



**SCOTTISHPOWER  
RENEWABLES**

# **East Anglia ONE North and East Anglia TWO Offshore Windfarms**

## **Applicants' Comments on Marine Management Organisation's Deadline 2 Submission**

Applicant: East Anglia TWO and East Anglia ONE North Limited  
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**Applicable to East Anglia ONE North and East Anglia TWO**

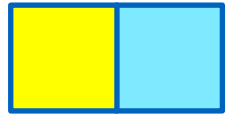


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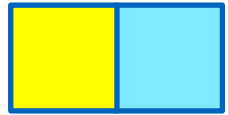
## Glossary of Acronyms

APP	Application Document
BEIS	Department for Business, Energy & Industrial Strategy
CIA	Cumulative Impact Assessment
DCO	Development Consent Order
DML	Deemed Marine Licence
EDR	Effective Deterrent Range
EIA	Environmental Impact Assessment
EMF	Electromagnetic Fields
EPS	European Protected Species
ES	Environmental Statement
ETG	Expert Topic Group
ExA	Examining Authority
FLCP	Fisheries Liaison and Co-existence Plan
FLO	Fisheries Liaison Officer
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables Group
HDD	Horizontal Directional Drill
HRA	Habitats Regulation Assessment
IHLS	International Herring Larvae Survey
MCA	Maritime and Coastguard Agency
MHWS	Mean High Water Springs
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MPA	Marine Protected Area
MSS	Marine Scotland Science
NE	Natural England
NFFO	National Federation of Fishermen's Organisation
NSIP	Nationally Significant Infrastructure Project
NtM	Notices to Mariners
PEIR	Preliminary Environmental Information Report
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEL	Sound Exposure Level
SIP	Site Integrity Plan
SNS	Southern North Sea
SoCG	Statement of Common Ground
SoS	Secretary of State
SPA	Special Protected Area
SPL	Sound Pressure Level
SPR	ScottishPower Renewables
SSC	Suspended Sediment Concentrations
UXO	Unexploded Ordnance



## Glossary of Terminology

Applicant	East Anglia TWO Limited / East Anglia ONE North Limited
Development area	The area comprising the onshore development area and the offshore development area (described as the 'order limits' within the Development Consent Order).
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO	The offshore area within which wind turbines and offshore platforms will be located.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Generation Deemed Marine Licence (DML)	The deemed marine licence in respect of the generation assets set out within Schedule 13 of the draft DCO.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms, these cables will include fibre optic cables.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition.
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.
Offshore development area	The East Anglia TWO windfarm site and offshore cable corridor (up to Mean High Water Springs).
Offshore electrical infrastructure	The transmission assets required to export generated electricity to shore. This includes inter-array cables from the wind turbines to the offshore electrical platforms, offshore electrical platforms, platform link cables and export cables from the offshore electrical platforms to the landfall.



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Offshore electrical platform	A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These cables will include fibre optic cables.
Offshore infrastructure	All of the offshore infrastructure including wind turbines, platforms, and cables.
Offshore platform	A collective term for the construction, operation and maintenance platform and the offshore electrical platforms.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
Transmission DML	The deemed marine licence in respect of the transmission assets set out within Schedule 14 of the draft DCO.



# 1 Introduction

1. This document is applicable to both the East Anglia ONE North and East Anglia TWO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's (ExA) procedural decisions on document management of 23rd December 2019. Whilst for completeness of the record this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it again for the other project.
2. This document presents the Applicants' comments on the Marine Management Organisation's (MMO) Deadline 2 submission. The MMO Deadline 2 submission includes MMO responses to submissions from the Applicants and other Interested Parties at Deadline 1 and Deadline 2.



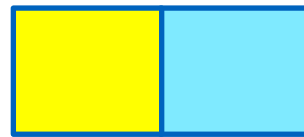
## 1.1 Applicants' Responses to MMO Comments on Deadline 1 Submissions

Point	MMO Comment	Applicant's Response
001	<p>The MMO has reviewed a number of documents submitted at Deadline 1, these are shown in Appendix 1, any comments on these have been set out below.</p> <p>The MMO notes that the Applicant and other Interested Parties have outstanding concerns and ongoing discussions on a number of offshore issues that may be resolved when the Applicant updates the relevant documents at Deadline 3. The MMO has noted these concerns but has not provided comments at this stage. The MMO will review the updated documents and relevant Interested Parties responses and provide comments at Deadline 4 or Deadline 5.</p>	Noted
<b>1.1 Historic England written representation [REP1-143]</b>		
002	1.1.1 The MMO defers all issues related to heritage assets and archaeology to Historic England.	Noted
003	1.1.2 The MMO agrees with point 5.3.1 of Historic England's Written Representation in that the wording of the Offshore In-Principle Monitoring Plan should be amended to read "The Outline WSI includes provision to update the document as the project design is refined and as the results of further archaeological assessment become available. With the final agreed WSI acting as a 'point-in-time' document and submitted to the Marine Management Organisation (MMO) 6 months in advance of the licensed activities".	Noted, the Applicants have incorporated text within the In-Principle Monitoring Plan (an updated version has been submitted at Deadline 3, document reference 8.13) to address this comment.
004	1.1.3 The MMO supports the changes requested in 6.1.2 and 6.1.	See the Applicants response to Historic England's written Representation (REP2-016).





Point	MMO Comment	Applicant's Response
	<p>1.1.4 The MMO concurs with Historic England's opinion raised in point 6.1.4 that Schedule 14, Part 2, Condition 13(1)(g) should be amended to read</p> <p>'A written scheme of archaeological investigation in relation to the offshore Order limits seaward of mean high water, which must be submitted to the statutory historic body at least six months prior to commencement of the licensed activities and to the MMO at least four months prior to commencement of the licensed activities and which must accord with the outline written scheme of investigation (offshore) and industry good practice, in consultation with the statutory historic body (and, if relevant, Suffolk County Council) to include—'</p>	See the Applicants response to Historic England's written Representation (REP2-016).
005	1.1.5 The MMO supports the points raised by Historic England in Section 6.2.1 and 6.2.2.	See the Applicants response to Historic England's written Representation (REP2-016).
<b>1.2 Maritime and Coastguard Agency (MCA) Statement of Common Ground [AS-047]</b>		
006	<p>1.2 Maritime and Coastguard Agency (MCA) Statement of Common Ground [AS-047]</p> <p>1.2.1 The MMO welcomes point 'MCA-105' in the Statement of Common Ground (SoCG) that states that the Applicant will be placing all the 'standard conditions' in the DCO/DML and supports MCA in this consideration. The MMO looks forward to viewing the updated DCO/DML at deadline 3.</p>	Noted
<b>1.3 Trinity House Statement of Common Ground [AS-053]</b>		
007	1.3 Trinity House Statement of Common Ground [AS-053]	Noted



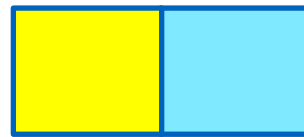
Point	MMO Comment	Applicant's Response
	<p>1.3.1 The MMO supports Trinity House's position on the point TH-105' and look forward to viewing the updated DCO/DML at deadline 3.</p> <p>1.3.2 The MMO welcomes Trinity House's support on Arbitration and has provided further comments in Section 3 of this document in response to ExA written question 1.5.18.</p>	
<b>1.4 Applicant's Fisheries Liaison and Co-existence Plan [REP1-045]</b>		
008	<p><b>1.4 Applicant's Fisheries Liaison and Co-existence Plan [REP1-045]</b></p> <p>1.4.1 The MMO notes the Outline Fisheries Liaison and Coexistence Plan will be developed further at the post consent stage. The MMO requests the Applicant provides further detail at this stage. The MMO believes there is enough information available to include more descriptive roles and responsibilities. A Fisheries Liaison and Co-existence Plan has been used on multiple OWF projects and as the document states it has been developed using best practices from East Anglia One. Therefore, the MMO requests that this section can be expanded with at least the expected roles and responsibilities – this can be amended at post consent if required.</p>	<p>The Applicants have updated the <b>Outline Fisheries Liaison and Co-existence Plan</b> (REP1-045) submitted at Deadline 3 to include further details of the roles and responsibilities of key roles in fisheries liaison.</p>
010	<p>1.4.2 Section 2.3 highlights that timescales will be added at the post consent stage. The MMO believes that as a minimum a table should be included to advise when information will be shared at the construction, operation and maintenance stages. The MMO notes this information is readily available similar to the table below:</p>	<p>Section 2.3 of the <b>Outline Fisheries Liaison and Co-existence Plan</b> (REP1-045) secures inclusion of timings for information distribution in the final Fisheries Liaison and Co-existence Plan (FLCP). The Applicants would anticipate inclusion of a table similar to that suggested by the MMO in the final FLCP and indeed, such a table was included in the East Anglia ONE FLCP. However, the Applicants have not made this change in the updated <b>Outline Fisheries Liaison and Co-existence Plan</b> (REP1-045) for the following reasons:</p>



Point		MMO Comment	Applicant's Response
	Activity	Timing	<ul style="list-style-type: none"> <li>Timing for provision of key information are secured in the draft DCO for example under condition 10 of the generation Deemed Marine Licence (DML) and condition 6 of the transmission DML; and</li> <li>The draft DCO submitted at Deadline 3 includes revisions to several timings for information distribution made to address stakeholder comments;</li> </ul> <p>Given that further revisions to the timing of information distribution within the draft DCO could be made during the course of the Examination in response to stakeholder comments, the Applicants suggest that further revisions regarding this matter are deferred to the final FLCP, should consent be granted.</p>
	Construction activities	Notices and information distribution not less than 2 weeks prior to the commencement of offshore construction activities.	
	Pre and post construction surveys	Notices and information distribution not less than 2 weeks prior to the commencement of offshore construction activities.	
	Operation and Maintenance (O&M) activities	Notices and information distribution not less than 2 weeks prior to the commencement of offshore O&M activities.	
	Meetings	Consultation meetings as required throughout the project development.	
	Unscheduled liaison	Additional unscheduled liaison and consultation will be undertaken by either the FLO or the FIR as required to address issues or fishermen's concerns as they arise.	
011	1.4.3 In addition to the above comments the MMO requests it is made clear within the document that 'the MMO will not act as arbitrator and will not be involved in discussions on the need for, or amount of, compensation being issued'. The MMO believes this should be made clear at this stage to ensure all parties are aware that the MMO will not be part of this process.		The Applicants have updated the <b>Outline Fisheries Liaison and Co-existence Plan</b> (REP1-045) submitted at Deadline 3 to address the MMO's comment.



Point	MMO Comment	Applicant's Response
<b>1.5 Applicant's Outline Landfall Construction Method Statement [REP1-042] &amp; Natural England's (NE's) Comments on Draft Outline Landfall Construction Method Statement [REP1-153]</b>		
012	1.5.1 The MMO believes the Outline Landfall Construction Method Statement document is well structured. In light of NE's comments submitted at deadline 1 the MMO defers to NE and the Local Planning Authority (LPA) on the detail within this document.	Noted
013	1.5.2 The MMO notes the document is required under Requirement 13 of the DCO. The MMO notes the document references Works No.6 the offshore exit pits.	Noted
014	1.5.3 The MMO would like to open discussions with the Applicant and the LPA on how the information relating to offshore works would be reviewed by the MMO and if this is captured within the DMLs. The MMO believes any information relating to offshore works (including HDD works) below mean high water springs should be reviewed and approved under the DML.	The draft DCO submitted at Deadline 3 has been updated to make it clear that the detailed Cable Laying Plan required under condition 13(1)(d)(ii)(bb) of the Transmission DML will include details of cable landfall.
<b>1.6 Applicant's Outline Sabellaria Reef Management Plan [REP1-044]</b>		
015	1.6.1 The MMO believes the management proposals for Sabellaria reef are generally acceptable. The MMO agrees that any conflicts between the proposed development, Sabellaria reef and other receptors (e.g. archaeology) that can't be easily resolved by micro-siting should be addressed by consultation with the MMO, NE and Historic England.	Noted



Point	MMO Comment	Applicant's Response
016	1.6.2 In the Sabellaria reef management plan (Section 1.2, paragraph 6), it is stated that ground-truthing will be carried out using grab samples if visibility prevents confirmation by drop-down video. The MMO recommends exploring the use of either a freshwater lens or an acoustic camera as alternatives to grab sampling if a standard drop-down camera is insufficient. Please review - Griffin et al. (2020) Effectiveness of acoustic cameras as tools for assessing biogenic structures formed by Sabellaria in highly turbid environments. Aquatic Conservation: Marine and Freshwater Ecosystems 30: 1121-1136.	The Applicants will review best practice methodology when developing the survey strategy in light of the survey requirements and the potential conditions (i.e. highly turbid environments).
017	1.6.3 The MMO believes this will assist in robust data as the patchy nature of many Sabellaria reefs would make it difficult to confirm the absence of this habitat using a benthic grab, which samples a very small area of the seabed each time it is deployed. Moreover, any grab samples that do extract reef will cause damage to the habitat.	
018	1.6.4 The MMO still has concerns in the case that potential impacts on Sabellaria reef remain following practicable design changes, however the MMO defers to NE on matters under the Natural Environment and Rural Communities Act 2006.	The Applicants have received feedback from NE on the Outline <i>Sabellaria</i> Reef Management Plan (REP1-044) at Deadline 2 and have provided responses to NE's detailed comments (document reference ExA.AS-18.D3.V1). A further iteration of the Outline <i>Sabellaria</i> Reef Management Plan (REP1-044) will be submitted into the examination with any necessary changes once matters are closed out with NE.
019	1.6.5 The MMO notes the Applicant has advised that the Sabellaria Reef Management Plan will be secured through a condition which will be in the updated DCO submitted at Deadline 3. The MMO will review this amendment and provide any further comments at this stage.	Noted



Point	MMO Comment	Applicant's Response
<b>1.7 Applicants ISAA (HRA) Addendum Marine Mammals [REP1-038]</b>		
020	<p>1.7.1 Point 17 in Section 2 of the Habitat Regulations Assessment (HRA) Addendum states the following:</p> <p>“The Applicant has also committed to the following in order to reduce the potential for significant disturbance of harbour porpoise in relation to the Conservation Objectives and current guidance for the SNS SAC. These commitments apply to the project alone case as well as in-combination with other projects:</p> <p>Only one detonation at a time during UXO clearance operations in the offshore development areas. There would be no simultaneous UXO detonations in either season. In the summer period in the summer area potentially more than one UXO detonation could occur in a 24 hour period. In the winter period in the winter area, only one UXO detonation without mitigation could occur in a 24 hour period.</p> <p>There would be no concurrent piling within the offshore development area in either season, with only one pile being installed at a time, with no overlap in the piling duration of any two piles. In the summer period in the summer area potentially more than one piling event could occur in a 24 hour period. In the winter period in the winter area, only one piling event without mitigation could occur in a 24 hour period.</p> <p>During the winter period there would be no UXO detonation without mitigation in the offshore development area in the same 24 hour period as any piling without mitigation in the offshore development area.</p> <p>There would be no concurrent piling or UXO clearance between the proposed East Anglia TWO and East Anglia ONE North projects in either season.”</p>	<p>The ‘without mitigation’ refers to at-source noise mitigation (such as use of bubble curtains or other noise attenuation) with regard to reducing the potential for significant disturbance of harbour porpoise in relation to the Conservation Objectives and current guidance for the Southern North Sea SAC. This does not refer to embedded mitigation secured through the Marine mammal Mitigation Protocol (MMMP) (i.e. establishing a mitigation zone based on the maximum potential range for PTS, soft-start and ramp-up, and activation of ADDs prior to soft-start) all of which would be applied to each and every UXO detonation and piling event.</p> <p>This was explained in Paragraph 17 of the <b>Applicants ISAA (HRA) Addendum Marine Mammals</b> [REP1-038] which stated (emphasis added):</p> <p><i>“In addition to the mitigation secured through the MMMP, the Applicant has also committed to the following in order to reduce the potential for significant disturbance of harbour porpoise in relation to the Conservation Objectives and current guidance for the SNS SAC. These commitments apply to the project alone case as well as in-combination with other projects”</i></p>

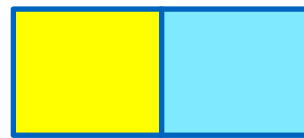


Point	MMO Comment	Applicant's Response
	The MMO notes the Applicant is clear that there will be no concurrent piling or Unexploded Ordnance (UXO) clearance between EA1N and EA2 in either season. However, The MMO is unsure as to why there is a reference to unmitigated piling and UXO, e.g. "only one UXO detonation without mitigation could occur in a 24-hour period". The MMO understands that any piling activity or UXO clearance will need to be, and should be, appropriately mitigated. The MMO requests the Applicant could clarify this and that this is clear in both the Southern North Sea (SNS) Special Area of Conservation (SAC) Site Integrity Plans (SIP) and the Marine Mammal Mitigation Protocol (MMMP).	
021	1.7.2 The MMO believes having an appropriate MMMP and SNS SAC SIP in place is likely to reduce the risk of potential impact on marine mammals.	Noted
022	1.7.3 The Applicant proposes that the In Principle SIP for the Project is expanded in scope to reflect the project-alone effects as well as in-combination effects. Then should the Applicant wish to undertake multiple UXO clearance or piling events on the same day in the winter period, this will be possible if it can be demonstrated that effective mitigation can be provided.	Noted
023	1.7.4 The MMO does not believe the approach to updating the SIP for project-alone effects is appropriate and will provide further comments at Deadline 3.	The Applicants will await these comments but maintain the position that the SIP provides the most appropriate and flexible mechanism for adaptive management. The in-combination management determined through the SIP process will need to take account of the project-alone information for the Projects and therefore this information will be included within the SIP in any event.



