



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

The Applicant's Responses to the Examining Authority's Fourth Written Questions

Revision A

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July 2023

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1 Applicant's Comments on Responses to Fourth Written Questions

1. Following the issue of the Fourth Written Questions by the Examining Authority (ExA) on 29th June 2023 to Equinor New Energy Limited (the Applicant) and other Interested Parties, the Applicant has subsequently responded to each of those relevant questions. Details of the Applicant's responses are set out within this document in the subsequent sections below.

Table 1 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.1

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.1 General and Cross-topic Questions			
Q4.1.1 Planning Policy			
No further questions in this section at this stage.			
Q4.1.2 Planning Permissions			
No further questions in this section at this stage.			
Q4.1.3 Legislative Framework			
No further questions in this section at this stage.			
Q4.1.4 Miscellaneous			
Q4.1.4.1	Applicant Natural England Royal Society for the Protection of Birds Marine Management Organisation Historic England Norfolk County Council National Trust National Highways Broadland District Council	Statements of Common Ground a) Applicant, submit final signed SoCG with electronic signatures at D8. b) Relevant parties, submit at D8 your confirmation that the final signed SoCG submitted by the Applicant is the version agreed with you. You may do so, by attaching to your submission the copy of the SoCG that is agreed with you.	A) Please refer to the Statement of Commonality (Revision G) [document reference 12.45], which provides the most recent update on the progress of Statements of Common Ground (SoCGs). A final signed SoCG has been submitted for East of England Ambulance Service Trust at Deadline 3 [REP3-116]. The Applicant anticipates that final signed SoCGs will be submitted with the following stakeholders by Deadline 8, although some will be submitted in advance at Deadline 7:

PINS Question Number	Question is addressed to	Question	Applicant Response
	Environment Agency North Norfolk District Council Perenco Norfolk Wildlife Trust South Norfolk District Council Anglian Water National Farmers union Chamber of Shipping Marine Conservation Authority Trinity House Norwich Airport Eastern Inshore Fisheries and Conservation Authority Ministry of Defence		

Table 2 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.2

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.2. Alternatives and need			
Q4.2.1 Selection of Landfall Site			
No further questions under this topic at this stage.			
Q4.2.2 Selection of Substation Site			
No further questions under this topic at this stage.			
Q4.2.3 Viability of the grid connection and progress with other licences			
No further questions under this topic at this stage.			
Q4.2.4 The Need for this type of Energy Infrastructure, and specifically for the Proposed Development			
No further questions under this topic at this stage.			

Table 3 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.3

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.3. Benthic ecology, Intertidal, Subtidal and Coastal effects			
Q4.3.1 Effects on Marine Life and Benthic Habitats			
Q4.3.1.1	Applicant Natural England	<p>Response to NE Risk and Issue Log</p> <p>The NE issue and risk log [REP5-093] indicates that there are many points relating to coastal and physical processes, the MCZ and Benthic Ecology that Natural England still has concerns about, identified as red and amber in the log. However, the Applicant has responded to many of these points, particularly in the Applicant's comments on Natural England's Deadline 2 Submissions [REP3-107].</p> <ul style="list-style-type: none"> a) In light of the Applicant's responses including [REP3-107], NE, submit an updated Issue and Risk Log addressing all the responses submitted by the Applicant, and if there is no change to the status, explain why. Please expand on any outstanding concerns, in addition to explaining why there has been no change. b) Applicant, provide an updated response to the most recent version of the Risk and Issue Log Deadline 5 Update [REP5-093], with the aim to resolve any remaining risks and issues remaining with NE. 	<p>The Applicant will submit at Deadline 8 updated responses to the Risk and Issue log that Natural England will submit at Deadline 7.</p>
Q4.3.1.2	Marine Management Organisation Natural England Applicant	<p>Electro-Magnetic Fields</p> <p>The MMO [REP5-080] has stated that burial to 1.5m+ should prevent adverse impacts to benthic ecology receptors via electromagnetic field and/or heating. However, the Cable Burial Risk Assessment [APP-293] concludes with a recommendation that there should be a target depth of lowering of 1.0 m, with a proposed minimum of 0.6 m. What</p>	<p>As stated in ES Chapter 8 Benthic Ecology [APP-094], EMF was scoped out of the assessment in agreement with advice from Natural England and the MMO, as per the scoping response. As such the Applicant is unclear why EMF is being raised here with respect to benthic ecology.</p> <p>Notwithstanding this, it is noted that there may be a trade-off between minimising any EMF effects and impacts on the</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>would be the consequences to benthic ecology where the depth of buried cable is less than 1m?</p>	<p>MCZ relating to burial depth. In this case, as has been discussed at length elsewhere and as set out in the Outline Cromer Shoal Chalk Beds (CSCB) Marine Conservation Zone (MCZ) Cable Specification, Installation and Monitoring Plan (CSIMP) (Revision B) [document reference 9.7], the Applicant has noted the possibility of accepting a shallower minimum burial depth of 0.6m as a means of reducing the likelihood of needing to use external cable protection.</p>
Q4.3.1.3	<p>Natural England Marine Management Organisation Applicant</p>	<p>Outline Benthic Mitigation Plan/Scheme</p> <p>The Applicant has stated that "Details of the benthic mitigation that applies are provided in Tables 8-3 and 8-4 of the ES [APP-094]. No other forms of mitigation are proposed by the Applicant".</p> <p>a) For MMO and NE, does the proposed mitigation within these ES tables sufficiently cover the types and form of mitigation that would likely form part of a final mitigation scheme for any benthic habitats, or is there further mitigation that should be incorporated?</p> <p>b) Applicant, explain with reasons what further mitigation might be needed in a final mitigation scheme for any benthic habitats.</p>	<p>Condition 13(1)(i) of Schedules 10 and 11 and Condition 12(1)(j) of Schedules 12 and 13 of the draft DCO (Revision J) [document reference 3.1] include provision for a mitigation scheme for any benthic habitats of conservation, ecological and/or economic importance constituting Annex I reef habitats identified by pre-construction surveys.</p> <p>With respect to how this mitigation will be implemented the following apply:</p> <ul style="list-style-type: none"> • Pre-construction surveys are secured by Condition 18(4)(a) of Schedules 10 and 11 and Condition 17(4)(a) of Schedules 12 and 13. • The corresponding monitoring requirements for benthic ecology are also included in the Offshore IPMP Revision C [document reference 9.5]. Specifically, Table 5 explains how the pre-construction monitoring will be used to determine the location and extent of any sensitive benthic features (i.e. <i>Sabellaria</i> reef and piddocks) to inform the appropriate mitigation (avoidance through micrositing) if found. • Within the MCZ the Outline CSCB MCZ CSIMP (Revision B) [document reference 9.7] also applies. Section 1.6 of the Outline CSIMP provides a

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>comprehensive account of the mitigation that will be applied, as a requirement of the final CSIMP, including:</p> <ul style="list-style-type: none"> ○ Embedded mitigation (Section 1.6.1); ○ Mitigation through micro-siting (Section 1.6.2); ○ Cable installation and burial mitigation (Section 1.6.3); ○ Cable protection mitigation (Section 1.6.4); ○ Operation and maintenance mitigation (Section 1.6.5); and ○ Section 1.6.6 (Table 4) provides a summary of export cable mitigation commitments in the MCZ. <p>In addition the Applicant has also now committed to locating the offshore exit pit location in the Weybourne Channel to avoid any impact on the subtidal chalk feature. This is secured through the updated Outline CSCB MCZ CSIMP (Revision B) [document reference 9.7], submitted at Deadline 7.</p> <p>N.B. the Applicant will also submit an updated Schedule of Mitigation and Mitigation Routemap [APP-282] at Deadline 8 to ensure that all of the mitigation, including that introduced through examination, has been incorporated.</p>
Q4.3.1.4	Applicant	<p>In-Principle Monitoring Plan</p> <p>Respond in full to [REP5-090], explaining your position and providing evidence or amendments to the document where possible to attempt to overcome NE's concerns.</p>	<p>The Applicant has updated the Offshore IPMP (Revision C) [document reference 9.5] at Deadline 7 to address NE's concerns. This includes point by point responses to the NE comments.</p>
<p>Q4.3.2 Impact on subtidal chalk features</p>			

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.3.2.1	Applicant	<p>Monitoring of cables and actions to address exposed cables</p> <ul style="list-style-type: none"> a) What types or methods of monitoring would be used to monitor cables. b) Outline typical actions if a cable becomes exposed and is identified through monitoring c) Where is this set out and how is it secured? 	<p>N.B it is assumed that Section 4.3.2 is only relevant to where the export cables pass through the CSCB MCZ, of which the subtidal chalk is a feature.</p> <p>a) and c)</p> <p>Monitoring of the exposure of cables is by geophysical survey, which is primarily undertaken for engineering purposes, as described in Section 1.6.1 of the Offshore IPMP (Revision C) [document reference 9.5]. Monitoring for engineering purposes is additional to that required for environmental purposes, although in practice there is often an overlap as data from one survey will be used to fulfil both engineering and environmental needs. Regardless, the requirement for post-construction geophysical surveys within the offshore export cable corridor is included in and secured by the Offshore IPMP and the relevant DML conditions (as discussed below).</p> <p>In response to DC1.8.1.1 concerning post-construction monitoring of the MCZ [REP5-051], the Applicant amended Condition 19(3) of Schedules 12 and 13 of the draft DCO to add 19(3)(f) as follows:</p> <p><i>“undertake monitoring of cables installed within the Cromer Shoal Chalk Beds MCZ in accordance with any monitoring required by the cable specification, installation and monitoring plan for the installation of cables within the Cromer Shoal Chalk Beds Marine Conservation Zone submitted in accordance with condition 12(1)(e).”</i></p> <p>Furthermore, Condition 19(5) of the same requires:</p> <p><i>“Following installation of cables, the cable monitoring plans required under conditions 12(1)(c) and 12(1)(e) must be updated with the results of the post installation surveys. The plans must be implemented until the authorised scheme is</i></p>

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			<p><i>decommissioned and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.</i>"</p> <p>b)</p> <p>The typical actions if a cable becomes exposed and is identified through monitoring are set out in Section 1.6.5.2 'Export Cable Remedial Reburial' of the Outline CSCB MCZ CSIMP (Revision B) [document reference 9.7]. For ease of reference this states:</p> <ul style="list-style-type: none"> • A protocol for undertaking reburial would be agreed with the MMO in consultation with Natural England, prior to construction. • Upon identifying a requirement to undertake reburial in the MCZ, the MMO and Natural England would be notified. The protocol for any subsequent reburial would then be discussed and agreed with the MMO and Natural England. • In order to limit the amount of external cable protection located within the MCZ as far as possible, the Applicant has made the commitment to attempt to rebury any cables which do become exposed within the MCZ during operation prior to the installation of any external cable protection. <p>c)</p> <p>See above</p>
Q4.3.2.2	Natural England	<p>Sub-cropping Chalk</p> <p>The Applicant is unable to confirm that the cable installation will not impact the sub- cropping chalk [REP5-049]. Do you have any objections if, at the end of Examination, the Applicant cannot confirm avoidance of impacts to sub-cropping chalk.</p>	-

