



East Anglia Two Case Team
Planning Inspectorate
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(Email only)

MMO Reference: DCO/2020/00005
Planning Inspectorate Reference: EN010078
Identification Number: 20024119

2 November 2020

Dear Sir or Madam,

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

Deadline 1 Submission

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 for the construction, maintenance and operation of the proposed East Anglia Two windfarm (the “DCO Application”) (MMO ref: DCO/2016/00005; PINS ref: EN010078).

The Applicant seeks authorisation for the construction, operation and maintenance of DCO Application, comprising of up to 75 wind turbine generators together with associated onshore and offshore infrastructure and all associated development (“the “Project”).

The MMO received a Rule 8 letter on 12 October 2020. In response to this letter, the MMO submits the following:

1. Summary of Relevant Representation

2. Responses to the Examining Authority’s first round of written questions

3. Notification of wish to make oral representations at the Issue Specific Hearings on Biodiversity and Habitats Regulations Assessment and Onshore siting, Design and Construction

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.

The MMO wish to reserve comment on all additional submissions until Deadline 3 as amendments are expected to be made to the Statement of Common Ground between the MMO and the applicant.

This written representation also serves as notification that the MMO wish to receive all future correspondence related to this Development Consent Order electronically.

Yours faithfully



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1. Summary of the MMO's Relevant Representation

Development Consent Order (DCO)/Deemed Marine Licence (DML) matters

1.1 The MMO advised the applicant of areas of disagreement with regards to definitions within the DCO/DML, in particular the definition of 'commence', 'maintain', and 'where applicable'.

1.2. The MMO stated a preference for Unexploded Ordnance (UXO) activities to be addressed under a separate licencing regime outside of the DCO process. The MMO would like to take the opportunity to reiterate that preference. The MMO further highlighted that the applicant will need to apply to the MMO for European Protected Species (EPS) licence in relation to UXO activity.

1.3 The MMO made several points related to arbitration. The MMO outlined that Article 37 set out conditions and timeframes which the MMO does not consider acceptable. The MMO notes that arbitration provisions tend to follow model clauses and be confined to disputes between the applicant/beneficiary of the DCO and third parties e.g. in relation to rights of entry or rights to install/maintain apparatus. The MMO does not consider that it was intended to apply such provisions to disagreements between the undertaker and the regulator, and strongly questions the appropriateness of making any regulatory decision or determination subject to any form of binding arbitration as set out by Article 37 and Schedule 15.

1.4 The MMO considers that Article 37 and Schedule 15 would shift the MMO's decision making responsibility from the hands of the regulator with primary responsibility for administering the marine licensing regime to an independent arbitrator. This would be contrary to the intention of Parliament set out in the Marine and Coastal Access Act (MCAA) 2009 and would potentially usurp the MMO's role as a regulator. The MMO therefore requests that the MMO is explicitly not subjected to these provisions, in line with the recommendation of the Planning Inspectorate in their proposed changes to the draft DCO for the Hornsea Three offshore wind farm (Relevant Representation PD-017: The Examining Authority's Schedule of Changes to the draft DCO).

Other application documents

1.5 The MMO gave comments on the following documents:

- Outline Offshore Operations and Maintenance Plan (OOMP)
- Offshore In Principle Monitoring Plan (OIPMP)
- In Principle Site Integrity Plan for the Southern North Sea Special Area of Conservation (IPSIP)
- Marine Mammal Mitigation Protocol (MMMP)
- Site Characterisation Report (Windfarm)

1.6 With regards to the IPSIP the MMO outlined that an IPSIP is an appropriate mechanism to capture the scale of potential noise impacts from the project on the Southern North Sea Special Area of Conservation (SAC). The MMO considers however that a more detailed Habitats Regulations Assessment (HRA) of this activity must follow post-consent together with the submission of a detailed marine licence application for the required UXO campaign, as advised above.

1.7 In reference to the Site Characterisation Report, the MMO notes that the application had not indicated the depth of material to be dredged. Neither have they indicated whether any sample analysis was conducted on subsurface sediment, i.e. sediment deeper than 1m below the seabed surface. The MMO consider this essential should any dredging below 1m of the seabed surface be required. In document the site characterisation report, it appears

that there is indeed potential for subsurface dredging. The applicant has not determined the dredging method to be used.

Environmental Statement (ES)

1.8 The MMO made comments on the following chapters and appendices:

- Chapter 03 Policy and Legislative Context
- Chapter 07 Marine Geology, Oceanography and Physical Processes
- Chapter 09 Benthic Ecology
- Chapter 10 Fish and Shellfish Ecology
- Chapter 13 Commercial Fisheries
- Appendix 10.3- Stationary Modelling
- Appendix 11.4 - Underwater Noise Assessment

1.9 Upon review of Chapter 03, the MMO recommended that all East Marine Plan policies which have been scoped in via Explore Marine Plans (EMP) should be considered. The MMO outlined these in Table 1.

1.10 The MMO noted that in relation to Chapter 07, it is satisfied that the applicant has followed standard EIA methodology in an attempt to minimise the proposed projects potential impact on environmental receptors. However, the MMO are cautious of the conclusions drawn and consider the existing knowledge base to be insufficient to know, with certainty, whether or not the cumulative impact of the OWF sector will have a significant impact on marine geology, oceanography and physical processes and subsequently, upon other receptors.

1.11 The MMO further notes that the applicant recognises the importance of minimising disturbance to circulatory sediment transport pathways that exist between the coast and Sizewell Bank and their choice of landfall location and commitment to install the export cable at the landfall location using Horizontal Directional Drill techniques is welcomed.

1.12 Upon reviewing Chapter 09 the MMO highlighted insufficiencies which included highlighting the lack of findings from the side-scan sonar, advising that Hamon grab samples are not suitable for the collection of contaminant samples. The action of the Hamon grab mixes the sediment, which could result in the release of adsorbed contaminants and cause the sample to be unrepresentative of the actual contaminant load.