Point	MMO Comment	Applicant's Response
<b>1.8 Ornithology</b>		
024	1.8.1 The MMO has reviewed the Deadline 1 submission made by the Royal Society for the Protection of Birds (RSPB) [REP1-180] and notes their point that the Special Protection Area (SPA) citation does not reflect the decline in bird populations. The MMO defers further comment on this matter to NE.	Noted
025	1.8.2 The MMO notes that in REP1-047 [Offshore Ornithology Cumulation and In Combination Collision Risk Update-Rev-01] the Applicant has made reference to updated estimates for several bird species from those presented within the Environmental Statement, Chapter 12 Offshore Ornithology (APP-060) and the Information to Support Appropriate Assessment Report (ISAA) (APP-043). The Applicant further states that this does not alter the conclusions of the Habitats Regulations Assessment (HRA). The MMO defers further comment on this matter to NE.	Noted
026	1.8.3 The MMO observes that NE has advised that mitigation regarding Red throated diver is front loaded, including consideration of hub height. The MMO is largely in agreement with this view and consider that where possible parameters of draft height are considered and implemented into the Deemed Marine Licence (DML) as part of the design envelope.	<p>Draught height increase mitigation for which the Applicants have committed to an increase in 2m from 22 to 24m above MHWS is reflected in the updated draft DCO submitted at Deadline 3 (document reference 3.1). This mitigation is relevant to collision risk impacts. Red-throated diver are not particularly sensitive to collision risk, the concerns NE have raised relate to displacement of red-throated diver.</p> <p>The Applicants have submitted an updated red-throated diver assessment at Deadline 3 (document reference ExA.AS-4.D3.V1).</p>

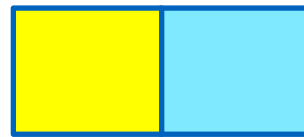




Point	MMO Comment	Applicant's Response
027	1.8.4 The MMO further observes that NE advocate for the construction of the array in excess of 10 kilometres (km) from the Outer Thames Estuary SPA. The MMO defers further comment on this matter to NE but note that this approach may require further assessment of other aspects of the proposed construction, for example cable protection.	<p>The Applicants have committed to an increased buffer distance from the Outer Thames Estuary SPA from approximately 400m to 2km.</p> <p>The worst case scenarios for cable protection assessed in the ES are unchanged.</p>
028	1.8.5 In their deadline 1 submission NE notes that the Appropriate Assessment should take into account O&M activities. The MMO supports this approach, but advise that should additional O&M consents be necessary, further assessment of these impacts is likely to be required.	<p>The Effects on Supporting Habitats of the Outer Thames Estuary SPA note submitted at Deadline 3 (ExA.AS-13.D3.V1), provides an assessment of O&amp;M activities on the supporting habitats.</p> <p>Disturbance from O&amp;M activities was covered in the Information to Support appropriate assessment Report (APP-043).</p>
029	1.8.6 The MMO understands that NE has suggested a seasonal restriction should be in place in respect of cable laying activity in the Outer Thames Estuary SPA. The MMO expects to see this reflected in the DML if it is deemed to be an acceptable form of mitigation. The MMO defer further comment until Deadline 4, once a revised DML has been submitted by the Applicant.	The Applicants are continuing to engage with NE on this matter.
030	<p>1.8.7 In respect of all proposed DML conditions, the MMO urges that the wording is concurrent with the 'Five Tests'. These are:</p> <ol style="list-style-type: none"> <li>1. The condition must be Necessary.</li> <li>2. The condition must Relate to the activity or development.</li> <li>3. The condition must be Precise.</li> <li>4. The condition must be Enforceable.</li> <li>5. The condition must be Reasonable.</li> </ol>	Noted



Point	MMO Comment	Applicant's Response
	The MMO reserves the right to comment on matters related to the DML in future deadlines.	
031	1.8.8 The MMO notes that NE propose that post-construction ornithological monitoring is conditioned within the DML with a focus on validating predicted impacts. As above the MMO urges that conditions are reflective of the five tests, and that the MMO reserves comment on these matters to a future deadline.	The in-principle monitoring plan has been updated and submitted at Deadline 3 (document reference 8.13) to include provision for red-throated diver monitoring.  The Applicants have updated conditions 20 and 22 of the Generation DML and conditions 16 and 18 of the Transmission DML to make provision for pre-construction and post-construction ornithological monitoring within the updated Draft DCO submitted into the Examination at Deadline 3 (document reference 3.1).
032	1.8.9 To ensure an efficient examination the MMO would welcome involvement in the production of any proposed DML conditions at the earliest opportunity.	
033	1.8.10 The MMO understands that there are tensions between mitigation for ornithological matters and matters pertaining to Seascape and Landscape Visual Impact Assessment (SLVIA). The MMO defer further comment on this matter to NE.	Noted
<b>2. MMO Other Comments</b>		
034	<p><b>2.1 New Cable Protection</b></p> <p>2.1.1 The MMO notes the Applicant has not advised on if they are going to include new cable protection as part of the O&amp;M activities.</p>	<p>The Applicants have submitted an updated outline Offshore Operations and Maintenance Plan (OOMP) at Deadline 3 (document reference 8.12) which clarifies the process for the installation of additional cable protection during O&amp;M. In addition, a new DML condition has been included in the Generation DML (condition 24) and the Transmission DML (condition 20) to make provision for the installation of additional cable protection (and scour protection) in areas where it was not installed during construction subject to MMO approval.</p> <p>The Applicants consider that this approach provides the MMO with sufficient comfort that such activities will not be undertaken without</p>



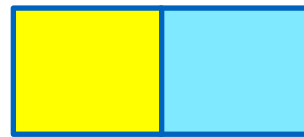
Point	MMO Comment	Applicant's Response
		subsequent approval from the MMO whilst removing the need for a separate marine licence post consent. The updated draft DCO has been submitted at Deadline 3 (document reference 3.2).
035	<p>2.1.2 The MMO notes the Applicant states that a position statement was being produced in relation to New Cable or Scour Protection. The MMO did work on a potential position statement however to maintain its ability to review each application on a case by case basis and taking account of the specific circumstances of each case, the MMO believes providing a formal position statement would not be appropriate.</p> <p>2.1.3 The MMO notes NE has provided a position statement on this matter and the MMO may take the information within this document into account when reviewing the potential to include new cable protection in any long term consent.</p> <p>2.1.4 However, to assist the Applicant in deciding their position the MMO has provided some general principles that will be used in assessing new cable protection below.</p>	Noted



Point	MMO Comment	Applicant's Response
036	<p>2.1.5 Any cable or scour protection which is proposed in areas where no such protection was employed during the construction phase of the wind farm is considered new cable or scour protection, and therefore cannot be properly considered to be a maintenance activity.</p> <p>2.1.6 Any new cable or scour protection must generally be consented through a separate marine licence and not through the O&amp;M plan.</p> <p>2.1.7 In addition to this any separate marine licence for O&amp;M should generally not include new cable or scour protection unless it is for maintenance of protection employed during the construction phase and must generally be consented through a separate marine licence.</p> <p>2.1.8 For marine licence cable and scour protection applications that are not in marine protected areas in respect of benthic habitat features, the MMO may consider it appropriate to offer a long term licence of a maximum of 10 years.</p> <p>2.1.9 For marine licence cable and scour protection applications that are in marine protected areas in respect of benthic habitat features, the MMO will generally require a separate marine licence to be in place for each and every individual campaign of scour and cable protection employed throughout the lifetime of the project.</p> <p>2.1.10 The MMO believes the Applicant should advise the final position on this matter at the earliest opportunity to enable comments by all interested parties.</p>	See response to Point 034 above.
037	<p><b>2.2 East Anglia One North (EA1N) and East Anglia Two (EA2) Cooperation/Coordination</b></p> <p>2.2.1 The MMO notes NE has requested that there is a condition added to the DML to ensure there is no concurrent piling between EA1N and</p>	The Applicants have submitted an updated draft DCO at Deadline 3 (document reference 3.1) which includes a Cooperation/Coordination condition as requested by the MMO.



Point	MMO Comment	Applicant's Response
	<p>EA2. The Applicant has responded and advised that they believe this will be managed using the SNS SAC SIP. The MMO believes the appropriate place to manage the in-combination impacts is the SNS SAC SIP.</p> <p>2.2.2 However, the MMO does agree with NE that there may be concerns in the review and potential overlap of some of the pre-construction documents. The MMO believes that should EA1N and EA2 be constructing at the same time some of the pre-construction documents may be linked, therefore the MMO requests the following conditions are added to Schedule 13 and Schedule 14 to ensure the overlap is fully covered:</p> <p>2.2.3 Schedule 13</p> <p><b>Coordination with EA2 Offshore Wind Farm</b></p> <p>18.—(1) Prior to submission of each of the UXO-clearance and pre-construction plans and documentation required to be submitted under condition 16(1) and 17(1) above the undertaker must provide a copy of the relevant plans and documentation to the undertaker of the offshore element of the EA2 Offshore Wind Farm to enable that undertaker to provide any comments on the plans and documentation.</p> <p>(2) The undertaker must participate in liaison meetings with the undertaker of the offshore element of the EA2 Offshore Wind Farm as requested from time to time by the MMO in writing in advance, which meeting will be chaired by the MMO and may consider such matters as are determined by the MMO relating to the efficient operation of the offshore element of the authorised project and the offshore element of the EA1N/EA2 Offshore Wind Farm.</p> <p>2.2.4 Schedule 14</p>	<p>This can be found in condition 25 of the Generation DML and condition 21 of the Transmission DML.</p> <p>The Applicants welcome MMO's advice that the SIP is the best place to manage the commitment to no concurrent piling.</p>



Point	MMO Comment	Applicant's Response
	<p><b>Coordination with EA2 Offshore Wind Farm</b></p> <p>18.—(1) Prior to submission of each of the UXO-clearance and pre-construction plans and documentation required to be submitted under condition 12(1) and 13(1) above the undertaker must provide a copy of the relevant plans and documentation to the undertaker of the offshore element of the EA2 Offshore Wind Farm to enable that undertaker to provide any comments on the plans and documentation.</p> <p>(2) The undertaker must participate in liaison meetings with the undertaker of the offshore element of the EA2 Offshore Wind Farm as requested from time to time by the MMO in writing in advance, which meeting will be chaired by the MMO and may consider such matters as are determined by the MMO relating to the efficient operation of the offshore element of the authorised project and the offshore element of the EA1N/EA2 Offshore Wind Farm.</p>	



Point	MMO Comment	Applicant's Response
	<p>2.3 Completion of Construction</p> <p>2.3.1 The MMO notes NE and the Applicant have discussed including something more specific within the DML to ensure it is clear when the construction phase ends and the O&amp;M phase begins. The Applicant believes that the notification requirement are appropriate.</p> <p>2.3.2 The MMO believes that it would be helpful for a 'close-out' or 'as-built' report to be submitted at the end of construction. This will assist in clarity to all parties on what the final parameters were at the end of construction.</p> <p>2.3.3 In addition to this, a report will ensure that cable protection to be used for maintenance can be set out at the start of the O&amp;M phase ensuring the consenting parameters aren't exceeded. This will also assist at the decommissioning stage to know the exact amount of cable protection placed during the construction phase linking with the O&amp;M plan. The MMO wishes to highlight to the ExA, at this stage, there are current ongoing internal discussions within the MMO about this issue. The MMO welcomes discussions with NE and the Applicant on this matter and will provide an update at future deadlines.</p>	<p>The Applicants consider that the notification requirements within the DMLs are appropriate. It is noted that the MMO state that a 'close out' report may be "helpful", however the Applicants do not consider it to be necessary and therefore such a condition would not meet the tests for a condition as set out in row 030 above.</p>
	<p>2.4 Article 36 – Certified Documents</p> <p>2.4.1 The MMO wishes to propose an update to the dDCO. The MMO believes Article 36 should be amended to include the following condition and a new Schedule 16 should be included in the dDCO as per the Schedule 18 of the Norfolk Boreas Offshore Wind Farm dDCO attached in Appendix 2. The MMO believes this will ensure all parties know the consented version of the certified document and prevent confusion at the pre-construction stage.</p>	<p>Article 36 of the draft DCO includes a list of all of the documents to be certified and also includes details of the document reference number and version/revision number so that it is clear which version of the document is to be certified. This Article will be updated in each version of the draft DCO to reflect the latest position in respect of each document.</p> <p>In light of the approach taken to Article 36, the Applicants do not consider that a separate schedule is necessary.</p>



Point	MMO Comment	Applicant's Response
	<p>Certification of plans etc.</p> <p>37.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of the documents listed in Schedule 16 (Documents to be certified) for certification that they are true copies of the documents referred to in this Order.</p> <p>(2) A plan or document so certified is admissible in any proceedings as evidence of the contents of the document of which it is a copy.</p> <p>(3) Where a plan or document certified under paragraph (1)—</p> <p>(a) refers to a provision of this Order (including any specified requirement) when it was in draft form; and</p> <p>(b) identifies that provision by a number, or combination of numbers and letters, which is different from the number, or combination of numbers and letters by which the corresponding provision of this Order is identified in the Order as made</p> <p>the reference in the plan or document concerned must be construed for the purposes of this Order as referring to the provision (if any) corresponding to that provision in the Order as made.</p>	



## 2 Responses to MMO Written Questions

ExA. Question Ref.	Question addressed to	ExA. Question Ref.	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment	
<b>1.0 Overarching, general and cross-topic questions</b>						
1.0.1	The Applicant (Other Interested Parties (IPs)) with an interest in design are requested to comment at Deadline 2.)	1 2	<p><b>Good Design</b></p> <p>Section 4.5 of the Overarching National Policy Statement (NPS) for Energy (EN-1) emphasises the importance placed on ensuring good design in the development of infrastructure projects. This matter is cross-cutting in relation to multiple topics identified within the Initial Assessment of Principal Issues.</p> <p>Whilst the NPS is the primary source of policy under which the applications will be considered, policy within the National Planning Policy Framework (NPPF) advocates for good design as do the 'Design Principles for National Infrastructure', developed by the National Infrastructure Commission.</p> <p>Could the Applicant outline their approach to good design in respect of the following key elements, focusing on how each element reflects the principles of development responding to setting/place and people:</p> <p>a) offshore wind turbine generators and associated platforms;</p>	<p>A key factor in the UK's success in delivering offshore wind is the flexibility offered by the Rochdale Envelope approach in the consent process. This is recognised by NPS EN-1 (paragraph 4.2.8) as providing the necessary flexibility for further evolution and refinement of project design within the assessed maximum extents. This allows developers to utilise the most up to date technologies, principles and guidance as part of the final project design and at the construction stage.</p> <p><b>Table 6.1</b> Good Design, Alternatives and Adaption Policy Compliance of the <b>Development Consent and Planning Statement</b> (APP-579) provides detail on design against the relevant sections of NPS EN-1.</p> <p>The layout of the windfarm site, including wind turbines, inter-array, platform link cables and offshore platform locations have not yet been specified. Therefore, exact locations are not included in the Application. This is due to the requirement for flexibility on layout pending further ground investigation, detailed design and commercial negotiations, and is one of the purposes of developing a project design envelope. In developing the final layout, the Applicants would aim to minimise environmental impacts (e.g. to ecology and archaeology) and impacts to other users (e.g. shipping and navigation) whilst maximising energy yield and cost efficiency.</p> <p>The reduction in the northern extent of the East Anglia TWO windfarm site following feedback to the Preliminary Environmental Information Report (PEIR) is a clear response to feedback on potential effects (<b>Appendix 28.1 Seascape, Landscape and Visual Impact Assessment Consultation Responses</b> (APP-556)). The Applicants refined the East Anglia TWO</p>	<p>The MMO expects to be included in discussions regarding the design plan as this is unlikely to be finalised prior to conclusion of the examination. The MMO notes the Applicant's commitment to planning a design which minimised environmental impact.</p>	<p>The Design Plan will be produced post consent and must be approved by the MMO in consultation with Trinity House and the MCA.</p>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>windfarm site area to reduce the magnitude of effect on onshore receptors. The reduction in the northern extent of the windfarm site was achieved whilst maintaining its generation capacity. The change resulted in:</p> <ul style="list-style-type: none"> <li>• Reduced lateral spread of the proposed East Anglia TWO windfarm site;</li> <li>• Reduced effects due to more concentrated grouping of wind turbines than the 'spread-out' and more varied spacing of the PEIR layout;</li> <li>• Increased offshore distance of the windfarm site for onshore receptors; and</li> <li>• Reduced cumulative landscape and visual effects on the Suffolk Coast and Heaths Area of Outstanding Natural beauty (AONB) due to increase in open sea horizon between the Projects' windfarm sites (see <b>section 28.3.3 of Chapter 28 Seascape, Landscape and Visual Impact Assessment</b> (APP-076) for further details).</li> </ul>		
1.0.3	The Applicant, East Suffolk Council (ESC), Suffolk County Council (SCC), Historic England, Natural England, AONB Board, Parish Councils, SASES, SEAS, SEAS, SoS	<p><b>Design Mitigation: Adverse effects</b> Are the measures set out in section 6.7 of the Environmental Statements (ES) (Onshore Schedule of Mitigation) sufficient to mitigate any adverse effects from the proposed substations and National Grid substation and enable the projects to satisfy the requirements of EN-1, the NPPF and local policies for visual amenity, landscape, public rights of way and heritage matters?</p> <p>a) Provide reasons for your answer. b) If not, what further measures are required?</p>	<p>Demonstration of compliance with EN-1, NPPF and local policies is set out in <b>Tables 6.19</b> (Onshore Archaeology and Cultural Heritage) and <b>Tables 6.22</b> (Human Health), <b>Tables 6.23</b> (Landscape and Visual Impact), and <b>6.24</b> (Tourism, Recreation and Socio-Economics) of the <b>Development Consent and Planning Statement</b> (APP-579).</p> <p>The Applicants are of the view that the measures set out in the <b>Onshore Schedule of Mitigation</b> (APP-575) and detailed in other certified documents are robust and will mitigate adverse effects as far as possible. Further discussion regarding residual significant effects is provided below. It is the Applicants view that the Projects meet the requirements of EN-1, NPPF and local policies in respect of the overall planning balance.</p> <p><u>Visual amenity and landscape</u></p> <p>During operation, potentially significant impacts at the onshore substations and National Grid substation would be largely contained within the</p>	The response has been noted by the MMO.	No further comment