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Q4.3.2.3	Applicant	<p>HDD Exit Location</p> <p>How would the exact position of the offshore HDD exit be secured within the dDCO?</p>	<p>The Applicant has updated the Outline CSCB MCZ CSIMP (Revision B) [document reference 9.7] at Deadline 7 to include the figure showing the area of the Weybourne channel within which it has committed to locating the offshore HDD exit. This secures the requirement for the HDD exit to be within this area. The exact position within this area will be confirmed through the detailed design process post-consent.</p>
Q4.3.3 Physical Processes, Coastal erosion effects and coastal processes			
Q4.3.3.1	Natural England	<p>Secondary Scour</p> <p>Whilst NE has stated that a Secondary Scour assessment would be best practice, what would be the consequences if this was not submitted by the end of Examination, and does the responses [REP3-107, for example] and the commitment to mitigation (such as the use of scour protection wherever scour will occur) [APP-092] made by the Applicant in their submissions address the possible impacts of secondary scour?</p>	<p>The Applicant refers to its comments on the NE response to Q3.3.3.2 in REP6-013, namely that where scour is likely to occur, scour protection would be installed to prevent scour. The Applicant also reiterates that it has committed through the Offshore IPMP (Revision C) [document reference 9.5] to monitor the extent of secondary scour (where scour protection is installed). As suggested in the Offshore IPMP, data from this monitoring could then be used to inform any future secondary scour assessment.</p>
Q4.3.3.2	Applicant	<p>Use of a barge to hold excavated sediment</p> <p>NE remains concerned about side-casting sediment excavated from the HDD offshore exit pits and have indicated a preference to barge storage. Does the Applicant agree to the use of a barge and how would this be secured?</p>	<p>The Applicant requires the option to side-cast sediment excavated from the HDD offshore exit pits to be retained until the detailed design stage and contractor selection has been completed. Information has been provided in response to Q2.3.2.1 c) in The Applicant's Responses to the Examining Authority's Second Written Questions [REP3-101] describes how the sediment removed from the Weybourne Channel will be predominantly cohesive (compacted over 1,000s of years) laminated sandy clay. Due to its cohesive nature, the sediment that is sidecast will be in the form of aggregated 'clasts' that will remain on the seabed for a relatively short period of time (approximately nine months) between sidecasting and backfill and thus, whilst the flow of tidal currents over the sidecast material would</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			gradually winnow (there would be a gradual disaggregation of the clasts into their constituent particle sizes) the topmost clasts, the loss of particulate material from the clasts through winnowing will be negligible.
Q4.3.3.3	Applicant	<p>Impact on sediment transport and suspended sediments</p> <p>In relation to sandbanks/waves, sediment deposition, sediment transport, and suspended sediments, NE has welcomed the inclusion of additional bathymetric data and seabed profiles for all six sites within the DOW array area. However, NE has stated in the Risk and Issue Log [REP5-095] that this data does not cover a long enough time period, post- completion of DOW, to support the conclusion that observed changes are driven by naturally occurring processes alone. Respond to NE comments and provide any more evidence available which could overcome these concerns.</p>	<p>The NE comment in the Risk and Issue Log [REP5-095] is noted. However, it is also the case that the Applicant has provided and used the best available evidence in the form of the latest DOW monitoring reports (this being a relatively unique situation whereby the existence of DOW has provided significant data and evidence that would not normally be available to inform the assessment i.e. the level of confidence in the SEP/DEP assessments is therefore relatively high). The DOW monitoring outcomes to date strongly suggest that the observed changes are indeed driven by naturally occurring processes alone. Where there is any remaining uncertainty on this conclusion the monitoring commitments included in the Offshore IPMP (Revision C) [document reference 9.5] are the appropriate means of addressing these (alongside any ongoing post-construction monitoring at DOW).</p>
Q4.3.3.4	Applicant Marine Management Organisation Natural England	<p>Micro-siting around sand waves and megaripples</p> <p>The ES [APP-092, Table 6-3] states that “Route selection and micro-siting of the cables will be used to avoid areas of sea bed that pose a significant challenge to their installation, including for example areas of sand waves and megaripples. This will minimise the requirement for sea bed preparation (levelling) and the associated sea bed disturbance.”</p> <p>a) Applicant, explain how this is secured through the dDCO?</p>	<p>This mitigation (ID 6.6) is included in the Schedule of Mitigation and Mitigation Routemap [APP-282] (which will be updated at Deadline 8 to ensure that all mitigation, including that introduced through examination, has been incorporated).</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		b) NE and MMO, are you satisfied that this mitigation would be secured based on the dDCO?	
Q4.3.3.5	Applicant	<p>Using sediment to backfill</p> <p>The ES [REP5-021, Paragraph 258] states that “All excavated sea bed sediments will be temporarily stored alongside the works location and within the export cable corridor (i.e. sidecast), prior to being backfilled after cable installation”. How is this secured through the dDCO, for cables and offshore HDD exit pit?</p>	The Applicant considers that this embedded mitigation does not need to be separately secured, as it is describing an inherent aspect of the project design and standard practice.
Q4.3.3.6	Applicant Marine Management Organisation	<p>Post-Consent Sampling</p> <p>The Applicant has committed to further contaminants sampling and analysis is being undertaken post-consent.</p> <p>a) Applicant, how this is secured post-consent?</p> <p>b) MMO, are you satisfied with how this is secured through the dDCO?</p>	Secured by Condition 23 of Schedules 10 and 11, and Condition 22 of Schedules 12 & 13 of the draft DCO (Revision J) [document reference 3.1].
Q4.3.4 Effects on the Marine Conservation Zone			
Q4.3.4.1	Natural England Applicant	<p>MEEB Requirement</p> <p>Much of the discussion as to whether a MEEB is required relates to whether cable protection is used within the MCZ.</p> <p>a) NE, are there other reasons why you would consider a MEEB is required, such as the impacts to mixed sediment areas or to sub-cropping chalk for example?</p> <p>b) Applicant may comment.</p>	<p>The Applicant maintains its position described in response to Q3.3.4.1 of The Applicant's response to the Examining Authority's Third Written Questions [REP5-049], that sub-cropping chalk cannot be considered to be of equal value with outcropping chalk in terms of the conservation objectives and therefore even if there were to be an interaction with sub-cropping chalk during export cable installation, it is the Applicant's position that this would not necessitate a requirement for MEEB.</p> <p>The Applicant maintains that the consideration of potential <u>cumulative</u> long term habitat loss impacts from the installation of external cable protection within the MCZ (i.e. as per the assessment provided in Section 9.4.4.3 of the Stage 1 CSCB</p>

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			<p>MCZ Assessment (Revision B) [document reference 5.6] – which has been updated at Deadline 7) would be the determining factor in whether the conservation objectives would be hindered and therefore whether MEEB would be required.</p>
Q4.3.4.2	Natural England Marine Management Organisation	<p>MEEB and the dDCO</p> <p>The Applicant has submitted the Proposal Without Prejudice DCO Drafting (Revision C) [REP5-008], which at Part 4 includes a section setting out the Measures of Equivalent Environmental Benefit. Consider the wording as set out and respond as to its adequacy if the MEEB is required, particularly with regards to:</p> <ul style="list-style-type: none"> a) The timings as set out, such as the provision under paragraph 33 that there should be no external cable protection works may be commenced within the Cromer Shoal Chalk Beds MCZ until the MEEB implementation and monitoring plan has been approved by the SoS. b) And, whether it is appropriate that there would be no requirement to implement the MEEB implementation and monitoring plan if no external cable protection works are required within the Cromer Shoal Chalk Beds MCZ? 	-
Q4.3.4.3	Applicant Natural England	<p>Removal of Cable Protection</p> <p>The Applicant has committed to removal of any cable protection within the MCZ at the point of decommissioning.</p> <ul style="list-style-type: none"> a) Applicant, explain how this is secured? b) NE, are you satisfied that this is secured though the dDCO? 	<p>Secured through the Outline Cromer Shoal Chalk Beds (CSCB) Marine Conservation Zone (MCZ) Cable Specification, Installation and Monitoring Plan (CSIMP) (Revision B) [document reference 9.7].</p> <p>Included (ID 8.13) in the Schedule of Mitigation and Mitigation Routemap [APP-282].</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.3.4.4	Natural England	<p>MCZ Conservation Advice Package</p> <p>Please provide a copy of the Cromer Shoals MCZ Conservation Advice Package for the Examination, highlighting any particular sections you feel are most relevant to this proposed development.</p>	-

Table 4 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.4

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.4. Civil and Military Aviation			
Q4.4.1 Effects on Radar and Defence Interests and Proposed Mitigation			
Q4.4.1.1	Applicant National Air Traffic Services Civil Aviation Authority	Mitigation with National Air Traffic Services Provide evidence of agreement between the Applicant and both NATs and Norwich Airport (along with CAA if applicable) on the necessary mitigation required relating to effects of the Proposed Development on radar and progress towards a mitigation plan, together with any corresponding change to the dDCO.	NATs The Applicant and NATs are continuing to engage on this matter. The Mitigation and Services Contract for the Project is currently with NATs for a second review and the Applicant has no reason to believe that an agreement is not forthcoming. As soon as the agreement is entered in to, the Applicant understands that NATs will be in a position to withdraw its objection. Norwich Airport The Applicant refers to the draft Statement of Common Ground (SoCG) with Norwich Airport (Revision C) [document reference 16.23] submitted at this deadline which provides the latest position between the Applicant and Norwich Airport. In summary, Norwich Airport agrees that the wording of Requirement 28 of the dDCO (Revision J) [document reference 3.1] is sufficient to secure necessary mitigation and avoid unacceptable impacts on the Claxby and Cromer PSRs. Norwich Airport agrees that radar blanking of the affected PSR together (through NATs) with an extension of the Greater Wash TMZ (through the CAA) would mitigate the predicted affect to the Claxby and Cromer PSRs. The mitigation is also detailed in the Schedule of Mitigation and Mitigation Routemap [APP-282].
Q4.4.1.2	Applicant Ministry of Defence/ Defence Infrastructure Organisation	Defence radar mitigation progress Following the Applicant's submission, the Applicant's comments on Ministry of Defence Deadline 5 Submission [REP6-020], provide an update with specific timetable, setting out next steps and dates towards agreement within this Examination of a wording for a Requirement designed to	The Applicant has been in continued dialogue with the Ministry of Defence (MOD) with a view to fully addressing its concerns. As indicated in the MOD's letter to the Examining Authority, dated 13 June 2023 [see REP5-082], the MOD has removed its objection relating to 'unacceptable impact on the operation and capability of Air Defence radar systems' subject to

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>secure the provision of appropriate mitigation of the impacts of the development on Air Defence radar systems.</p>	<p>amendments to the current drafting of Requirement 27 in the dDCO (Revision J) [document reference 3.1].</p> <p>A meeting took place between the Applicant and the MOD on 4 July 2023 to discuss the dDCO requirement drafting.</p> <p>The MOD had requested that Part 2(a)(i) of Requirement 27 is amended to specifically refer to mitigation at both RRH Trimingham and RRH Neatishead (see Annex of REP5-082).</p> <p>However, from previous discussions with the MOD, the Applicant's understanding was that the radar will be moved from RRH Trimingham to RRH Neatishead. The Applicant noted the MOD's position on the Norfolk Boreas Offshore Wind Farm (planning inspectorate reference EN010087) and Norfolk Vanguard Offshore Wind Farm (planning inspectorate reference EN010079) where the MOD confirmed the reference to RRH Trimingham could be <u>replaced</u> by RRH Neatishead in the relevant Requirements of these DCOs. The respective Amendment Orders for these projects (SI 2022/968 and SI 2022/1004) secure amended DCO Requirement drafting that substitutes RRH Trimingham for RRH Neatishead. The Applicant therefore sought clarity on the MOD's position for proposing mitigation at Trimingham <u>and</u> Neatishead for the SEP and DEP dDCO.</p> <p>The Applicant has since received a copy of a letter submitted to the ExA by the MOD on 6 July 2023 (reference DIO10056799) which confirmed the removal of its objection to SEP and DEP, and provided alternative DCO Requirement wording which secures the need for ADR mitigation for <u>Neatishead only</u>. The Applicant welcomes this confirmation and has updated the drafting of Requirement 27 of the draft</p>