1.13 Further, MMO noted that no benthic monitoring was proposed. The MMO recommended that grab samples should be collected to monitor the effect of turbine installation on sediment composition and benthic communities. This would allow the predicted effects on benthic ecology to be confirmed or otherwise.

1.14 When commenting on Chapter 10 the MMO noted that there were multiple concerns regarding impacts to herring, in particular that limited survey data used to inform the ES. Further the MMO were not in agreement that the applicant had provided the worst-case scenario with regards to noise propagation.

1.15 In regard to sandeel the MMO noted that no impact was greater than minor adverse for the project alone or cumulatively for the proposed East Anglia Two project, therefore no monitoring or surveys are proposed. However, the MMO recommends that pre- and post-construction monitoring of sediments across the EA2 site is undertaken to inform the assessment of cumulative impacts to sandeel arising disturbance to, and loss of, 'preferred' sediments.

1.16 The MMO further outlined that the assumption that as the North Sea is a 'large area', impacts to sandeel resulting from a particular development are unlikely to be significant is incorrect. The rationale given by the applicant was that there are other areas of suitable habitat in the wider Southern North Sea area which sandeel can inhabit. However, there are many of these areas are not suitable sandeel habitat, due to incompatible substrate composition and/or water depth. There are large areas of the Southern North Sea are already being utilised by marine developments including Offshore Wind Farms and aggregate extraction, which further reduces available sandeel habitat.

1.17 The MMO advised that further detail was required regarding the impacts of suspended sediment concentrations (SSC) on shellfish species.

1.18 Where Chapter 13 was concerned, the MMO advised the applicant that as the cable export route will pass through active fishing grounds, this is likely to cause disruption to the local inshore fleet during cable laying and be contentious due to the number of export cables already passing through local inshore waters. Further, the use of concrete mattresses and other methods to cover unburied cables or cable crossing points is also likely to be controversial as this presents a snagging risk to trawling vessels. These mattresses will be in addition to those in place along cable routes for other windfarms within the area.

1.19 The MMO recommended that a Fisheries Liaison Officer (FLO) and Fishing Industry Representative (FIR) are appointed to liaise with the local fishing industry.

1.20 The MMO made several comments in relation to Appendix 11.4. The MMO provided the applicant with technical advice related to SPLpeak impact ranges and advised that worst case scenarios were considered in the ES.

1.21 The MMO stated that 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, and listed various technologies available to do this.



2. Responses to the Examining Authority's first round of written questions

EN010078/ EN010077 – East Anglia Two and East Anglia One North – The Examining Authority's (ExA) first written questions and requests for information

Issued on 12 October 2020 for submission at Deadline 1.

ExQ1	Question to	Question	MMO Response
Biodiversity, Ecology and Natural Environment			
Marine Mammals			
Q1.2.26	Marine Management Organisation The Applicant	<p>Inclusion of UXO Clearance Activities within DMLs</p> <p>The ExA notes the MMO's [RR-052] position that UXO (Unexploded Ordnance) clearance activities should not be included within the DMLs and rather should be determined via separate marine licence applications after the DCO consenting process and prior to construction. In Table 29 of [AS-036] the Applicant has set out the reasons why it has taken the approach it has taken and seeks to demonstrate how the DMLs adequately control UXO clearance activities. The submitted early draft SoCG [AS-051] states that discussion between the Applicant and the MMO on this matter is ongoing.</p>	<p>a). The MMO preference is for a separate marine licence to control UXO detonation activities, as this may allow for a more up to date assessment closer to the time of proposed UXO activities, including an assessment of other noisy activities in the area, which may not be known at the time of DCO consent.</p> <p>-If the UXO detonations are to be controlled via the DML, the condition 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 no later than 6 months prior to the start of planned UXO activities unless otherwise agreed with the MMO. The MMO is keen that the condition ensures that these documents are submitted in a controlled way so as not to overwhelm the approval process.</p>

ExQ1	Question to:	Question	MMO Response
		<p>a) Could the MMO please respond with reasons to the position set out by the Applicant, specifically that:</p> <ul style="list-style-type: none"> - UXO clearance activities are adequately assessed in the submitted ES; - the draft DML conditions provide adequately for post-consent approval by the MMO of mitigation for UXO clearance activities via the method statement for UXO clearance, the Marine Mammal Mitigation Protocol and the Site Integrity Plan; - to request that a separate marine licence application (or applications) is made would be contrary to one of the intended purposes of the DCO regime, to streamline multiple consenting processes; - a European Protected Species licence for any UXO campaign is capable of being applied for separately from the marine licensing of such activity, in an analogous way to the approach for piling activity authorised by DMLs; and, - in the event that UXO clearance activities are required beyond the scope of what has been assessed in the ES and applied for via the DMLs, then a separate marine licence can be applied for, rather than needing to vary the DMLs? <p>b) Please could the MMO provide a copy of the marine licence conditions for UXO clearance in its cited example of the Hornsea 2 project?</p>	<p>-The MMO acknowledges that requesting a separate marine licence application represents an additional consenting process. There are however other consented OWF DCOs which are required to submit separate marine licence applications, such as for Operational Maintenance activities.</p> <p>b). Please see Appendix 1 of this response which includes Hornsea Project Two UXO clearance marine licence conditions.</p> <p>d). The MMO submitted their response on this matter to the Applicant on 8 September 2020.</p>

