions internally and have concerns regarding the usage of the phrase 'Adversely affecting the Integrity of a relevant site'. The MMO has produce guidance on this issue in Section 9.10 of this document

The MMO also maintains its position that any UXO activities would be more appropriately controlled in a separate marine licence, and we will continue to work with the applicant on this issue. The MMO notes that the Applicant has stated that they will work with the MMO to ensure that all positions area agreed by Deadline 6, the MMO echoes this sentiment and will endeavour to work with the Applicant to achieve this.



3.5 Schedule 13, Condition 20 and Schedule 14, condition 24 – Scour and Cable protection

The MMO notes that NE provided further information on long term cable protection at Deadline 4. The MMO was aiming to provide wording of a potential condition at Deadline 5, however the MMO will now wait for the Applicant's detailed response to these comments. The MMO will review the Applicants response and will endeavour to get to an agreed position with the Applicant and NE for Deadline 6.

3.6 Cooperation

The MMO considers that within these DCOs, co-operation has been adequately captured in Schedule 13, Condition 25 and Schedule 14, Condition 21. The MMO has no further comments to make on this.

4. Action Points from ISH 3

#	Action	Party	Deadline	MMO Response
3	<p>Made Hornsea Project Three DCO</p> <p>Applicants, MMO, NE and RSPB to comment on whether the approach to securing HRA compensation measures in the made Hornsea Project Three DCO might have wider applicability, for example to these cases, should they be required? If such an approach were to be taken, would it be appropriate for the DMLs to replicate or refer to any of the provisions that secure the compensation measures?</p>	Applicants, MMO, Natural England and RSPB	D5	<p>The MMO highlights that the Hornsea Project Three decision is novel in terms of offshore wind and compensation and the MMO is still discussing the details internally and is unable to provide a detailed response at this time. The MMO has provided initial comments below and will update the ExA at Deadline 6.</p> <p>The MMO's general position is that any compensation should be secured within the DCO as it is for the Secretary of State as the competent authority to ensure the compensation is secured and adhered to and any licensable activities would require a separate marine licence.</p> <p>The MMO notes that within Schedule 14 of the HOW03 DCO Condition 17 states the MMO has to approve decommissioning and monitoring plans. The MMO is reviewing how this works in principle and how this would be managed alongside the DMLs.</p> <p>The MMO notes if there are licensable activities as part of the compensation then</p>



				<p>Applicant may request this to be included within the DMLs. Again, the MMO is reviewing how this would work in principle and how this would look as a DML.</p> <p>In relation to EA1N/EA2 the MMO reserves comment until the DCO is updated with the required information.</p>
4	<p>Effects on Subtidal and Intertidal Benthic Ecology: Sabellaria Management Plan</p> <p>NE and the MMO to provide submissions on the content of the most up to date Sabellaria management Plan which was submitted at D4.</p>	Natural England and MMO	D5	<p>The MMO is content that all matters raised by our scientific advisors have been agreed. However, the MMO notes NE still has multiple outstanding concerns and is providing an update at Deadline 5, the MMO supports these concerns. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities. The MMO notes that the Applicant is organising a meeting in relation to UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6.</p>
6	<p>UXO Clearance Activities within DMLs</p> <p>Applicants and MMO to provide update about progress toward agreement on the acceptability of including Unexploded Ordnance (UXO) clearance activities within the DMLs as distinct from within separate Marine Licences.</p>	Applicants and MMO	D5	<p>The MMO has had further discussions with the Applicant and understands the Applicant is reviewing the MMO's Deadline 4 response [REP4-081] and all NE concerns and will be arranging a meeting with all parties in due course to discuss any updates.</p>
7	<p>Cessation of Piling DML Condition</p> <p>MMO to provide comments on the drafting of the cessation of piling condition included as amended Condition 21(3) of the generation assets DMLs and Condition 17(3) of the</p>	MMO	D5	<p>The MMO is still discussing the concerns raised in REP4-081 on this condition and how to measure what '<i>significantly</i>' means.</p> <p>The MMO will provide an update at Deadline 6 but believes this update will only be part of the Offshore In</p>



	transmission assets DMLs [REP3-011].			Principle Monitoring Plan and there is no requirement to update the DML condition wording. The MMO notes the ExA requests outstanding issues are dealt with as soon as possible. The MMO acknowledges this and will work with the Applicant and Natural England to provide an agreed response as early as possible.
8	<p>Monopile Foundation Option for Offshore Platforms</p> <p>The Applicants to elaborate on the rationale underpinning their conclusion that including monopile foundations for offshore platforms lies within the parameters for the maximum adverse effect that has been assessed in terms of underwater noise effects, by reference to the Environmental Statement and Information to Support Appropriate Assessment Report. By D5. NE, MMO, TWT to respond by D6 or at a subsequent biodiversity ISH.</p>	Applicants NE, MMO, TWT	D5 and D6	The MMO notes this action point for Deadline 6.

5. Action Points from ISH 5

#	Action	Party	Deadline	MMO Response
1	<p>Marine Plan policies</p> <p>MMO to inform ExA at D5 whether there are any outstanding issues around Marine Policy Statement (MPS) or Marine Plan policy compliance.</p>	MMO	D5	Please see Section 11 of this document.
2	<p>North Sea oil and gas production coexistence</p> <p>To review possibility of outstanding residual co-existence issues requiring submission of protective provisions.</p>	MMO and The Applicants	D5	The MMO has reviewed all existing and planned activities in the East Marine Plan Area, and we are content that there are no live or proposed O&G activities within the proposed EA OWF development area. The MMO has engaged with



				the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to confirm this. The MMO will provide more detailed comment on the MMO's relationship with the Oil and Gas industry at Deadline 6.
5	<p>Strategic planning of seabed release to avoid potential damage to coastal communities</p> <p>Aldeburgh Town Council requested to submit questions in respect of the role and remit of the MMO and Crown Estate in addressing the needs of coastal communities in strategic planning of seabed release. MMO and Crown Estate to respond by D6.</p>	<p>Aldeburgh Town Council,</p> <p>MMO and Crown Estate</p>	<p>D5- Aldeburgh Town Council</p> <p>D6- MMO and Crown Estate</p>	The MMO notes this action point for Deadline 6.
13	<p>Further hearings to address technical matters</p> <p>Submissions were made expressing views about the benefit of additional hearing time to orally examine some areas of technical detail. IPs are invited to suggest any specific issues about which they consider it to be necessary for the ExAs' examination of the applications to allocate further hearing time in order to ensure adequate examination of the issue or that an IP has a fair chance to put its case. IPs should give reasons why they consider it to be necessary for oral, as opposed to written, examination of the issue.</p>	IP's	D5	The MMO has no outstanding concerns that cannot be set out in a written response and therefore does not have any specific topics that would need to be discussed at future hearings.



	<p>The ExAs will consider submissions in making its decisions about the hearing time to be allocated to specific issues for the remainder of the examinations.</p>			
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6. Comments on any additional information/submissions received at Deadline 4

6.1 Guide to the application- Version 5 [REP4-002]

The MMO appreciates the usefulness of this document and welcomes the Applicant's updated versions at each deadline throughout the course of the Examination process.

6.2 Applicants comments on Natural England's Deadline 3 response [REP4-016]

Section 2 - NE Appendix A10

The MMO understands ornithological matters are still ongoing between the Applicant and NE. The MMO defers to NE and has no comments at this stage.

Section 3 - NE Appendix A11

The MMO understands ornithological matters are still ongoing between the Applicant and NE. The MMO defers to NE and has no comments at this stage.

Section 4 - NE Appendix B2

The MMO acknowledges the Applicant's clarification on the project commitment wording in relation to mitigation. The MMO defers to NE on whether or not this is appropriate.

The MMO supports NE in relation to expanding the scope of the SIP for project alone impacts. The MMO provided comments in section 5.3 of Deadline 4 response [REP4-081].

The MMO welcomes the Applicant's decision to explore a potential condition to be included within the DML to alleviate these concerns and will continue engagement with the Applicant.

Section 5 - NE Appendix D2

The MMO notes the current disagreements in relation to Sizewell C Impact Assessment and defers to NE therefore has no comments at this stage.