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>local landscape. Significant operational visual effects would be experienced only at Saxmundham Road, Aldeburgh Road, Friston Area C, Grove Road Section B and Suffolk Coastal Cycle Route Section B (<b>section 29.1.6.3 of Chapter 29 Landscape and Visual Impact Assessment</b>).</p> <p>Mitigation planting set out in the figures for the <b>Outline LMP General Arrangement</b> (APP-401), <b>Illustrative Plan</b> (APP-402) and <b>Timing of Planting</b> (APP-403) will be introduced and designed with the aim of reducing the identified impacts. <b>The General Arrangement</b> (APP-401) shows how mitigation planting would contribute to the wider landscape structure of the area and has been designed to screen the onshore project substation and help consolidate green corridors.</p> <p>The planting includes areas of fast growing woodland species as this will provide the height required, as well as the density, to ensure effective screening. The Applicants are in discussion with the LPA to the extent and delivery of early planting as part of the Projects in locations where it is possible to achieve early planting.</p> <p>A final detailed LMP will be produced post-consent which will be approved by the relevant Planning Authority in order to discharge Requirement 14 of the <b>draft DCO</b> (APP-023). Requirement 14 states that these plans must be produced in accordance with the <b>OLEMS</b> (APP-584). Through submission and approval of the final LMP, the provision of landscaping associated with the construction and operation of the onshore infrastructure will be formally controlled and implemented.</p> <p>The Applicants are in discussion with the Councils regarding updates to the <b>OLEMS</b> (APP-584), which will be updated and submitted at Deadline 3.</p> <p><u>Public Rights of Way</u></p> <p>Although not specifically referenced in the <b>Onshore Schedule of Mitigation</b> (APP-575),</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>Public Rights of Way (PRoW) are covered in <b>section 3.5.13</b> of the <b>OLEMS</b> (APP-584). The <b>OLEMS</b> (APP-584) has been developed to take into consideration potential impacts on users of PRoWs at the onshore substation.</p> <p>The <b>Outline Public Rights of Way</b> (PRoW) <b>Strategy</b> (APP-581) outlines the management principles to be adopted in ensuring that PRoW are managed in a safe and appropriate manner during construction and operation. Timings of closures and diversions are discussed in <b>section 23.3 and 3.3</b> of the <b>Outline PRoW Strategy</b> (APP-581).</p> <p>There are two PRoW within the onshore development area which interact with the Projects on a permanent basis during construction and also during operation. These will require permanent stopping-up and diversion (as listed in <b>Table 3.1</b> in the <b>Outline PRoW Strategy</b> (APP-581)) and as shown on the <b>Permanent Stopping up of Public Rights of Way Plan</b> (APP-014). For PRoW which will be permanently stopped up, as set out in Article 10 of the <b>draft DCO</b> (APP-023), the existing PRoW cannot be extinguished until the Local Highway Authority confirms that the alternative PRoW has been created to the standard defined in the final PRoW Strategy.</p> <p>Precise details for the management of each PRoW, including the specification of any PRoW temporary diversions required during construction works, will be agreed with the Local Planning Authority (following consultation with the Local Highway Authority) through approval of the final PRoW Strategy prior to commencement of any stage of the authorised development that would affect a PRoW specified in Schedule 3 or 4 of the draft DCO (APP-023). For temporary stopping up of PRoW, Article 11 of the <b>draft DCO</b> (APP-023) requires the alternative right of way to be in place to the standard defined in the PRoW Strategy, to the reasonable satisfaction of the Local Highway Authority before the existing PRoW can be temporarily stopped up.</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>The Applicants are in discussion with the Councils regarding updates to The <b>Outline PRow Strategy, Temporary</b> (APP-013) and <b>Permanent</b> (APP-014) <b>Stopping Up of Public Rights of Way Plans</b> which will be submitted at Deadline 3.</p> <p><u>Onshore Archaeology and Cultural Heritage</u></p> <p>As described above, an Outline LMP was submitted as part of the <b>OLEMS</b> (APP-584). The OLMP seeks, among other objectives, to reduce adverse impacts on the heritage assets at Friston. The OLMP has been developed to take into consideration historic landscape and re-establishing historic field boundaries. In areas to the immediate north of Friston, the re-establishment of historic field boundaries, filling gaps in existing hedgerows and introducing field boundary trees has been proposed to provide layered screening, rather than large-scale woodland planting close to the village. This allows the 'setting' of Friston to be retained (rather than being contained by woodland). Reinstatement of hedges with substantial gaps and new field trees are proposed to north of Friston.</p> <p>These proposals focus on the re-establishment of historic field boundary hedgerows / tree lines; as well as tree blocks set back from farmhouses (e.g. Covert woods). The <b>OLEMS</b> (APP-584) has proposed planting not to enclose the historic farms in woodland, as this is not how they would have been experienced in the past. The reestablishment of historically mapped tree-lined enclosures close to the farms has been proposed, to retain farms in an open farmed landscape, whilst achieving screening through multiple lines of planting. In the area to the north of the onshore substations and National Grid substation, the <b>OLEMS</b> (APP-584) has proposed the establishment of larger woodland blocks akin to the existing pattern of woodland blocks within the wider landscape.</p> <p>The capacity of the landscape to accommodate the onshore infrastructure has been assessed in relation to the natural screening afforded by</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			landform, woodlands, trees and hedgerows. The onshore substations and National Grid infrastructure is located within a landscape with extensive mature woodland of large scale, which provides some capacity to absorb and provide screening of the onshore infrastructure ( <b>section 29.10.3 of Chapter 29 Landscape and Visual Impact Assessment</b> (APP-077).  The Applicants are in discussion with the Councils and Historic England regarding updates to the <b>OLEMS</b> (APP-584), which will be submitted at Deadline 3.		
1.0.8	The Applicant, ESC, SCC, Historic England, Natural England, AONB Board, Parish Councils, SASES, SEAS, SEAS, SoS	1 2 <b>Design Principles</b> a) In the context of EN-1 paragraph 4.5.5, explain how the design of the EA1N and EA2 projects meet the National Infrastructure Commission's Design Principles for National Infrastructure (February 2020) in respect of Climate, Places, People and Value, both offshore and onshore and in all three phases of construction, operation and decommissioning. b) Comment on the desirability of implementing the following measures to ensure that good quality sustainable design and integration of the proposed substations and National Grid substation projects into the landscape is achieved in the detailed design, construction and operation of the projects. How might they be secured? Are any further measures appropriate? i) A 'design champion' to advise on the quality of sustainable design and the spatial integration of energy infrastructure structures, buildings, compounds, security fences, landscape, heritage, woodland, new landscape features, public rights of way and visual amenity. ii) A 'design review panel' to provide informed 'critical-friend' comment on	a) Paragraph 4.5.5 of EN-1 states that Applicants should consider taking independent professional advice on the design aspects of a proposal. In particular, Design Council CABE can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service.  As per <b>Chapter 5 EIA Methodology</b> (APP-053) the Projects are based on a project design envelope (or 'Rochdale Envelope') approach. It is recognised by the Planning Inspectorate (The Planning Inspectorate 2018) that, at the time of submitting the applications, offshore wind developers may not know the precise nature and arrangement of infrastructure and associated infrastructure that make up the proposed development.  Acknowledging that the onshore substation and National Grid substation must function efficiently and safely as substations, the <b>Outline Onshore Substation Design Principles Statement</b> (APP-585) submitted with the Applications, commits the Applicants to (amongst other things):  <ul style="list-style-type: none"> <li>• A design review of the landscape and building design proposals (i.e. Design Council or Shape East);</li> <li>• Consideration of 'Good Design' in line with the requirements of Overarching National Policy Statement for Energy (NPS-EN-1).</li> </ul>	The MMO notes the Applicants response and agrees with the reference to Offshore Aspects of the project. The MMO considers that implementing an outline of the proposed design process would be useful and could compliment the suite of pre-construction documents required by the Deemed Marine Licence (DML). The MMO should be consulted on this matter.	The Applicants have submitted an updated version of Appendix 6.3 Relationship of Offshore Plans Secured by the DCO (document reference 6.3.6.3) which details the relationship between the offshore plans and the relevant DML conditions.



ExA. Question Ref.	Question addressed to		ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>the developing sustainable design proposals;</p> <p>iii) An approved 'design code' or 'design approach document' (as approved in the Hinkley Point C Connector Project (EN020001)) to set out the approach to delivering the detailed design specifications to achieve good quality sustainable design;</p> <p>iv) An outline, including timeline, of the proposed design process, including consultation with stakeholders and a list of proposed consultees.</p> <p>v) In the opinion of the local authorities and other statutory agencies, would the implementation of any or all of the above measures assist in determining post-consent approvals (including the discharge of requirements) in relation to achieving good design?</p>	<p>The Applicants have submitted an <b>Outline National Grid Substation Design Principles Statement</b> to Examination at Deadline 1 (ExA.AS-6.D1.V1), and the Applicants will amend the <b>draft DCO</b> (APP-023) at Deadline 3 to require the layout, scale and external appearance of the National Grid substation to be in accordance with the <b>Outline National Grid Substation Design Principles Statement</b>.</p> <p>The Applicants note that the National Infrastructure Commission's Design Principles for National Infrastructure was published a number of months after submission of the Applications and has therefore not been incorporated specifically within the design principles. There are however a number of common themes that are reflected in the <b>Outline Onshore Substation Design Principles Statement</b> (APP-585). The Applicants will review the National Infrastructure Commission's Design Principles for National Infrastructure report and consider the updating of the <b>Outline Onshore Substation Design Principles Statement</b> (APP-585) and Outline National Grid Substation Design Principles Statement. Any updates to these documents will be submitted to Examination on Deadline 3.</p> <p>In response to Question 1.0.8(b) specifically:</p> <ol style="list-style-type: none"> <li>I. The Applicants consider that sufficient skill and experience rests within the Applicants' design team to achieve the objectives of a 'design champion' and are not supportive of the appointment of a design champion;</li> <li>II. The Applicants consider that sufficient skill and experience rests within the Applicants' design team to achieve the objectives of a 'design review panel' and are not supportive of the appointment of a design review panel. The measures set out in the approved <b>Onshore Substation Design Principles Statement</b> will provide the framework for delivering sustainable design principles.</li> </ol>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>III. The Applicants consider that the <b>Outline Onshore Substation Design Principles Statement</b> (APP-585) and <b>Outline Onshore National Grid Substation Design Principles Statement</b> (to be submitted to Examination at Deadline 1) sets out the Applicants' approach to delivering the detailed design specifications to achieve good quality sustainable design.</p> <p>IV. An update to the <b>Outline Onshore Substation Design Principles Statement</b> (APP-585) and <b>Outline Onshore National Grid Substation Design Principles Statement</b> will be submitted at Deadline 3 to provide an outline, including timeline, of the proposed design process, including consultation with stakeholders and a list of proposed consultees. It is the Applicants' intention to progress the detail design with ESC and SCC in the first instance from early 2021.</p> <p>The Applicants consider that the approach adopted within the <b>draft DCO</b> (APP-023) of requiring the approval (by the relevant planning authority) of an <b>Onshore Substation Design Principles Statement</b> and <b>Onshore National Grid Substation Design Principles Statement</b> will achieve the good, efficient, functional, sustainable and grid code compliant design of the onshore substations and National Grid substation.</p>		



## 2.1 Biodiversity, Ecology and Natural Environment (including Habitats Regulations Assessment (HRA))

### 2.1.1 Offshore Ornithology

ExA. Question Ref.	Question addressed to	ExA. Question Ref.	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment	
<b>1.2 Biodiversity, Ecology and Natural Environment (including Habitats Regulations Assessment (HRA))</b>						
<b>Offshore ornithology</b>						
1.2.10	Natural England	1 2	<p><b>Outer Thames Estuary SPA: Operation and Maintenance Vessel Traffic</b> The Applicant has responded (Point 2, Table 35 of [AS-036]) to Natural England's advice in relation to red-throated diver impacts arising from offshore site maintenance vessel traffic during the operation phase.</p> <p>a) Please could Natural England comment on its satisfaction with the Applicant's response?</p> <p>b) Specifically, to what extent does Natural England consider that the '<i>best-practice protocol for minimising disturbance to red-throated divers</i>' referred to by the Applicant would assist and is it adequately secured by the DML conditions pertaining to a project environmental management plan?</p> <p>c) Is Natural England satisfied that adequate safeguards against red-throated diver disturbance are secured in that event that helicopters are used for maintenance activities?</p>	<p><b>Natural England</b></p> <p>a) Partly satisfied, but as the location of the O&amp;M port is not known at this stage, Natural England recommends that the Applicant commits to mitigating impacts from vessels in future by commitment to best practice Applicant/Interested Party Response at Deadline 1</p> <p>b) Natural England notes that within both DMLs a condition requiring the production of an Environmental Management Plan is included. Within this condition it is secured that they will need to provide procedures to minimise disturbance to red-throated diver. We are content that this ensures the mitigation can be secured.</p> <p>c) We are not aware of any evidence which recommends a minimum safe flight height for helicopters to avoid disturbance of divers. We would wish to see a minimum flight height restriction (based on best available evidence) to apply anywhere within the OTE SPA. This needs further consideration and securing within the DML.</p>	<p>The MMO notes the response from Natural England and refer the ExA to comments regarding ornithology above, The MMO requests that they be consulted upon all matters conditioned within the DML.</p>	<p>Noted, see the Applicants responses to the MMO comments on offshore ornithology in <b>section 1.1</b>.</p>
1.2.11	The Applicant	1 2	<p><b>Red-Throated Diver: Project Environmental Management Plan (PEMP)</b> Responding to Natural England's [RR-059], the Applicant states (Table 35 of [AS-036]) that the PEMP should be produced post-consent, once details of the project are confirmed. Accordingly, no draft of the document, which is secured by DML conditions, has been submitted.</p> <p>a) Can the Applicant explain why the DML conditions relating to the PEMP refer only to the purpose of minimising disturbance to red-throated divers, whereas the Schedule of Mitigation [APP-574] in</p>	<p>a) Regarding the reference within the <b>Offshore Schedule of Mitigation</b> (APP-574) to risk of physical injury from vessels, this was an error. Birds would be disturbed by vessel noise and vessel presence. It is highly unlikely that a vessel would collide with individual birds which is reflected in the fact that this issue has not been raised by stakeholders.</p> <p>For clarity, the mitigation measures described within the best practice protocol for red-throated diver will</p>	<p>The MMO notes that the Applicant does not intend to submit a draft PEMP prior to determination. Whilst the MMO would require final sign off of the document in consultation with Natural England, the MMO urges the Applicant to resolve any issue prior to the conclusion of examination so that in the event of a positive determination, the post consent process can progress smoothly.</p>	<p>The Applicants have been engaging with NE on this matter and have submitted a best-practice protocol to minimise disturbance to red-throated diver (document reference ExA.AS-22.D3.V1) which will form part of the final PEMP. In addition, the Applicants have updated the DMLs to require the procedures to minimise disturbance to red-throated diver which are to be included within the PEMP to be in accordance with the best-practice protocol.</p> <p>The Applicants anticipate that submission of the best practice protocol together with the</p>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
		<p>relation to operation effects (Mitigation Reference 6.4) states a wider purpose of reducing risk of physical injury or disturbance to offshore ornithology?</p> <p>b) Given the strong rationale for as much certainty as possible in respect of measures to minimise disturbance to red-throated divers, does the Applicant consider that it would be possible for a document akin to a 'Draft PEMP' to be produced at this stage, to be a certified document within the DCO and with which the eventual PEMP must accord in respect of red-throated diver mitigation?</p>	<p>mitigate potential impacts on any seabird species in the vicinity of Project vessels or Project vessel transit routes however, because the PEMP will specifically address management of potential impacts on red-throated diver which is known to be particularly sensitive to disturbance from vessels, the focus within the PEMP is on that species.</p> <p>b) The Applicants do not consider it necessary to produce a draft PEMP prior to consent. The Applicants consider that the requirement for approval of the final PEMP by the MMO in consultation with Natural England provides the necessary assurance that potential impacts on red-throated diver will be managed accordingly and that management will be based on the most up to date scientific information at the time together with the relevant Project information such as the Operations and Management port and vessel transit routes.</p>		amendment to the DMLs will resolve NE's concerns.
1.2.12	The Applicant	<p>1 2</p> <p><b>Assessment of Displacement of Red-Throated Divers by Offshore Cable Laying</b> With reference to section 4.3.1.2.2 of [APP-043], the Applicant explains why the 10% displacement mortality for red-throated diver is considered to be highly precautionary and improbable, and a 1% rate is stated as applied to the assessment of integrity of the population which is a feature of Outer Thames Estuary SPA.</p> <ul style="list-style-type: none"> <li>• Could the Applicant please explain, with reference to supporting information, why a 1% rate was chosen.</li> </ul>	The Applicants made reference to a review of displacement studies for red-throated diver presented for the Norfolk Vanguard project <sup>1</sup> , which considered the available evidence and concluded that a 1% mortality rate was appropriately precautionary for this potential impact.	This comment has been noted by the MMO.	No further comment.
1.2.13	Natural England	<p>1 2</p> <p><b>Outer Thames Estuary SPA: Seasonal Restriction on Cable Laying</b> a) Please could Natural England respond to the Applicant's comments [AS-036] with</p>	<p><b>Natural England</b></p> <p>a) Please see NE Deadline 1 Appendices A1b, A4 and A5</p>	As outlined above, should the seasonal restriction on cable laying activity be deemed appropriate mitigation the MMO expects to see this reflected in the DML. The MMO	The Applicants are currently in discussion with NE on this matter.

<sup>1</sup> Norfolk Vanguard (2019). Deadline 1 submission Appendix 3.1 Red-Throated Diver Displacement. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-002249-Womble%20Bond%20Dickinson%20on%20Behalf%20of%20Norfolk%20Vanguard%20-%20Appendices%20to%20written%20Questions-%20Email%204.pdf>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
		<p>regard to Point 5 of the Natural England relevant representation (RR) [RR-059], on the question of whether a seasonal restriction on cable-laying activity is necessary to minimise effects on red-throated diver?</p> <p>b) Could Natural England please clarify whether its comment at Point 5 that '<i>we are already unable to rule out AEOI in-combination from displacement as a result of disturbance within the SPA</i>' is referring to in-combination displacement due to already consented and operational projects, notwithstanding the East Anglia ONE North and TWO projects?</p>	<p>b) Yes, our response is referring to in-combination displacement due to already consented and operational projects. Please see NE Deadline 1 Appendix A4.</p>	<p>defers further comment until Deadline 4, once a revised DML has been submitted by the Applicant</p>	
1.2.16	Natural England	<p><b>Avoidance Rates for Kittiwake and Gannet</b></p> <p>Natural England acknowledges that higher avoidance rates for gannet and kittiwake have been recommended by Bowgen &amp; Cook (2018) and notes in [RR-059] that it is currently considering its response to those recommendations.</p> <ul style="list-style-type: none"> <li>Can Natural England provide an update on its response to these recommendations; is it likely to be forthcoming within the timescale of this Examination?</li> </ul>	<p><b>Natural England</b></p> <p>Natural England and the Statutory Nature Conservation Bodies (SNCBs) are currently reviewing the evidence on avoidance rates presented in Bowgen &amp; Cook (2018), and its applicability to SNCB advice on CRM. As part of this work, Natural England have recently commissioned the BTO to undertake work, including combining Avoidance rates from the 2014 review with the Avoidance Rates from Bowgen &amp; Cook (2018). Until that work is complete, Natural England's position remains that the appropriate Avoidance Rates to use with Band (2012) model are those set out in the SNCB guidance note JNCC et al. (2014), i.e. 98.9% for gannet and kittiwake with the 'Basic' Band model (i.e. Options 1 and 2).</p> <p>The work by the BTO required to inform the revision of the SNCB advice will be completed by March 2021 at the latest, and may be forthcoming within the timescale of the</p>	<p>This comment has been noted by the MMO. The MMO looks forward to the output of this review.</p>	<p>No further comment.</p>
1.2.17	The Applicant	<p><b>Flamborough and Filey Coast SPA: Effects on Breeding Seabird Assemblage Alone and In-Combination</b></p> <p>a) Please could the Applicant indicate when its assessment of effects on the seabird assemblage feature of the Flamborough and Filey Coast SPA (as referred to in Table 61 of [AS-036]) will be submitted to the Examination, noting that this should be made available as soon as possible?</p>	<p>The assessment of potential effects on the seabird assemblage of the Flamborough and Filey Coast SPA will be submitted at Deadline 2. If time permits, these will be provided to Natural England and the RSPB for review prior to submission.</p>	<p>This comment has been noted by the MMO.</p>	<p>No further comment.</p>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
		b) In doing so, please could the Applicant set out the extent to which the material has been seen and/or agreed by RSPB and Natural England.			
1.2.18	Natural England and The Applicant	<p><b>Cumulative and In-Combination Assessments for Offshore Ornithology</b> The Applicant has responded to Natural England's advice about cumulative and in-combination assessments at Sections 3 and 4 of Table 35 of [AS- 036], albeit that its responses on many aspects of this topic were deferred until after the decision deadline for the Norfolk Vanguard and Hornsea Three projects.</p> <p>a) In providing its updated information to inform appropriate assessment at Deadlines 1 and 3 (as confirmed in [AS-061]), please could the Applicant respond in full to those aspects of Natural England's advice [RR-059] and RSPB's representation [RR-067] to which it has not yet responded.</p> <p>b) Where the Applicant has provided a substantive response to Natural England's points in [AS-036], please could Natural England comment on its satisfaction with those responses.</p>	<p>a) The Applicants have responded in full to these aspects of Natural England's and RSPB's Relevant Representations (RR-059 and RR-067) within the <b>Offshore Ornithology Cumulative and In-Combination Collision Risk Assessment Update</b> (document reference ExA.AS-7.D1.V1) submitted at Deadline 1, and will also do so in the Deadline 3 submission (Spatial modelling of red-throated divers (RTD) in the Outer Thames Estuary SPA).</p> <p><b>Natural England</b> NE confirms we will provide further advice once further updates are provided. However, further NE advice is provided at Deadline A1b which responds to [AS-036].</p>	The MMO has reviewed the Offshore Ornithology Cumulative and In-Combination Collision Risk Assessment Update (document reference ExA.AS7.D1.V1) and refers to comment 1.8.2 made earlier in the document. The MMO will review further submissions at future deadlines.	The Applicants note the point made in comment 1.8.2 (Point 025) in <b>section 1.1</b> above.
1.2.19	Natural England	<p><b>Cumulative and In-Combination Assessment for Offshore Ornithology: Applicant's Precaution Note</b> The Applicant submitted an Offshore Ornithology Precaution Note as Appendix 4 to its Rule 9 submissions [AS-041].</p> <ul style="list-style-type: none"> <li>Please could Natural England provide its comments on the content of this note as it relates to the proposed development?</li> </ul>	Notwithstanding the Applicants' position that they disagree with Natural England on a number of matters regarding the interpretation of precaution, the Applicants do not intend to comment further on precaution within offshore ornithology assessments. The Applicants' position remains as set out within <b>Applicant's Comments on Relevant Representations - Appendix 4: Offshore Ornithology Precaution Note</b> (AS-041). The Applicants and Natural England have agreed to adopt the cumulative and in-combination numbers from the recent Norfolk Boreas examination as a 'common currency' going forward.	This comment has been noted by the MMO.	No further comment.
1.2.20	Natural England and The Applicant	<p><b>Ornithological Population Effects of Predicted Mortality Rates: Monitoring Studies</b></p> <ul style="list-style-type: none"> <li>Are the Applicant or Natural England aware of any monitoring studies having been</li> </ul>	There have been numerous studies of mortality effects on seabird populations, many of which have been cited throughout the Applicants' assessment. The effects of additional sources of mortality on populations	This comment has been noted by the MMO.	No further comment.