ExQ1	Question to:	Question	MMO Response
		<p>c) Can the Applicant please provide any examples of other consented offshore wind projects which include UXO clearance works within the licensed marine activities covered by their DMLs? Where examples exist, please provide the text of deemed marine licence conditions dealing with UXO clearance activities.</p> <p>d) Please could the Applicant and MMO ensure that the SoCG requested for Deadline 1 provides an update on this matter.</p>	
Q1.2.27	Marine Management Organisation	<p>UXO Clearance and Habitats Regulations Assessment</p> <p>In [RR-052], the MMO states in relation to UXO clearance and potential noise impacts on the Southern North Sea Special Area of Conservation (SAC) that '<i>a more detailed Habitats Regulations Assessment of this activity should follow post-consent together with the submission of a detailed marine licence application for the required UXO campaign</i>'.</p> <p>Given that the Applicant seeks to include UXO clearance within the DMLs, does the MMO consider that the submitted Information to Support Appropriate Assessment and supporting material ([APP-043] – [APP-047]) provides sufficient information about, and assessment of, the potential effects on the integrity of the Southern North Sea SAC?</p>	<p>-The MMO defers to Natural England as to the adequacy of the document in relation to providing sufficient information about, and assessment of, the potential effects on the integrity of the Southern North Sea SAC. However, the MMO considers that appropriate conditions securing the management of this activity must be within the DML.</p>

ExQ1	Question to:	Question:	MMO Response:
Q1.2.28	<p>The Applicant,</p> <p>Natural England</p> <p>Marine Management Organisation</p> <p>The Wildlife Trusts</p>	<p>Disturbance of Harbour Porpoise from UXO Detonation and Piling: 20% Threshold</p> <p>Following Natural England's [RR-059], the Applicant notes in [AS-036] that its Information to Support Appropriate Assessment Report [APP-043] does not reflect the updated Conservation Objectives for the Southern North Sea SAC insofar as they state that disturbance of harbour porpoise will not exceed '<i>20% of the relevant area of the site in any given day</i>'. The Applicant accepts that two events of either UXO clearance or piling (or a combination of both) in a single day would exceed the 20% limit for the winter area only, with no exceedance for the summer area.</p> <p>a) Please could the Applicant update the relevant sections of its Information to Support Appropriate Assessment Report [APP-043] (for example, by submission of an Addendum to that Report) to reflect the current Conservation Objectives for the Southern North Sea SAC. This should include the revised findings in respect of the effects on site integrity of more than one UXO clearance event, piling event or combination of both in any 24 hour period.</p>	<p>c). The MMO defers comment to Natural England on this matter, but reiterate that appropriate conditions must be placed within the DML for the management of this activity in the event that UXO is included within the DML.</p> <p>d). The MMO are content that the Statement of Common Ground (SoCG) reflects the discussion regarding this issue. The MMO understands that the applicant intends to submit the contemporary SoCG at Deadline 1.</p>

ExQ1	Question to:	Question	MMO Response
		<p>b) Could the Applicant clarify whether, in light of the above updates, it still considers there is a sound basis for the In-Principle Site Integrity Plan provisions at section 6.1, including that potentially more than one UXO detonation, piling event or combination of both could occur in any 24 hour period?</p> <p>c) Do Natural England, the MMO, The Wildlife Trusts or any other relevant party wish to comment on the Applicant's reasoning in Table 36 of [APP-036] for not limiting UXO detonations and piling events to a total of one in any 24 hour period?</p> <p>d) Could all relevant parties please also ensure that the status of discussions on this issue is covered within the SoCGs requested for Deadline 1.</p>	
Q1.2.30	<p>Natural England</p> <p>Marine Management Organisation</p> <p>The Applicant</p> <p>The Wildlife Trusts</p>	<p>Restrictions on Concurrent UXO Detonation and Piling: Security</p> <p>The ExA notes the Applicant's points at Table 36 of [AS-036] in response to Natural England's requests for security in the DMLs to limit UXO detonations and piling events to a total of one in any 24 hour period.</p> <p>Do Natural England, the MMO, The Wildlife Trusts or any other relevant party wish to comment on the Applicant's reasoning in Table 36 of [APP-036] that Site Integrity Plans, agreed post-consent in accordance with the In-Principle SIP, are an appropriate</p>	<p>-The MMO agrees with the Applicant's reasoning that Site Integrity Plans are an appropriate mechanism to manage the matter of piling. As aforementioned the MMO has a preference for UXO detonation to be determined under a separate Marine Licence, but in the event that it is included in the DML, the MMO are content that a SIP is appropriate.</p>

ExQ1	Question to:	Question:	MMO Response:
		<p>mechanism to manage this matter? If not, why not?</p>	
Q1.2.31	<p>The Applicant, Marine Management Organisation, Natural England The Wildlife Trusts</p>	<p>Concurrent Piling at East Anglia ONE North and East Anglia TWO</p> <p>The In-Principle Site Integrity Plan [APP-594] states at bullet four of section 6.1 that '<i>(t)here would be no concurrent piling or UXO detonation between the proposed East Anglia ONE North and East Anglia TWO projects if both projects are constructed at the same time</i>'. However, it does not appear to limit the overall number of piling or UXO detonation events that could potentially occur within any 24 hour period across the two projects.</p> <p>a) Do Natural England, the MMO, The Wildlife Trusts and the Applicant consider that it should? Please given reasons for your position.</p> <p>b) Could Natural England please explain why it considers in [RR-059] that a DML condition would be a more appropriate way to secure the particular mitigation commitments relating to concurrent piling between the East Anglia ONE North and East Anglia TWO projects?</p>	<p>a). The MMO advise that noise disturbance within an SAC from a plan/project, individually or in combination, is considered to be significant if it excludes harbour porpoises from more than 20% of the relevant area of the site on any given day, or an average of 10% of the relevant area of the site over a season. The MMO consider that if more than one piling event or UXO detonation exceeds this threshold, then it is reasonable for the In-Principle Site Integrity Plan to limit the overall number of piling or UXO detonation events that could potentially occur within a 24-hour period across the two projects.</p>