6.3 Applicants' comments on Historic England's Deadline 3 Response [REP4-018]

The MMO notes Historic England are still reviewing the Offshore Written Scheme of Investigation but believes all issues have been resolved.

The MMO is aware that there are still some outstanding offshore issues between the Applicant and Historic England. The MMO understands the Applicant and Historic England are discussing these and believes these will be resolved prior to the end of Examination.

In relation to Historic England's request to include Suffolk County Council as a consultee on the written scheme of archaeological investigation in Schedule 14, Part 2, Condition 13(1)(g). The MMO supports Historic England's position on this and understands the Applicant will be updating this condition in the updated dDCO at Deadline 5.

6.4 Applicants' Comments on Marine Management Organisation's Deadline 3 Submissions [REP4-019]

The MMO has reviewed this document and due to the size of the comments the MMO has responded in Section 7 of this document.



6.5 Applicant's comments on The Wildlife Trust's Deadline 3 Response [REP4-020]

The MMO notes that the Wildlife Trust and the Applicant remain in disagreement regarding expansion of the SIP to include project alone impacts. The MMO supports this position and provided comments in section 5.3 of Deadline 4 response [REP4-081]. The MMO welcomes the Applicant's decision to explore a potential condition to be included within the DML to alleviate these concerns.

The MMO understands some concerns on the potential impacts of UXO detonations are still outstanding and these are similar to NE's concerns. The MMO acknowledges these concerns and will continue to engage with the Applicant to address these during examination.

6.6 Deadline 4 Project Update Note [REP4-026]

The MMO understands this document relates to onshore project updates and therefore has no comments to make.

6.7 Applicants' Response to Rule 17 Letter [REP4-028]

The MMO has reviewed this document and have no comments to make at this stage.

6.8 Outline Sabellaria Reef management plan [REP4-040]

The MMO welcomes the resubmission of this document by the Applicant in response to comments made by the MMO and NE at Deadline 3. The MMO is content that all matters raised by our scientific advisors have been agreed.

However, the MMO notes NE has multiple outstanding concerns and these will be provided at Deadline 5, the MMO supports these comments. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities. The MMO notes that the Applicant is organising a meeting in relation to UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6

6.9 Deadline 4 Offshore Ornithology Cumulative and In-Combination Collision risk update [REP4-042]

The MMO notes the Applicant has incorporated Hornsea Project Three Offshore Windfarm into their revised assessments, and the MMO welcomes this inclusion. The MMO defers matters of ornithology to NE but will continue to engage with both the Applicant and NE on these issues and hopes that all issues of this nature can be resolved before the close of examination.

6.10 Draft Statement of Common Ground with Trinity House (TH) [REP4-045]

The MMO notes that the only outstanding issue is in relation to the dDCO. The MMO has provided comments on the updates requested by Trinity House in Section 6.24. The MMO defers to TH on navigational matters and will continue to liaise with them throughout the examination process.

6.11 Statement of Common Ground with National Federation of Fishermen's Organisations (NFFO) and National Association of Producer Organisations in Dutch Demersal Fisheries (VisNed) [REP4-047]

The MMO understands the only outstanding issues are in relation to the Assessment Methodology of the Environmental Impact Assessment and Cumulative Impact Assessment. The MMO notes that although there is outstanding concerns a final position has been achieved between the Applicant and NFFO/Visned.

In addition to this, concerns were raised on the level of beam trawling that could occur within the Projects' windfarm sites post-construction due to the worst case scenario (WCS) of spacing between turbines. The Applicant believes this is up to the individual skippers and the



NFFO acknowledge that if the spacing is less than the WCS this will may alleviate concerns. The MMO has no further comments on these matters.

6.12 Draft Statement of Common Ground with Maritime and Coastguard Agency (MCA) [REP4-049]

The MMO has reviewed this document and welcomes the fact that almost all issues related to the dDCO has been closed out between the Applicant and MCA. The MMO notes that full checks of hydrographic data submitted by the Applicant to MCA is still being analysed/reviewed by MCA and findings are set to be published at Deadline 6, the MMO has no comment to make on this.

Furthermore, the MMO notes that the Applicant is currently updating the dDCO to reflect changes requested by MCA at Deadline 4 [REP4-082] which should be submitted at Deadline 5, the MMO supports the changes requested by MCA and look forward to reviewing any updated dDCO upon submission by the applicant.

6.13 Historic England's Deadline 4 Submission [REP4-079]

The MMO has reviewed this submission and is aware that most of Historic England's (HE) concerns are related to the terrestrial environment and as such, are not relevant to the MMO under their remit in this process. However, the MMO notes that HE will be submitting a response to the Applicants Offshore WSI at Deadline 5, the MMO defers to HE on the appropriateness of this document.

6.14 Maritime and Coastguard Agency Deadline 4 submission [REP4-082]

The MMO has reviewed this document and agrees with all of the points that the Maritime and Coastguard Agency (MCA) have raised in relation to the dDCO.

The MMO notes MCA has requested that they be consulted prior to any UXO clearance activities taking place, the MMO is content with this request but understands some of the documents as part of this condition may fall outside their remit. The MMO notes the Applicant is engaging with the MCA on this matter.

The MMO looks forward to reviewing the Applicants updated dDCO and continues to liaise with both MCA to ensure all navigational conditions are secured and appropriate in the DCO/DML.

6.15 Appendix A12 NE advice on Red-Throated Divers in the Outer Thames Estuary Special Protected Area related to Deadline 3 submissions [REP4-087]

The MMO notes that there remain several unresolved issues between the Applicant and NE regarding the potential impacts to Red-Throated Divers (RTD) as a result of the project. The MMO defers all ornithological issues to NE but hopes that these can be resolved before the close of examination. The MMO will continue to liaise with NE and the Applicant on these issues.

6.16 Appendix A13 – NE Interim Comments on Ornithology Compensation [REP4-088]

The MMO has reviewed this document. The MMO defers to Natural England on any compensation requirements and looks forward to reviewing their expanded document that will be submitted at Deadline 5. The MMO has no further comments to make at this stage.

6.17 Appendix A14 – Legal Submission on RTD Displacement within Outer Thames Estuary (OTE) Special Area of Protection (SPA) REP3-049 [REP4-089]

The MMO has reviewed this document and has no comments to make at this time.



6.18 Appendix B3 Natural England’s comments on the In Principle Southern North Sea (SNS) Special Area Conservation (SAC) Site Integrity Plan (SIP) (REP3-044) and Draft Marine Mammal Mitigation Protocol (MMMP) (REP3-042) [REP4-090]

The MMO supports NE’s position on the use of the words ‘*without at source mitigation*’. The MMO would like further clarity from the applicant as to why this term has been used. The MMO also support’s NE’s position regarding UXO clustering and trust that the Applicant and NE can resolve this issue prior to the conclusion of examination.

The MMO supports NE’s position that a Marine Mammal speed of 1.8m/s should not be used for the MMMP. The MMO will review the Applicant’s response at Deadline 5.

6.19 Appendix B4 NE’s Deadline 4 Boreas Submission- SIP Position Statement [REP4-091]

The MMO considers it a useful submission from NE to explain the context surrounding their concerns about the SIP being used as a mechanism to control Project Alone matters. The MMO supports NE’s position on this and will continue to engage with the Applicant.

6.20 Appendix F7 NE’s advice on Cable Protection for Offshore Wind Farms and Inclusion in Marine Licenses [REP4-093]

The MMO welcomes this submission as a useful resource in relation to cable protection. The MMO believes this is relevant to concerns raised in Section 1.25, 3.6 and Table 4.1 of REP4-081. The MMO is still formulating a potential condition and is awaiting the Applicants response on this matter at Deadline 5 and will provide an update at Deadline 6.

6.21 Appendix G2 NE Comments to the Draft Development Consent Order (DCO) [REP3-011 & REP3-012] and Schedule of Changes to the Draft DCO [REP3-013] [REP4-094]

The MMO has reviewed this document and supports NE on all the issues raised. The MMO and NE are in regular contact to discuss matters related to the dDCO and believes the minor amendments are agreed with the Applicant. The MMO understands the Applicant is proposing a meeting between all parties in relation to UXO clearance activities included within the dDCO.