ExA. Question Ref.	Question addressed to		ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
			<p>undertaken on the observed ornithological population effects of predicted mortality rates from offshore wind farm impacts (displacement and/or collision), and the outcomes of these studies? If so, please provide details.</p>	<p>are not limited to windfarm studies, since it is the consequence of the mortality which is of interest rather than the cause. Population modelling, as presented by the Applicants in the assessment (e.g. APP-043) provides predictions of the population consequence of a given range of mortalities. What is considered of greater relevance to the current assessment is the actual magnitude of mortality due to either collisions or displacement. The most relevant recent study of collision mortality rates was conducted under the Offshore Renewables Joint Industry Programme (ORJIP) scheme by Skov et al. (2018). This used a combination of radar, cameras and observers to record flight activity and collisions at an operational windfarm (Thanet). This study, although limited to one windfarm, presented evidence that current collision predictions are almost certainly precautionary (i.e. over-estimated) due to the use of a combination of precautionary input parameter values for the collision risk model. This was subsequently confirmed by a separate analysis of the same data by Bowgen and Cook (2018) who reached similar conclusions. Both of these studies have already been referred to in <b>Chapter 12 Offshore Ornithology</b> (APP-060) and the <b>Habitat Regulations Assessment - Information to Support Appropriate Assessment Report</b> (APP-043).</p> <p>Similarly, studies of displacement have been referred to in the submitted assessments and were summarised in the literature reviews of displacement of auks (razorbill and guillemot) and red-throated diver submitted for the Norfolk Vanguard assessment<sup>2</sup>. These reviews were undertaken in 2019 and are considered to remain comprehensive and up to date. These reviews indicate that precautionary rates of displacement and</p>		

<sup>2</sup> Norfolk Vanguard, (2019). Deadline 1 submission Appendix 3.3 Operational Auk and Gannet Displacement: update and clarification. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010079/EN010079-002249-Womble%20Bond%20Dickinson%20on%20Behalf%20of%20Norfolk%20Vanguard%20-%20Appendices%20to%20written%20Questions-%20Email%204.pdf>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
			consequent mortality for auks are 50% and 1% respectively, and for red-throated divers 90% and 1% respectively.		
1.2.21	Natural England	1 2 <b>Cumulative and In-Combination Assessment for Offshore Ornithology: Update Following Recent Decisions of the Secretary of State (SoS)</b>  The ExAs note Natural England's intention [AS-063] to submit further advice at Deadline 1 about the Applicants' information to support appropriate assessment in light of the recent SoS decisions and in response to the questions raised in Procedural Decision 18(a). <ul style="list-style-type: none"> <li>The ExAs welcome additional clarity on Natural England's position in these respects and requests that its Deadline 1 submissions are as full and reasoned as possible.</li> </ul>	<b>Natural England</b>  Our position on the HP3 and Norfolk Vanguard decisions hasn't changed since our Norfolk Boreas responses which we have been included at NE Deadline 1 response Appendix A6, A7 and A8.	This comment has been noted by the MMO. The MMO has reviewed these appendices and have no comment to make at this time other than to acknowledge Natural England's position has not changed.	No further comment.
1.2.22	Natural England	1 2 <b>Cumulative and In-Combination Assessment: Natural England Submissions to the Norfolk Boreas Examination</b> Natural England's [AS-063] suggests that its submissions to Deadline 14 of the Norfolk Boreas examination are of relevance to the ExA's consideration of the EA1N and EA2 applications. <ul style="list-style-type: none"> <li>Please could Natural England submit a copy of the relevant parts of that response (and any other submissions to the Norfolk Boreas examination that it considers to be of relevance to these projects) into the examinations for EA1N and EA2?</li> </ul>	<b>Natural England</b>  Please see Norfolk Boreas responses which we have included at NE Deadline 1 response Appendix A6, A7 and A8.	This comment has been noted by the MMO. The MMO has reviewed these appendices and have no comment to make at this time other than to acknowledge Natural England's position has not changed.	No further comment.
1.2.23	Natural England and The Applicant	1 2 <b>Post-Construction Monitoring for Offshore Ornithology</b> The ExA notes both the concerns of Natural England at section 5 of [RR- 059] with respect to post-construction monitoring provisions and comments from the RSPB about the need for a more detailed post- construction monitoring plan at this stage. <ol style="list-style-type: none"> <li>Please could the Applicant respond to the comments of Natural England on this matter. What scope is there to include the areas suggested by Natural England for post-construction monitoring within the</li> </ol>	The Applicants will update the <b>Offshore In-Principle Monitoring Plan (IPMP)</b> (APP-590) to include a requirement for RTD monitoring. The revised IPMP will be re-submitted to the Examination at Deadline 3. If time allows, consultation with Natural England will be undertaken in the lead-up to Deadline 3 (15 December 2020) to understand Natural England's desired approach to monitoring of RTD.  The Applicants intend to update Conditions 20 and 22 of the generation DML and	The MMO notes Natural England's comments regarding DML conditions for post construction monitoring and refers to comments made above.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response / Natural England Response	MMO Comment	Applicants' Response to MMO Comment
		<p>existing provisions of the dDCO/DMLs and/or Offshore In-Principle Monitoring Plan?</p> <p>b) Could Natural England please respond to the Applicant's clarification that the strategic monitoring to which it refers in section 1.6.7.2 of [APP-590] would not be secured within this DCO?</p> <p>c) On the basis of this clarification, is Natural England satisfied that sufficient post-construction monitoring provisions for offshore ornithology are secured within the dDCO, DMLs and Offshore In-Principle Monitoring Plan? If not, what changes would it advise?</p>	<p>Conditions 16 and 18 of the transmission DMLs to make provision for pre-construction and post-construction ornithological monitoring which will be included in the updated <b>Draft DCO</b> (APP-023) submitted into the Examination at Deadline 3.</p> <p><b>Natural England</b></p> <p>b) Natural England disagrees with the assertion made in Section 1.6.7.2 of [APP-590] that the findings of the EIA suggest no monitoring is required. We advise that the requirements for project specific monitoring are reviewed following a robust and thorough HRA process in particular for the OTE SPA.</p> <p>c) Natural England is not satisfied that sufficient monitoring has been secured in the DMLs and there are no conditions within the DML to secure a requirement for ornithological monitoring. Please see Deadline 1 response Appendix A1b highlighting residual impacts where monitoring will be required.</p>		

## 2.1.2 Marine Mammals

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.2 Biodiversity, Ecology and Natural Environment (including Habitats Regulations Assessment (HRA))</b>					
<b>Marine Mammals</b>					
1.2.26	Marine Management Organisation (MMO) and the Applicant	<p><b>1 2 Inclusion of UXO Clearance Activities within DMLs</b></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>c) As far as the Applicants are aware, no DMLs to date include UXO clearance. With respect to the Projects, UXO clearance has however been assessed in the ES (using a worst case scenario formulated by considering experience from East Anglia ONE) in order to justify the inclusion of such activities within the DMLs. The UXO clearance activities are also appropriately controlled by the conditions of the DMLs (which are</p>	<p>The MMO is in discussions with the Applicant through the SoCG and will continue these throughout Examination aiming to come to a final position by the close of Examination.</p>	<p>No further comment.</p>



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
		<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"> <li>- UXO clearance activities are adequately assessed in the submitted ES;</li> <li>- 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;</li> <li>- 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;</li> <li>- 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,</li> <li>- 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?</li> </ul> <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>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>	<p>based on the conditions found within other UXO marine licences).</p> <p>d) An updated SoCG with the MMO has been submitted at Deadline 1 (document reference ExA.SoCG-6.D1.V2). As noted in paragraphs 14 to 18 of the SoCG, engagement on UXO clearance has been undertaken and issues have not yet been fully resolved. The Applicants understand that the MMO written representation submission into the examination at Deadline 1 will reflect the progress made on this matter.</p>		





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
1.2.28	The Applicant, Natural England, Marine Management Organisation, The Wildlife Trusts	<p><b>1 2 Disturbance of Harbour Porpoise from UXO Detonation and Piling: 20% Threshold</b></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 '20% of the relevant area of the site in any given day'. 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>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>	<p>a) The assessments have been revised in the <b>HRA Addendum</b> which has been submitted at Deadline 1 (document reference ExA.AS-19.D1.V1).</p> <p>b) The In-Principle Site Integrity Plan (IPSIP) will be updated and re-submitted at Deadline 3 to take account of the amended conservation objectives and the outcomes of the updated assessment within the <b>HRA Addendum</b> submitted at Deadline 1 (document reference ExA.AS-19.D1.V1). The Projects' commitments have been updated as shown in the <b>HRA Addendum</b> which has been submitted at Deadline 1 (ExA.AS-19.D1.V1).</p> <p>d) This will be included in the SoCG with Natural England (document reference ExA.SoCG-13.D1.V1), the MMO (document reference ExA.SoCG-6.D1.V2) and The Wildlife Trust (TWT) (document reference ExA.SoCG-28.D1.V1).</p> <p><b>Natural England</b></p> <p>a) No comment</p> <p>b) No comment</p> <p>c) Please refer to NE Deadline 1 Appendix B1b</p> <p>d) No further comment</p> <p><b>The Wildlife Trust</b></p> <p>TWT agrees with Natural England's suggestion in their relevant representation [RR-059] that piling activities and UXO detonations should be limited to 1 on any given day, to ensure that 20% threshold of the Southern North Sea SAC is not exceeded. The Applicant should clarify their definition of a 24 hour period in each case, as this could affect the 20% threshold.</p>	The MMO defers to NE in matters of HRA but has reviewed the HRA Addendum REP01 and provided comments above.	See the Applicants' response to MMO comments on the HRA addendum in <b>section 1.1</b> (Points 20 to 23) above.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
1.2.29	The Applicant	<p><b>Restrictions on Concurrent UXO Detonation and Piling: Points of Clarification</b></p> <p>Could the Applicant please clarify the following points of detail:</p> <p>a) Please could the Applicant review paragraph 1035 of [APP-043], which states that it has been assumed that UXO clearance could be undertaken in the offshore cable corridor concurrently with piling in the array area. This appears to be inconsistent with the commitments at section 6.1 of the In-Principle Site Integrity Plan, which refers to the 'offshore development area', defined as the offshore order limits including both array area and export cable area, and the provisions of the draft Marine Mammal Mitigation Protocol (MMMP) [APP-591]. Could the Applicant please confirm what it is committing to in terms of restrictions (spatial and temporal) on concurrent underwater piling and UXO events within the offshore order limits?</p> <p>b) Paragraph 634 of [APP-044] states '<i>the Applicant, if required, would ensure UXO detonation and piling would not occur at the same time...</i>'. Could the Applicant clarify whether 'if required' refers to piling/UXO clearance or mitigation in this statement?</p>	<p>a) As outlined above, the Projects' commitments will be clarified in the updated IPSIP and the draft Marine Mammal Mitigation Protocol (MMMP) which are to be submitted at Deadline 3. The revised commitments are set out in the <b>HRA Addendum</b> which has been submitted at Deadline 1 (document reference ExA.AS-19.D1.V1). The relevant commitment in the context of this question is:</p> <ul style="list-style-type: none"> <li>During the winter period there would be no UXO detonation <b>without mitigation</b> in the offshore development area in the same 24 hour period as any piling <b>without mitigation</b> in the offshore development area. There is no requirement for a similar commitment in the summer period.</li> <li>There would be no concurrent piling or UXO clearance in either season within the offshore development area for each Project. There would be no concurrent piling or UXO clearance between the Projects in either season.</li> </ul> <p>b) This commitment which applies to the winter period in the offshore development area only has been updated to reflect the revised interpretation of the guidance, as presented above. In this case, there could either be one detonation or one piling event in one 24 hour period, unless it can be demonstrated that effective mitigation can be provided for either activity (or both). This will be reflected in the updated Site Integrity Plan (SIP) which will cover management of Project-alone as well as in-combination effects.</p>	<p>The MMO defers to Natural England for comments on whether the potential effects on the Southern North Sea SAC have been appropriately considered and mitigated. The Applicant is clear that there will be no concurrent piling or UXO clearance between EA1N and EA2 in either season. However, MMO is unsure as to why there is a reference to unmitigated piling and UXO, e.g. "only one UXO detonation without mitigation could occur in a 24-hour period". Further clarification is sought from the Applicant as to why this is included as per above.</p>	<p>See the Applicants' response to this in point 020 of the table in <b>section 1.1</b></p>
1.2.30	Natural England, Marine Management Organisation,	<p><b>Restrictions on Concurrent UXO Detonation and Piling: Security</b></p> <p>The ExA notes the Applicant's points at Table 36 of [AS-036] in response to Natural England's requests</p>	<p><b>Natural England</b></p> <p>Please refer to NE Deadline 1 response Appendix B1b.</p> <p><b>The Wildlife Trust</b></p>	<p>The MMO disagrees with Natural England and The Wildlife trust but is continuing discussions on this matter.</p>	<p>The Applicants welcome and agree with the MMO that the SIP is the appropriate mechanism to manage conflicting noise between UXO and piling (for which separate SIPs will be produced).</p>

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
	The Wildlife Trusts	<p>for security in the DMLs to limit UXO detonations and piling events to a total of one in any 24 hour period.</p> <ul style="list-style-type: none"> <li>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 mechanism to manage this matter? If not, why not?</li> </ul>	TWT would welcome Natural England's view on this matter.	The MMO believes the SIP the appropriate mechanism to manage conflicting noise between UXO and piling.	
1.2.31	The Applicant, Natural England, Marine Management Organisation, The Wildlife Trusts	<p><b>1 2 Concurrent Piling at East Anglia ONE North and East Anglia TWO</b></p> <p>The In-Principle Site Integrity Plan [APP-594] states at bullet four of section 6.1 that '(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'. 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>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>	<p>a) The IPSIP sets out the process for managing potential effects and lists potential mitigation. The SIP mechanism allows for the review of currently available mitigation techniques as well as consideration of new techniques that may become available during the pre-construction phase. It will also enable changes to the science, changes in guidance and regulatory advice and any changes to the conservation objectives for the SAC to be taken into consideration prior to approval of the SIP and MMMP by the MMO. Additionally, the Applicants have committed to consulting with Natural England (and The Wildlife Trust) through the IPSIP and have proposed a consultation programme within the IPSIP (Table 2.1) that commences more than 12 months in advance of the first noisy activity (UXO clearance).</p> <p>Therefore, there is no need to set out limits on UXO detonations in the IPSIP. Any such limits, if required, would be presented in the final SIP using up to date Project design information, science and guidance.</p> <p>b) It is the Applicants' view that the commitments secured in the conditions in the DMLs prevent breaches of the conservative objective noise thresholds both for Project alone</p>	<p>The MMO notes the comments set out and understands discussions are still ongoing between the Interested Parties and the Applicant.</p> <p>The MMO has proposed a condition in this document to be included in the DMLs to ensure there is coordination in the submission of the UXO and Pre-construction documents on each project.</p> <p>The MMO will continue to engage with all parties and provide an update at Deadline 4.</p>	See the Applicants' response to this at Point 37 in <b>section 1.1</b> .