ExQ1	Question to	Question	MMO Response
		<p>c) Whilst noting the Applicant's response at Table 45 of [AS-036], could it please respond specifically to Natural England's suggestion that a 'Co-operation Plan / Agreement' is required to be secured via DML condition for both projects to manage and mitigate underwater noise from piling and UXO activities in the event that construction periods for the two projects overlap?</p>	
Q1.2.36	<p>The Applicant</p> <p>Marine Management Organisation</p> <p>Natural England</p> <p>The Wildlife Trusts</p>	<p>Marine Mammals: In-Principle Site Integrity Plan - Certainty</p> <p>Under the provisions of the dDCO, the future SIP(s) must accord with the principles set out in the In-Principle SIP (IPSIP), which is to be a certified document under Art 36. The submitted IPSIP [APP-594] appears to indicate (for example at Table 2.1) that the document itself would continue to be revised and updated following the grant of DCO consent.</p> <p>a) If the IPSIP is necessary to ensure the avoidance of Adverse Effects on Integrity of the designated features of the Southern North Sea SAC, does the scope for review and change to the IPSIP post-DCO consent provide sufficient certainty that it can be relied upon for its intended purpose in the DCO consenting process?</p> <p>b) In [APP-036] the Applicant refers to a statement in Table 2.1 of [APP-594] that '(a)longside the in-principle SIP for UXO</p>	<p>b). The MMO understands that the purpose of the IPSIP is to set out the approach to deliver potential mitigation measures for the project. The MMO is of the opinion that the IPSIP should not be revised as it is a set of principles. The SIP, which is expected to include any detailed mitigation measures, must accord with the principles set out in the IPSIP, and so any changes to the IPSIP are required to be reflected here. The MMO will seek further clarification from the Applicant as to any proposed changes in approach as set out in the IPSIP.</p>

ExQ1	Question to:	Question	MMO Response
		<p><i>clearance an implementation plan and any monitoring requirements will also be drafted for any required measures'. Could the Applicant please expand on this statement?</i></p> <ul style="list-style-type: none"> - What would be the function of the implementation plan relative to the IPSIP/SIP? - Is it envisaged that this would be within the scope of the material to be submitted to and approved in writing by the MMO under the relevant DML conditions? 	
Q1.2.37	<p>The Applicant</p> <p>Marine Management Organisation</p> <p>Natural England</p> <p>The Wildlife Trusts</p>	<p>In-Principle Site Integrity Plan – Potential Mitigation Measures</p> <p>The Applicant notes that the In-Principle SIP needs to retain a level of flexibility until the extent and nature of mitigation becomes clear, and that finalised SIPs must, under the conditions of the DMLs, be approved by the MMO prior to construction.</p> <ul style="list-style-type: none"> a) In this context, do the MMO, Natural England and The Wildlife Trusts consider that the draft In-Principle Site Integrity Plan provides sufficient detail on potential mitigation measures? b) If not, what additional information should be included to provide sufficient detail? c) How does the Applicant respond to The Wildlife Trusts' request for underwater noise modelling at this stage to demonstrate the degree of noise reduction which could be achieved through mitigation? 	<p>-The MMO defers to Natural England as to whether the IPSIP provides sufficient detail on potential mitigation measures. The MMO expects any detailed mitigation measures to be included in any post consent SIP and Marine Mammal Mitigation Protocol (MMMP).</p>

ExQ1	Question to	Question	MMO Response
Q1.2.38	Marine Management Organisation	<p>In-Principle Site Integrity Plans – MMO/BEIS Advice</p> <p>The ExA notes the MMO’s statement that the Department of Business, Energy and Industrial Strategy (BEIS) and MMO intend to provide further advice about the content of In-Principle SIPs for harbour porpoise SACs.</p> <ul style="list-style-type: none"> • Can the MMO provide an estimate as to when this advice is expected to be available? Will it be within the timescales of this Examination? 	<p>-As part of the Southern North Sea (SNS) Regulators forum, the MMO and BEIS are encouraging collaboration within and between sectors (ie Renewables, Oil & Gas) to work together so as to avoid in combination noise activities, in particular during the sensitive summer period. As part of this an online tool is being developed where developers from all sectors can set out proposed noisy activities and timings, and so avoid in combination effects with other projects. The MMO cannot at this time confirm timescales for delivery of this or any other advice on noise management within SNS SAC. The MMO also notes that the Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs JNCC Report no.654, May 2020, is now available. The document sets out guidance, including daily and seasonal noise thresholds.</p>
Q1.2.39	Marine Management Organisation	<p>Site Integrity Plans – Mechanisms for Coordination</p> <p>Natural England and The Wildlife Trusts state that they do not consider it possible to conclude that there would be no Adverse Effect on Integrity of the Southern North Sea SAC due to the absence of a regulatory mechanism to manage, monitor and review multiple Site Integrity Plans across a range of offshore wind farm projects. This concern relates to the potential for in-combination underwater noise impacts affecting harbour porpoise populations.</p> <p>a) Can the MMO provide any reassurance in respect of how multiple SIPs will be managed, monitored and reviewed to avoid adverse effects on the integrity of the Southern North Sea SAC?</p>	<p>a). The MMO has imposed the requirement for Site Integrity Plans (SIPs) on to several projects following a review of consents within the Southern North Sea SAC in conjunction with Department for Business Energy and Industrial Strategy (BEIS). On receipt of the Southern North Sea SIP the MMO will assess the activities proposed for their impacts alone, and in-combination with other plans and projects, with the relevant SNCB. The MMO, alongside BEIS, is encouraging cross industry working which will be considered when assessing the SIP.</p> <p>b). To date the MMO received one SIP for a consented project. This was managed according to the terms set out above in consultation with the Natural England as the relevant SNCB. The MMO is developing the monitoring practices for the SIP and would like to assure the ExA that this will be reviewed with due diligence. This MMO is in conversation the Southern North Sea Regulators Working Group to ensure that this can be managed, and will provide details once it becomes available.</p>