6.22 Appendix I1d – NE’s Risk and Issues Log [REP4-095]

The MMO has reviewed this document and supports NE on all the issues raised. The MMO and NE are in regular contact to discuss matters raised and will continue this throughout examination.

6.23 Royal Society of the Protection of Birds (RSPB) Deadline 4 Submission [REP4-097]

The MMO supports the RSPB on the issues raised within this document. The MMO defers to NE on ornithological matters and has no further comments at this time.

6.24 Trinity House Deadline 4 Submission [REP4-122]

The MMO supports Trinity House (TH) on all of the points raised in respect of the proposed changes to the dDCO. The MMO also welcomes TH’s support on the MMO’s stance on arbitration, in that, the MMO should not be subject to the Arbitration provision of the DCO. The MMO looks forward to reviewing the Applicants updated dDCO at Deadline 5 and continues to liaise with both MCA and TH to ensure all navigational conditions are secured and appropriate in the DCO/DML.

6.25 The Wildlife Trust’s Deadline 4 Submission [REP4-125]

The MMO welcomes The Wildlife Trust’s comments on the MMMP and SNS SAC SIP. The MMO notes most of these have also been raised by Natural England. The MMO will review the Applicant’s response at Deadline 5 and respond accordingly if required.



7. Comments on Applicants comments on MMO Deadline 3 Response

7.1 Summary of Oral Cases made during the Biodiversity and Habitats Regulations Assessment (HRA) Issue Specific Hearing (ISH) 1

The MMO welcomes the Applicant's clarification that the implementation of a 2km buffer will not impact any other designated sites located near the proposed works site. The MMO notes that the Applicant maintains their position that regarding UXO detonations and that it doesn't need to be controlled by a separate marine licence, the MMO has some concerns on this as set out in Section 5 of REP4-081 and will continue to liaise with the Applicant on this issue.

Regarding the updates made to condition 21(3) of the Generation DML and condition 17(3) of the Transmission DML, the MMO welcome these updates and is currently reviewing the wording of these conditions internally in relation to the word '*significantly*' and will provide an update at Deadline 6.

The MMO understands that all outstanding issues on underwater noise will be discussed at a joint meeting with the Applicant and NE and will provide an update at Deadline 6 on our position in relation to these conditions.

Finally, the MMO welcome the submission of an updated Sabellaria Reef Management Plan, the MMO is content that all matters raised by our scientific advisors have been agreed. However, the MMO notes NE has multiple outstanding concerns and these will be submitted at Deadline 5, the MMO supports these comments. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities and will discuss these along side other outstanding issues on UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6.

7.2 Comments on any additional information/submissions received at Deadline 2

The MMO appreciates the Applicants clarification that an updated Written Scheme of Investigation was submitted to the ExA at Deadline 3, the MMO is aware that there remains some unresolved issues between HE and the Applicant and that HE will be providing comments on this document at Deadline 5, the MMO reserve comment on this and defer to HE on the content of this document.

7.3 Applicants' Comments on Responses to the ExA WQ1s [REP2-014]

The MMO notes that there is still a disagreement in relation to the timescales for submission of documents relating to UXO clearance activities. The MMO notes that the Applicant maintains their position that 3 months is sufficient time for the relevant documents to be submitted to the MMO in this document. The MMO maintains its position that 6 months is a more appropriate timescale and understands the Applicant is currently reviewing this and hopes to update the dDCO at Deadline 5 to include 6 months for the documents of concern. The MMO will review the condition and provide comments at Deadline 6.

The MMO welcomes the Applicants proposal to update the DCO to include a condition that limits the amount of piling that can take place within a 24-hour period. The MMO will review any conditions submitted at Deadline 5 and will provide comments at Deadline 6.

Regarding the In-Principle Site Integrity Plan and In-Principle Monitoring Plan, please see the points 8.2 and 8.3 of this document to see the MMO's comments on these documents, the MMO will continue to liaise with the Applicant on these documents to ensure that they are fit for purpose.

Finally, the MMO welcomes the Applicant's commitment to updating the Site Characterisation report, in relation to the disposal site HU212, to the ExA at Deadline 5, the MMO will provide a response to this at Deadline 6.



7.4 NE Comments on Outline Sabellaria Reef management plan [REP1-044]

The MMO welcomes the fact that the Applicant is continuing to work with NE on the Sabellaria Reef Management Plan. The MMO is content that all matters raised by our scientific advisors have been agreed.

However, the MMO notes NE has multiple outstanding concerns and will be submitting these at Deadline 5, the MMO supports these concerns. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities. The MMO notes that the Applicant is organising a meeting in relation to UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6.

7.5 Comments on Applicants Comments on Relevant Representatives, Volume 3: Technical Stakeholders [AS-036] including Appendices 1, 2, 3 and 6

The MMO welcomes the Applicant's clarity regarding the largest predicted impact range using the SPLpeak metric being 11.1km. Please see section 8.1 of this document to see the MMO's extended comments on the Draft MMMP.

The MMO has had further discussions in relation to point 3.7.1 and understand the Applicant has now agreed to undertake sediments and infauna monitoring and this will be updated in a future version of the IPMP. The MMO welcomes this agreement and will confirm this matter is closed upon review of the IPMP.

In relation to point 3.7.2 the MMO does not agree that there is limited potential for the spread of Non-native Species (NNS) within an individual windfarm or between windfarms. The MMO still considers that the Applicant also needs to consider the potential for other windfarms to be built in the vicinity of the EA wind farm sites, which could increase the potential for the EA windfarms to act as steppingstones.

Furthermore, NNS dispersal could also be influenced by climate change, which may make windfarms steppingstones for species that are currently prevented from spreading by thermal constraints. The MMO therefore expects NIS to be considered in the cumulative impact assessment, while acknowledging that there will be a high level of uncertainty in these assessments. The MMO has had further discussions with the Applicant on this matter and has provided an update in Section 9.4 of this document.

The MMO notes that the Applicant considers issues related to sediment contamination to be closed out. The MMO disagrees with the Applicant on this point and will continue to liaise with them to achieve a resolution. Please see Section 9.2 for further comments.

Points 3.8.1, 3.8.3, 3.8.4 and 3.8.5 have been noted by the Applicant and the MMO has no further comments to make on these sections.

The MMO understands the Applicants comments in relation to Herring modelling (Point 3.8.2) and Sandeel monitoring (3.8.6). The MMO and the Applicant have progressed these matters please see Section 9.5 and 11 for further comments.

In relation to Underwater Noise and comment 3.11.1 The MMO does not agree with the Applicant's response. The Applicant has confirmed that there is the potential for more than one pile to be installed in the same 24-hour period (i.e. sequentially). Therefore, in line with the marine mammal noise exposure criteria (i.e. NMFS, 2018), the number of piles installed in a 24-hour period should be assessed.

The Applicant states that there will be no further cumulative noise exposure, however, no evidence or justification has been provided to support this statement. The same can be said for the following statement:



“Marine mammals would have been disturbed from the area during the first piling event and therefore would not be at further risk of PTS (including PTS SELcum) from the installation of the second pile as the marine mammals would have been disturbed already beyond the potential impact range of PTS”.

It is plausible that the installation of the second pile may only have a marginal increase in the predicted cumulative sound exposure effect ranges, but this needs to be properly assessed via modelling before conclusions can be drawn.

Therefore, the MMO believes that the predicted PTS (permanent Threshold Shift) and Temporary Threshold Shift (TTS) effect zones are re-evaluated (in line with the noise exposure criteria) to take into account the number of piles that will be installed in a 24-hour period.

8. Comments on Deadline 3 Submissions not submitted at DL4

8.1 Draft Marine Mammal Mitigation Protocol (MMMP) [REP3-042]

The MMO notes that table 2.1 (Number of piles per foundation) needs updating to reflect the number of monopiles for the offshore platforms. The same comment applies to Table 2.1. Maximum number of piles - Offshore platforms.