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
			<p>and cumulative cases through the approval process of the SIP and the MMMP. The SIP provides a flexible management mechanism as described above.</p> <p>It is the Applicants' view that the commitments already made allow for robust control of this issue by the MMO and that no further conditions are necessary. The Applicants would therefore re-emphasise that the approval process of the SIP and MMMP together with the associated DML conditions are the appropriate mechanisms in which to secure the commitments that have been made.</p> <p>c) The Applicants do not consider it appropriate to include a condition within the DMLs to require a co-operation plan or agreement for the Projects to manage and mitigate underwater noise from piling and UXO activities as this will be managed through existing DML conditions. The timing of piling and UXO clearance activities will be notified to the MMO through the construction programme (Condition 17(1)(b) of the Generation DML and Condition 13(1)(b) of the Transmission DML) and through the programme of works contained within the method statement for UXO clearance (Condition 16(1)(a)(iii) of the Generation DML and Condition 12(1)(a)(iii) of the Transmission DML), respectively and will be managed through the approval process for the SIP (Conditions 16 and 17(2) of the Generation DML and Conditions 12 and 13(2) of the Transmission DML). In approving the plans for the second Project, the MMO will already have the necessary information about the first Project and will be able to approve the</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
			<p>SIP for the second Project in light of this information.</p> <p><b>Natural England</b></p> <p>a) Please refer to NE Deadline 1 response Appendix B1b</p> <p>b) Please refer NE Deadline 1 response Appendix B1b and G1b</p> <p>c) No comment from NE</p> <p><b>The Wildlife Trust</b></p> <p>TWT has been assured by the Applicant that EA1N and EA2 will not be constructed at the same time but TWT highlights that careful planning/scheduling of underwater noise will be required if one project is undertaking UXO clearance whilst the other is undertaking piling activity. TWT agrees with Natural England's suggestion in their relevant representation [RR-059] that piling activities and UXO detonations should be limited to 1 on any given day across the two projects, to ensure that 20% threshold of</p>		
1.2.32	Natural England	<p>1 2 <b>Harbour Porpoise of the Southern North Sea SAC: Assessment of Effects - SNCB Advice</b></p> <p>In their RR [RR-091], The Wildlife Trusts express disagreement with the SNCB's advice in relation to underwater noise management in the Southern North Sea SAC and the approach to assessment of impacts on harbour porpoise populations.</p> <ul style="list-style-type: none"> <li>Please could Natural England respond to the concerns raised by The Wildlife Trusts in this regard, specifically statements that: <ul style="list-style-type: none"> <li>The science underpinning the advice on underwater noise management is weak and the proposed approach will be difficult to deliver; and,</li> <li>A site-based assessment based on an estimate population number for the Southern North Sea SAC is required, rather than an assessment on the North Sea Management Unit?</li> </ul> </li> </ul>	<p><b>Natural England</b></p> <p>The science and evidence used to underpin the SNCB advice on managing noise in harbour porpoise SACs, including why we consider it most appropriate to undertake assessments at the Management Unit scale, can be found in the short document 'JNCC (2020). Background to the advice on noise management within harbour porpoise SACs in England, Wales and Northern Ireland.' JNCC Report No. 653, JNCC, Peterborough, ISSN 0963- 8091, which is available here <a href="https://data.jncc.gov.uk/data/2e60a9a0-4366-4971-9327-2bc409e09784/JNCC-">https://data.jncc.gov.uk/data/2e60a9a0-4366-4971-9327-2bc409e09784/JNCC-</a></p>	This comment has been noted by the MMO.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
1.2.33	Natural England	<p><b>Commercial Fishing in Cumulative and In-Combination Marine Mammal Assessments</b></p> <p>The Wildlife Trusts [RR-091] make the case that commercial fishing activities should be included in cumulative and in-combination assessments as opposed to the Applicant's approach of including them as a part of the environmental baseline for the marine mammals assessment. The Wildlife Trusts refer to the Waddenzee judgement and judicial review proceedings in relation to the Dogger Bank SAC. The Applicant's response refers to the approach taken in the draft HRA for the BEIS Review of Consents and by other consented or planned offshore wind farms.</p> <ul style="list-style-type: none"> <li>Does Natural England consider that the Applicant's approach of including commercial fishing in the environmental baseline is sound in this case? Please explain the reasoning behind your position.</li> </ul>	<p><b>Natural England</b></p> <p>When assessing the effects of a plan or project it is a requirement of the Habitats Directive that consideration is given to whether those effects are likely to be significant either individually or in combination with other plans or projects. In seeking to avoid deterioration and to properly assess the likely effects of a plan or project it is appropriate to take account of the prevailing factors acting on the site to the extent that they are capable of influencing the conservation objectives for the site. Where there is ongoing fishing activity on the site, it is appropriate to consider the effects of the plan or project that is the subject of the assessment in the context of those prevailing conditions, of which fishing impact may be one.</p>	This comment has been noted by the MMO.	No further comment.
1.2.34	The Applicant	<p><b>Southern North Sea SAC: Thresholds for the Significance of Disturbance Effects</b></p> <p>Thresholds for the significance of disturbance effects in relation to Southern North Sea SAC conservation objectives for harbour porpoise are set out in Section 5.3 of [APP-043].</p> <ul style="list-style-type: none"> <li>Can the Applicant explain how the significance of disturbance effects for grey seal and harbour seal has been determined?</li> </ul>	<p>There are currently no guidance or thresholds to determine the potential significance of disturbance of grey or harbour seal. Significance was therefore based on the percentage of the relevant reference population or management unit for the area and SAC that could be temporarily disturbed. Following the approach in <b>Chapter 11 Marine Mammals</b> (APP-059), for example, an effect on less than 1% of the reference population is considered to have a negligible effect on the population.</p> <p>Note that the methodology for the assessment of seals was discussed and agreed through the Evidence Plan Process with Natural England, and follows the methodology used on many consented projects including Norfolk Vanguard.</p>	The MMO notes the Applicant's response and defers to Natural England in this matter.	No further comment.
1.2.35	The Applicant	<p><b>Marine Mammals: Acoustic Deterrent Devices</b></p> <p>The Applicant's marine mammal assessment [APP-043] makes reference to the use of acoustic deterrent devices (ADDs) as part of the mitigation to be secured within the final MMMP, and the assessment considers the adverse effects of this mitigation. The characteristics of the ADDs on which the assessment has been based appear not</p>	<p>The assessments on the potential disturbance during proposed mitigation, such as ADD activation, was based on the duration that a device could be activated rather than a specific type of device.</p> <p>The type of ADDs to be deployed would be based on the latest technology and</p>	MMO considers that the Applicant's proposals regarding ADD do appear appropriate to inform their MMMP. The MMO adds that It will be important for the MMMP to evidence that the proposed acoustic deterrent device (ADD) is able to	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
		<p>to be described in [APP-043] or in the draft MMMP. It is not clear, for example, what types of deterrents have been considered, which species / life history stage of a species these deterrents would target, where and how such deterrents would be implemented / fixed, any commitments to their ongoing upkeep, and the anticipated effectiveness of such deterrents (such as avoidance).</p> <ul style="list-style-type: none"> <li>Please could the Applicant confirm where this information is provided? If it is not included within the application documents, please provide it.</li> </ul>	<p>information to ensure adequate and effective mitigation for the species required.</p> <p>Further information will be added to the draft MMMP on the effectiveness of ADDs and how they will be deployed. The updated draft MMMP will be submitted to the Examination at Deadline 3.</p>	<p>deter the key species of concern and to the distances required.</p>	
1.2.36	The Applicant, Marine Management Organisation, Natural England and The Wildlife Trusts	<p>1 2 <b>Marine Mammals: In-Principle Site Integrity Plan - Certainty</b> 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 clearance an implementation plan and any monitoring requirements will also be drafted for any required measures'. Could the Applicant please expand on this statement?</p> <ul style="list-style-type: none"> <li>What would be the function of the implementation plan relative to the IPSIP/SIP?</li> <li>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?</li> </ul>	<p>a) The IPSIP will not be updated post consent. The final SIP produced post consent will be based upon the certified IPSIP. An updated IPSIP will be submitted at Deadline 3 with revised wording to clarify this point.</p> <p>b) The text quoted is a typographical error and should read: <i>'within the final SIP for UXO clearance an implementation plan and details of any monitoring requirements to assess the effectiveness of mitigation measures will be included.'</i> The implementation plan referred to will be part of the final SIP which will be submitted to and approved in writing by the MMO. The final SIP will also detail any monitoring required to assess the effectiveness of the mitigation.</p> <p><b>Natural England</b></p> <p>a) Yes, Natural England considers that when the SIP is revisited post consent and prior to construction, the HRA will need to be updated. Therefore any changes to existing mitigation methods or new/additional mitigation measures can be implemented prior to construction commencing.</p> <p>b) No comment from NE.</p> <p>The Wildlife Trust</p> <p>As part of the SoCG, TWT have asked for the inclusion of the Final Investment Decision</p>	<p>The MMO notes the responses and at this time has no further comments.</p>	<p>No further comment.</p>



ExA. Question Ref.	Question addressed to	1	2	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
					(FID) and Contract for Difference (CfD) across all SIPs prepared by the offshore wind industry [TW-015]. This is to ensure that decisions made at these milestones do not limit the mitigation required to ensure no adverse effect. Monitoring requirements also need to be taken into account in relation to these milestones. The inclusion of FID and CfD milestones in the in-principle SIP is currently under consideration by the Applicant. TWT support the principle of a SIP, however it is not possible to agree no adverse effect due to the lack of strategic management and mechanisms for tackling underwater noise on a North Sea level.		
1.2.37	Natural England, Marine Management Organisation, The Wildlife Trusts and the Applicant			<p><b>In-Principle Site Integrity Plan – Potential Mitigation Measures</b></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> <p>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?</p> <p>b) If not, what additional information should be included to provide sufficient detail?</p> <p>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>	<p>c) The Applicants do not consider it appropriate to undertake noise modelling at this stage. Modelling undertaken now would not be based upon the final design and would therefore not reflect the potential impacts of the final design. Mitigation measures (if required) proposed within the SIP will consider:</p> <ul style="list-style-type: none"> <li>• The SNS SAC management measures available at the time;</li> <li>• The final Project design and mitigation available; and</li> <li>• The design and programme of other projects to understand the actual in-combination scenario.</li> </ul> <p>The final mitigation measures would be agreed and secured in the period between consent and the commencement of UXO clearance or piling, following an updated assessment of the potential impacts taking into account the above points.</p> <p><b>Natural England</b></p> <p>a) NE is satisfied that the draft IPSIP provides sufficient detail at this time and will enable the consideration of advances in mitigation methods and technology between consent and</p>	The MMO has no further comments at this stage.	No further comment.





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				<p>when the review of the SIP is undertaken. However, we maintain our position with regards to securing essential mitigation to ensure no adverse effect on integrity. Please see NE Deadline 1 response Appendix B1b.</p> <p>b) No comment from NE</p> <p>c) No comment from NE</p> <p><b>The Wildlife Trust</b></p> <p>a) It is recognised that the In-principle SIP needs some level of flexibility prior to consent, however it would be helpful for the In-principle SIP to provide more detail on the potential effectiveness of the mitigation measures mentioned. TWT welcomes their inclusion as a consultee on the Draft MMMP and the In-principle SIP, and we welcome the opportunity to work with the applicant to discuss the implementation of mitigation and monitoring further. TWT still have some concerns on the industry's approach to the in-combination mitigation and emphasise that a regulatory mechanism and monitoring programme will be essential to increase our confidence [See Question 1.2.46. for more detail].</p> <p>b) As part of the CoCG, TWT have asked for the inclusion of the Final Investment Decision (FID) and Contract for Difference (CfD) across all SIPs prepared by the offshore wind industry [TW-015]. This is to ensure that decisions made at these milestones do not limit the mitigation required to ensure no adverse effect. Monitoring requirements also need to be taken into account in relation to these milestones. The inclusion of FID and CfD milestones in the in-principle SIP is currently under consideration by the Applicant.</p>		
1.2.40	The Applicant	1 2	<p><b>Site Integrity Plans: Point of Clarification</b></p> <p>The dDCO [APP-023] appears to provide for the production of separate Site Integrity Plans for UXO Clearance and piling activities.</p> <ul style="list-style-type: none"> <li>Can the Applicant clarify what is the maximum number of Site Integrity Plans in relation to the Southern North Sea SAC that</li> </ul>	<p>The <b>draft DCO</b> (APP-023) provides for two SIPs, one for UXO clearance and one for piling. These are secured separately in the Generation and Transmission DMLs but in practice a single SIP, prepared to meet the requirements of both DMLs, would be produced for each activity</p>	<p>The MMO notes the Generation and Transmission Assets construction may not take place at the same time. If there is only one SIP per activity this may require multiple revisions and consultation on each revision.</p>	<p>A single UXO SIP will be issued to the MMO three months prior to commencement of UXO clearance in the export cable corridor (under the transmission DML) or windfarm site (under the generation DML), irrespective of the sequencing of clearance in the two areas.</p>

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
		may be produced for a single project?		<p>The MMO would like to highlight concerns of the potential delay in proceeding with one document for both the Transmission and Generation Assets.</p> <p>For example, if the Transmission Assets begins construction first. The SIP will be submitted 6 months prior to the commencement of the Transmission Assets activity. If there are issues with information in the Generation Assets section this would mean the document could not be discharged until all the issues with the Generation Assets had been resolved. Leading to potential delays to the Transmission commencement date if these weren't resolved in the 6 months.</p> <p>The MMO believes 6 months allows enough time to resolve issues however would like the Applicant to acknowledge the risk of this approach.</p>	<p>Similarly, a single piling SIP for piling of wind turbine foundations (generation DML) and offshore platform foundations (transmission DML) will be issued to the MMO six-months prior to commencement of the first piling activity.</p> <p>The Applicants do not consider there to be any significant risks in taking the approach outlined above.</p>
1.2.41	The Applicant and The Wildlife Trusts	<p><b>SIP and MMMP - Post-Consent Approvals</b></p> <p>The Applicant states in [AS-036] that it has agreed through the SoCG process that it will consult The Wildlife Trusts in respect of the Site Integrity Plans and Marine Mammal Mitigation Protocols for Unexploded Ordnance (UXO) clearance and piling. A SoCG between the Applicant and The Wildlife Trusts has not yet been submitted to this Examination.</p> <p>a) Do The Wildlife Trusts consider that this addresses their comments in [RR-091] on post-consent engagement?</p> <p>b) Could the Applicant please ensure that this is included in the SoCG requested for Deadline 1 and confirm whether and how this will require a change to relevant DCO / DML wording?</p>	<p>b) The Applicants can confirm that TWT will be consulted in respect of the SIPs and MMMP and that this is included in the draft SoCG with TWT submitted at Deadline 1 (document reference ExA.SoCG-28.D1.V1). As agreed with TWT, this commitment will be reflected in the updated IPSIP and draft MMMP which will be submitted at Deadline 3. No changes will be made to the DMLs.</p> <p><b>The Wildlife Trust</b></p> <p>We welcome the fact that the Applicant has now agreed to update the Draft MMMP and the In-principle SIP to include TWT as a consultee [TW - 016]. TWT will assess our satisfaction when we see the updated Draft MMMP and the In-principle SIP at Deadline 3.</p>	<p>The MMO notes these responses and welcomes the commitment to review the SIP and MMMP prior to submission to the MMO.</p>	<p>No further comment.</p>
1.2.43	The Applicant, Marine Management Organisation	<p><b>Marine Mammal Mitigation Protocol: Point of Clarification</b></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</p>	<p>a) The <b>draft DCO</b> (APP-023) provides for two MMMPs, one for UXO clearance and one for piling. These are secured separately in the Generation and Transmission DMLs</p>	<p>The MMO notes the Generation and Transmission Assets construction may not take place at the same time. If there is only one MMMP per activity this may require</p>	<p>See response to ExA Question reference 1.2.40 above.</p>



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		<p>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>but in practice a single MMMP, prepared to meet the requirements of both DMLs, would be produced for each activity.</p> <p>b) The MMMPs for each activity will follow the same structure and only deviate from each other where the detail of the activity requires this. The rationale for separation of MMMPs is a practical one, UXO clearance will take place in advance of piling, therefore the MMMP for that activity is developed separately to allow discharge of the relevant condition at the appropriate time.</p>	<p>multiple revisions and consultation on each revision.</p> <p>The MMO would like to highlight concerns of the potential delay in proceeding with one document for both the Transmission and Generation Assets.</p> <p>For example, if the Transmission Assets begins construction first. The MMMP will be submitted 6 months prior to the commencement of the Transmission Assets activity. If there are issues with information in the Generation Assets section this would mean the document could not be discharged until all the issues with the Generation Assets had been resolved. Leading to potential delays to the Transmission commencement date if these weren't resolved in the 6 months.</p> <p>The MMO believes 6 months allows enough time to resolve issues however would like the Applicant to acknowledge the risk of this approach.</p> <p>The MMO welcomes the Applicant's clarification that the UXO MMMP would be submitted at a separate time to the piling MMMP.</p>	
1.2.44	The Applicant, Marine Management Organisation	<p>1 2 <b>Construction Monitoring: Cessation of Piling Condition</b></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>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</p>	<p>a) The Applicants do not consider the proposed text to be necessary within the DMLs as the MMO has the necessary enforcement powers under the Marine and Coastal Access Act 2009. The Applicants therefore do not consider that such a condition would meet the legal test of necessity as it duplicates statutory powers.</p> <p>b) The circumstances under which the Applicants and Norfolk Vanguard operate are the same, however the Applicants do not consider a DML condition to be justified for the reasons given above.</p>	<p>The MMO does not consider that the necessary enforcement powers exist under MCAA (2009). The MMO's view is 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.</p> <p>Relying on the powers to suspend or revoke the licence, with the current wording of the condition there is a requirement for the Applicant to submit the noise report 6 weeks after the noise measurements are taken and activities can continue until the MMO advises otherwise – if the noise measurements are above the predictions from the ES there would be a substantive</p>	The Applicants have updated condition 21(3) of the Generation DML and condition 17(3) of the Transmission DML within the draft DCO submitted at Deadline 3 in order to address the MMO's concerns.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
		Applicant's statement that the necessary enforcement powers already exist under the Marine and Coastal Access Act 2009?	<b>Natural England</b> Natural England supports the provisions recommended by MMO which would require piling to cease if noise levels are found to be significantly higher than those assessed in the environmental statement. We also note that this condition has already been applied to other projects and therefore we consider it a standard condition.	delay before any action could be taken by the MMO.  The MMO believes that it is up to the Applicant to ensure any noise from piling is below the validations set out within the Environmental Statement. The MMO believes that the cessation wording should be included to ensure there is no further potential impact on marine mammals if the noise levels were higher than predicted.  The MMO believes this is a standard condition and therefore will be requesting this condition on all future offshore windfarms and any other project that includes offshore piling.	
1.2.45	The Applicant, Marine Management Organisation	1 2 <b>Post-Construction Monitoring Commitments for Marine Mammals</b> 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].  a) Does the MMO consider that these changes adequately address its concerns? b) Does the Applicant intend to submit an updated version of the In- Principle Monitoring Plan to this Examination?	b) Yes, the Applicants intend to submit an updated In-Principle Monitoring Plan at Deadline 3.	The MMO will review the updated IPMP at Deadline 3.	No further comment.
1.2.46	The Wildlife Trusts, Natural England, Marine Management Organisation	1 2 <b>Southern North Sea SAC: Adequacy of Monitoring Commitments</b> 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.  a) Do the MMO and Natural England consider that the monitoring provisions included in the draft DMLs and subsidiary plans and	<b>Natural England</b> a) Discussions regarding marine mammal monitoring are ongoing and we will provide an update at a future deadline. b) No comment from NE c) No comment from NE  <b>The Wildlife Trust</b> b) + c) It is recognised that the Applicant has included provision for further monitoring (if required) in the Draft Marine Mammal Mitigation Protocol and In-Principle Site Integrity Plan, and TWT welcomes their inclusion as a consultee on the Draft MMMP	<b>Natural England</b> The MMO is working with NE to discuss marine mammal monitoring.  <b>The Wildlife Trust</b> The MMO notes The Wildlife Trust has concerns on the current lack of mechanism for management of SNS SAC and reiterates that a mechanism is being discussed as part of the SNS Regulators Group.  The MMO notes that marine mammal monitoring discussions are ongoing and will provide an update at a future deadline.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
		<p>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>and the In-principle SIP, and the opportunity to work with the Applicant to discuss the implementation of mitigation and monitoring further. However, TWT still has concerns about the Industry's lack of approach to strategic monitoring. Without an industry-wide regulatory mechanism and monitoring programme TWT cannot have confidence in the effectiveness of in-combination noise mitigation or the impact of the offshore wind industry on the site integrity of the Southern North Sea SAC. Currently there will be no monitoring of harbour porpoise post construction. Pre, during and post construction monitoring is required of both noise levels and harbour porpoise activity to understand the impact of underwater noise on harbour porpoise as an EPS and on the Southern North Sea SAC.</p> <p>Without an appropriate regulatory mechanism in place, TWT cannot agree to no adverse effect on the Southern North Sea SAC for EA1N &amp; 2 in-combination with other identified projects.</p>		
1.2.47	Whale and Dolphin Conservation and the Applicant	<p>1 2 <b>Whale and Dolphin Conservation: Participation in the Examinations</b></p> <p>The Applicant states in [AS-036] that Whale and Dolphin Conservation (WDC) have advised that it will be making no further representations to these Examinations, however the ExA appears not to have received confirmation of this.</p> <p>a) Please could WDC confirm whether this is the case?</p> <p>b) In any event, please could WDC indicate whether the concerns set out in their RRs [RR-090] continue to stand or whether the response provided by the Applicant in Table 67 of [AS-036] has altered its position?</p> <p>c) Please could the Applicant provide a copy of the correspondence dated 15 April 2020 to which [AS-036] refers?</p>	<p>c) See <b>Appendix 3</b> of this document for a copy of the email correspondence with WDC dated 15<sup>th</sup> April 2020 (document reference ExA.WQ-1.A3.D1.V1).</p>	<p>The MMO has reviewed Appendix 3 and notes the WDC is no longer taking part in the Examination process.</p>	<p>No further comment.</p>