ExQ1	Question to:	Question:	MMO Response:
		<p>b) The Applicant refers in [AS-036] to SIPs already in place for other consented projects. Is the MMO able to offer any emerging evidence from practice in those cases which may assist in providing reassurance that SIP coordination is capable of being managed successfully?</p>	
Q1.2.42	Marine Management Organisation	<p>Marine Mammal Mitigation Protocol – Permanent Threshold Shift Range</p> <ul style="list-style-type: none"> • Please could the MMO respond to the Applicant’s explanation (in Table 29 of [AS-036]) as to why it considers single strike sound exposure level (SELss) to be appropriate for the assessment of noise from UXO detonations and therefore used as the basis of proposed mitigation? 	<p>-The MMO are of the opinion that a (UXO) detonation is classed as an impulsive noise source; impulsive sources produce sounds that are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (NMFS, 2018).</p> <p>There are various metrics that can be used to measure an impulsive noise source, including the single strike sound exposure level (SELss) and the peak Sound Pressure Level (SPLpeak). The SELss metric is a measure of the total noise energy produced from a single noise event and is the integration of all the acoustic energy contained within the event. The SPLpeak metric is a measure of the maximum instantaneous sound pressure from a particular event. If the MMO consider the recommended marine mammal noise exposure criteria, e.g. NMFS (2018), dual criteria are provided for impulsive sources: the weighted cumulative sound exposure level (SELcum) and the SPLpeak. “<i>The instantaneous SPLpeak level has also been chosen as part of the NMFS’ dual metric thresholds for impulsive sounds. Auditory weighting is not considered appropriate with the SPLpeak metric, as direct mechanical damage associated with sounds having high peak sound pressures typically does not strictly reflect the frequencies an individual species hears best...</i>” (NMFS, 2018). When applying dual metric thresholds for impulsive sounds, one</p>

ExQ1	Question to:	Question:	MMO Response:
			<p>should use whichever results in the largest isopleth for calculating PTS onset.</p> <p>The MMO consider that the SPLpeak is the most appropriate metric to apply for the assessment of instantaneous auditory injury, e.g. Permanent Threshold Shift (PTS). This is because the risk of auditory damage depends on how high peak pressures get (and how rapidly they rise), which – out of the standard metrics available – is best reflected by the SPLpeak. Because this PTS is physical damage to the inner ear, it is less dependent on the sensitivity of hearing across frequency, which is why it isn't weighted. Furthermore, the Popper et al. (2014) criteria for fish provide quantitative thresholds for explosions based on the SPLpeak only for mortality and potential mortal injury.</p> <p>The MMO conclude that mitigation plans and proposed mitigation measures should consider the maximum predicted impacts ranges, which are likely to be the SPLpeak predictions. UXO detonations give large effect zones for PTS because they can generate very high peak Sound Pressure Levels.</p> <p>The MMO is happy engage in dialogue with the applicant to address these considerations.</p>

ExQ1	Question to	Question	MMO Response
Q1.2.43	<p>The Applicant</p> <p>Marine Management Organisation</p>	<p>Marine Mammal Mitigation Protocol: Point of Clarification</p> <p>The draft DMLs [APP-023] require that a final Marine Mammal Mitigation Protocol (MMMP) is approved prior to construction in respect of UXO clearance and piling activities associated with both the generation and transmission assets for each project. The submitted draft MMMP [APP-591] appears to indicate that separate MMMPs may be produced, at least in relation to piling and UXO clearance.</p> <p>a) Can the Applicant clarify what is the maximum number of Marine Mammal Mitigation Protocols that may be produced for a single project under the provisions of the draft DMLs?</p> <p>b) In the event that there would be more than one final MMMP, is there a need for coordination of their provisions?</p>	<p>The MMO consider that in the event that more than one final MMMP is produced then there would be a need to coordinate their provisions. The MMO defer further comment on this matter to Natural England.</p>
Q1.2.44	<p>The Applicant</p> <p>Marine Management Organisation</p>	<p>Construction Monitoring: Cessation of Piling Condition</p> <p>The Applicant states in Table 29 of [AS-036] that it does not consider it necessary to add provisions recommended by the MMO to the DML construction monitoring conditions which would require piling to cease if noise levels are significantly higher than those assessed in the ES, with recommencement dependent upon an updated MMMP and MMO agreement to further monitoring requirements.</p>	<p>c). The MMO does not see this as duplication. The MMO does not consider that the necessary enforcement powers exist under MCAA (2009). It is the MMO's view that the recommended provisions remain within the DML as the MMO do not agree that the enforcement powers under MCAA (2009) allow for a cessation of work in the same way the conditions would. Under MCAA (2009) the MMO could suspend or revoke the DML, however the MMO believe that this puts the project at risk of lengthy delay should an enforcement issue arise.</p>

ExQ1	Question to:	Question:	MMO Response:
		<p>a) Does the Applicant maintain this position in light of the inclusion of similar conditions for recently consented projects such as at condition 19(3) and 14(3) of the Norfolk Vanguard DMLs?</p> <p>b) If so, please can the Applicant explain why the circumstances of the projects before us justify a different approach to that taken in the Norfolk Vanguard case?</p> <p>c) Please could the MMO respond to the Applicant's statement that the necessary enforcement powers already exist under the Marine and Coastal Access Act 2009?</p>	
Q1.2.45	<p>The Applicant</p> <p>Marine Management Organisation</p>	<p>Post-Construction Monitoring Commitments for Marine Mammals</p> <p>In Table 29 of [AS-029] the Applicant suggests amended wording to DML conditions relating to post-construction monitoring to remove reference to a three-year timescale. The Applicant also states that it will set out details of timescales for post-construction monitoring in the In-Principle Monitoring Plan [APP-590].</p> <p>a) Does the MMO consider that these changes adequately address its concerns?</p> <p>b) Does the Applicant intend to submit an updated</p>	<p>a). Yes, the MMO consider that these changes adequately address the concerns raised.</p>