Furthermore, in reference to Appendix 1, Point 13, the MMO wishes to state that we do not agree with the applicants point that alternative mitigation options are not suitable (such as low order deflagration or the use of bubble curtains, for example).

The MMO recommends that such options are adequately explored as part of the mitigation selection process. The most direct and comprehensive way to mitigate the risk of acoustic impact on marine species is to reduce the amount of noise pollution emitted at source (noise abatement). It is the MMO's belief that efforts should be made to reduce the noise at source, rather than adding additional acoustic disturbance into the marine environment.

The MMO believes that a commitment to use low deflagration techniques for UXO clearances should be made at this stage. The MMO highlights that this technology is likely to be standard in the near future.

Furthermore, the MMO maintains its position that the MMMP does not take into account the maximum potential permanent threshold shift (PTS) impact ranges for marine mammals and that it does not reference the most appropriate metric for assessing the potential impacts of UXO detonation, which is the peak sound pressure level (SPL_{peak}), the MMO hopes this can be amended in the next iteration of the document.

8.2 In Principle Site Integrity Plan (SIP) for the Southern North Sea (SNS) Special Area of Conservation (SAC) [REP3-044]

The MMO notes that the Applicant has updated this document to clarify that *'without mitigation'* means *'without at source mitigation'*, the MMO understand NE had concerns in relation to this point as it is not clear at this stage exactly what *'at source'* mitigation would entail, the MMO request further clarity from the Applicant on this point.

The MMO considers that the findings presented in Table 5.1 of this document are correct in that the potential effects during the construction, operation and decommissioning phases are appropriately identified. However, Temporary auditory injury (i.e. Temporary Threshold Shift, TTS) is another important effect which has not been considered in Table 5.1. The MMO expects TTS to have been considered within Table 5.1.

The MMO is content with the findings presented in tables 5.2, 5.3, 5.4 and 5.5 and have no comments to raise on them.



The MMO considers that the commitments made by the Applicant in this document are reasonable, although we do defer to Natural England for their comments on the appropriateness of this plan.

The MMO welcomes the mitigation measures presented in Section 6, particularly the consideration of noise mitigation systems, and alternatives to UXO detonation such as low order deflagration.

8.3 Offshore In-Principle Monitoring Plan (IPMP) [REP3-040]

The MMO generally supports NE comments in relation to the detail within the IPMP and understands NE are due to put in a submission at Deadline 5 in relation to this the MMO will provide further comments at Deadline 6.

The MMO is content with the approach proposed by the applicant with regards to monitoring Sabellaria Reef and the inclusion of the Management plan.

The MMO notes that this proposed monitoring does not include monitoring of wider benthic sediment and infauna as discussed in section of REP3-109.

The MMO has discussed this further with the Applicant and advised that benthic sediment and infauna monitoring was still required as it relates to the specific project and ensure the Environmental Statement predictions can be tested and validated.

The MMO understands that the Applicant has agreed to conduct this monitoring, and this will be reflected within a future version of the IPMP. The MMO will provide further comments at that stage.

8.4 Outline Offshore Operations and Management Plan (OOOMP) [REP3-039]

The MMO has a major concern regarding the inclusion of the Scour and Cable protection at locations where protection was not placed during construction. The MMO is continuing discussions with the Applicant and NE in relation to this to come to an agreement at the earliest opportunity.

The MMO notes that the footprints per wind turbine foundation (and scour protection) shown in Appendix 1 do not match those presented in Table 4 of the document 'MMO_ExA.AS-6.D3.V1 EA1N&EA2 Deadline 3 Project Update Note (1).pdf'. The latter document states that the parameters associated with use of monopile foundations for the offshore platforms accord with those of the wind turbine monopile foundations, so it seems that these numbers should match up. It may be the case that the areas in Appendix 1 of this document actually relate to all wind turbine foundations combined, rather than each individual wind turbine foundation. The MMO requests clarification from the Applicant.

8.5 Outline Sabellaria Reef Management Plan [REP4-040]

The MMO welcomes the updated plan being submitted by the Applicant and is content that the concerns of our scientific advisors have been closed out. However, the MMO notes NE has multiple outstanding concerns that will be submitted at Deadline 5, the MMO supports these comments. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities. The MMO notes that the Applicant is organising a meeting in relation to UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6.

8.6 HRA Derogation Case- Version 1 [REP3-053]

The MMO defers matters of ornithology to NE but will continue to engage with both the Applicant and NE on these issues and hopes that all issues of this nature can be resolved before the close of examination. appreciates the usefulness of this document and welcomes



the Applicant's updated versions at each deadline throughout the course of the Examination process.

9. Other Comments

9.1 MMO comments on Natural England's (NE) Cover Letter [REP4-086]

The MMO has reviewed this document. The MMO recognises NE's concerns regarding their ability to respond to deadlines due to the Covid-19 pandemic and its associated implications, the MMO urges the ExA to take this into consideration should they request further information from other interested parties, the MMO has no further comments to make on this submission.

9.2 Sediment Contamination Sampling

The MMO has reviewed the Applicants Deadline Three Project Update [REP3-052] in relation to Sediment contamination and disposal sites. The worst case scenario comparisons in Table 4 appear acceptable. The monopile foundation worst-case scenario (WCS) volumes represent a reduction from those forecast for the other foundation types such as jacket caisson and pin-piles. The MMO sees no potential impacts to dredge and disposal activities from the transferral of the monopile assessment for wind turbines to the offshore platforms. The proposed monopile foundation will not adversely change or impact the proposed disposal activities. The proposal to utilise monopile foundations represents a reduction from those volumes originally anticipated (using other foundation methods) and this is welcomed.

The MMO has ongoing concerns in relation to sediment contaminant sampling. As part of engagement with the Applicant a review of the minutes from the Expert Topic Group Benthic Ecology 1 has been undertaken. The minutes show agreement from the MMO to the various surveying and data collection strategies in respect of our Scientific Advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) in the Fisheries, Physical and Benthic Fields. For contaminant sampling, the only discernible detail found is a comment from the Cefas benthic advisor stating:

“that inshore sediments along the cable route with higher proportions of silt are most likely to be contaminated” and a comment from the Applicant (Royal Haskoning) stating that there is a “good coverage of contaminants in cable route from EA1/EA3 works.”

The MMO believes that these considerations and as no dredge and disposal advisors from Cefas were present at the meeting, indicates that a contaminant sampling regime was not agreed. The MMO notes that whilst there may be good coverage purported, there are differences in the methods and types of contaminant analysis required for dredge material compared to benthic ecology and their remit. It is also unclear whether a Cefas dredge and disposal advisor was able to view and assess the data referenced for the East Anglia One and East Anglia Three works as part of the Evidence Plan Process and subsequently whether the conclusion could be agreed with.

Regarding the current sediment sampling proposed by the Applicant, the MMO has several concerns set out below;

- No figure for total solids is provided.
- The polycyclic aromatic hydrocarbons (PAHs) tested for comprise only 15 congeners, missing out 7 of the congeners Cefas recommend for PAH analysis.
- The PAH results are also reported in ng/g, whereas I would've expected results to be reported in either mg/kg or µg/kg. 0.08 ng/g (the value reported for all PAHs) converts to 0.00008 mg/kg, which is lower than the limit of detection (LOD) for PAHs that SOCOTEC usually use.
- The polychlorinated biphenyls (PCBs) tested for comprise only 7 congeners (constituting the ICES 7 group), missing out 18 of the congeners Cefas recommend for PCB analysis.



- The PCB results are also reported in µg/kg, the lowest of which (0.08 µg/kg) would constitute a level lower than the LOD that SOCOTEC usually use. PCB results are usually reported in mg/kg.
- No data are presented for either brominated flame retardants or organochlorine pesticides.
- The limit of detection is not presented for any of the analytes tested for.
- The methods of analysis are not reported. The methods for metals are indicated but not explained, whilst methods for the remaining analytes have not been reported at all. This is particularly salient as different methods can lead to widely varying results.

For the issues identified above, no justification is provided by the Applicant. A full list of routinely tested analytes and their congeners can be found in the MMO Results Template which can be accessed here: <https://www.gov.uk/guidance/marine-licensing-sediment-analysis-and-sample-plans>.