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			<p>DCO (Revision J) [document reference 3.1] submitted at Deadline 7 to reflect the wording provided in the Annex to the MOD letter (reference DIO10056799) (see Schedule of changes to Revision J of the draft DCO [document reference 3.1.2]).</p> <p>An updated final SoCG with the MOD (Revision B) [document reference 12.27] has been submitted at Deadline 7 which confirms that all matters between the Applicant and the MOD are now agreed.</p>

Table 5 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.5

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.5. Construction Effects Offshore			
Q4.5.1 Development Scenarios and Rochdale Envelope			
Q4.5.1.1	Natural England	<p>Collision Risk due to layout</p> <p>Paragraphs 2.6.108 and 2.6.109 of NPS EN-3 state that "Subject to other constraints, wind turbines should be laid out within a site, in a way that minimises collision risk." Whilst it is for the ExA, and ultimately the SoS, to determine whether the Proposed Development complies with the NPS, what is Natural England's views if the Proposed Development complies with the NPS?</p>	<p>The Applicant refers to its detailed response to WQ1.5.1.2 in The Applicant's Responses to the Examining Authority's First Written Questions [REP1-036] and reiterates that there is no basis for any changes or restrictions to the layout of the turbines on account of ornithological collision risk because:</p> <ul style="list-style-type: none"> the predicted impacts are the same irrespective of whether DEP North and DEP South are developed or only DEP North is developed (design-based density estimation) there is very little difference, with no statistical significance, between the scenarios where all turbines are placed in DEP North or across both DEP North and DEP South (model-based density estimation). <p>As such there can be no grounds for reducing the number of turbines in any part of DEP, because any reduction in impact is marginal and the benefits uncertain, and such an action is outweighed by the issues of technical feasibility and economic viability as set out in Section 4.6 (Step 4: Feasibility of Alternative Solutions) of the Habitats Regulations Derogation – Provision of Evidence [APP-063]. As noted in the Defra (2021) best practice guidance for developing compensatory measures in relation to Marine Protected Areas "Alternative solutions...should be limited to those which would deliver the same overall outcome for the activity whilst creating a substantially lower risk of impact to the MPA.". Neither of those conditions would be met by reducing the number of turbines in any part of DEP.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>The Applicant also draws the ExA's attention to the the general principles set out in NPS EN-1 para. 417 (and Draft NPS EN-1 4.1.16) which is important in this context (emphasis added): "The Secretary of State should only impose requirements in relation to a development consent that are necessary, relevant to planning, relevant to the development to be consented, enforceable, <u>precise</u>, and <u>reasonable</u> in all other respects."</p>
Q4.5.1.2	Applicant	<p>Seasonal restrictions</p> <p>How would any seasonal restrictions, adopted to prevent impacts on fish, shellfish, marine mammal and offshore ornithology species, affect the overall offshore construction programme.</p>	<p><u>Any seasonal restrictions on construction activities have the potential to affect the construction programme through a reduction in contingency for unforeseen programme delays. This is addressed in more detail under each of the following receptor headings:</u></p> <p><u>Fish and Shellfish</u></p> <p>No seasonal restrictions to mitigate impacts on fish and shellfish species have been requested by consultees, including Cefas, MMO and NE. The Applicant anticipates this position being agreed in the Draft SoCG with the MMO at Deadline 8 following the MMO's review of Appendix 10.2 Underwater Noise Modelling (Revision B) which addresses minor remaining comments.</p> <p><u>Marine Mammals</u></p> <p>It has been suggested by Natural England [REP5-089] that the Applicant could commit to undertake piling within areas of DEP outside of the relevant season and area of the Southern North Sea SAC (for which there is no direct overlap with the wind farm sites, only with the precautionary 26km effective</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>deterrent radius). However, the Applicant maintains, as per its response to Natural England [REP6-015], that it is not possible at this stage to determine which mitigation options would be needed, or which would be the most appropriate to implement, as it depends on the final pile design, the piling programme, the other noisy activities that may be happening at the same time (since this is an in-combination issue only), and whether options for either mitigation or management, or alternative installation techniques, become available between consent and construction, that are not available now.</p> <p>Therefore, the Applicant considers that whilst it is currently possible to state the options that would be considered, it would not be appropriate to finalise and commit to mitigation and management options at this time, as it would not allow for future methods and knowledge to be accounted for. It is also noted that the Project's contribution to the in-combination impact is relatively small, alongside the fact that the arrays are outside of the Southern North Sea SAC.</p> <p>In order to avoid an overlap of the 26km effective deterrent range (EDR) for piling of monopiles within the winter area of the Southern North Sea SAC, piling within the majority of the DEP South array area would have to be avoided during the winter period i.e. October-March. Whilst piling in the summer period is preferred in order to minimise the risk of poor weather disruption, any seasonal restrictions on piling could potentially result in delays to the Projects' offshore construction programmes. Given the complexities and availability limitations in procuring piling contractors/vessels for the appropriate durations and the desire for these to tie in with delivery of piles to site, coupled with the need to factor in contingency in the case of overruns in programme, maintaining flexibility in the timing of piling allows the offshore</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>construction programme to be more easily managed. Therefore, the Applicant maintains that it would not be appropriate to finalise and commit to underwater noise mitigation and management options at this time.</p> <p><u>Offshore Ornithology</u></p> <p>Regarding an export cable laying vessel seasonal restriction to mitigate potential displacement effects on red-throated diver, as noted within the Apportioning and HRA Updates Technical Note (Revision D) [document reference 13.3], the Applicant has (notwithstanding its position that AEoI can be ruled out for all potential impact pathways without the requirement for this additional mitigation) committed to a seasonal restriction on export cable installation works within the Greater Wash SPA during the period 01 November to 31 March (inclusive). This is secured by the following condition that has been added to the DMLs within Schedule 12 and Schedule 13 of the draft Development Consent Order (Revision J) [document reference 3.1]:</p> <p>Seasonal restriction</p> <p><i>(1) The undertaker must not carry out any cable installation works within the GW during the winter period.</i></p> <p><i>(2) For the purpose of this condition-</i></p> <p><i>“the GW” means the site designated as the Greater Wash Special Protection Area;</i></p> <p><i>“winter period” means the period between 1 November to 31 March inclusive.</i></p> <p>Timing of the works outside of the winter period helps to minimise the risk of poor weather disruption and the Applicant is already committed to avoiding works during the winter</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>period, where possible, through the best practice protocol for minimising disturbance to red-throated divers as secured through the Outline Project Environmental Management Plan (PEMP) (Revision C) [REP3-060]. Therefore, whilst any seasonal restrictions reduce flexibility in the timing of construction (e.g. if export cable laying vessels could only be procured during the winter months of a certain year), this can be mitigated to some extent through early engagement with construction contractors and programme management.</p>