ExQ1	Question to:	Question	MMO Response
Q1.2.46	<p>The Wildlife Trusts</p> <p>Marine Management Organisation</p> <p>Natural England</p>	<p>Concerns have been expressed by The Wildlife Trusts about the monitoring secured in the dDCO in respect of harbour porpoise and the Southern North Sea SAC. The Offshore In Principle Monitoring Plan [APP-590] signposts to provision for monitoring (if required) in the Draft Marine Mammal Mitigation Protocol [APP-591] and In-Principle Site Integrity Plan [APP-594]. All three are to be certified documents under Art 36 of the DCO.</p> <p>a) Do the MMO and Natural England consider that the monitoring provisions included in the draft DMLs and subsidiary plans and protocols are fit for purpose in respect of marine mammals?</p> <p>b) Do The Wildlife Trusts wish to comment on the Applicant's response to its concern at line 011 of Table 66 in [AS-036]?</p> <p>c) What function do The Wildlife Trusts consider that any additional monitoring commitments would have and what form might they take?</p>	<p>a). At this stage, the MMO broadly agree that the monitoring provisions included in the draft DMLs are fit for purpose and reflect the monitoring requirements of similar projects within the Southern North Sea SAC. The MMO defer further comment on this point to a later deadline.</p>
Q1.2.49	<p>The Applicant</p> <p>Marine Management Organisation</p>	<p>HRA Screening (EA2)</p> <p>Can the Applicant please respond to comments made by the MMO in its RR [RR-052] regarding benthic ecology and comment on how these may affect the conclusions drawn in the screening exercise? (The MMO is asked to comment on responses at Deadline 2.)</p>	<p>The MMO reserves comment until Deadline 2, as requested by the ExA.</p>

ExQ1	Question to	Question	MMO Response
2.1 Benthic Ecology			
Q1.2.50	Marine Management Organisation	<p>Micro-siting: benthic habitats</p> <p>Is the MMO [RR-052] content that the dDCO and DML are adequately drafted to ensure micro-siting to reduce or avoid impacts on valuable benthic habitats? Does anything else need to be provided for?</p>	<p>-The MMO note that 17(1) and 13 (1) of the draft DML makes provision for a design plan to be submitted to the MMO prior to the commencement of activities, and activities must not commence until the design plan has been approve by the MMO. This includes any exclusion zones/environmental micrositing requirements. The MMO will consult the relevant SNCB regarding this plan. At present the MMO consider that micrositing, and if required any exclusions zones, should be sufficient to avoid or, where avoidance is not possible, reduce impacts to benthic habitats. The MMO understand the applicant will be submitting a plan at this deadline to deal with reef, and so the MMO defer further comment until such time as the plan has been reviewed.</p>
1.11 Marine and Coastal Physical Processes			
Q1.11.9	SCC ESC Environment Agency Marine Management Organisation	<p>Do you agree with the conclusions on the extent of future coastal erosion set out in Appendix 4.6 [APP-447]?</p>	<p>-The MMO agree with the applicant's conclusions regarding the extent of future coastal erosion and consider that the information available to the applicant allows for a good assessment of the area, in terms of present-day trends of erosion. The MMO's understanding of the wider coastal system is generally consistent with their own, which has been developed through the MMO's involvement in the proposed Sizewell C new nuclear build over the previous decade. The MMO consider that long-term rates of erosion presented in Table A4.6 of the document are reasonable projections. The MMO further note that that the Development Consent Order (DCO) application for Sizewell C has now been submitted, meaning that the associated evidence base is now in the public domain and may further support the applicants' studies should the examining authority wish to access this. Although we do note that DCO variations have been</p>

ExQ1	Question to:	Question:	MMO Response:
			<p>submitted to PINs which could impact on coastal processes. Overall, the MMO is content that the applicant has successfully assessed the extent of future coastal erosion.</p> <p>The MMO is expecting further information from Sizewell C to be submitted in November regarding the DCO variation. Should the need arise, the MMO will give comment on any future requirements for additional modelling to account for the changes in the Sizewell C project at a later date.</p>
Marine Effects			
Q1.12.11	Marine Management Organisation	<p>Marine Plans assessments</p> <p>Does the Marine Management Organisation (MMO) have any additional observations to raise on the Applicants' characterisation of applicable policy from marine plans and responses to that policy in the Marine Policy Clarification Note [AS-038]?</p>	<p>In the Relevant Representation submitted by the MMO 24 January 2020, the MMO outlined that not all policies scoped in via the Explore Marine Plans (EMP) tool has been assessed. The MMO consider that the applicant has considered the appropriate, and applicable policies and is content with the marine policy clarification note.</p>
Q.1.12.12	Marine Management Organisation	<p>Observations on marine disposal locations</p> <p>Does the MMO have any further observations on marine disposal proposals, including the Applicant's additional submissions on disposal site locations [AS-043]?</p>	<p>The MMO advise that should the material and volume proposed for disposal be deemed acceptable, the MMO would be content that the proposed disposal sites for EA1N and EA2 be included on the face of the DCO/DML. The MMO is of the opinion that the proposed offshore corridor disposal site for EA1N and EA2 would comprise two separate disposal sites due to the overlap with TH057. If disposal of material is required at site TH057, they will also require consent for this site. It is difficult to specify a disposal site code given the overlap between the applicant's proposed corridor disposal sites, but they are likely to be either TH225, TH226 or TH227, however this will be confirmed at the time of characterising the site.</p>