The MMO has listed the PAH and PCB congeners that have not been tested for by the Applicant.

<i>PAHs</i>		<i>PCBs</i>	
Tested for	Not tested for	Tested for	Not tested for
Acenaphthene	Anthracene	PCB28	CB105
Acenaphthylene	Benzo[e]pyrene	PCB52	CB110
Benz[a]anthracene	C1-Naphthalenes	PCB101	CB128
Benzo[a]pyrene	C1-Phenanthrenes	PCB118	CB141
Benzo[b]fluoranthene	C2-Naphthalenes	PCB138	CB149
Benzo[g,h,i]perylene	C3-Naphthalenes	PCB153	CB151
Benzo[k]fluoranthene	Perylene	PCB180	CB156
Chrysene			CB158
Dibenz[a,h]anthracene			CB170
Fluoranthene			CB18
Fluorene			CB183
Indeno[123-c,d]pyrene			CB187
Napthalene			CB194
Phenanthrene			CB32
Pyrene			CB44
			CB47
			CB49
			CB66

The MMO highlights that there could be consideration on whether a reduced sampling regime could be undertaken based on the physical composition of the site. The data provided by the Applicant details the particle size distribution across the site. The data comprise 84 samples (B1-65 & C1-19), only 19 of which were tested for contaminant analysis (C1-19). When looking at the group of samples not tested for contaminants (B1-84), there are several sites which raise concern due to their high silt content. Notably, there are 11 sites in this group that are either classified as “silt” on the Wentworth scale, or comprise over 50% silt. Further, when comparing the two groups, samples that were tested for contaminants (C1-19) appear to be generally coarser than those which weren’t (B1-65).

Considering this point, whilst the majority of samples not tested for contaminants (B1-65) are sufficiently coarse such that they may not require contaminant analysis, several samples contain levels of silt high enough to warrant contaminant analysis (B03, B19, B20, B27, B28, B29, B30, B32, B33, B34, B35).



Overall, the MMO believes that the sediment data that have been gathered and analysed are not sufficient to support the Application and that additional data should either be provided – in full – or generated through more sediment sampling, proportionate to the volume of material that will be dredged/disturbed with respect to requirements for dredge and disposal.

This additional sampling can be reduced based on the proportion of sandy material throughout the area. The MMO recommends that the applicant seeks pre-application advice in sample plan format using the Marine Case Management System at the MMO.

9.3 Disposal Sites

The MMO understands the Applicant will be providing an updated Site Characterisation Report (Windfarm Site) (APP-592) to include use of the HU212 disposal site. In addition to this the MMO notes a number of disposal sites need designated to be specified within the dDCO and allow consent for the disposal. Until the sediment contaminant sampling concerns raised in Section 9.2 are resolved the MMO is unable to provide approval of these disposal sites to be used within the dDCO.

9.4 Benthic Ecology

The MMO and the Applicant had a SoCG meeting on 18 January 2021. The MMO advised that the MMO does not require strategic monitoring and agrees that this is not within the project scope. However, the MMO does believe that project alone monitoring for sediment and infauna is still required to ensure the Environmental Statement predictions can be tested and validated, along with monitoring of Non Native Species once the windfarm is constructed.

The MMO understands that the Applicant has now agreed to conduct this monitoring and this will be reflected within a future version of the IPMP. The MMO will provide further comments at that stage.

The MMO welcomes the fact that the Applicant are continuing to work with NE on the Sabellaria Reef Management Plan. The MMO notes that NE has multiple outstanding concerns that will be submitted at Deadline 5, the MMO supports these comments. The MMO believes some of these concerns relate to the inclusion of UXO clearance activities. The MMO notes that the Applicant is organising a meeting in relation to UXO clearance activities and will work with the Applicant and NE to endeavour to agree these matters by Deadline 6.

9.5 Fish Ecology – Sandeel Monitoring

The MMO and the Applicant had a meeting on 18 January 2021. The MMO advised that the MMO does not require strategic monitoring for sandeel and agreed that this is not within the project scope. However, the MMO does believe that project alone monitoring for sandeel habitat is still required and this can be done as part of the benthic monitoring sediment grab samples by particle size analysis.

The MMO understands that the Applicant has now agreed to conduct this monitoring and this will be reflected within a future version of the IPMP. The MMO will provide further comments at that stage

The MMO highlights the only outstanding fish ecology concern is in relation to behavioural modelling for herring. The MMO has reviewed the information provided by the Applicant in relation to point 3.8.2 in REP4-019. In light of this information the MMO has provisionally recommended that a seasonal piling restriction is implemented to protect gravid and spawning herring and has requested additional data and information from the Applicant in order to temporally refine the duration of restriction. The MMO notes that this is a slight change in the MMO's position and the MMO will work with the Applicant in relation to this point. Due to the amount of information within this point the MMO has set this out in section 11 of this document.



9.6 Project Update: Monopiles for Offshore platforms and Underwater Noise

In relation to Underwater Noise impacts the MMO believes the worst-case scenario for the use of a monopile foundation for offshore platforms has not been assessed correctly in Table 4 in relation to fish ecology marine mammals it is not clear whether the worst-case originally modelled for the WTG foundations is applicable to the offshore platform locations.

In the original underwater noise assessment two piling source scenarios were modelled to include monopile and pin pile (jacket) WTG foundations across the EA1N and EA2 wind farm sites. The monopile scenario considered a 15 m diameter pile, installed using a maximum hammer energy of 4000 kJ. Modelling was undertaken at two representative locations at each wind farm site, covering the WC position (i.e. the deepest location where piling can take place, which tends to give the greatest noise propagation), and an average water depth (AV) location located in slightly shallower water. The MMO requires the Applicant to demonstrate that the modelled worst-case is representative of the offshore platform locations, then the MMO has no major objections to this approach (given that the monopile parameters will be the same as those already assessed) for marine mammals.

In relation to fish ecology, as raised in our RR [RR-052] the worst-case scenario for assessing the impact of noise and vibration from monopiling should be based on the spatial extent of impact rather than the duration of impact. This has been recognised by the Applicant in their responses to Relevant Representations [AS-036] and further modelling was presented at this time, based on monopiling of a 4000kJ hammer energy and a stationary receptor.

Therefore, the MMO requires an explanation that justifies why the existing modelling outlined in Appendix 3, Fish and Shellfish Ecology Clarification Note (AS-040) still represents the worst-case scenario, taking into account the additional monopiling for the offshore maintenance platforms that were previously to be installed using pin-piles.

Table 4 could then be updated by listing the spatial extent of impact (i.e., distances in km) for monopiling of the offshore maintenance platforms for Mortality and Potential Mortal Injury, Recoverable Injury, TTS, Masking, and Behaviour, based on the Popper et al. (2014) guidelines.

The MMO notes in relation to fish ecology there are ongoing discussions on herring, please see Section 11 for further information.

At this time the MMO also raises that multiple Offshore Wind Farm Projects are requesting DCO variations to the maximum hammer energy from 4000kJ to 5000kJ due to the turbine size that will be used at that time. To reduce future work for all parties the MMO asks the Applicant why 5000kJ is not appropriate for this project?

9.7 Schedule 13, Part 2 Condition 24 and Schedule 14, Part 2 Condition 20

The MMO is aware that Natural England provided further information on long term cable protection at Deadline 4. The MMO has briefly discussed this with the Applicant and is awaiting the Applicant's detailed response to these comments. Rather than proposing a condition for the DCO at this stage the MMO will review the Applicants response and work with the Applicant to get to an agreed position by Deadline 6.

9.8 SNS SAC Regulators Group

The MMO has no further update at this deadline however advises that number of actions have been taken by all parties to be discussed in detail at the next meeting 18 February 2021.

9.9 Schedule 13, Part 2, Condition 17(g)(iv) and Schedule 14, Part 2, Condition 13(g)(vii)

The MMO is aware that HE has proposed an amendment to this condition in both the transitional and generational DMLs. HE has requested that the wording '*Archaeological Data*



Service replaces *National Record of the Historic Environment* in order to provide a more up to date definition as to where the projects archaeological reporting archive should be submitted to for these projects. The MMO supports this amendment.