Table 6 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.6

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.6. Construction Effects Onshore			
Q4.6.1 Development Scenarios			
Q4.6.1.1	Applicant	<p>Traffic and Transport Assumptions for Development Scenarios</p> <p>As discussed at CAH2 [EV-103] [EV-105] and following previous written questions [PD-10, Q1.6.1.2] [PD-012, Q2.6.1.3] [PD-017, Q3.6.1.1] and discussion at ISH2 [EV-019] [EV-023] and ISH4 [EV-057] [EV-061], the ExA is not content with the responses and information provided so far.</p> <p>The ExA's concerns relate primarily to the anticipated trip generation figures set out in the TA [APP-268, Table 5], which are generated from Annexes 9 and 10 of the TA [APP-269]. The ExA considers these suggest the concurrent trip generation figures are based on Scenario 4 (one workforce installing SEP and DEP at the same time) and not Scenario 1d (two workforces installing SEP and DEP separately). The ExA take this view for several reasons:</p> <ol style="list-style-type: none"> 1. The Applicant sets out [APP-269, Annex 10 Page 2 of 19 (Page 611 of APP-269)] the concurrent scenario figures are based 'on a tandem project installation'. This would suggest to the ExA that this assumes them being built together at the same (Scenario 4) and not separately (Scenario 1d). 2. The TA [APP-268, Table 5] shows that the anticipated generation figures for the vast majority of construction activities are the same (or only very marginally different) for the in isolation and concurrent construction scenarios. This strongly suggests to the ExA that it has been assumed only 	<p>The Applicant thanks the ExA for providing further detailed clarification upon this matter.</p> <p>To assist the ExA, the Applicant has provided a detailed response to each of the points (1 to 3) below prior to providing a response to the direct questions (a to e). It is clarified that Scenario 1d has been assessed as the worst case traffic and transport 'concurrent' scenario. It can be noted from Figure 8-3 (Scenario 1d) of the Scenarios Statement [APP-314] that Scenario 1d requires separate transmission systems as opposed to Figure 8-6 (Scenario 4) which requires an integrated system, therefore, by definition Scenario 1d has the greater traffic demand. However, from a traffic and transport perspective, in essence there is intuitively little difference between the two scenarios.</p> <p>The contracting strategy, i.e. the number of contractors involved in carrying out the works (which may or may not vary dependent upon the scenario that is implemented), is not a main driver in the determination of the traffic figures, which are a function of the activities involved in each scenario. The Applicant reiterates that under Scenario 1d opportunities to optimise resources and schedule activities to limit the traffic demand have been identified. For example, SEP and DEP would share accesses, compounds and a haul road. The deliveries associated with shared works comprise of approximately 45% of the total traffic demand in the concurrent construction scenario. There is therefore a significant reduction in total traffic demand associated with the sharing of these elements by the two projects for Scenario</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>one workforce would be constructing the Proposed Development in both the isolation and concurrent scenarios. The ExA fails to see how the concurrent scenario figures would not be higher (both HGVs and LVs) than the in isolation scenario if it had been assumed that there were two active workforces (Scenario 1d) as opposed to one (Scenario 4).</p> <p>3. The only major difference in the anticipated trip generation figures in the Transport Assessment [APP-268, Table 5] for in isolation and the concurrent scenario is associated with the onshore substation. This also suggests to the ExA that Scenario 4 has been modelled where a larger integrated onshore substation would be constructed for both SEP and DEP at the same time.</p> <p>a) Applicant, provide a thorough explanation of the assumptions used within Annex 10 for the concurrent scenario to demonstrate how it has incorporated Scenario 1d with two concurrent work forces. The Applicant's previous response [REP5-049, Q3.6.1.1], which simply stated the figures were provided by an experienced contractor, is not an adequate response and will not satisfy the ExA. Further evidence or analysis of evidence already provided is required to satisfy the ExA that Scenario 1d with two concurrent work forces has been assessed in the ES. In doing so, also directly address in detail the ExA's reasons for the concerns set out in 1) to 3) above and demonstrate how the figures referred to above accommodate Scenario 1d as opposed to Scenario 4.</p>	<p>1d. This is reflected in the response set out at Q2.6.1.2(a) within The Applicant's Responses to the Examining Authority's Second Written Questions [REP3-101], which confirms that the draft DCO (Revision J) [document reference 3.1] does not provide for wholly separate but concurrent construction. A Cooperation Agreement between SEL and DEL will govern the necessary coordination and collaboration between the two projects (see paragraph 35 of the Scenarios Statement [APP-314]). Collaboration between the two projects is also secured via Requirement 33 (Onshore collaboration) of the draft DCO (Revision J) [document reference 3.1].</p> <p>Further details with regard to shared works are detailed within Section 8.3 of the Scenarios Statement [APP-314].</p> <p>As set out within paragraph 80 of the Scenarios Statement [APP-314], Scenario 4 means either SEL or DEL constructs on behalf of both itself and the other project, both the onshore and offshore integrated works including the substations and the cables. All other works are constructed either concurrently or sequentially. Scenario 1(d) means SEP and DEP are constructed separately but concurrently (i.e. with separate transmission systems).</p> <p>Whilst scenario 1(d) comprises the construction of two separate projects with two separate transmission systems, it is worth noting that there will be a degree of coordination between the projects. Section 8.3 of the Scenarios Statement [APP-314] and paragraph 41 of the Supplementary Information to the Scenarios Statement [REP3-074] states that <i>"there will need to be collaboration between the two Projects to optimise construction logistics and to share certain temporary works such as the haul road and construction compounds. This applies to a concurrent</i></p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>In the event that the ExA remains unconvinced following the above information and bearing in mind at CAH2 [EV-103] [EV-105] the Applicant set out that Scenario 1d was the worst case scenario:</p> <ul style="list-style-type: none"> b) what implications does this have for the adequacy of the assessment of Traffic and Transport in the ES and its robustness, given that the trip generation figures underpin the subsequent modelling; c) does this mean that Scenario 1d with two concurrent work forces has not in fact been assessed in the ES; d) if the worst case scenario for Traffic and Transport has not been appropriately assessed in the ES should Scenario 1d be removed from the dDCO? e) for all other ES topics, particularly those that rely on transport modelling (such as noise and vibration and air quality) where the worst case is a concurrent scenario, confirm whether the assessment is based on Scenario 1d or Scenario 4 and where it is based on Scenario 1d, provide evidence to demonstrate this has been robustly assessed and the ES is adequate. 	<p><i>build, or may apply to a sequential build if there is an overlap in construction programmes regardless of whether the transmission systems are integrated...".</i></p> <p>Point 1</p> <p>The Applicant clarified to the ExA at Compulsory Acquisition Hearing Two (CAH2) [EV-103] [EV-105] that the term 'Tandem' was initially used to refer to the concurrent construction of SEP and DEP (Scenario 1d). Murphy is an experienced offshore wind engineering contractor who has undertaken the initial design of the onshore works. Murphy produced forecast for construction traffic demand used in the Traffic Assessment. The initial use of the term 'tandem' by them does not undermine the data produced by them as this term has been used interchangeably by them with the term 'concurrent', or in other words the data would have been the same if they had simply used the term 'concurrent' at the outset. The Applicant reiterates, as set out above, that the worst case concurrent scenario which has been used for the assessment is Scenario 1d.</p> <p>Point 2 and 3</p> <p>The Applicant accepts that Table 5 in the Transport Assessment (TA) [APP-268] when viewed out of context (from the supporting Annex 9 and 10 of the TA [APP-269]) could be misleading and lead the ExA to draw the conclusion that the concurrent scenario figures would not be higher (both HGVs and Light Vehicles (LVs)) than the in isolation scenario.</p> <p>The misunderstanding relates to the daily vs. total traffic for each scenario, and the commitment to shared works. To explain, the Applicant has produced a summary table of the construction activities from Annex 9 and 10 of the TA [APP-</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>269]. Please see Appendix A.1 Development Scenarios within Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1]). For the avoidance of doubt, the Applicant highlights that its responses below should all be read alongside Appendix A.1.</p> <p>It can be evidenced from Appendix A.1 that of the 14 construction activities, half comprise of activities where there would not be a doubling of demand as works would be shared, e.g. there would only be one haul road installed so total HGV and LV numbers are the same, i.e. one crew. Where activities are not shared, e.g. cable installation, it can be seen from Appendix A.1 that the number of workers is approximately double between the concurrent (Scenario 1d) and isolation scenarios (Scenario 1a or 1b).</p> <p>Table 5 of the TA [APP-268] presents the peak number of deliveries per day. To derive peak daily numbers the total number of Full Time Equivalent (FTE) workers or HGVs are divided by the number of work days. As shown in Appendix A.1, where the construction activities are not shared the number of work days is greater for concurrent than isolation (with the exception of the onshore substation (site preparation works) which has increased LV and HGV movements over the same duration). Consequently, aggregate number of LV and HGV movements per day are broadly comparable between the concurrent and isolation scenarios.</p> <p>Whilst peak daily numbers per activity are broadly comparable between the two scenarios, it is evidenced from Table 24-19 and Table 24-20 of ES Chapter 24 Traffic and Transport [APP-110] that the concurrent scenario typically results in higher traffic movement per link (therefore higher potential impacts). This reflects that there would be more</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>concurrent activities given that activities are occurring over a longer duration which leads to a greater propensity for overlap of activities in adjacent sections.</p> <p>With regard to the onshore substation, it can be identified from Appendix A.1 that for the above ground infrastructure, the numbers of vehicle movements would be double, reflecting a concurrent build (Scenario 1d), i.e. separate transmission systems. With regard to the site preparation works for the onshore substation the numbers are greater (but not double) for the concurrent than the isolation scenario. This reflects that there would be an element of shared infrastructure, e.g. access roads, compounds and drainage. The higher vehicle movements can be further explained in Annex 9 and 10 of the TA [APP-269] as a result of the onshore substation base footprint and exported soil for the substation base being approximately double for the concurrent scenario (separate transmission systems for each project, 6Ha maximum operational area) compared to the isolation scenario (one transmission system as there is only one project, ~3.25Ha maximum operational area).</p> <p>The Applicant responds to the ExA questions as follows:</p> <p>Question a)</p> <p>The Applicant clarifies that the concurrent construction of SEP and DEP (Scenario 1d) will require more material and resource (FTE) than the construction of SEP and DEP in Isolation (Scenario 1a or 1b). This is evidenced in detail within the Applicant's response to point 2 and 3 above and the supporting Appendix A.1.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>It can be evidenced from Appendix A.1 that the number of HGVs and LVs are higher for the concurrent scenario (Scenario 1d) than the isolation scenario (Scenario 1a or 1b) and are on average 33% higher for HGVs and 44% higher for LVs. This reflects the greater requirement for materials and resource for a concurrent construction than an in isolation scenario.</p> <p>As outlined early in this response and evidenced through Appendix A.1, the construction of SEP and DEP concurrently represents the worst case for total traffic movements. The imperative for construction works is to optimise activities to ensure economic use of personnel and materials (e.g. make best use of finite resource).</p> <p>For these reasons the works do not necessarily result in a greater number of <u>daily</u> vehicle movements. The derivation for this is set out in response to point 2 and 3 above.</p> <p>With specific regard to workforce traffic demand, the rationale for 'similar' concurrent and isolation LV demand is as follows:</p> <ul style="list-style-type: none"> • Under Scenario 1d, SEP and DEP will share works such as a haul road and accesses. A crew installing accesses or haul road would therefore require the same number of full time equivalent (FTE) hours. • Activities (where works aren't shared) are undertaken by the same number of FTEs per day but for a longer duration. <p>For example, when considering the activity of undertaking crossings in Appendix A.1 it can be evidenced that there is a requirement for double the number of workers but work days is equally doubled resulting in the same numbers of peak workers per day for this activity when comparing isolation to concurrent.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Question b to e)</p> <p>The TA [APP-268 and APP-269] provides (together with the clarifications above and within Appendix A.1) a comprehensive 'audit trail' for how traffic demand has been derived.</p> <p>To assist in the derivation of these traffic movements the Applicant sought early contractor input from Murphy to provide assurance that SEP and DEP can be constructed within the parameters outlined within ES Chapter 24 Traffic and Transport [APP-110] and Outline Construction Traffic Management Plan (Revision D) (OCTMP) [REP5-027].</p> <p>With specific regard to the traffic parameters, these are secured by Requirement 15 and further detail is provided within the OCTMP [REP5-027]. The OCTMP (including Annex A) would form part of the tender package used to appoint a Contractor and ensure that there is no exceedance of the forecast traffic demand.</p> <p>The Applicant would also highlight that both highway authorities (Norfolk County Council and National Highways) have reviewed the traffic forecasts and agreed the demand, this can be evidenced at:</p> <ul style="list-style-type: none"> • ID12 of the Statement of Common Ground with Norfolk County Council (Revision C) [document reference 12.17] ; and • ID13, 14 and 15 of the Statement of Common Ground with National Highways (Revision D) [document reference 12.22].

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Question b)</p> <p>The Applicant refers to its detailed response above that demonstrates that a worst case of SEP and DEP being constructed concurrently (Scenario 1d, separate transmission systems) has been assessed.</p> <p>Notwithstanding the above, the Applicant acknowledges that the nature of construction is such that there are multiple factors that could influence how construction activities are scheduled.</p> <p>The Applicant reiterates that mitigation measures to manage traffic movements are included within the OCTMP (Revision D) [REP5-027] to ensure that the assessed construction traffic parameters (Annex A of the CTMP) are not exceeded. The OCTMP (Revision D) [REP5-027] (including Annex A) would form part of the tender package used to appoint a contractor and ensure that there is no exceedance of the forecast traffic demand.</p> <p>Prospective contractors would be required to demonstrate during the tender process that their construction methodology is compliant with the OCTMP parameters. This would be validated in the final CTMP which must be agreed prior to commencement of construction (by the local planning authority in consultation with the highway authorities).</p> <p>Question c)</p> <p>The Applicant refers the ExA to its responses above that demonstrate that a worst case of SEP and DEP being constructed concurrently (Scenario 1d, separate transmission systems) has been assessed.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Question d)</p> <p>The Applicant refers to its detailed responses above that demonstrate that a worst case of SEP and DEP being constructed concurrently (Scenario 1d, separate transmission systems) has been assessed and therefore this scenario should not be removed .</p> <p>Question e)</p> <p>The Applicant refers to its detailed responses above that demonstrate that a worst case of SEP and DEP being constructed concurrently (Scenario 1d, separate transmission systems) has been assessed.</p> <p>The vehicles numbers used within ES Chapter 24 Traffic and Transport [APP-110] have informed the assessment of direct traffic borne impacts upon noise, air quality and health. Therefore the responses set out in points 1 to 3 and questions a to d are equally applicable to all assessments that use the traffic metrics (traffic borne impacts upon noise, air quality and health).</p>
Q4.6.2 Approach to Construction, Compounds, Programme, Timing and Methods			
Q4.6.2.1	Applicant	<p>Link Boxes</p> <p>The ExA understands from the NFU [REP5-083] that the Applicant is of the view that one of the roles of the ALO will be to discuss and agree the location of link boxes with landowners. Applicant, provide a revised OCoCP to reflect this.</p>	<p>The Applicant has provided information on link boxes in ES Chapter 4 Project Description (Revision C) [REP5-021, Section 4.6.1.3.7] which provides sufficient details on the dimensions and approach to locations of link boxes.</p> <p>As stated in paragraph 45 of the Outline Code of Construction Practice (Revision F) [document reference 9.17], the number and location of link boxes will be</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>determined during detailed design and where possible, will be close to field boundaries and in accessible locations.</p> <p>Further details are provided on the methodology of the construction of link boxes in The Applicant's Responses to the Examining Authority's Second Written Questions [REP3-101], submitted at Deadline 3.</p> <p>The ALO responsibilities will include discussing the location of link boxes with landowners and occupiers, however the location of link boxes along the cable corridor is a design issue and it may not be possible to locate them in a location that is preferred by a landowner or occupier. It is therefore not possible for the Applicant to commit to the ALO agreeing the location of link boxes with landowners and occupiers rather than discussing them. Indeed, a commitment to the ALO agreeing the locations is not what is being sought by the NFU or LIG in the latest draft Construction Practice Addendum that has been received by the Applicant. As stated above, the location of the link boxes is dictated by detailed design and therefore is not within the ALO's capability to agree.</p>
Q4.6.3 Baseline survey and effects of Unexploded Ordinance			
No further questions in this section at this stage.			
Q4.6.4 Effects of construction works on human health			
No further questions in this section at this stage.			
Q4.6.5 Effects from emissions on air quality			
No further questions in this section at this stage.			
Q4.6.6 Adequacy of the Outline Code of Construction Practice			
No further questions in this section at this stage.			