### 2.1.3 Benthic Ecology

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.2 Biodiversity, Ecology and Natural Environment (including Habitats Regulations Assessment (HRA))</b>					
<b>Benthic Ecology</b>					
1.2.49	The Applicant, MMO	1 2 <b>HRA Screening (EA2)</b> 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.)	Following review of the MMO Relevant Representation (RR-052), none of the comments made by the MMO in their Relevant Representation would alter either the way in which HRA screening was conducted or the conclusions that were reached regarding benthic ecology.	The MMO agrees that the comments within our relevant representations (RR-052) regarding benthic ecology receptors do not have implications for the HRA screening process. The MMO defers to Natural England on matters relating to HRA.	No further comment.
1.2.50	MMO	1 2 <b>Micro-siting: benthic habitats</b> 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>A <i>Sabellaria</i> reef management plan in accordance with an outline plan to be submitted at Deadline 1 (document reference ExA.AS-4.D1.V1) will detail how <i>Sabellaria</i> reef will be managed during Project activities.</p> <p>The Applicants will include a condition within the DMLs requiring submission of a plan detailing <i>Sabellaria</i> reef management which would be in accordance with an outline <i>Sabellaria</i> Reef Management plan. This will be reflected in the updated <b>draft DCO</b> (APP-023) to be submitted at Deadline 3.</p> <p><b>Natural England</b></p> <p>Natural England notes that the Applicant intends to submit an Outline Sabellaria spinulosa reef Management Plan at Deadline 1 so NE will provide further advice at Deadline 2 or 3.</p>	The MMO has provided further comments on the Sabellaria reef Management Plan in Section 1.6 of this document.  The MMO will review the updated dDCO along with NE's comments at deadline 3.	See the Applicants' response to MMO comments on the <i>Sabellaria</i> reef management plan in Points 015-019 of <b>section 1.1</b> .
1.2.51	The Applicant	1 2 <b>Sediment deposition: in-combination effects</b> Please explain why it has been considered that no pathway exists for significant indirect in-combination effects to benthic ecology interest features from sediment deposition, given that East Anglia TWO and East Anglia ONE North may be constructed at the same time (or overlap) and that they partly share an offshore export cable route?	Modelling undertaken for previous projects in the former East Anglia Zone (see <b>Section 5.2.1, Habitats Regulations Assessment - Appendix 1 – Information to Support AA Report – HRA Screening Report</b> (APP-044)) demonstrated that coarse sediment would settle out rapidly where disturbed (or dredged) and that indirect far-field effects would be limited to within 1km of the works and for the duration of one tidal cycle. For finer materials it was predicted that deposition could occur at up to 50km from the source, however, the deposited sediment layer across the wider seabed was found to be generally less than	The MMO agrees and has no concerns regarding the in-combination effects of sediment deposition associated with EA1N and EA2 on benthic ecology receptors.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>0.2mm thick and did not exceed 2mm. There are no sites within 1km of the offshore development areas (where most of sediment deposition would be expected to occur) and any deposition beyond this point is expected to be minimal.</p> <p>Cumulatively, suspended sediment would still behave in the same way, even if more sediment was suspended in the same area it would still fall out of suspension at the same distance and not affect a designated site.</p> <p>During Phase 3 consultation, Natural England stated in a letter dated 8<sup>th</sup> October 2018 responding to a consultation request from the Applicants regarding the HRA Screening Reports that they <i>were 'content there is no potential for direct or indirect effects which could result in an LSE to offshore SACs with benthic habitat interest features'</i>.</p>		

#### 2.1.4 Construction

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
<b>Project Description [APP-054]</b>					
1.4.6	The Applicant	<p>1 2 Table 6.2 shows the various wind turbine and met mast foundation type options. Please</p> <p>a) confirm that paragraph 36 also refers to met masts;</p> <p>b) summarise the advantages and disadvantages of each foundation type; and</p> <p>c) explain which of the five is/are your preferred option(s) for this project and why.</p>	<p>a) Paragraph 36 refers to the wind turbine layout used in the SLVIA and therefore does not refer to met masts.</p> <p>b) Through the Rochdale Envelope approach the Applicants have assessed the worst case aspect of each foundation typology relevant to each respective impact for each respective receptor. Could the ExA clarify in what context advantages and disadvantages applies?</p> <p>c) At this stage, the Applicants are not able to commit to a preferred foundation type as this is something that is determined during detailed design and procurement. If this</p>	<p>a) This comment has been noted by the MMO.</p> <p>b) This comment has been noted by the MMO.</p> <p>c) The MMO expects the preferred option to be fully detailed within all relevant pre-construction plans.</p>	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			situation changes during the examination, the Applicants will update the ExA.		
1.4.7	The Applicant	1 2 Table 6.2 shows the windfarm site area as 208km <sup>2</sup> with one met mast, and paragraph 113 says that <i>"there is the potential for one meteorological mast... to be installed ..."</i> .  Please explain a) why one meteorological mast is sufficient; b) how you will ensure that the performance of any associated equipment is not affected by electrical interference; and c) what will be its separation distance.	a) A single met mast is considered sufficient to support wind and metocean measuring equipment to inform operational logistics. b) There are no anticipated interference issues. c) The met mast would be incorporated in the windfarm layout, respecting the same separation distances as the wind turbines, the minimum of which are set out in the <b>Chapter 6 – Project Description</b> (APP-054) as: <ul style="list-style-type: none"><li>• in-row spacing – 800m; and</li><li>• inter-row spacing – 1,200m.</li></ul>	This comment has been noted by the MMO.	No further comment.
1.4.8	The Applicant	1 2 Plate 6.1 shows the key dimensions of the proposed offshore wind turbines.  a) What is the difference in depth between Lowest Astronomical Tide and Mean High Water Spring? b) How does this vary across the array area? And c) How is it expected to vary over the life of the project?	a) Lowest Astronomical Tide is up to 1.5m lower than Mean High Water Springs (MHWS) in the East Anglia TWO windfarm site and up to 0.93m lower than MHWS in the East Anglia ONE North windfarm site b) There is anticipated to be little variation (<0.5m) in lowest astronomical tide (LAT) or MHWS across the array areas. c) There is anticipated to be little variation in LAT or MHWS over the life of the Projects.	This comment has been noted by the MMO.	No further comment.
1.4.9	The Applicant	1 2 Paragraph 35 states that the worst case layout is that with fewer larger turbines, and that for tip heights between 250m and the 300m maximum the number of turbines could vary between the maximum number stated in the DCO and the lower number stated for the 300m maximum tip height.  <ul style="list-style-type: none"><li>• Explain how you would calculate the number of turbines so as to ensure that it lies within the Rochdale Envelope.</li></ul>	The worst case varies between receptor topics and sometimes within topics for different impacts. The example cited of fewer and larger was determined to be the worst case for seascape effects whereas for shipping and navigation risk the largest number of structures is the worst case (irrespective of size).  The approach taken is therefore to look at each impact individually and determine the worst case for that assessment. For example, the worst-case footprint on the seabed for turbines is determined by a combination of the number of turbines and largest of each potential foundation type. In this example, the largest footprint for a foundation type is the gravity base structure. The footprints are scaled up to the maximum number of each indicative models (250m and	This comment has been noted by the MMO.	No further comment.





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>300m) to determine which is the worst and the impact assessment done on that footprint.</p> <p>Assuming that the impact is not significant (and would require mitigation), this provides an allowable threshold for impact for that parameter.</p> <p>In the procurement process, the potential project designs are judged against each of these parameters and must fit within the assessed envelope. The Design Plan provides the detail of each parameter and must be approved by the Marine Management Organisation (MMO) in consultation with Trinity House and the Maritime and Coastal Agency (MCA) as secured under Conditions 17(1) of the Generation Deemed Marine Licence (DML) and 13(1) of the Transmission DML respectively.</p>		
1.4.10	The Applicant	<p>Paragraph 49 describes the overall installation methodology for pre-piled jackets and paragraph 50 describes the sequence for post-piled jackets: bullet point 7 of paragraph 50 says "<i>Pin piles driven to depth using piling hammer</i>" (sic). Paragraph 101 lists the key stages of steel monopile installation.</p> <ul style="list-style-type: none"> <li>What happens if a pile cannot be driven to the target depth?</li> </ul>	<p>If a pile is not driven fully to target depth, a thorough assessment would be undertaken before deciding on the next course of action. This would consider the level difference, the actual ground conditions encountered and the possibility of problems with the piling equipment. The assessment might conclude a shorter piling depth is acceptable if actual ground conditions are more favourable than assumed in the original foundation design. However, if the pile needs to be driven further, driving would be attempted again and if necessary a drill may be deployed to drill through the harder geology.</p> <p>In an extreme event the piling location would be abandoned and the pile extracted or cut below seabed level. However, this is considered an extremely low likelihood event at this site because ground conditions are considered favourable for pile driving and there is the contingency available to drill/drive.</p>	This comment has been noted by the MMO.	No further comment.
1.4.11	The Applicant	<p>In paragraph 51 you give values of hammer energy considered necessary for pile installation including a maximum value of 2,400kJ for a 4.6m diameter pin pile. Paragraph 102 states that 4,000kJ would be required for a 15m diameter monopile. In paragraph 52 you quote lower figures relating to the East Anglia ONE OWF.</p>	<p>a) To date no windfarm developer has installed a 15m diameter monopile. Most information on monopiles comes from early projects where the diameter of piles is significantly smaller than those assessed for the Projects. Dudgeon Offshore Windfarm for example had piles of 7.6m and used a</p>	This comment has been noted by the MMO.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		<p>a) Are there any actual values available for monopiles?</p> <p>b) Why are these figures significantly higher than the figures obtained on the East Anglia ONE OWF?</p>	<p>maximum hammer energy of 2,843kJ during installation. The worst case scenario assessed in the Dudgeon ES was 3,000kJ.</p> <p>b) The figures are higher than those obtained at East Anglia ONE for two reasons:</p> <ul style="list-style-type: none"> <li>The worst case diameter of pin piles assessed for the Projects are 4.6m, 2.1m larger than those used at East Anglia ONE.</li> <li>Flexibility within the consent is required in the event that certain areas of the Projects' windfarm sites have ground conditions which require a higher energy to enable pile installation. However, as is demonstrated in paragraph 102, it is highly unlikely that the maximum hammer energy would be required for each foundation.</li> </ul>		
1.4.12	The Applicant	<p>1 2</p> <p>Paragraph 60 says that <i>"There are many possible shapes and sizes being proposed by manufacturers for gravity base structures."</i></p> <ul style="list-style-type: none"> <li>Given that new ideas are under development, and that the final form may differ from what is currently proposed, explain how you can be sure that what is actually constructed will be within the Rochdale envelope in respect of environmental assessment.</li> </ul>	In the procurement process, the potential project designs are judged against each of the parameters assessed in the EIA, and must fit within the envelope. The Design Plan provides the detail of each parameter and must be approved by the MMO in consultation with Trinity House and the MCA as secured under Conditions 17(1) of the Generation and 13(1) of the Transmission DML respectively.	This comment has been noted by the MMO.	No further comment.
1.4.13	The Applicant	<p>1 2</p> <p>Paragraph 134 mentions a pre-lay grapnel run.</p> <p>a) Is this the offshore equivalent of onshore site clearance?</p> <p>b) Is this before or after commencement as defined in the DCO? And</p> <p>c) Do Tables 6.16 and 6.18 show all known assets to be crossed, and whether each is in service or out of service?</p>	<p>a) This is a useful comparison. The pre-lay grapnel is a large dredge type device that will ensure that cable corridors are free from obstructions.</p> <p>b) This is a post-commencement activity that is undertaken just before cable installation</p> <p>c) Yes, this is correct although now both East Anglia ONE export cables are installed and in service.</p>	<p>a) This comment has been noted by the MMO. The MMO considers that this activity, which may involve boulder clearance, has the potential to impact upon the environment and should therefore be subject to approval of the appropriate methodology prior to commencement.</p> <p>b) This comment has been noted by the MMO.</p>	The methodology for pre-lay grapnel run will be provided within the construction method statement which requires to be approved by the MMO prior to commencement of the activity.
1.4.14	The Applicant	<p>1 2</p> <p>Paragraph 162 refers to cable crossing agreements. How will you proceed in the event that an agreement cannot be reached?</p>	Early engagement with all known offshore cable owners has taken place from Submission of the Preliminary Environmental Information Report (PEIR) in accordance with Section 42 of the Planning Act 2008 from the 11 <sup>th</sup> February 2019. Subsequent engagement with all known offshore cable owners has followed pre-application to confirm the future intent of the Applicants to	This comment has been noted by the MMO.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>enter into crossing agreements with these parties.</p> <p>In addition, the Applicants have progressed draft SoCGs to confirm the intent to enter into a future crossing agreement and agree cooperation with those offshore cable owners identified as Energy Undertakers in accordance with Procedural Decision 7 (PD-006). These parties are as follows:</p> <ul style="list-style-type: none"> <li>• East Anglia ONE Limited (SoCG to be submitted at later dealdine)</li> <li>• East Anglia THREE Limited (ExA.SoCG-34.D1.V1)</li> <li>• Interconnector UK Limited (ExA.SoCG-29.D1.V1 for the East Anglia ONE North project only)</li> <li>• Greater Gabbard OFTO (ExA.SoCG-31.D1.V1)</li> <li>• Diamond Transmission Partners Galloper Limited (ExA.SoCG-12.D1.V2)</li> </ul> <p>Offshore telecommunications cable owners are not identified as requiring a SoCG, however have benefited from early engagement from the Applicants including the future intent of the Applicants to enter into crossing agreements with these parties. These parties are as follows:</p> <ul style="list-style-type: none"> <li>• Interoute Communications Limited</li> <li>• Verizon Communications Inc</li> <li>• BT Group Plc</li> <li>• Centurylink Inc</li> </ul> <p>The offshore cable owner cannot be identified for the Hermes North (Aldeburgh to Zandvoort) Telecoms cable (out of service) which is located within the East Anglia TWO order limits. The Applicants completed an investigation into this ownership and submitted the findings that no identifiable ownership could be traced to The Crown Estate (TCE) on the 16<sup>th</sup> October 2019 and that subsequently, consultation towards a crossing agreement could not be carried out.</p>		

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>TCE confirmed that East Anglia TWO could proceed as it saw fit in this instance.</p> <p>In the event that agreement cannot be reached between the Applicants and an offshore cable owner to allow for a signed crossing agreement, the Applicant will look to comply with guidance specified in European Subsea Cables Association (ESCA) Guideline No. 6; The Proximity of Offshore Renewable Energy Installations &amp; Submarine Cable Infrastructure in UK Waters<sup>3</sup>. The Applicants will also consult with TCE to confirm that any crossings would be designed and carried out in accordance with International Cable Protection Committee (ICPC) Recommendation 2 (Recommended Routing and Reporting Criteria for Cables in Proximity to Others)<sup>4</sup> and Recommendation 3 (Criteria to be applied to Proposed Crossings between Submarine Telecommunications Cables and Pipelines / Power Cables)<sup>5</sup> to demonstrate commitment to best practice and to seek permission to proceed.</p>		
1.4.15	The Applicant	<p>1 2 Paragraph 310 says that "Cables will be placed directly underground without ducting, although ducting may be used in some or all of the route."</p> <p>a) Bearing in mind that there are two projects proceeding side by side onshore, should the onshore cables be laid in ducts throughout, with a view to reducing the construction impacts in the event that the projects are constructed consecutively rather than concurrently? .</p> <p>b) What would be the advantages and disadvantages of installing ducts for the second project at the same time as installing the ducts and cables for the first project? And</p> <p>c) if the onshore works were carried out separately for each project, is it intended that the haul road would remain in place between the construction of the first and second projects?</p>	<p>a) The scenario described would reduce impacts, as per the rationale applied to East Anglia ONE and East Anglia THREE.</p> <p>The determining factor in terms of which construction scenario is adopted will be the outcome of the Contract for Difference (CfD) auction, scheduled to be held by the UK Government in 2021 and every two years thereafter. Depending on the auction prices achieved, the auctions could see 1 to 2 gigawatts of new offshore wind being deployed every year in the 2020s.</p> <p>Whilst the precise level of Government funding for each round of future CfD auctions is yet to be announced, it is clear that the Government is continuing to drive the offshore wind sector to reduce costs.</p>	This comment has been noted by the MMO.	No further comment.