9.10 The Wording of the SNS SAC SIP Condition

The MMO notes that the Applicant's position is to have UXO clearance activities included in, and controlled via, the DMLs. The MMO outlined its position in relation to this at Deadline 4 [REP4-081] and still believes UXO clearance activities a best suited to a separate marine licence. However, the MMO has comments to make on the wording of the SIP conditions set out in Schedule 13, Condition 16 & 17(2) and Schedule 14, Condition 12 & 13(2).

The MMO was involved in the recent Review of Consents, undertaken by the Department of Business, Energy and Industry Strategy (BEIS), published 25 September 2020 (Appendix 1 and 2) for the Southern North Sea (SNS) Special Area of Conservation (SAC). As part of the Review the MMO varied DMLs for the follow projects:

- Dogger Bank A Windfarm & Dogger Bank B Windfarm
- Dogger Bank C Windfarm
- Sofia Offshore Windfarm
- Hornsea Offshore Windfarm Project Two

The variation was to include a condition requiring a Site Integrity Plan (SIP) to be submitted no later than 6 months prior to the commencement of any activities which produce underwater noise. The final condition can be found in Annex 1.

The MMO notes the current condition within the draft DML supplied by the applicant at Deadline 3 [REP3-012] contains the phrase 'avoid adversely affecting the integrity...of a relevant site'. The MMO understands this may be based on early versions of the draft condition proposed as part of the Review of Consents.

During the Review of Consents process the MMO raised concerns in relation to the inclusion of similar phrasing, related to avoiding an adverse effect on integrity, should include a requirement for SIPs on future projects. The MMO takes the position that it is not the remit of the MMO to determine if the project alone will have an adverse effect on site integrity, but for the Secretary of State to decide in their capacity as the competent authority to determine at the point of consent.

The MMO considers that the SIP is an integral document for managing noisy activity in the SNS SAC, near to the as-built phase of construction, and especially if the Secretary of State is minded to include UXO detonation as part of the DML.

However, it is not within the remit of the MMO to approve the SIP so as to satisfy the no adverse effect on site integrity. Rather the MMO consider that it has the regulatory power to discharge this condition on the basis that the SIP demonstrates that the project, in-combination with other plans or projects at the pre-construction stage, does not exceed the guidance published by the Joint Nature Conservation Committee (JNCC). The MMO has provided this guidance in Appendix 2.

The MMO acknowledges the Applicant's concern regarding the possibility that this guidance may change during the course of constructing, operating and decommissioning both EA1N and EA2, if consented, and so propose that the final condition wording be flexible to this.

As such the MMO has set out, without prejudice, updates to the DMLs that are required to change the current conditions and has included a new separate SNS SAC SIP condition. Please note this does not take into account the updates the Applicant is proposing at Deadline 5.

Schedule 13, Condition 16 and Schedule 14, Condition 12



UXO clearance

16.—(1) No removal or detonation of UXO can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body—

(a) a method statement for UXO clearance which must include—

(i) methodologies for—

(aa) identification and investigation of potential UXO targets;

(bb) clearance of UXO;

(cc) removal and disposal of large debris;

(ii) a plan showing the area in which clearance activities are proposed to take place;

(iii) a programme of works; and

(iv) any exclusion zones/environmental micro-siting requirements;

(b) a marine mammal mitigation protocol in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation bodies; and

~~(c) an East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan for UXO Clearance which accords with the principles set out in the in-principle East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan.~~

~~(2) In approving the East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan for UXO Clearance the MMO must be satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Offshore Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.~~

(3) The method statement, marine mammal mitigation protocol ~~and East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan for UXO Clearance~~ must be submitted to the MMO for approval at least three months prior to the date on which it is intended for UXO clearance activities to begin.

(4) (3) Any UXO clearance activities must be undertaken in accordance with the method statement, ~~and the~~ marine mammal mitigation protocol ~~and East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan for UXO Clearance~~ approved under paragraph (1).

Preconstruction plans and documentation

17.—...

~~(2) In the event that driven or part-driven pile foundations are proposed to be used, the licenced activities, or any phase of those activities must not commence until an East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan for Piling which accords with the principles set out in the in-principle East Anglia ONE North Project Southern North Sea SAC Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Offshore Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.~~

New condition to be added within the DMLs:

Southern North Sea Special Area of Conservation Site Integrity Plan



No piling activities or any removal or detonation of UXO can take place until a Site Integrity Plan (SIP), which accords with the principles set out in the in principle Southern North Sea SAC Site Integrity Plan, has been submitted to, and approved in writing, by the MMO in consultation with the relevant statutory nature conservation body.

The SIP submitted for approval must contain a description of the conservation objectives for the Southern North Sea Special Area of Conservation (SNS SAC) as well as any agreed Management Measures and it must set out the key Statutory Nature Conservation Body (SNCB) Advice on Activities within the SNS SAC which could reasonably be expected to impact upon site integrity as a result of the Project, as are set out in the SNCB guidance published in June 2020: Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs Joint Nature Conservation Committee (JNCC) Report no.654, May 2020 (“the Guidance”).

Where this guidance is superseded the MMO will assess the SIP in line with subsequent advice.

The SIP must be submitted to the MMO no later than six months prior to the commencement of the piling/UXO activities.

In approving the SIP the MMO must be satisfied that the project, in-combination with other plans and projects at the pre-construction stage is in line with the above Guidance.

The approved SIP may be amended with the prior written approval of the MMO, in consultation with the relevant statutory nature conservation body, where the MMO remains satisfied that the Project, in-combination with other plans or projects at the pre-construction stage, is in line with the above Guidance.

The above updates are also contingent upon the MMO and the Applicant reaching an agreement on the inclusion of the UXO clearance activities as set out in Section 5 of REP4-081, including a 6 month timeline of submission for the UXO documents which includes, but is not limited to, the SIP. The MMO is content that piling activities can be authorised under, and controlled by, the DML.

The MMO reiterates that the SIP should not be used for project alone impacts, as these impacts should be assessed, and any mitigation agreed at the point of consent. Again, the MMO considers this the responsibility of the Secretary of State in their capacity as the competent authority. Confidence in the mitigation for the Project alone is integral to the consent and for minimising risk both to the environment and the Project.

10. Fish Ecology – Herring

10.1 General Comments

In respect of impacts from piling on herring the MMO’s position has changed. The behavioural criteria described by Popper et al. (2014) are considered to be appropriate, conservative, and have been peer-reviewed. Nonetheless, the MMO recognises that the lack of numerical criteria to inform modelling for behavioural responses in fish can be challenging.

The MMO has previously advised that the received levels of the 135 dB single strike sound exposure level (SELss) at the herring spawning ground were modelled and presented. This was discussed further on 12th October 2020. Modelling of the 135dB SELss at the herring spawning ground was suggested as an alternative option, instead of modelling based on the ‘Near’, ‘Intermediate’ and ‘Far’ guidance described in Popper et al. (2014).



The MMO acknowledges that the reasoning behind this could have been better explained to the Applicant to find common ground sooner.

The MMO does not agree with the below statement in response to point 3.8.2 of REP4-019:

'Herring's substrate specific spawning behaviour means that they are considered to be receptors of medium sensitivity'.

The MMO believes Herring should be assessed against impacts from noise as a high sensitivity receptor for two reasons:

- a) because they are substrate specific spawners, and
- b) because they have a swim-bladder involved in hearing and can detect sound pressure as well as particle motion and are susceptible to barotrauma.

The MMO notes the Applicant requested further information/maps on the movement patterns of spawning herring in the North Sea. The MMO recommends Dickey-Collas (2004) is used as this provides a good overview of herring migration patterns in the North Sea and several other supporting papers are cited within this publication.

10.2 Modelling in Figures 1 and 2 of point 3.8.2 in REP4-019

The Applicant has presented new modelling for potential behavioural responses in herring based on numerical criterion described in Stadler & Woodbury (2009).