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.6.7 Waste Management			
No further questions in this section at this stage.			

Table 7 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.7

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.7. Commercial Fisheries and Fishing			
Q4.7.1 Effects on Fishing Stocks			
No further questions in this section at this stage.			
Q4.7.2 Effects on fishing enterprises as a result of navigational or special restrictions			
Q4.7.2.1	Applicant	<p>Fishing related conditions and requirements</p> <p>It is understood that the potential justified disturbance payments to UK potters, as set out in the ES [APP-098] as a form of additional mitigation, is a tool within the Outline Fisheries Liaison and Co-existence Plan [APP-295]. However, explain how the ExA can be satisfied that in practice there is the mechanism to ensure that this form of mitigation and the justifiable payments are made to fishing crews/fleets where it is necessary?</p>	<p>A Fisheries Liaison Officer (FLO) is contracted to the Project, whose details are provided in the Outline Fisheries Liaison and Co-existence Plan (Revision B) [document reference 9.8] (Outline FLCP). Through the FLO the project has successfully arranged and paid out compensation to local fishing groups and individuals for survey works undertaken for the offshore sites in 2022.</p> <p>The above demonstrates that this is a process that has already been effective, and the Applicant considers that the lack of representation by interested parties reflects that those affected are content with the use of FLOWW guidance and have confidence in the Applicants track record and relationship with local fishing communities.</p> <p>Compensation, where required, will be offered under the terms of agreement based on the FLOWW guidance, as set out in the Outline FLCP. This guidance is an industry model, agreed and implemented by cross-industry representatives (including developers, fisheries groups and government bodies) and has contributed successfully to managing interactions between offshore developers and fisherman for almost a decade.</p> <p>Where the Applicant enters into agreements, these are intended to be legally binding. In return for justified compensation, fishermen will remove gear from the relevant</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>areas. If the Applicant were not to reach these agreements, then gear left in situ could prohibit access to the site and pose a risk to survey and construction vessels. Risk of disruption to the Applicants activities ensures it is in all parties interests that agreements are reached.</p> <p>Given the time between submission of the Application and the anticipated offshore construction start date, it is not possible at this point to identify those parties who are likely to be offered such agreements and, as such, there is no mechanism to secure payments beyond the commitments made already in the application documentation.</p> <p>The Applicant is not aware of compensation payments being secured beyond commitments to apply FLOWW guidance and the use of FLCP (or similar plans) in any other offshore wind DCO applications.</p> <p>For the avoidance of doubt, as a responsible developer the Applicant will make justified disturbance payments to fishermen in a timely manner and in accordance with any agreements entered into.</p>

Table 8 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.8

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.8. Compulsory Acquisition and Temporary Possession			
Q4.8.1 Updates on Negotiations and Funding Statement			
Q4.8.1.1	Applicant	Provide any further updates for close of Examination.	<p>The Applicant refers to item 6 of Written Summary of the Applicant's Oral Submissions at Compulsory Acquisition Hearing 2 [document reference 21.4] which sets out the update provided at Compulsory Acquisition Hearing 2.</p> <p><u>Cable Easement</u></p> <p>The Applicant confirms that as stated at the hearing, it will continue to engage with LIG and their appointed legal representatives after the conclusion of Examination to negotiate a draft option agreement that once agreed can be populated and distributed to each landowner and their individual legal representative.</p> <p>The response to the draft option agreement received from LIG and their appointed legal representatives on 20th June 2023 contained proposed amendments that had not been raised within the first response on 1st March 2023 to which the Applicant had responded 25th March 2023. The response is currently being reviewed by the Applicant, but it is noted that some amendments conflict with the agreed Heads of Terms. The Applicant will respond to LIG and their appointed legal representatives once the review of the substantial amendments has been completed.</p> <p>The Applicant will also continue to negotiate voluntary agreements with landowners not represented by LIG.</p> <p><u>Substation</u></p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>The Applicant confirms that Heads of Terms have been agreed with the landowners of the substation site. The land agent of the landowners has advised that signed Heads of Terms should be received by the Applicant by 18th July 2023 following their return from holiday.</p> <p>The Applicant in the meantime is preparing the draft option agreement to send to the landowners' appointed legal representative.</p> <p><u>Temporary Working Areas</u></p> <p>The Applicant expects to be able to send the latest draft Heads of Terms to LIG for review week commencing 10th July 2023. The Applicant considers the commercial proposals reasonable and provide favourable terms to landowners, however the expectations of LIG are such that reaching an agreement for these areas may be difficult.</p>
Q4.8.2 Affected Persons' Site-specific Issues			
Q4.8.2.1	Applicant	<p>Plot 27-006</p> <ul style="list-style-type: none"> a) Submit updated Land Plans and associated documents showing proposed amendments to Plot 27-006 to enable access ACC46. b) Are there any highways access or construction issues which may be associated with this amendment? c) Explain your approach and justification to the part of Plot 27-006 that is no longer needed for the Proposed Development, including the inclusion of 'white land' in the Land Plans as explained at CAH2 [EV-103] [EV-105]. d) Are there any recent DCO (or TWA Order) precedents for your approach and if so which? 	<ul style="list-style-type: none"> a) The Applicant refers to Sheet 28 of the Land Plans (Revision E) [document reference 2.3]. This shows a revision to plot 27-006 such that the Applicant is now only seeking temporary possession powers through the Order over the area shaded yellow. The white area remains within the Order limits but the Applicant is no longer seeking temporary possession powers over that area in acknowledgement of the fact that the white land area is currently being re-designed to ensure the revised design for ACC46 will tie into the re-aligned A47 highway layout in the event that the A47 Tuddenham Order is implemented. b) As set out in previous written and oral submissions (see The Applicant's Comments on Responses to ExA

PINS Question Number	Question is addressed to	Question	Applicant Response
		<ul style="list-style-type: none"> e) Submit a revised version of the EM to include your explanation, including citing any recent precedents. f) If you intend to continue to seek CA or TP on the part of Plot 27-006 that you have indicated is no longer needed for access ACC46, explain your justification to do so. g) Provide an update of discussions and agreements reached with the landowner for the land included within the Order limits that is no longer needed for access ACC46, and the land currently not included within the Order limits which would be required to enable access ACC46. h) What are the implications to the viability of the Proposed Development if agreement is not reached and if you are unable to acquire the land currently not included within the Order limits which would be required to enable access ACC46? i) Provide an updated SoR. j) Provide an update to your strategic case for CA. 	<p>2WQ [REP4-028], The Applicant's comments on National Highways Deadline 5 Submission [REP6-016] and Written Summary of the Applicant's Oral Submissions at Compulsory Acquisition Hearing 2 [document reference 21.4]), the Applicant has accepted that on the Works Plans (onshore) (Revision C) [REP2-004] submitted to the Examination there is a misalignment such that in the event the A47 Tuddenham Order is implemented and the A47 is realigned in this location construction access ACC46 would not currently align with the re-aligned highway layout in this area. For the avoidance of doubt, there is no issue with highway access in the event the A47 Order is not implemented and the existing A47 road layout remains. In that case, construction access ACC47 will be used and there will be no requirement for access ACC46 to be used. The amendment to the Land Plans (Revision E) [document reference 2.3] simply reflects the fact that construction access ACC46 needs to be re-designed in the white land area. An initial proposal for the redesign of ACC46 has now been shared with National Highways for their review. The Applicant will continue to work with National Highways, as well as Orsted, to complete the redesign of this access so as to correct the misalignment and avoid any conflict with the A47 Tuddenham Scheme.</p> <p>The proposed minor changes to ACC46 will not undermine the point of access concept agreed with the highway authorities, nor will it materially change the parameters which informed the traffic and transport assessment.</p> <p>c) The Applicant has amended Sheet 28 of the Land Plans (Revision E) [document reference 2.3] to exclude part of ACC46 because it is no longer seeking temporary</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>possession powers over the excluded area (which now appears as white land without a plot number on the Land Plans). This is in recognition of the uncertainty over this area created by the misalignment with the re-aligned A47 in the event that the A47 Tuddenham Order is implemented as this area is now subject to a re-design. The Applicant considers that in light of the uncertainty and the need to seek separate planning consent for the re-designed access post examination, it is better to remove that part of the plot from the land plans as the case for compulsory acquisition or temporary possession powers may not be considered to be robustly made out for that land in accordance with section 122 of the Planning Act 2008. However, the Applicant considers that its overall case for compulsory acquisition for all the other land shown on the updated Land Plans remains robust on the basis that the land is required for the development to which the development consent relates as set out in the Statement of Reasons (Revision E) [document reference 4.3]. As noted at Compulsory Acquisition Hearing 2 (see Written Summary of the Applicant's Oral Submissions at Compulsory Acquisition Hearing 2 [document reference 21.4]), the Applicant highlights paragraph 19 of the Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land (September 2013) which requires applicants to <i>'demonstrate that any potential risks or impediments to implementation of the scheme have been properly managed.'</i> This recognises that DCO applications may still have risks or impediments but so long as they are being appropriately managed, consent, including CA powers, can still be granted. As explained at the CAH2 the Applicant is actively doing everything it reasonably</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>can to manage the misalignment in the event the A47 Tuddenham Scheme is constructed. This is through engagement with relevant parties, its commitment to enter into cooperation agreements and having a clear strategy in place to resolve the misalignment post consent. The Applicant also reiterates that it is progressing the re-design of ACC46 and has now shared an initial proposal with National Highways. The Applicant considers that it has therefore demonstrated that any potential risks or impediments to implementation of the scheme are being appropriately managed.</p> <p>d) It is for an Applicant to decide whether it requires CA or TP powers when promoting a DCO and over which land it requires powers, which it considers will meet the legal tests. Most DCOs have CA powers underpinning the entire scheme. Where no powers are sought the convention is to leave the relevant land (which would otherwise have a plot number) as white to make it clear than no powers are being sought. Recent examples of other DCOs/draft DCOs with white land include:</p> <ul style="list-style-type: none"> a. The Little Crow Solar Park Order 2022 where all the land is white land on the basis that no compulsory acquisition or temporary possession powers were sought over that land as part of the application. Please see the Little Crow Solar Park Land Plan including Order Limits at Appendix A.4 in the Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1]. b. Sheet 28 of Hornsea Project Four's Land Plans show white land at the Creyke Beck Substation.