<sup>3</sup> European Subsea Cables Association (ESCA) (2016). Guidelines. Available at: <http://www.escaeu.org/guidelines/>

<sup>4</sup> International Cable Protection Committee. ICPC Recommendation #2, Recommended Routing and Reporting Criteria for Cables in Proximity to Others, Issue 11, 3 November 2015

<sup>5</sup> International Cable Protection Committee. ICPC Recommendation #3, Criteria to be Applied to Proposed Crossings of Submarine Cables and/or Pipelines, Issue 10A, 12 February 2014.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>Recent CfD auctions have seen significant reductions in the cost of offshore wind projects. In 2015, CfD Round 1 (in which East Anglia ONE successfully secured its CfD), achieved an average clearing price of approximately £117/MWh. In 2017, CfD Round 2 achieved prices as low as £58/MWh. The offshore wind CfD prices for CfD Round 3 in 2019 were lower still at around £40/MWh.</p> <p>All indications are that this downward pressure will continue into the 2021 CfD auction, when the Projects are expected to enter the Round 4 CfD auction. This reduction in CfD strike price represents a significant challenge for the offshore wind sector to reduce construction costs, and is likely to result in only the most competitive projects receiving CfD support and therefore proceeding to construction.</p> <p>Acknowledging the extremely competitive market, in order to ensure the capital cost of both Projects are as competitive as possible, each project must bear its own construction cost. Should only East Anglia TWO be successful in the 2021 CfD auction for example, that project may not be able to carry the significant cost of the duct installation for the East Anglia ONE North project as it would increase the East Anglia TWO construction costs, making the East Anglia TWO project less competitive and potentially jeopardising its ability to secure a CfD in its own right (and vice versa if only East Anglia ONE North was successful in the 2021 auction). In that case, both Projects would progress sequentially (construction scenario 2), with the project that was not successful in the 2021 auction proceeding to construction at a later date once it secures a CfD.</p> <p>The Applicants are currently investigating the possibility of installing ducts for both projects in parallel should the Projects be</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>built sequentially. An update will be provided at Deadline 2.</p> <p>b) If ducts were used for the second project:</p> <ul style="list-style-type: none"> <li>• Cables would be installed in sections between jointing bays, the worst case assumes 19 jointing bays along the onshore cable route.</li> <li>• The jointing bays would need to be accessed via a haul road. Cables would be pulled through the ducts across the full-length of the onshore cable route.</li> <li>• The advantage would be to reduce the intrusiveness of the cable pulling when compared to open trenching for the second project. The footprint for impacts would be the same as per parallel construction, however some repeated impacts would be avoided or reduced in magnitude for the second project.</li> <li>• There are no disadvantages from this approach in terms of environmental impact.</li> </ul> <p>c) Requirement 29 of the <b>draft DCO</b> (APP-023) requires that any land which is used temporarily for construction of the onshore works and not ultimately incorporated into permanent works or approved landscaping must be reinstated within twelve months of completion of the relevant stage of the works or such other period as the relevant planning authority may approve. The assumption would therefore be that the haul road will be removed and the land reinstated where there is a gap between the construction of the first project and the second project. However, there is scope for agreeing with the relevant planning authority that works are not to be reinstated within the twelve month period. This flexibility is intended to cover the situation where it would make sense (for example, from an environmental perspective) for temporary works to remain in place between the construction of one project and the construction of the second (i.e. where removal and reconstruction of the</p>		

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			temporary works may give rise to more impacts than leaving them in place between the construction of the first and second projects might).		
1.4.20	The Applicant	<p>Paragraphs 464 and 465 describe the construction of the foundations for the onshore substation, noting that dewatering of excavations may be required.</p> <ul style="list-style-type: none"> <li>Please explain how your proposals will not impact on water quality or water supply, or cause or exacerbate flooding.</li> </ul>	<p>With regards to impacting on water quality and supply, construction of the onshore substation (including foundations) will be in accordance with the Applicants' final Code of Construction Practice (CoCP). This must be provided by the Applicants and approved by the relevant planning authority under Requirement 22 of the <b>draft DCO</b> (APP-023). Outline measures with regards to water quality and supply are provided in <b>section 11</b> of the <b>Outline Code of Construction Practice</b> (APP-578).</p> <p>Embedded mitigation in relation to surface water runoff and flood risk is presented within <b>section 20.3.3</b> and <b>Table 20.3</b> of <b>Chapter 20 Water Resources and Flood Risk</b> (APP-068). Issues pertinent to construction phase drainage, including consideration of surface water runoff, will be managed through the development and implementation of a Surface Water and Drainage Management Plan to be submitted post-consent as part of the CoCP, as secured under the requirements of the <b>draft DCO</b> (APP-023). This must be approved by the relevant planning authority before works can commence.</p> <p>The Surface Water and Drainage Management Plan will secure measures which limit discharges to a controlled rate (equivalent to the greenfield runoff rate) and ensure that any redirected overland flow routes do not cause an increase in offsite flood risk.</p> <p>The CoCP will also include silt control measures (e.g. silt fences at soil storage areas) to intercept sediment runoff and prevent it from entering the water environment.</p>	This comment has been noted by the MMO.	No further comment.



## 2.1.5 Draft Development Consent Order

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.5 Draft Development Consent Order (dDCO)</b>					
<b>Schedule 13 – DML (generation assets)</b>					
1.5.16	The Applicant	1 2 Condition 17(1)(f) (Preconstruction plans and documentation) states that “ <i>In the event that driven or part-driven pile foundations are proposed ... a marine mammal mitigation protocol ...</i> ” is to be submitted to and approved in writing by the MMO.  a) Should this condition include restricting maximum hammer energy? And b) if so, should any such restriction vary according to the foundation type being used?	It is not necessary for Condition 17(1)(f) of the Generation DML to restrict maximum hammer energy as this is controlled by Condition 17(3) which limits hammer energy by reference to foundation type. Condition 13(3) of the Transmission DML similarly includes a restriction on hammer energy.	The MMO agrees with the Applicant's response in respect of both the conditions present in the Transmission DML and the Generation DML.	No further comment.
1.5.17	The Applicant	1 2 Does Condition 17(1)(c) include requiring pre and post-construction surveys and monitoring for benthic communities and geophysical features?  • If not, why not?	Condition 17(1)(c) in the generation DML and 13(1)(c) in the transmission DML secures preparation and timescales for the Monitoring Plan.  Condition 20(2) and 22(2) in the generation DML and Condition 16(2) and 18(2) in the transmission DML secure the required pre and post construction surveys (swath-bathymetry (geophysical) surveys and surveys of <i>Sabellaria spinulosa</i> , a benthic community). No other benthic features will require any survey.	The MMO agrees with the Applicants response to this question.	No further comment.
1.5.18	The Applicant	1 2 <b>Art 37 and Schedule 15 – Arbitration</b> Made DCOs for offshore wind farms have tended to have relatively simple arbitration provisions, in which the SoS appoints the arbitrator and the remit of arbitration is limited. Sch 15 in these dDCOs provide more substantial and complex provisions for arbitration than have been typical, including processes that provide for the appointment of an arbitrator other than by the SoS and, amongst other outcomes, that could refer	The Applicants intend to delete paragraph (2) of Article 37 of the <b>draft DCO</b> which refers to disputes with the Secretary of State and the appointment of an arbitrator by a person other than the Secretary of State.  This is to make it clear that the arbitration provisions are not intended to apply to decisions of the Secretary of State or of other statutory authorities such as the Marine Management Organisation.  This amendment will be reflected in the next version of the draft DCO to be submitted at Deadline 3.	The MMO welcomes the removal of Article 37 (2) and will review the updated DCO at Deadline 3.  The MMO requests that the following wording is included in Article 37 to make it clear that the arbitration provisions do not apply to the MMO:  (2) Any matter for which the consent or approval of the Secretary of State or the Marine Management Organisation is required under any provision of this Order shall not be subject to arbitration.	The Applicants have included the wording suggested by the MMO in the updated draft DCO submitted at Deadline 3 (document reference 3.1).



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		<p>the decisions of the SoS and the MMO to arbitration.</p> <p>The ExA for the Norfolk Vanguard Offshore Wind Farm examined what commenced as a similar set of arbitration provisions to the ones included here. Their Recommendation Report<sup>4</sup> at Chapter 9.4 records a process of simplification during that examination, including the removal of provisions subjecting the SoS and the MMO to arbitration. In taking this approach, the ExA there observed that it had not been provided with evidence of the specific harms that had been occasioned by MMO decision-making and that justified the imposition of an arbitration mechanism that was not available for the beneficiaries of other equivalent DMLs. The SoS accepted the ExA's approach, but additionally formed the view that an arbitrator should not be appointed by a person other than the SoS. The decision letter<sup>5</sup> identifies changes to the made Order as a consequence.</p> <p>The same issues (complex arbitration provisions without a clear justification) were analysed by the ExA in the Thanet Extension Offshore Wind Farm Recommendation Report<sup>6</sup>, from paragraph 11.4.4. In that case, because the SoS decided not to make the DCO, the decision letter does not directly consider the ExA's recommended approach to arbitration. However, the Applicant is referred to the reasoning there and asked to</p>		<p>This has been included in the Norfolk Vanguard Offshore Windfarm Development Consent Order and the MMO believes this should be standard going forward for all DCO Applications.</p>	



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		<p>respond to it in the following terms:</p> <p>a) In the light of the decision in Norfolk Vanguard and the ExA reasoning in Thanet Extension, is there an evidence base that supports arbitration provisions that subject decisions by relevant statutory authorities (specifically the MMO and or the SoS) to arbitration?</p> <p>b) Is there an evidence base that supports the appointment of an arbitrator by a person other than the SoS?</p>			
1.5.19	The Applicant	<p>1 2 <b>Schedule 15 – Arbitration</b> Paragraph 6(3) provides for costs to follow the event and Paragraph 7 provides for confidentiality.</p> <p>a) What is the justification for imposing costs on regulatory bodies who may be acting reasonably in relation to their statutory functions?</p> <p>b) What is the justification for seeking confidentiality where matters of public interest and environmental protection are involved, and can it</p>	It is not intended for the arbitration provisions to apply to regulatory bodies.	The MMO welcomes this clarification by the Applicant.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		lawfully be delivered in circumstances where transparency is provided for (eg as a consequence of the UK's signature to the Aarhus Convention)?			
1.5.20	The Applicant	1 2 <b>Explanatory Note</b> Please confirm that the reference to Art 37 (certification of plans etc) should be to Art 36.	The Applicants confirm that the reference in the Explanatory Note to Art 37 (certification of plans etc.) should be "Art 36 (certification of plans etc.)". This will be amended in the next iteration of the dDCO which will be submitted at Deadline 3 pursuant to the Examination timetables.	This comment has been noted by the MMO.	No further comment.
1.5.21	The Applicant	1 2 <b>Matters not Addressed and Unsecured: Monitoring Schedules</b> The Application documents sets do not include a Schedule of Monitoring. The ExA considers that a Monitoring Schedule is a valuable document: such schedules record all monitoring commitments entered into by the Applicant and, if proposed to be certified under Arts 36, ensures that relevant monitoring commitments are secured and are easily located during construction, operation or decommissioning as necessary. <ul style="list-style-type: none"> <li>The Applicant is requested to submit a Schedule of Monitoring for both Applications drafted as a document for certification and to amend draft Art 36 accordingly.</li> </ul>	The Applicants consider that these matters are covered in the In-Principle Monitoring Plan which will be certified under Article 36. An updated version of this document will be submitted at Deadline 3. The Applicants do not consider a separate monitoring schedule to be necessary.	The MMO notes previous DCOs do not have a certified Monitoring Schedule however agrees with the Applicant that this should all be covered within the In Principle Monitoring Plan.  The MMO has raised further comments on Article 36 and Certified documents in Section 2.4 of this document.	No further comment.
1.5.21	The Applicant	<b>Matters Unsecured: Mitigation Schedules</b> The ExA consider that Mitigation Schedules should be certified under Art 36, ensuring that relevant commitments are secured and are easily located during construction, operation or decommissioning as necessary. <ul style="list-style-type: none"> <li>The Applicant is requested to amend draft Art 36 accordingly.</li> </ul>	The Schedules of Mitigation are signposting documents which set out the mitigation measures proposed within the ES and how such measures are secured, they do not secure any mitigation measures.  All mitigation is captured within the DCO requirements, DML conditions or in the plans and documents secured within the draft DCO.  It is therefore not considered to be necessary or appropriate for the Schedules of Mitigation to be listed as certified documents within Article 36 of the draft DCO.	The MMO notes previous DCOs do not have a certified Mitigation Schedule. The MMO will review the updated outline documents at deadline 3 to ensure any potential mitigation is covered. The MMO is discussing this further internally and with the Applicant will provide and update at Deadline 4.  The MMO has raised further comments on Article 36 and	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
				Certified documents in this document.	

## 2.1.6 Historic Environment

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.8 Historic Environment</b>					
1.8.1	The Applicant	<p><b>1 2</b></p> <p><b>Historic Environment Policy Balance</b> Paragraph 51 of Chapter 24 of the ESs [APP-072,] contains a precis of Table 24-4 and aims to summarise Government policy. This states that government guidance provides a framework which, amongst other items:</p> <p><i>“places weight on the conservation of designated heritage assets (which include world heritage sites, scheduled monuments, listed buildings, protected wreck sites, registered parks and gardens, registered battlefields or conservation areas), with any anticipated substantial harm weighed against the public benefits of the proposal”.</i></p> <p>However, NPS EN-1 states:</p> <p><i>“Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development”</i> (para 5.8.15)</p> <p>and that:</p> <p><i>“Substantial harm to or loss of a grade II listed building park or garden should be exceptional”,</i> with substantial harm to or loss of designated assets of the highest significance, including grade II*listed buildings considered as wholly exceptional (para 5.8.14).</p> <p>The National Planning Policy Framework (NPPF) states that:</p>	<p>a) The Applicants agree with the ExA's summary of the Government policy and guidance that is set out in NPPF and NPS EN-1. However, the Applicants would highlight that paragraph 5 of the NPPF states <i>“The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework”.</i> The Applicants therefore note the emphasis in the NPPF on meeting the specific tests of the NPS. Further details on how the Projects meet these tests is provided in <b>Table 6.19</b> of the <b>Development Consent and Planning Statement</b> (APP-579).</p> <p>b) The Applicants do not agree with the interpretation as set out in the question, given the reliance in that summary on the specific NPPF policy which, as stated above, does not apply to NSIPs. In particular the policy of “great weight” set out in paragraph 193 of the NPPF is not reflected in paragraph 5.8.15 of NPS EN-1. Section 104 of the Planning Act 2008 gives statutory weight to the NPS policy and where there are differences the NPS specific policy should be applied. Notwithstanding the requirement to give primacy to NPS policies, there are aspects of the NPPF which are likely to be relevant and material. Subsequent questions discuss aspects of impact on Listed buildings. It is important to note that the Statutory test for considering such impacts is also slightly different from that applying in the standard Planning context. The test of having “special regard” as set out in section 66 of the Planning (Listed Buildings and Conservation areas) Act 1990 is reduced to having “regard” through regulation 3 of the Infrastructure Planning (Decisions) regulations 2010. The</p>	<p>This comment has been noted by the MMO.</p> <p>The MMO has provided comments on Historic England's written response in section 1.1. The MMO supports Historic England in all Offshore Archaeology matters.</p>	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		<p><i>"When considering the impact of a proposed development on the significance of a designated heritage asset, <b>great weight</b> should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any harm amounts to substantial harm, total loss or less than substantial harm to its significance."</i> [ExA's emphasis, para 193]</p> <p>The NPPF goes on to state that any harm to or loss the significance of a designated heritage asset (including from development within its setting) should require clear and convincing justification (para 194), that substantial harm requires substantial public benefits that outweigh that harm (para 195) and that less than substantial harm should be weighed against the public benefits of the proposal (para 196).</p> <p>a) Do you agree with the ExA's summary of Government policy and guidance above?</p> <p>b) If so, do you agree that a more correct interpretation of Government guidance for the ES would be that guidance places great weight on the conservation of designated heritage assets, and that any anticipated substantial harm should be outweighed by substantial public benefits and that substantial harm to or loss of a grade II listed building should be exceptional, or to a grade II*listed building considered as wholly exceptional?</p> <p>c) And having reached this position, please review the assessments of impacts on relevant historic built assets, ensuring that the appropriate policy tests are applied.</p> <p>d) If you do not agree with the ExAs' policy summary above, please provide reasoned justification as to</p>	<p>different legal and policy tests are important to the decision making context.</p> <p>The Applicants assessment in <b>Chapter 24 Archaeology and Cultural Heritage</b> (APP-072) notes the potential impact on landscape character and historical setting of the Church of St Mary. This is reflected by the determination of low adverse impact magnitude. It is therefore the Applicants' view that there is no anticipated substantial harm as worded in the NPS.</p> <p>c) The Applicants note that 'Harm' as used in NPS and NPPF (including the concept of 'substantial harm') is measured by impact magnitude as opposed to significance of effect. It is therefore the Applicants view that it is findings on impact magnitude that feed directly into the policy tests provided by both the NPS and NPPF.</p> <p>The distinction between the NPS and NPPF is immaterial to the Applicants' assessments. It does not affect the Applicants' assessments of impact magnitude as these are based on an understanding of the heritage significance of an asset and an analysis of how this would be affected by the Projects.</p> <p>d) The Applicants do not agree entirely with the ExA's policy summary, see answer to a) above</p>		



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		why not.			