The Applicant has modelled a noise contour based on 150 dB SPL_{peak} to assess behavioural impacts on spawning herring. Indeed, Popper et al. (2014) highlight that the U.S. National Marine Fisheries Service (NMFS) uses a criterion for behavioural response of 150 dB re 1 μ Pa (Stadler and Woodbury 2009), but it is unclear whether this is a peak or rms level.

The MMO believes the NMFS uses a criterion of 150 dB re 1 μ Pa (rms) as the sound pressure that may result in the onset of behavioural effects (e.g. see Popper and Hawkins., 2019). Therefore, the use of the 150 dB SPL_{peak} threshold is arbitrary, and there are no details provided as to how the 150 dB SPL_{peak} has been modelled. The MMO would expect such details to be included.

Having said that, it is the MMO's understanding that the 150 dB SPL_{peak} threshold is similar to the single strike sound exposure level (SEL_{ss}) of 135 dB re 1 μ Pa² s (based on the linear equation in Lippert et al. (2015), which has a regression co-efficient of approximately 1.4). The MMO previously recommended that the Applicant models the received levels of the single strike sound exposure levels (i.e. SEL_{ss} of 135 dB re 1 μ Pa² s) at the herring spawning grounds.

Whilst there are uncertainties regarding the appropriateness of the criteria used in the modelling, the MMO is satisfied that the 150dB SPL_{peak} noise contours depicted in Figures 1 and 2 are broadly similar to what we would expect to see, had the received levels of the 135 dB SEL_{ss} at the herring spawning ground been modelled and presented.

Please note that acceptance of the modelling is not an endorsement of the use of 150dB SPL_{peak} for future applications.

The MMO notes that the modelling presented in Figures 1 and 2 is based on a stationary receptor, using the maximum hammer energy. The MMO has assumed the hammer energy is 4000kJ though is not specified in the Applicant's response.

Figure 1. displays 10 years (2007-2017) of IHLS data for the two surveys undertaken during January each year (1-15 January and 16-31 January). Figure 2. displays 10 years (2007-2017) of IHLS data for the whole of the Downs survey period (16-31 December, 1-15 January, and 16-31 January).



Figures 1 and 2 show that there is an overlap of the noise contours for temporary threshold shift (TTS) and 150dB 'behavioural response' with northerly areas of the Downs herring spawning ground for EA2. The MMO notes for EA1N, there is a slight overlap of the TTS noise contour with the spawning ground, but as per EA2, the 150dB 'behavioural response' noise contour fully overlaps northerly areas of spawning ground.

10.3 Mitigation

According to the Environmental Statement, the construction of the offshore elements would take approximately 27 months. Construction works would be undertaken for both EA1N and EA2 windfarms 24 hours a day and seven days a week. The two construction scenarios described in the ES are:

- Scenario 1 - the proposed East Anglia ONE North project and proposed East Anglia TWO project are built simultaneously.
- Scenario 2 - the proposed East Anglia ONE North project and the proposed East Anglia TWO project are built sequentially.

It is not entirely clear whether, under Scenario 1, the offshore elements for both EA1 and EA2 would be constructed within one 27-month period but using this 'best case' scenario of a 27-month construction period, there would be a minimum overlap in the construction period with two Downs herring spawning seasons.

A 'worst-case' scenario of sequential construction of EA1N and EA2 would result in a 54-month construction period, resulting in an overlap of four to five Downs herring spawning seasons.

Due to this the MMO does not agree with the Applicant's conclusion that the duration of piling is 'short' and 'intermittent', and when taking this into consideration alongside the 'high' sensitivity of spawning herring to the effects of noise and vibration outlined above, and the overlap of TTS and behavioural response noise contours with the herring spawning ground. At this stage it is necessary and appropriate to recommend a temporal piling restriction for EA1N and EA2.

When considering the effects of TTS and behavioural responses on fish receptors, eggs and larvae are of less concern, particularly when considering that eggs are immobile and larvae have limited motility, making them unable to exhibit behavioural responses. Therefore, our concerns relate to the potential impacts of TTS and behavioural effects to gravid and spawning herring at the spawning grounds.

The spawning season for Downs herring is November – January (inclusive), but the MMO believes that the duration of a temporal restriction could be refined to a shorter period than this based on the location of piling in relation to the specific timing of herring spawning in this part of the Downs spawning ground.

In summary, this would require looking at individual years of IHLS larval survey data for the 1-15 January and 16-31 January surveys to determine when the highest larval densities occur in this area and whether there are 'hotspots' of continuously high larval densities in any years. Once the peak of high larval densities has been determined, a back-calculation from this period can be made to ascertain the approximate weeks when the herring will be aggregating, spawning and laying their eggs. The MMO notes this approach has been successfully used to refine temporal mitigation recommendations for other offshore developments including offshore windfarms and cable laying activities.

The MMO has provide a summary of the data required below. However, the MMO is engaging with the Applicant on the details of this matter, including a meeting with our scientific advisors.



In their current form, the maps presented in Figures 1 and 2 do not provide sufficient information to refine the period of temporal restriction. Within the ES and technical reports, the Applicant has presented a suite of maps including spawning and nursery ground maps, PSA data and IHLS data. Unfortunately, as the individual data sets have not been provided together in one map, it is difficult to interrogate and interpret to ascertain the level of potential risk to herring.

To help better inform the assessment, we recommend that the applicant provides a layered PDF which includes the following data layers that can be turned on and off:

- IHLS larval density data <11mm (newly hatched yolk sac larvae) for the 10-year data set in m^2 (please see recommendations for presentation of IHLS data below).
- PSA data for the EA1N and EA2 study area (PSA data from the EA Zone would also be helpful)
- Seabed substrate British Geological Society (BGS) data with Folk (1954) classification.
- Historical herring spawning ground data (Coull et al., 1998)
- ICES rectangles
- TTS (186dB) noise contours
- 'Behavioural response' 150dB noise contours (as a substitute for 135 dB SEL_{ss})

The Applicant has confirmed that simultaneous piling will not be carried out during the construction of EA1N or EA2, nor will there be any simultaneous piling between EA1N and EA2. Therefore, modelling of simultaneous piling is not applicable/required in this instance unless this has changed.

10.4 Recommendations for the presentation of IHLS data

The MMO notes Southern North Sea and eastern English Channel (SNS) IHLS surveys are conducted as three separate sampling events: 16-31 December, 1-15 January, and 16-31 January. Downs herring spawning activity in northern parts of the spawning grounds occurs later in the season compared to those grounds further south in the English Channel. Please see Figure 1 below for examples of this taken from ICES (2015 and 2016) which demonstrate the variations in larval abundance according to the periods in which surveys were carried out.

With this in mind, The MMO recommends that 10 years of IHLS data should be presented for each of the two IHLS survey periods of 1-15th January and 16-31st January. Please note IHLS data are now available up to 2019.

Presenting the data in separate temporal periods will enable identification of when peak larval densities typically occur in the vicinity of the EA1N and EA2 sites and will assist in refining the duration of any recommended temporal restriction.

Data for each of the January surveys should be presented;

- As a consolidated figure over a 10-year period.
- By individual survey year.

The style of 'heat map' used to present the IHLS data in Figures 1 and 2 is difficult to interpret, in terms of quantifying larval densities. It would be helpful if the IHLS heat map was presented using isopleths/contours with a colour graded key showing the different larval densities per m^2 for each isopleth/contour.



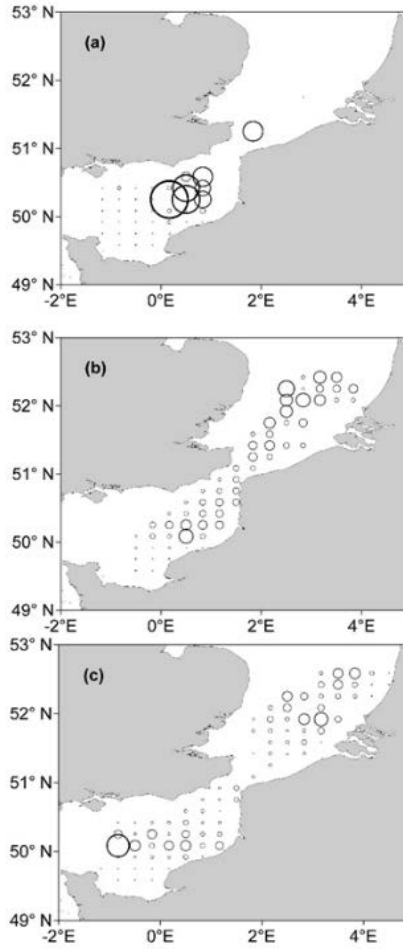


Figure 2.3.2.2 a-c: North Sea herring - Abundance of larvae < 11 mm (n/m^2) in the southern North Sea as obtained from the International Herring Larvae Survey in the second half of December 2015 (a) and in the first (b) and the second half (c) of January 2016 (maximum circle size = 1 600 n/m^2).