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>The Creyke Beck substation has been included within the Order limits where the undertaker is seeking consent for Work No. 8 (connection into Creyke Beck) in its draft DCO but is not seeking powers of compulsory acquisition or temporary possession powers over the Creyke Beck substation site. Please see the final version of the draft Order submitted by Hornsea Project Four and Sheet 28 of the Hornsea project Four Land Plan Onshore at Appendices A.5 and A.6 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1].</p> <p>c. The Land Plans for The A303 Sparkford to Ilchester Dualling Development Consent Order 2021 (A.8 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1]) show various areas of white land. Sheet 10, for example, shows an area where signage is required under the DCO within the highway verge and neither compulsory acquisition or temporary possession powers were sought for that highway work.</p> <p>d. Sheet 3 of the Land Plans (A.9 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1]) for The Thurrock Flexible Generation Plant Development Consent Order 2022 show white land on the local highway where powers were used to suspend a HGV weight limit only.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>e) The Applicant has reviewed the Explanatory Memorandum (Revision H) [document reference 3.2] and does not consider that it requires updating in this regard. The Applicant has however updated the Statement of Reasons as per (i) below.</p> <p>f) As set out above, the Applicant has removed the part of plot 27-006 which is being re-designed.</p> <p>g) The Applicant has agreed Heads of Terms for the current design of ACC46. The Applicant therefore anticipates and is confident that a new agreement can be secured voluntarily to reflect the future design of ACC46 post Examination.</p> <p>h) In the unlikely event Agreement were not reached, the Applicant would consider alternative options such as seeking a change to the DCO post consent to include the re-designed access together with relevant temporary possession powers. The Applicant reiterates that this is considered unlikely given the current position with the landowner, the temporary nature of the access and the limited land interest therefore sought to accommodate the temporary access.</p> <p>i) Please see section 11.2.4, paragraph 230 of the Statement of Reasons (Revision E) [document reference 4.3].</p> <p>j) The Applicant considers that it has set out above in response to points (a) to (i) all the updates necessary in relation to its strategic case for CA.</p>
Q4.8.3 Special Land			
Q4.8.3.1	Applicant	Public Open Space	a) The Applicant refers to document Open Space Agreements Updates (Revision C) [document reference

PINS Question Number	Question is addressed to	Question	Applicant Response
		<ul style="list-style-type: none"> a) Provide an update on negotiations. b) Provide evidence of final agreements for close of Examination. c) If final agreements are not received for close of Examination, provide updates expected and corresponding timescales after close of Examination in Signed Final SoCG or a similar joint signed statement. 	<p>12.48] as the most up to date statement, and as provided at the Compulsory Acquisition Hearing on the 22nd June.</p> <ul style="list-style-type: none"> b) The Applicant does not expect to complete the Option Agreements prior to close of Examination. c) The Applicant has written to Louise Savory, Norfolk County Council and Broadland District Council following the ExA's request. All other parties within Open Space Agreements Updates (Revision C) [document reference 12.48] are leasehold interests and captured within the joint statements the Applicant is attempting to agree with the freeholders.
Q4.8.3.2	Applicant National Trust	<p>NT Land</p> <p>ExA understands that there remains disagreement over whether there is a need for an easement in perpetuity [REP5-088], though reasoning for this has been provided to NT by the Applicant. Provide an update on progress with these negotiations and provide an explanation as to your position with regards the issue of the length of time the easement is requested for.</p>	<p>The Applicant and National Trust have reached an agreement in principle as to how to proceed and the details are being worked through. The details of the arrangement remain confidential.</p>
Q4.8.3.3	Applicant	<p>Crown Land</p> <ul style="list-style-type: none"> a) Provide an update on negotiations. b) Provide evidence of final agreements for close of Examination. c) If final agreements are not received for close of Examination, provide updates expected and corresponding timescales after close of Examination in Signed Final SoCG or a similar joint signed statement. 	<p>The Applicant has been in discussions with The Crown Estate Commissioners in connection with the provision of the necessary Crown authority (pursuant to section 135 of the Planning Act 2008) in regard to powers sought in relation to Crown Land and/or Crown rights. An agreed position has now been reached and the Commissioners have confirmed that they expect to be in a position to issue a letter of consent by Deadline 8.</p> <p>The Applicant and the Ministry of Defence ("MOD") have now agreed the wording for Requirement 27 of the draft DCO (Revision J) [document reference 3.1] and there are no</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>matters outstanding between them. As such, the Applicant anticipates that confirmation of s135 consent will be forthcoming for Deadline 8.</p> <p>At Compulsory Acquisition Hearing 2 (see Written Summary of the Applicant's Oral Submissions at Compulsory Acquisition Hearing 2 [document reference 21.4]), the Applicant confirmed in relation to the Forestry Commission land, that agreement has been reached and as such The Secretary of State for Environment, Food and Rural Affairs has confirmed its s135 consent. Please see Appendix B.5 – Supporting Documents for the Applicant's Responses to the Examining Authority's First Written Questions [REP1-039].</p> <p>As confirmed at Compulsory Acquisition Hearing 2 (see Written Summary of the Applicant's Oral Submissions at Compulsory Acquisition Hearing 2 [document reference 21.4]), the Department for Transport have delegated the section 135 consent to National Highways and the Applicant is now liaising directly with an allocated individual at National Highways to progress the necessary s135 consent. The Applicant is responding to a query raised by the Department for Transport and National Highways and will continue to work towards securing the necessary consent for Deadline 8. In the event this is not achieved, the Applicant will continue to work with National Highways within the 3 months following the end of examination such that an update can be provided to the Secretary of State when the matter is referred to the Secretary of State for decision.</p>
Q4.8.3.4	Applicant	Statutory Undertaker Land	a) The Applicant refers to document The Applicant's Statutory Undertakers Position Statement (Revision

PINS Question Number	Question is addressed to	Question	Applicant Response
		<ul style="list-style-type: none"> a) The ExA has seen the Current Status of Statutory Undertaker Negotiations [REP5-037] and requests an update at Deadline 7. b) Provide evidence of final agreements for close of Examination. c) If final agreements are not received for close of Examination, provide updates expected and corresponding timescales after close of Examination in signed final SoCG or a similar joint signed statement. 	<ul style="list-style-type: none"> D) [document reference 12.46] as the most up to date statement. b) The Applicant has requested that Statutory Undertakers write to the Examining Authority for Deadline 8 to confirm the position has been agreed and withdrawing their representations on that basis. c) The Applicant will submit a final Statutory Undertaker's Position Statement to provide the necessary updates at Deadline 8.
Q4.8.4 Applicant's Strategic Case for CA and TP			
		See related question in Affected Persons' Site-specific Issues.	
Q4.8.5 General			
Q4.8.5.1	Applicant Parties in Schedule 14 of the dDCO	Protective Provisions <ul style="list-style-type: none"> a) Applicant and relevant party, for each set of Protective Provisions that is not agreed, provide jointly with the relevant party copies of Applicant's proposed drafting and the drafting required by the party, highlighting the areas of difference. Update this at D8. b) Applicant and relevant party, for Protective Provisions where final agreements is not likely for close of Examination, provide updates expected and corresponding timescales after close of Examination in signed final SoCG or a similar joint signed statement. 	The Applicant refers to The Applicant's Statutory Undertakers Position Statement (Revision D) [document reference 12.46] which confirms which protective provisions have been agreed for Deadline 7 and, where protective provisions are not yet agreed, sets out the matters outstanding and whether or not these will be agreed by the end of examination. Where protective provisions are unlikely to be agreed, the Applicant will endeavour to reach agreement with the relevant statutory undertaker(s) within the 3 months following the end of examination such that an update can be provided to the Secretary of State when the matter is referred to the Secretary of State for decision. The Applicant will submit a final Statutory Undertaker's Position Statement to provide the necessary update at Deadline 8.

Table 9 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.9

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.9. Cumulative Effects			
Q4.9.1 Scope and Extent			
No further questions in this section as this stage.			

Table 10 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.10

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.10. Design			
Q4.10.1 Design Principles			
No further questions in this section at this stage.			
Q4.10.2 Design Development Process			
No further questions in this section at this stage.			

Table 11 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.11

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.11. Draft Development Consent Order			
Q4.11.1 General and cross-cutting			
Q4.11.1.1	Applicant	<p>Format of Providing the dDCO and Explanatory Memorandum with Track Changes</p> <p>Provide the track change version of the dDCO and EM that shows all the changes made since the submissions of the application for all versions provided until the close of the Examination.</p>	<p>Please see Draft Development Consent Order (Revision J) (Full Tracked Revisions A/J) [document reference 3.1.4] and Explanatory Memorandum (Tracked – Revisions A/H) [document reference 3.2.2]. The Applicant confirms that it will provide further updates to these documents at Deadline 8.</p>
Q4.11.2 Content			
Q4.11.2.1	Applicant	<p>Applicant's Confirmation of Final Review at the final Examination Deadline</p> <p>Provide the review as indicated [REP5-051, DC1.1.2.1].</p>	<p>The Applicant confirms that it is continuing to undertake this review and will finalise it for Deadline 8.</p>
Q4.11.2.2	Applicant Norfolk County Council	<p>Discharging Requirements and Conditions</p> <p>Provide update and agreed drafting for R26.</p>	<p>Agreed drafting for Requirement 26 was included in the draft DCO (Revision I) [REP6-002] submitted at Deadline 6.</p>
Q4.11.3 Article 2 Interpretation			
Q4.11.3.1	National Highways	<p>Pre-commencement works</p> <p>Confirm the Applicant's understanding that you no longer seek any further amendments to R19, if Protective Provisions are agreed [REP5-051, DC1.2.1.1].</p>	
Q4.11.3.2	Applicant	<p>HDD Works at Night and Emergency Works</p> <p>See related question in Noise and Vibration.</p>	<p>The Applicant has updated Requirement 20 as set out in response to Q4.20.2.3, see draft DCO (Revision J) [document reference 3.1].</p>
Q4.11.4 Article 5 Benefit of Order			

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.11.4.1	Applicant Marine Management Organisation	<p>The role of MMO and other drafting edits proposed in the dDCO</p> <p>a) MMO, provide the update as indicated [REP6-026, paragraph 3].</p> <p>b) Applicant and MMO, indicate either in the draft SoCG or here if matters are subsequently agreed with the Applicant, or remain in dispute.</p>	(b) The Applicant notes that the MMO's Deadline 6 response [REP6-026] deferred the MMO's position on a number of matters until Deadline 7 and as such the Applicant and MMO are not in a position to provide an updated SoCG for Deadline 7 but are intending to provide that update at Deadline 8.
Q4.11.5 Article 6 Disapplication and modification of legislative provisions			
Q4.11.5.1	Applicant Environment Agency	<p>Update</p> <p>a) Is there an agreement regarding the disapplication of the relevant legislation and the Protective Provisions or provide an update [REP1-111] [REP2-040, Q1.11.3.3] [REP5- 078] [REP5-051, DC1.3.2.1]?</p> <p>b) Can you explain, the implications of Protective Provisions not being agreed? What objections (if any) would remain outstanding and where do you feel the EA's interests are protected by the Environmental Permitting (England and Wales) Regulations 2016 [REP3-129]?</p>	<p>(a) Please see The Applicant's Statutory Undertakers Position Statement (Revision D) [document reference 12.46].</p> <p>(b) In the event Protective Provisions were not agreed then the Environment Agency would not consent to inclusion of the disapplications set out at Article 6(1)(a) and 6(1)(b). Those provisions would therefore be removed from the final version of the draft DCO such that the undertaker would then have to seek consent for watercourse crossings from the EA pursuant to those legislative provisions rather than in accordance with any protective provisions contained within the DCO. This is the process that applies outwith the DCO context where developments are being undertaken pursuant to planning permission or under permitted development rights for example.</p>
Q4.11.6 Requirement 1 Time limits			
Q4.11.6.1	Applicant	<p>Assumptions on Working Crews</p> <p>Provide suitable wording, corresponding explanation in the EM, and any corresponding changes to the ES in relation to your response to related question in Construction Effects Onshore.</p>	In light of the Applicant's response to Q4.6.1.1, the Applicant is not making any amendments to the draft DCO in this regard.