ExQ1	Question to:	Question:	MMO Response:
			<p>Regarding options available to the applicant for this designation, the MMO consider that from the information provided, there seems to be significant overlap between the two, though the Southerly option of EA2 deviates much more from EA1N than the Northerly option. Areas which overlap exactly can be designated as one disposal site, then, another disposal site could be designated where the areas begin to deviate. However, the MMO see no issue with simply combining both disposal sites into one, thus only requiring two disposal sites for the corridor section in total; split by the overlap with TH057.</p> <p>Regarding the requested EA1N and EA2 Windfarm disposal site (not the area covered by HU212), the MMO would be content for both sites to be included on the face of the DCO/DML so long as the material and volume proposed are deemed acceptable. For EA1N, the disposal site code is likely to be TH025, for EA2 the disposal site codes are likely to be TH021 and TH022, however this will be confirmed at the time of designating the site.</p> <p>Regarding discussions around the use of site HU212 being conducted post-consent (which was suggested by the applicant in their comments to relevant representations), the MMO disagree with the applicant and claim this discussion should not take place during the post-consent stage. An assessment can be made as to the likely behaviour of material that will be disposed by using the anticipated volume, i.e. how material will disperse and whether it will shoal. In cases where the capacity of a disposal site is questionable, further assessment via disposal plume modelling can be conducted to determine the likelihood of adverse effects, the results of which inform the decision as to whether the proposed disposal</p>

ExQ1	Question to:	Question:	MMO Response:
			<p>site is acceptable. The MMO take the view that all the above can be, and usually is, conducted prior to consent being granted, therefore, the applicant's proposal to resolve the concerns post-consent is not consistent with regular practice.</p> <p>It may be possible to confirm the capacity of HU212 post-consent, but this would likely require a licence condition precluding any disposal activities until an assessment is conducted and its results are deemed acceptable. The MMO is content that this process does not raise any immediate concerns but it may be lengthier and costlier, as it will effectively add another step in the regulatory process, i.e. rather than confirming capacity prior to consent being granted, consent would be granted and then a condition would need to be discharged to permit disposal should capacity be confirmed.</p> <p>The MMO will discuss these points with the applicant and provide the ExA with an update in due course after having actioned advice received in September and October.</p>
Other Projects and Proposals			
Q1.14.5	SCC ESC SASES SoS	<p>Relevant projects and effects for cumulative impact assessment purposes: grid connections at Friston (OFHs 1 – 3, 7 – 9 October 2020)</p> <p>Parties at OFHs 1 – 3 raised a range of grid connection proposals potentially making use of the National Grid substation proposed to be constructed at Friston. If you have already responded to ExQ1.0 and/ or ExQ1.6</p>	<p>The MMO has no comment to make.</p>

ExQ1	Question to:	Question:	MMO Response:
	Parish Councils and other Interested Parties	<p>questions on these issues and provided a complete list of projects in response, this question does not need to be responded to. However, if you have not responded to those questions or your response does not include a complete list of projects that you are aware of and consider to be relevant, please set out a full list and identify the public information source(s) from which you have made your assessment.</p>	
Q1.14.6	All Interested Parties	<p>Relevant projects and effects for cumulative impact assessment purposes: other projects</p> <p>Are there any other projects that are not documented in the ES and are not grid connection projects at Friston (ExQ1.14.5) that are relevant and need to be considered by the ExA?</p> <ul style="list-style-type: none"> • Please identify these projects and identify the public information source(s). 	The MMO has no comment to make.



3. Notification of wish to make oral representations at the Issue Specific Hearings

The Marine Management Organisation (MMO) is an interested party for the examination of Development Consent Order (DCO) applications for Nationally Significant Infrastructure Projects (NSIPs) in the marine area. Should consent be granted for the project, the MMO will be responsible for monitoring, compliance and enforcement of Deemed Marine Licence (DML) conditions.

The MMO received a Rule 8 letter dated 12 October 2020 containing the notification of hearings for the proposed East Anglia One North Offshore Wind Farm (Ref EN010077). Please find the MMO's response to the notification of hearings below.

1. Notification of wish to make oral representations at the Issue Specific Hearing on Biodiversity and Habitats Regulations Assessment

The MMO will be attending the Issue Specific hearing on Biodiversity and Habitats Regulations Assessment on 1 December 2020. The MMO have the following ongoing concerns and will make oral representation on these if required:

**Offshore Biodiversity
Habitats Regulations Assessment
Cumulative and In-combination effects.**

2. Notification of wish to make oral representations at the Issue Specific Hearing on Onshore siting, design and construction

The MMO will be attending the Issue Specific hearing on Biodiversity and Habitats Regulations Assessment on 2/3 December 2020. The MMO have the following ongoing concerns and will make oral representation on these if required:

**Siting
Department of Business, Energy and Industrial Strategy Review
Good Design**

3. Notification of wish to make oral representations at the Issue Specific Hearing on Any specific issue adjourned from ISH1 and/ or ISH2

The MMO will be attending the Issue Specific hearing on any specific issue adjourned from ISH1 and/ or ISH2. All concerns from the MMO regarding these hearings have been listed above.

Appendix 1

The ExA requested the MMO provide a copy of the marine licence conditions for the Hornsea 2 Project. These are as follows:

5.2.1 Local mariners and fishermen's organisations must be made fully aware of the activity through a local Notice to Mariners. This must be issued at least 5 days before the commencement of the works. The MMO must be sent a copy of the notification within 24 hours of issue.

Reason: To ensure other vessels in the vicinity can be informed to plan and safely conduct their passage.

5.2.2 A notification of works must be sent to the UK Hydrographic Office at least two weeks prior to the commencement of the works for a decision on whether updates to maritime safety information and nautical charts/publications is required. The MMO must be sent a copy of the notification within 24 hours of issue.