Figure 1: ICES (2015 and 2016)



11. Marine Plan Review – ISH 5 Action Point 1

The MMO received an action point during ISH 5 from the ExA regarding EA2 being adherent to the East Marine Plans. The MMO specifically understood the ExA to be querying whether the issue of the unassessed policies, as identified in the table above, could be brought to compliance.

The MMO is content to comment on the assessment of the Marine Plan Policies but consider the matter of determining if the application is compliant with the plans as being the remit of the Secretary of State.

The MMO outlined in the Section 56 response that the policies identified below had not been considered in Document 8.2 Development Consent and Planning Statement. Following that submission, the applicant submitted 'Applicant's Comments on Relevant Representations Appendix 1 Marine Policy Clarification Note' [AS-038].

The MMO has reviewed that submission and as such consider that the projects have considered the East Marine Plan, demonstrating due diligence to the aim of the policies. Whilst the MMO is broadly content with the justification supplied in AS-038, the MMO propose to keep a watching brief on the adherence to these policies as the examination progresses, with an update supplied to the ExA should the MMO's position change.

The MMO has provided further comments on this document below.

East Marine Plan Policy	Policy screened in from Explore Marine Plans (EMP) assessment	Consideration in document 8.2	Consideration in AS-038
Policy AQ1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO notes the Applicant has deemed this policy as not being applicable to EA1N and EA2 as there are no known or proposed aquaculture sites in the vicinity of the proposed development. The MMO understands that this remains the case. Per Figure 27 of the East Inshore and East Offshore Marine Plans (Appendix 4) the landfall sites may be within areas identified as optimum sites of aquaculture potential. The MMO considers that any future matters of co-existence will be managed should they arise.
Policy CAB1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The Applicant has outlined in their clarification note that cables will be buried wherever possible, pending pre-construction investigation. The MMO is content that the projects are in line with the aims of this policy.
Policy CC1	IN- Policy scoped into assessment	Not considered in Document 8.2 Development	The Applicant has outlined in their clarification note that the potential for impacts related to climate change have been assessed, and taken



	through EMP policy search	Consent and Planning Statement	into account, with a view to them being resilient to the effects of climate change. The MMO is content that the projects are in line with the aims of this policy.
Policy CC2	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO notes the Applicant has deemed this policy as not being applicable to EA1N and EA2 as there are no known or proposed Carbon Capture and Storage sites in the vicinity of the proposed development. The MMO understands that this remains the case.
Policy EC1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO notes that the Applicant has conducted assessments in relation to socio-economic matters. Whilst the MMO understands that there are matters unresolved at a terrestrial level, the MMO considers that marine employment gained as a result of these projects is in line with the aim of this policy.
Policy GOV1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO understands that the Applicant is reliant upon onshore infrastructure to support the development. Terrestrial issues notwithstanding, the MMO considers that the Applicant has made appropriate provision to support their activities, and as such is content with the adherence to this policy.
Policy GOV2	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO have liaised with the Applicant to minimise the impacts of marine co-existence. The MMO is content that the applicant has established a Commercial Fisheries Working Group (CFWG). Further the MMO is content with the Fisheries Liaison and Coexistence Plan (FLCP) proposed by the applicant. The MMO defers to the Maritime and Coastguard Agency (MCA) regarding matters of shipping and navigation but understands that the Applicant is progressing these matters.
Policy GOV3	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO is content that the Applicant has followed the hierarchy considerations set out by this policy in their clarification note. The MMO understands that matters pertaining to shipping and navigation are being progressed with the MCA.
Policy MPA1	IN- Policy scoped into assessment through	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO notes the Applicant's assessment of this policy within AS-038, in particular the reference to the Round 3 Strategic Environmental Assessment (SEA) and Plan Level Habitats Regulation Assessment (HRA). The MMO considers that agreement related to



	EMP policy search		the impacts to Marine Protected Areas remain outstanding. Whilst the Applicant has demonstrated effort to comply with this policy, the MMO does not consider this matter closed and defer to Natural England in future deadline submissions.
Policy OG1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO understands that there is minimal capacity for spatial conflict between these Projects and Oil and Gas activity per Figure 14 of the East Inshore and East Offshore Marine Plans. The MMO has contacted OPRED and is awaiting response.
Policy SOC1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO notes that the applicant has considered matters of tourism and recreation, including alternative Public Rights of Way (PRoW). The MMO encourages the Projects to facilitate access to the coast for health and wellbeing benefits and is content that PRoW Strategy is being pursued under the Development Consent Order (DCO).
Policy SOC3	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO is content the applicant has considered the hierarchy of this policy, but understand matters of Seascape, Landscape and Visual Assessment (SLIVA) remain outstanding. Whilst the Applicant has demonstrated effort to comply with this policy, the MMO does not consider this matter closed and defer to Natural England in future deadline submissions.
Policy TR1	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO observes that the applicant has outlined their commitment to no adversely impacting tourism and recreation during construction. The MMO is content that the hierarchy of the policy has been considered.
Policy TR2	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO observes that the applicant has outlined their commitment to no adversely impacting tourism and recreation during construction. The MMO is content that the hierarchy of the policy has been considered. The MMO understands that the Royal Yachting Association (RYA) chose not to enter into the Statement of Common Ground (SoCG) process with the applicant due to contentment with the project. The MMO considers that this policy has been suitably considered.



Policy TR3	IN- Policy scoped into assessment through EMP policy search	Not considered in Document 8.2 Development Consent and Planning Statement	The MMO considers that these Projects are not intended to deliver tourism or recreational benefit by definition, however the MMO is content that this applicant has demonstrated consideration for these matters elsewhere in the project.
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12. Notification of Hearings

The MMO has provided comments on the Notification of Hearings in Appendix 5.

Yours Sincerely



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Annex 1: Review of Consents Condition

Prior to the commencement of any activities which produce underwater noise authorised under this licence on or after 28 September 2020 a Site Integrity Plan (SIP) must be submitted to, and approved in writing, by the MMO in consultation with the relevant statutory nature conservation body.

The SIP submitted for approval must contain a description of the conservation objectives for the Southern North Sea Special Area of Conservation (SNS SAC) as well as any agreed Management Measures and it must set out the key Statutory Nature Conservation Body (SNCB) Advice on Activities within the SNS SAC which could reasonably be expected to impact upon site integrity as a result of the Project, as are set out in the SNCB guidance published in June 2020: *Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs Joint Nature Conservation Committee (JNCC) Report no.654, May 2020* (“the Guidance”).

The MMO will approve the SIP where it is satisfied that the Project, either alone or in-combination with other plans or projects, will not exceed the noise thresholds assessed within the Special Area of Conservation Review of Consents Habitats Regulations Assessment (“the HRA”), which are based on the Guidance.

Where the MMO cannot be satisfied that the Project, either alone or in-combination with other plans or projects, will not exceed the thresholds set out in the HRA then the MMO will not approve the SIP.

The SIP must be submitted to the MMO for approval no later than **6 months** prior to the start of construction unless otherwise agreed with the MMO.

In spite of anything to the contrary in any licence or consent, the Project must be carried out in accordance with the approved SIP.

The approved SIP may be amended with the prior written approval of the MMO, in consultation with the relevant statutory nature conservation body, where the MMO remains satisfied that the Project, either alone or in-combination with other plans or projects, will not exceed the thresholds set out in the HRA.