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.11.7 Requirements 17 and 19			
Q4.11.7.1	Applicant Environment Agency Lead Local Flood Authority Norfolk Rivers Internal Drainage Board	Update The latest draft of the SOCG with NCC and the Applicant [REP5-033] notes that the wording of R17 and R19 of the dDCO is still under discussion. Provide an update on such discussions.	A final version of the Statement of Common Ground with Norfolk County Council [document reference 12.17] with all matters agreed has been submitted at Deadline 7. IDs 6 and 7 of Table 4 confirm agreement with the Norfolk County Council in their role as LLFA with regards to Requirement 17 and Requirement 19 respectively. The LLFA has confirmed that all previous comments have been addressed.
Q4.11.8 Schedules			
Q4.11.8.1	Applicant Natural England	Schedules 12 and 13 Part 2 Condition 19 See related questions in Benthic ecology, Intertidal, Subtidal and Coastal effects.	The Applicant has committed to locating the offshore exit pit location in the Weybourne Channel to avoid any impact on the subtidal chalk feature. This is secured through the updated Outline CSCB MCZ CSIMP (Revision B) [document reference 9.7] submitted at Deadline 7 and therefore by conditions 12(1)(e) and 14(3) of Schedules 12 and 13 of the draft DCO (Revision J) [document 3.1].
Q4.11.8.2	Applicant Natural England Marine Management Organisation	Post construction monitoring and subsequent remediation a) Do the dDML post construction monitoring conditions (Schedule 10, Part 2, Condition 20; Schedule 11, Part 2, Condition 20; Schedule 12, Part 2, Condition 19; and Schedule 13, Part 2, Condition 19) [REP6-002] or any other part of the dDCO bind the undertaker to take action should this post construction monitoring highlight any particular	(a) The Applicant has updated Condition 20 of Schedules 10 and 11 and Condition 19 of Schedules 12 and 13 of the draft DCO (Revision J) [document 3.1] to include an additional sub-paragraph (6) as follows: <i>(6) In the event that the reports provided to the MMO under sub-paragraph (4) identify a need for additional monitoring, the requirement for any additional</i>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>impacts that need remediation or further mitigation works?</p> <p>b) Highlight is any further provisions or drafting edits that could be required in the dDCO to ensure remediation or further mitigation works are undertaken on the basis of findings in the post construction monitoring.</p>	<p><i>monitoring will be agreed with the MMO in writing and implemented as agreed.</i></p> <p>(b) The Applicant does not consider that any further amendments or drafting edits are necessary or appropriate. This is further explained within ID 4 of Table 2 of the Offshore In Principle Monitoring Plan (Revision C) [document 9.5] which notes that:</p> <p><i>“If monitoring work identified a potential need for adaptive management or remedial measures, then the Applicant would discuss with the relevant parties (i.e. Natural England and the MMO) at the relevant time what an appropriate course of action would be. Such measures may themselves require a separate consent or agreement before they could be implemented (e.g. a marine licence for works to the seabed). It will therefore not necessarily be within the Applicant’s power to immediately undertake such works and therefore it is not appropriate to seek to impose such a requirement through the DML.”</i></p> <p>The Applicant notes that PINS Advice Note 15 confirms that, whilst the law and policy relating to planning conditions does not necessarily apply to DCO Requirements relating to the offshore elements of an NSIP or to Deemed Marine Licence conditions, it is considered that similar principles should apply when drafting these. The NPS EN-1 at paragraph 4.1.7 (draft EN-1 para. 4.1.16) does note that the Secretary of State should only impose requirements/conditions that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. The Applicant considers that a condition of the type</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			suggested relating to remediation or further mitigation works would not meet those tests.
Q4.11.8.3	Marine Management Organisation	<p>Deemed Marine Licences and Marine Mammals and Monitoring</p> <p>Detail any remaining concerns regarding the dDMLs and the management of marine mammals.</p>	The Applicant is working with the MMO to seek to reach final positions on the few remaining outstanding matters in relation to the DMLs and will reflect this within the final Statement of Common Ground with the MMO to be submitted at Deadline 8.
Q4.11.8.4	Natural England Marine Management Organisation	<p>Deemed Marine Licences and Benthic Ecology</p> <p>Are you satisfied that the mitigation relevant to benthic ecology (including offshore physical processes/ marine geology) are all included with appropriate wording within the dDCO and dDMLs, including through the Requirements and Conditions?</p>	As noted within the Draft Statement of Common Ground with MMO (Revision C) [REP6-006] with respect to offshore receptors: <i>'The MMO note that the Schedule of Mitigation and Mitigation Routemap contains numerous embedded and additional mitigation and consider the measures included to be appropriate.'</i>

Table 12 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.12

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.12. Habitats and Ecology Offshore			
Q4.12.1 Effects on Ornithology			
Q4.12.1.1	Royal Society for the Protection of Birds	<p>Outstanding concerns / final position</p> <p>The ExA is sympathetic to the circumstances of the RSPB in being able to engage with the Examination and all its related material. Nonetheless, a number of concerns were raised in the Written Representation [REP1-161] and the ExA wishes to know which, if any, still remain. Can the RSPB provide the ExA with an update on the current, and final, position of the organisation in relation the Proposed Development.</p>	-
Q4.12.1.2	Applicant	<p>Operation and Maintenance Vessels</p> <p>a) Is the Applicant any closer to confirming the port that would be used to service the Proposed Development?</p> <p>b) Is the Applicant able to confirm that operations and maintenance vessels from the port of Great Yarmouth, or going to the DEP part of the Proposed Development from another port, would not go through the Greater Wash SPA?</p>	<p>a)</p> <p>It remains the intention that SEP and DEP will be operated from the existing SOW and DOW O&M base at Great Yarmouth. The construction port will be confirmed post-consent.</p> <p>b)</p> <p>The Applicant confirms that O&M vessels operating out of Great Yarmouth would transit through the Greater Wash SPA since it is the most direct route to the Project sites. However, during the period 01 November to 31 March (inclusive), SEP and DEP O&M vessels would be subject to the best practice protocol for minimising disturbance to red-throated diver (as secured through the Outline PEMP (Revision D) [document reference 9.10]), within which one of the measures is to restrict vessel movements to existing navigation routes (where the densities of red-throated divers are typically relatively low). As described in the Apportioning and HRA Updates Technical Note (Revision D) [document reference 13.3], the addition of SEP and DEP's</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>O&M vessel traffic would result in a negligible increase in disturbance risk to red-throated divers within the SPA. This is because the total area at risk of disturbance along the vessel corridors would be unchanged from the current situation. The Applicant can confirm that use of the O&M vessels would be shared with SOW and DOW, and existing vessels would maintain the same frequency of transits, as follows:</p> <ul style="list-style-type: none"> Existing vessels for SOW DOW (current situation) = 1 Service Operation Vessel (SOV) & 1 Crew Transfer Vessel (CTV); SOW/DOW/SEP/DEP Option 1 (worst case) = 1 SOV & 3 CTV all using same/similar transit routes to existing; SOW/DOW/SEP/DEP Option 2 (best case) = 1 SOV & 1 CTV, plus 2 daughter craft, which are attached to the SOV and therefore would not result in extra transits through the SPA. <p>In both options, the number of SOV transits to port would be unchanged from the existing situation (i.e. from existing SOW and DOW traffic). In the case of Option 2, there would be no change to the overall number of vessel transits through the SPA, i.e. there would still be 1 CTV as well as the SOV. In the case of Option 1, the number of SOV transits would be unchanged, but there would be a small increase in the number of CTV transits which would not materially increase overall vessel activity (wind farm and non-wind farm) relative to baseline.</p>
Q4.12.1.3	Natural England Royal Society for the Protection of Birds	<p>Cumulative Effects Are there any remaining concerns regarding the Applicant's assessment of cumulative effects (EIA-scale)? Explain with reasons.</p>	-
Q4.12.1.4	Applicant	<p>Offshore In-Principle Monitoring Plan Natural England has asked for a comprehensive review and amendment to the approach used for the IPMP [REP5-090]. In this respect:</p>	<p>a, b, c) See Offshore IPMP (Revision C) (Tracked) [document reference 9.5] which has been updated at Deadline 7 and shows the changes since</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<ul style="list-style-type: none"> a) Provide an updated IPMP; b) Where NE's changes are accepted and incorporated, signpost these in a separate document to identify where such amendments have been made. c) Where NE's changes are not accepted, explain with reasons. 	<p>Revision B alongside the Applicant's responses to NE's comments provided in REP5-090.</p> <p>In response to NE's request to include the 'fundamental hypotheses/questions that will be tested by the monitoring based on the outcomes of the HRA, EIA and address issues of uncertainty and/or residual impacts' the Applicant notes that these are set out throughout the IPMP tables under the heading 'headline reasons for monitoring'.</p> <p>Where possible and appropriate to do so the Applicant has added further detail describing the potential hypotheses/questions that will be tested, subject to development of the detailed monitoring plans. However, fundamentally, the position remains that the document is only intended to provide a framework for further discussions post consent for the reasons already set out. This approach is consistent with the final IPMP submitted for EA1N/2 [REP8-028] for which the consent has been granted.</p>
Q4.12.1.5	Applicant	<p>Certified Documents and Updates</p> <p>It was suggested in ISH5 that some of the technical studies for ornithology (and indeed for marine mammals) may be amalgamated into the existing chapters of the ES, thus forming part of the suite of certified documents in the dDCO. In others respects, technical studies would be listed. The ExA note that ES Chapter 4 was provided at Deadline 5 [REP5-021] but no other ES Chapter updates are recorded. Provide an updated list of certified documents at D7 alongside the updated chapters of the ES (as necessary or applicable) to demonstrate all important and relevant information and mitigation is appropriately incorporated.</p>	<p>The Applicant notes that Schedule 18 of the Draft DCO (Revision J) [document reference 3.1] contains the list of certified documents including those technical documents in relation to offshore ornithology and marine mammals submitted during the examination period. This list has been updated at Deadline 7.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.12.2 Effects on Aquatic Wildlife including Mammals, Fish and Shellfish			
Q4.12.2.1	Natural England	<p>Environmental Impact Assessment perspective</p> <p>NE's Issues and Risks Log [REP5-093, point D1, D5, D6 and D10 in particular] raised some outstanding issues with regards to marine mammal modelling information. Can NE set out the nature and scope of any perceived remaining deficiencies in the data, methodology, assumptions or modelling information and what, at this late stage, are the implications for the Applicant's conclusion/assessment?</p>	<p>The Applicant will respond to Natural England's Deadline 7 Risk and Issues Log at Deadline 8.</p> <p>It is the Applicant's understanding that the Marine Mammals Technical Note and Addendum (Revision B) [document reference 16.14] has addressed the outstanding Natural England concerns regarding these matters; however, a formal response has not yet been received. The Applicant will seek to include any outstanding points of agreement within the SoCG to be submitted at Deadline 8.</p>
Q4.12.2.2	Applicant Natural England	<p>Mitigation for harbour porpoise</p> <p>NE [REP5-093, point D18] suggests the risk of a significant adverse effect on harbour porpoise could be mitigated through various commitments including a seasonal restriction.</p> <p>a) Is the Applicant willing to make the commitments and, if so, identify where the commitments are made and secured. If not, explain with reasons.</p> <p>b) NE confirm if, subject to mitigation, the risk of a significant adverse impact is sufficiently dealt with.</p>	<p>The Applicant maintains that the SIP is the appropriate mitigation to apply at this stage of the Projects. The SIP will ensure that there is no adverse effect on integrity of the harbour porpoise feature of the Southern North Sea SAC due to underwater noise disturbance. The potential for seasonal restrictions on piling at SEP and/or DEP will be considered within the post-consent phase when the SIP is finalised prior to construction.</p> <p>As noted within previous responses (REP3-133 & REP5-080), the MMO are satisfied that the SIP is the appropriate mitigation, and that the In-Principle SIP is acceptable. Therefore, the Applicant does not consider that specific mitigation and management measures need to be committed to at this stage.</p>
Q4.12.2.3	Natural England Applicant	<p>Mitigation for grey seal</p> <p>NE [REP5-093, point D19] suggests a potential significant impact on grey seal that requires mitigation. Set out fully the situation including what mitigation is being considered, is required, is or is</p>	<p>At Deadline 6, NE provided their response on the population modelling for grey seal of the Humber Estuary SAC (REP6-029).</p> <p>At Deadline 6, NE provided their response on the population modelling for grey seal of the Humber Estuary SAC (REP6-029).</p> <p>Within the population modelling presented within the Marine Mammals Technical Note and Addendum (Revision B) [document reference</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		not being provided and where mitigation measures will be secured if to be used?	<p>16.14], the Applicant determined a threshold of 1% additional annual decline (when compared to the unimpacted population) to represent a significant effect to the population assessed. In their D6 response, NE agreed with this threshold as suitable, and that the results of the population modelling for grey seal are not significant in line with the 1% annual decline threshold (REP6-029).</p> <p>The Applicant therefore considers this matter to be resolved, with no potential for significant effect for grey seal, and no further mitigation to be required.</p>
Q4.12.2.4	Applicant	<p>Full response to Natural England</p> <p>Using the same headings as NE, respond to each and every point raised by NE in its response to the marine mammals technical note [REP6-029].</p>	<p>A full response to all of NE's comments on the population modelling for marine mammals (REP6-029) has been provided in the Marine Mammals Technical Note and Addendum (Revision B) [document reference 16.14].</p> <p>A full response to all of NE's comments on the population modelling for marine mammals (REP6-029) has been provided in the Marine Mammals Technical Note and Addendum (Revision B) [document reference 16.14].</p>
Q4.12.2.5	Applicant Marine Management Organisation	<p>Cockles and brown shrimp</p> <p>State the final positions of the parties on the issues on cockles and brown shrimp [REP6- 026].</p>	<p>The Applicant anticipates reaching agreement on all fish and shellfish ecology assessment matters with the MMO which will be reflected in the final SoCG to be submitted at Deadline 8.</p>