## 2.1.7 Marine and Coastal Physical Processes

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.11 Marine and Coastal Physical Processes</b>					
1.11.1	The Applicant	<p><b>UK Climate projections and coastal erosion</b></p> <p>The ExA notes that Appendix 4.6 of the ES [APP-447] was produced in April 2018. The UK Climate Projections 2018 (UCKP18) was published on 26 November 2018</p> <ul style="list-style-type: none"> <li>Do the projections have any implications for the conclusions drawn in Appendix 4.6 or ES Chapter 4 [APP-052] or on the risk of the development being affected by coastal change?</li> </ul>	<p>The Applicants' assessment in <b>Appendix 4.6 Coastal processes and Landfall Site Selection</b> (APP-447) adopted conservative factors for future coastal change, based upon guidance that was available at the time.</p> <p>The Applicants have undertaken a comparison of the rates of sea level rise used in the assessment against the UKCP18 data and considers the assessment to be robust.</p> <p>Whilst the values used are slightly lower than UKCP18 over shorter timescales (approximately 50 years), they are higher than UKCP18 values for the longer term (50 years+) for RCP2.6 (50<sup>th</sup> and 95<sup>th</sup> percentile values), RCP4.5 (50<sup>th</sup> and 95<sup>th</sup> percentile values) and RCP8.5 (50<sup>th</sup> percentile value)<sup>6</sup>.</p> <p>The values used are slightly lower than the RCP8.5 95<sup>th</sup> percentile value over the longer term but this is considered an unlikely high-end outcome.</p>	This comment has been noted by the MMO.	No further comment.
1.11.2	The Applicant	<p><b>Mitigation and remediation at landfall</b></p> <p>a) In the event that cables were to become exposed due to coastal erosion what mitigation or remediation measures may be required? How would this be monitored?</p> <p>Paragraph 5.510 of (EN-1) seeks to ensure that proposed developments will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period.</p>	<p>a) Future trends in coastal erosion has been assessed in <b>Appendix 4.6 Coastal processes and Landfall Site Selection</b> (APP-447).</p> <p>The study quantified appropriate set back distances from the cliff line depending on where a future landfall location is chosen. This was proposed on a conservative precautionary approach. The Applicants have committed to setting back the landfall transition bays to the potential 100-year erosion prediction line to ensure the integrity of the cliff is not compromised and to allow for natural coastal erosion (<b>section 6.6.2 of Chapter 6 Project Description</b> (APP-054)). It is therefore the Applicants' view that the cables will not become exposed from coastal erosion.</p> <p>A commitment has also been made to install the export cable at the landfall using trenchless techniques, thus minimising disturbance to the cliffs and SSSI. Monitoring of the landfall will be undertaken as set out in <b>section 3 of the Outline Landfall Construction Method Statement</b> (ExA.AS-2.D1.V1), submitted at Deadline 1.</p>	This comment has been noted by the MMO. Please see comments in Section 1.5 of this document on the Outline Landfall Construction Method Statement.	See the Applicants' response to the MMO comments on the Outline Landfall Construction Method Statement (Points 12 to 14) in <b>section 1.1</b> .

<sup>6</sup> \*RCP2.6 and RCP8.5 are the low and high emission scenarios used, as in IPCC AR5.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
		b) How has the resilience to costal erosion during the decommissioning period been addressed?	b) The Applicant has committed to setting back the landfall transition bays to the potential 100-year erosion prediction line to allow for coastal erosion over the entire duration of the project including decommissioning ( <b>section 6.6.2 of Chapter 6 Project Description</b> (APP-054)). This has been informed by the technical study provided in <b>Appendix 4.6</b> (APP-447).		
1.11.3	The Applicant	<p><b>HDD at landfall</b></p> <p>Use of the horizontal directional drill (HDD) method to bring the offshore cables onshore is understood to reduce potential significant adverse impacts on coralline crag and the Lesiton to Aldeburgh SSSI</p> <p>a) Please identify, with reference to the Shoreline Management Plan (SMP) and the assessments in Appendix 4.6 where the parameters have been calculated and set for the length, depth and angles of drilling that are compatible with the assessments</p> <p>b) Does the Applicant intend on submitting a draft landfall construction method statement into the Examination and if so when?</p>	<p>The Applicants intend to use a trenchless technique solution at the landfall. HDD is an example of a trenchless technique and is the technique that formed the basis of the impact assessment. The Applicants refer to <b>sections 4 and 5</b> of the <b>Outline Landfall Construction Method Statement</b> (ExA.AS-2.D1.V1), submitted at Deadline 1 which provide outline information regarding the HDD design and methodology respectively. Detailed parameters such as length, depth and angles of the drilling will be subject to detailed design and will be provided in the final Landfall Construction Method Statement which is secured under Requirement 13 of the <b>draft DCO</b> (APP-023).</p> <p>The infrastructure associated with the HDD at landfall has been appropriately sited based on the Applicants' identification of the potential 100-year erosion prediction line which allows for coastal erosion over the entire duration of the project (<b>Appendix 4.6</b> (APP-447)). The 100-year erosion prediction line is based on the current management measures of the SMP and additional analysis of the characteristics and behaviour of the shoreline as presented in <b>section 2 of Appendix 4.6</b> (APP-447).</p> <p>The transition bays would be installed with a minimum setback distance of 85m from the cliff top to ensure the integrity of the cliff is not compromised and to allow for natural coastal erosion. The boundary of associated Work No. 8 reflects this set back distance.</p> <p>b) The Applicants have provided an <b>Outline Landfall Construction Method Statement</b> (ExA.AS-2.D1.V1), at Deadline 1.</p>	This comment has been noted by the MMO. Please see comments in Section 1.5 of this document on the Outline Landfall Construction Method Statement.	See the Applicants' response to the MMO comments on the Outline Landfall Construction Method Statement (Points 12 to 14) in <b>section 1.1</b> .
1.11.4	The Applicant	<p><b>Geological integrity and stability at landfall</b></p> <p>What site investigations have taken place to ensure that the geological integrity and stability the shoreline could withstand vibrations or fracturing as a result of HDD or during operation and what are the results?</p>	<p>The Applicants note the concerns and sensitivities, particularly expressed by local residents, in relation to the perceived potential to de-stabilise the existing cliffs.</p> <p>The siting of the landfall has been carefully considered. Review of published and publicly available geological and geotechnical information has been undertaken as part of a desk-based assessment and to inform the development of the outline designs presented in the Applications.</p> <p>Intrusive site investigations have not been undertaken, however these will be undertaken as part of the pre-construction detailed</p>	This comment has been noted by the MMO. Please see comments in Section 1.5 of this document on the Outline Landfall Construction Method Statement.	See the Applicants' response to the MMO comments on the Outline Landfall Construction Method Statement (Points 12 to 14) in <b>section 1.1</b> .



ExA. Question Ref.	Question addressed to		ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
				<p>design to allow full assessment of all relevant geotechnical risks and to enable detailed design of the HDDs.</p> <p>Requirement 13 of the DCO requires that a landfall construction method statement is submitted to and approved by the relevant planning authority prior to any landfall works being carried out. This will be in accordance with the <b>Outline Landfall Construction Method Statement</b> (ExA.AS-2.D1.V1), which has been submitted at Deadline 1.</p> <p>The outline landfall construction method statement includes provisions for the following measures to protect the integrity of the cliff:</p> <ul style="list-style-type: none"> <li>• The transition bay will be located a setback distance of at least 85m from the current mapped top of the cliff line. The outline design of the HDD is approximately 10m below the beach level of the cliff line even at the maximum predicted 100 year erosion extent. This is shown indicatively in <b>Appendix 11</b> (ExA.WQ-1.A11.D1.V1) . The depth of the HDD will be deeper below the toe of the existing cliffs, potentially between 15m and 20m below the toe level. This is to ensure the integrity of the cliff is not compromised and to account for natural coastal erosion during the operational life of the Projects.</li> <li>• The British Geological Survey Geological Map Sheet 191 (solid and drift) 1:50,000 shows a thin strip of Lowestoft Till formation outcropping along the cliff line to the north of Thorpeness. The anticipated thickness (depth) and geometry of the superficial deposits is such that directional drilling is expected to pass through these and be within the underlying bedrock (Crag Group) where the HDD passes under the current cliff line.</li> <li>• HDD uses rotary rather than percussive drilling and only minor vibrations are expected. The detailed design will be developed to take into account the anticipated levels of vibration from the proposed drilling equipment to ensure the integrity of the cliff.</li> <li>• Vibration monitoring will be undertaken in the vicinity of the cliffs as part of the site investigation works to gather background data on vibration levels. This data will be examined to establish a suitable vibration limit which will be maintained during the HDD works to ensure the integrity of the cliffs are maintained.</li> <li>• Vibration monitoring will be undertaken in the vicinity of the cliffs for the duration of the HDD works. A system will be set up to pause drilling operations if the set vibration limits are exceeded.</li> </ul> <p>HDD has been used successfully in similar geology comprising superficial Lowestoft Till formation deposits and underlying Crag</p>		





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response	MMO Comment	Applicants' Response to MMO Comment
			<p>Group bedrock, with nearby examples of HDD for cable landfalls for both the Greater Gabbard Offshore Windfarm and the Galloper Offshore Windfarm south of Sizewell village, both approximately 2.5km north of Thorpeness. These HDDs were much shallower and shorter. They extended from agricultural fields, under the cliff line and exited on the beach. The Applicants are not aware of any issues relating to adverse impacts on the cliff line.</p> <p>There were some post installation issues with exposure of transmission cables on the shore at Sizewell, these occurred beyond where the HDDs terminated and are unrelated to the actual HDDs. The proposal for the Projects is to pass beneath the shoreline at depth and exit well offshore, avoiding similar burial issues.</p>		
1.11.6	The Applicant	1 2 <b>Preferred solutions at landfall</b> ES Chapter 4 states that the preferred solution is to HDD from onshore landfall to south of the coralline crag, potentially including HDD under a small section of the southern extent of coralline crag. Further geological and engineering surveys will lead to a final installation location.  What are the implications if the preferred solution is not achievable?	<p>HDD is a commonly used technique and has been employed for many projects including East Anglia ONE/THREE, Greater Gabbard, Galloper, Moray East, Sheringham Shoal and Dudgeon. These have been undertaken in a variety of geologies and distances.</p> <p>The Applicants are of the view that HDD is achievable for the Projects. The onshore works area allows for up to four HDD bores. The works area offshore is sufficiently wide to enable the HDD punch out to be appropriately located to avoid the Coralline Crag. The final design of the HDD operation (i.e. angle, depth and exit location) will reflect the results of the site investigation works. This information will be provided in the final Landfall Construction Method Statement, secured under Requirement 13 of the <b>draft DCO</b> (APP-023).</p> <p>Alternative trenchless techniques would also fit within the impact assessment envelope adopted for the EIA.</p>	This comment has been noted by the MMO.	No further comment.
1.11.7	The Applicant	1 2 <b>Landfall compound, cable entry point, cable exit point, long HDD, coastal erosion, coralline crag and SPA/SSSI boundary</b>  Please provide plan view(s) of the proposed HDD working area(s) including any temporary landfall compound, cable entry point, cable exit point, long HDD, 100 year predicted shoreline, SSSI/SPA boundary and extent of coralline crag	<p>The Applicants refer to <b>Appendix 10</b> (ExA.WQ-1.A10.D1.V1) of this document. Note that the HDD temporary working area described in <b>section 6.6.2.1.3 of Chapter 6 Project Description</b> (APP-054) will contain the HDD entry compounds. The eastern boundary of Work No. 8 is set at least 85m from the cliff and the potential 100-year erosion line to ensure the integrity of the cliff is not compromised and to allow for natural coastal erosion.</p>	This comment has been noted by the MMO.	No further comment.
1.11.9	Maritime and Coastguard Agency	1 2 <b>Coastal erosion predictions</b>  Do you agree with the conclusions on the extent of future coastal erosion set out in Appendix 4.6 [APP-447]?	No response.	The MMO has no further comments to add.	No further comment.



## 2.1.8 Marine Effects

ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
<b>1.12 Marine Effects</b>					
1.12.1	Trinity House	<p><b>1</b> <b>2</b> <b>Effects on navigation, lighthouses, buoys and beacons</b></p> <p>The Trinity House RRs [RR-029] identify the likelihood of further comments. Please ensure that any substantive observations on navigational risk or infrastructure are made in your WRs at Deadline 1.</p> <p>Are any substantive amendments to the proposed development sought and if so why are they required and how should they be secured?</p> <p>Please provide best progress on and justifications for any amended dDCO drafting sought (see draft SoCG [AS-053] (ID TH-105)).</p>	<p>As agreed with Trinity House (TH) through the SoCG the Applicants will be submitting an updated draft DCO at Deadline 3 which reflects amendments to the draft DCO agreed between Trinity House and the Applicants.</p> <p><b>Trinity House</b> remain at the position stated within the draft SoCG (AS-053) and are waiting to review an updated Draft DCO/DML to see what changes the applicant has made from our original suggestions and discussions. Trinity House are largely content with the document at this stage.</p> <p>The Applicant has stated the latest Draft DCO/DML will be available at deadline 3 and Trinity House will comment further once we have seen that document.</p>	This comment has been noted by the MMO.	No further comment.
1.12.2	Maritime and Coastguard Agency	<p><b>1</b> <b>2</b> <b>Effects on shipping and navigation, search and rescue</b></p> <p>The Maritime and Coastguard Agency RRs [RR-053] identify the potential for further comments and correspondence in response to the ExA's Rule 9 Letter of 21 May 2020 [AS-058] does not set out or rule out further comments. Please ensure that any substantive observations on shipping, navigational risk or search and rescue are made in your WRs at Deadline 1.</p> <ul style="list-style-type: none"> <li>Please provide best progress on and justifications for any amended dDCO drafting sought (see draft SoCG [AS-051] (ID MMO-005)).</li> </ul>	<p>As agreed with the MCA through the SoCG the Applicants will be submitting an updated draft DCO at Deadline 3 which reflects amendments to the draft DCO agreed between MCA and the Applicants.</p> <p><b>MCA</b></p> <p>Based on the agreements reached through the Statement of Common Ground (SoCG) to date, the MCA has no further substantive observations on shipping, navigational risk or search and rescue since our Relevant Representation (RR).</p> <p>This is on the understanding that our requirements are suitably addressed through the Development Consent Order (DCO) and its Deemed Marine Licence (DML). To date, there are a number of items to be addressed in the draft DCO/DML and we have not yet seen the revised version to be satisfied that the impact on shipping and navigation has been addressed through suitably worded conditions of consent.</p> <p>We understand the revised draft DCO/DML will be submitted at deadline 3.</p> <p>The MCA would like to add that it supports the MMO's position with regards to Arbitration.</p>	The MMO welcomes MCA's support on arbitration. Otherwise, MMO notes MCA's response and welcomes that no further substantive observations have been raised in their discussions with the Applicant.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
1.12.3	Maritime and Coastguard Agency	1 2 <b>Application of Marine Guidance Notes and related documents</b> What (if any) are the as yet undocumented implications of the proposed development arising from: <ul style="list-style-type: none"> <li>a) Marine Guidance Note (MGN) [543] Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response and its annexes;</li> <li>b) Marine Guidance Note (MGN) [372] Safety of Navigation; Guidance to Mariners operating in the vicinity of UK OREIs; and</li> <li>c) Methodology for Assessing the Marine Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations?</li> <li>d) Please document any substantive amendments to the proposed development that you seek to respond to these documents, identify why are they required and how these should be secured?</li> </ul>	<b>MCA</b> <p>The MCA expects all OREIs to be assessed in accordance with MGN 543 and its annexes. There is currently one outstanding aspect on MGN 543 regarding the submission of Hydrographic Survey data to the MCA. However, this is being addressed between MCA and the applicant as per SoCG and we expect to close this by deadline 3.</p> <p>The other outstanding aspect is ensuring the MCA's requirements for shipping and navigation are adequately secured through condition of consent in the DCO/DML.</p>	This comment has been noted by the MMO.	No further comment.
1.12.4	Maritime and Coastguard Agency, Trinity House	2 <b>Ro-ro operations</b> <p>Do you have any observations on the position of the CLdN Group on navigational safety effects for ro-ro operations [RR-026] or the Applicants' responses to those [AS-036]?</p>	<b>MCA</b> <p>The MCA has considered RR-026 and the Applicants' responses to those comments [AS-036]. The MCA agrees with the comments made by CLdN and we are content with the risk mitigation measures the applicant is putting in place. However, we are yet to see the revised DCO/DML incorporating all of our requirements, and to see how the risk mitigation measures have been secured through the wording in the DCO/DML.</p> <p>The MCA would like to ensure that any route deviation or impact on Ro-Ro ferries is adequately addressed through consultation with those affected and considered in the NRA. We understand from the RR from CLdN Group that they have been consulted about the project by the applicant and they consider that there should be no impact on its operations. We believe they are seeking reassurance that the mitigation measures identified, to bring the risk to ALARP, are suitably</p>	This comment has been noted by the MMO.	No further comment.



ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' / Interested Party Response	MMO Comment	Applicants' Response to MMO Comment
1.12.5	Maritime and Coastguard Agency, Trinity House	<p><b>1</b></p> <p><b>Individual project effects: shipping and navigation</b></p> <p>Please identify whether there are any outstanding shipping and navigation effects that bear only on the proposed development for East Anglia ONE North?</p>	<p>The SoCG with MCA and TH submitted on the 11<sup>th</sup> of June is all agreed, with the exception of data checks on the hydrographic survey data collected to inform the assessment and agreement statements relating to the draft DCO; As recorded within the SoCG submitted on the 11<sup>th</sup> June 2020, initial checks of the data have been undertaken, which did not suggest significant issues, however, full checks are still to be completed after being put on hold due to Covid-19. The Applicants understand that the MCA response to this question will confirm this and the timeline for completion of those checks.</p> <p>With regard to the draft DCO, the Applicant, Trinity House and the MCA have agreed changes to be incorporated into the updated draft DCO which will be submitted into the Examination at Deadline 3. Agreement over the draft DCO is therefore subject to the MCA and TH reviewing the updated draft DCO to be submitted at Deadline 3 to ensure that agreed changes have been incorporated. An updated draft SoCG for the MCA and TH will not be submitted at Deadline 1 given that there have been no changes since the one submitted on the 11<sup>th</sup> of June.</p> <p><b>MCA</b></p> <p>There are no issues from MCA's perspective that we wish to raise. Stakeholder agreement in the hazard log and risk controls measures, as part of the formal safety assessment outlined in MGN 543, is a key requirement for the MCA. We are not aware of any significant issues raised that bear only on the proposed development for East Anglia ONE North, which MCA needs to highlight here.</p> <p><b>Trinity House</b></p> <p>Trinity House are not currently aware of any outstanding shipping and navigation effects to be addressed by East Anglia One North.</p>	This comment has been noted by the MMO.	No further comment.

### 2.1.9 Seascape Landscape and Visual Amenity

ExA. Question Ref.	Question addressed to	ExA. Question	NE Response	MMO Comment on Response	Applicants' Response to MMO Comment
<b>1.16 Seascape, Landscape and Visual Amenity</b>					
1.16.3	Natural England	<p><b>1 2</b></p> <p><b>Visual effects of turbines</b></p> <p>Detailed analysis of the visible height of offshore wind turbines is provided by yourselves to the ExAs ([RR-059], Appendices E, Section 2).</p> <p>The ExA also note the detailed responses of the Applicants to this analysis in their response to the</p>	<p>Natural England</p> <p>Natural England has provided further advice at Deadline 1 response Appendix E1b on Seascape and Landscape Visual Impact Assessment (SLVIA).</p>	On review of Appendix E1b submitted by Natural England at deadline 1, the MMO notes there is potential tension between mitigation measures for ornithology matters and for seascape matters. The MMO will maintain a watching brief	No further comment.

ExA. Question Ref.	Question addressed to	ExA. Question	NE Response	MMO Comment on Response	Applicants' Response to MMO Comment
		<p>RRs [AS-036] and their view that there are limitations to the analysis presented and that the apparent height of the Project 300m turbines will only be greater than that of the existing offshore windfarms in views from northern parts of the seascape setting of the AONB.</p> <ul style="list-style-type: none"> <li>Respond to this analysis of your comments, should you wish to do so</li> </ul>		<p>on this issue, as any mitigation is likely to be conditioned within the DML.</p>	