Reason: To ensure other vessels in the vicinity can be informed to plan and safely conduct their passage.

5.2.3 HM Coastguard, nmoccontroller@hmcg.gov.uk, The National Maritime Operations Centre, must be made fully aware of the works at least 5 days before commencement of the works. The MMO must be sent a copy of the notification within 24 hours of issue

Reason: To ensure HM Coastguard is aware of the activities.

5.2.4 A schedule for when the works are to be carried out must be submitted to the MMO at least 5 working days prior to the commencement of works.

Reason: Licence number: L/2019/00266/1 Case ref: MLA/2018/00503 To allow the MMO to plan any marine licence inspections.

5.2.5 Bunding and/or storage facilities must be installed to contain and prevent the release of fuel, oils, and chemicals associated with plant, refuelling and construction equipment, into the marine environment. Secondary containment must be used with a capacity of no less than 110% of the container's storage capacity.

Reason: To minimise the risk of marine pollution incidents.

5.2.6 Any oil, fuel or chemical spill within the marine environment must be reported to the MMO Marine Pollution Response Team within 12 hours. Within office hours: 0300 200 2024. Outside office hours: 07770 977 825. At all times if other numbers are unavailable: 0345 051 8486. dispersants@marinemanagement.org.uk

Reason: To ensure that any spills are appropriately recorded and managed to minimise the risk to sensitive receptors and the marine environment.

5.2.7 During the clearance works, the Marine Mammal Mitigation Protocol document HOW02 Offshore UXO MMMP (00395685_C) (see Licence Schedule 2) must be followed at all times.

Reason: To reduce underwater noise impacts on marine mammals.

5.2.8 The relocation of any archaeological features must be undertaken as per the method statement in document HOW02 Arch_Review_Geophys_Data_UXO_Method Statement (01738084_A)_FINAL (see Licence Schedule 3). Licence number: L/2019/00266/1 Case

ref: MLA/2018/00503

Reason: To reduce any impact on archaeological features.

5.2.9 No Archaeological Exclusion Zones (AEZ) are to be removed until confirmation in writing is provided to the MMO that Historic England are satisfied with the removal of the AEZ.

Reason: To ensure that AEZ are removed correctly.

5.2.10 Detonations of UXO greater than 50kg charge weight occurring in water depths between 5m and 40m, with water current speeds of less than 1.5m/s must be carried out using bubble curtains unless otherwise agreed in writing by the MMO.

Reason: To ensure appropriate mitigation activities are undertaken as licensed and bubble curtains are used as effective mitigation at current speeds of up to 1.5m/s.

5.2.11 The licence holder must seek written permission from the Marine Management Organisation to undertake UXO detonation activities of UXO greater than 50kg charge weight at depths of between 5m and 40m, with current speeds of less than 1.5m/s without the use of bubble curtains as mitigation. The request must be received at least 5 working days prior to the detonations without bubble curtains. Written approval from the MMO must be received before the specified detonation activity can take place.

Reason: To ensure appropriate mitigation activities are undertaken as licensed.

5.2.12 All UXO detonations must only be carried out between July 2019 and 31 December 2019 and 1 April 2020 and 31 December 2020.

Reason: To ensure detonations are carried out as per the proposed campaigns in the marine licence application. Licence number: L/2019/00266/1 Case ref: MLA/2018/00503 Upon completion of the Works

5.2.13 The licence holder must notify the local MMO office as detailed in section 2.2 of the completion of the licensed activities by the licence holder, no later than 10 working days after their completion.

Reason: To ensure the local MMO officer is aware of the licensed activities at sea occurring within its jurisdiction in order to notify other sea users and to arrange any enforcement visits where appropriate.

5.2.14 The licence holder must submit the exact locations and dates of detonation of explosives to the Marine Noise Registry, in order to satisfy the 'Close-out' requirements of the Registry, within 12 weeks of completion of detonation of explosives. The licence holder must notify the MMO of the successful submission of 'close out' data within 7 days of the submission. <https://mnr.jncc.gov.uk/> *Reason: In order to collect the evidence required to support the implementation of the Marine Strategy Framework Directive, under descriptor 11.*

5.2.15 The licence holder must notify The Source Data Receipt team, UK Hydrographic Office, Taunton, Somerset, TA1 2DN (Email: sdr@ukho.gov.uk ; Tel: 01823 337900) of completion of the licensed activities, no later than 10 days after their completion. A copy of the notification must be sent to the MMO within 1 week of the notification being sent.

Reason: To ensure necessary amendments to charts can be made.

5.2.16 The licence holder must produce a technical report which provides the archaeological interpretation and analysis of data acquired through the UXO survey

programme. This report should be submitted to the MMO within 3 months of the completion of the works. Licence number: L/2019/00266/1 Case ref: MLA/2018/00503
Reason: To allow analysis of the archaeological data.

5.2.17 The licence holder must submit a UXO Inspections Close Out Report with the results of the UXO survey, to provide the breakdown of the total number of UXOs found, charge size, depth and coordinates of each UXO. This must be submitted to the MMO no later than 1 month after the survey is completed.
Reason: To report on the results of the UXO survey.

5.2.18 The licence holder must submit a UXO Clearance Close Out Report to the MMO. For each detonation undertaken the report must include coordinates, depth, current speed, charge utilised and the date and time of each detonation and whether a bubble curtain was deployed. Including feedback on practicalities of deployment of equipment and efficacy where possible of bubble curtain in situ. An interim close out report must be submitted to the MMO 1 month after the completion of the 2019 UXO campaign. This final close out report must be submitted to the MMO no later than 1 month after the expiry of the licence.
Reason: To report on detonations and mitigation used.

5.2.19 The licence holder must produce a report on archaeology and AEZ. This report should be submitted to the MMO within 3 months of the completion of the works.
Reason: To allow analysis of archaeological data