Table 13 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.13

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.13. Habitats and Ecology Onshore			
Q4.13.1 Effects on Protected and Priority Species			
No further questions in this section at this stage.			
Q4.13.2 Effects on Ancient Woodland, Trees and Hedgerows			
No further questions in this section at this stage.			
Q4.13.3 Effects on Rivers and River-Based Wildlife			
No further questions in this section at this stage.			

Table 14 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.14

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.14. Habitats Regulation Assessment			
Q4.14.1 Effect of the Proposed Development on its own and In-combination with Other Plans and Projects			
Q4.14.1.1	Applicant Natural England	<p>Conclusions to be drawn</p> <p>The Applicant has provided a table [REP3-103, Q2.14.1.1] listing European sites and features, and whether agreement had been reached on the AEol position. A number of items were labelled 'To Be Confirmed' whilst the Applicant explained that a further table would be provided covering marine mammals [REP3-101, Q2.14.1.1] at Deadline 5.</p> <p>This information has not been forthcoming. Please produce the marine mammals table and submit it to the Examination, as well as update the original table submitted at Deadline 3 with final positions expressed. It is imperative that the ExA and the SoS understands fully those areas where an AEol cannot be ruled out and where there is disagreement, which can be explored further in Q4.14.1.2.</p>	<p>The Applicant has submitted an update to the Joint Natural England and Applicant Position on HRA Conclusions and Derogation Requirements provided within Appendix A.3 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1].</p>
Q4.14.1.2	Natural England	<p>Conclusions to be drawn part 2</p> <p>The ExA, and the SoS, must be confident, where the derogations are engaged, compensatory measures must be taken to ensure that the overall coherence of the National Site Network is protected. Following the exercise in the above question Q4.14.1.1, the ExA ask for final detailed information regarding:</p> <p>a) Guillemot and Razorbill – reasons why an AEol can/cannot be ruled out AND, if it cannot be, whether the ExA and SoS can have confidence in</p>	<p>a)</p> <p>It is noted that there is disagreement between Natural England and the Applicant on this point. The Applicant maintains its position that an AEol of the guillemot and razorbill features of the Flamborough and Filey Coast SPA can be ruled out and that, in the event that the Secretary of State is unable to rule out AEol, the compensation measures described in the Guillemot and Razorbill Compensation Document (Revision D) [document reference 5.5.4] and secured through the Without Prejudice DCO Drafting (Revision C) [REP5-008] can deliver on SEP and DEP's compensation requirements.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>the compensatory measures provided by the Applicant.</p> <p>b) Red-Throated Diver - reasons why an AEol can/cannot be ruled out AND, if it cannot be, what position that leaves the Examination without any preliminary submissions regarding compensatory measures.</p> <p>c) Grey seal, Harbour seal, Harbour porpoise - reasons why an AEol can/cannot be ruled out AND, if it cannot be, what position that leaves the Examination without any preliminary submissions regarding compensatory measures.</p> <p>d) In relation to c) above, the ExA has already seen your reasons regarding concerns over the SIP process but ask specifically why the MMMP and SIP together are not enough to minimise the adverse impact to a point that AEol can be ruled out (depending, of course, on your earlier conclusions).</p>	<p>b)</p> <p>As noted in the Apportioning and HRA Updates Technical Note (Revision D) [document reference 13.3], the Applicant can confirm that, following discussions with Natural England on 26 June 2023, and notwithstanding its conclusions that AEol on the red-throated diver feature of the Greater Wash SPA can be ruled out, the Applicant has committed to the following mitigation:</p> <ul style="list-style-type: none"> • Seasonal restriction on export cable laying activity within the SPA as secured by Condition 24 of Schedules 12 and 13 of the dDCO (Revision J) [document reference 3.1]; • Turbine restriction zone within the southeast corner of the SEP wind farm site resulting in an approximate 4.5% reduction in buildable area of SEP (as secured through an update to the Works Plans (Offshore) (Revision C) [document reference 2.7]); and • Updates to the best practice protocol for minimising disturbance to red-throated diver with respect to a firm commitment to utilise existing vessel transit routes and an additional commitment regarding considering the potential for crew transfer vessels to transit to the wind farm sites in convoy, where practicable. This is secured within the Outline Project Environmental Management Plan (PEMP) (Revision D) [document reference 9.10]. <p>The Applicant anticipates that agreement with NE can be reached by the close of Examination, to enable AEol in respect of red-throated diver to be ruled out for all impact pathways.</p> <p>c)</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>The Marine Mammals Technical Note and Addendum (Revision B) [document reference 16.14] concludes that AEoI can be ruled out for all marine mammal SACs and qualifying features.</p> <p>The Applicant notes that within the Joint Natural England and Applicant Position on HRA Conclusions and Derogation Requirements provided within Appendix A.3 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1], a number of conclusions with respect to bottlenose dolphin, grey seal and harbour seal are to be confirmed pending additional information from the Applicant. The Applicant has sought to provide this within the Marine Mammals Technical Note and Addendum (Revision B) [document reference 16.14] and anticipates being able to reach agreement with NE that AEoI on these qualifying features can be ruled out following NE review of that document. This will be reflected in an updated Joint Natural England and Applicant Position on HRA Conclusions and Derogation Requirements to be provided at Deadline 8.</p> <p>d) No comments</p>
Q4.14.1.3	Applicant	<p>Sandwich Tern Compensation Document</p> <p>Provide the updated sandwich tern compensation / implementation documents to the Examination.</p>	<p>Appendix 2 Sandwich Tern Compensation Document (Revision B) [document reference 5.5.2] has been submitted at Deadline 7, alongside the updated Sandwich Tern Compensation, Implementation and Monitoring Plan (Revision B) (document reference 5.5.2.1). Schedule 17 of the dDCO (Revision J) [document reference 3.1] has also been updated in relation to compensation measures for Sandwich tern. In addition, the Applicant is intending to update the Appendix 5 Derogation Funding Statement (Habitats Regulations and Marine and Coastal Access Act) [APP-076] at Deadline 8.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.14.1.4	Applicant Natural England	<p>Kittiwake Tower</p> <p>The HRA Derogations Update [REP6-010, plate 2] shows the designs of the kittiwake tower, with the preferred solution being installing new panels underneath the existing panels.</p> <p>a) Applicant, in the newly proposed arrangement in plate 2, are the quantity of benefits (chick yields) the same or equivalent to the benefits arising from the initial design concept with plate 1 as predicted in the quantity of benefits document [REP3-088]? If not, explain with reasons.</p> <p>b) NE, the ExA believes NE has yet to see the designs for the kittiwake tower shown in Plate 2 [REP6-010]. Provide comments on the designs and if there are any concerns regarding the anticipated success of these.</p>	<p>a)</p> <p>The Applicant confirms that there would be no reduction in the estimates of kittiwake productivity gain provided within the Gateshead Kittiwake Tower Modification Quantification of Productivity Benefits (Revision B) [REP3-088] for the updated illustrative design [REP6-010, plate 2]. The calculations assume that the south face of the tower would be removed and therefore the illustrative designs in REP6-010, plate 2 which retain the south panel could provide additional nesting capacity (noting that the south face is much less productive than the north facing faces) which could result in an increase in the productivity benefits, however the ability to retain the south facing panel and ledges is subject to further engineering design considerations and discussions with Gateshead Council.</p> <p>b)</p> <p>The Applicant discussed the updated designs with Natural England at a meeting on 03 July 2023. It is noted that Natural England are broadly content with the updated designs but will be seeking clarifications regarding coppicing of the nearby wooded area (to minimise avian predator interactions) and consideration of the height above ground of the new faces which the Applicant will seek to provide at Deadline 8.</p>
Q4.14.1.5	Applicant	<p>Guillemot and Razorbill compensatory measures</p> <p>Notwithstanding that NE may conclude an AEoI could be ruled out and that the compensatory measures are submitted on a without prejudice basis, the ExA requests an update to the Examination on the progress regarding finalising the measures for these two species, including what further evidence is available to demonstrate the measures are robust, feasible and viable.</p>	<p>The Applicant has updated the Guillemot and Razorbill Compensation Document (Revision D) [document reference 5.5.2] to seek to address outstanding matters raised by Natural England.</p> <p>The Applicant maintains that the implementation of Looming Eyes Buoys (LEB) / Above Water Deterrents (AWD) is the best available option for offshore wind farm developers with small numbers of auk mortalities to deliver project-led compensation.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>The Applicant is not aware of any further evidence regarding use of LEBs / AWDs however understands that the Hornsea Project 4 winter 2022/2023 trials should be being reported on in 2023 and that a Defra funded project undertaking further trials of LEBs / AWDs is due to start in August 2023. The Applicant will keep abreast of these projects and, if AEoI is concluded by the SoS for SEP and DEP in-combination, and compensation is required, will seek to sign up the required number of fishing vessels (based on any further evidence of the effectiveness of LEBs / AWDs) to implement LEBs / AWDs to deliver on SEP and DEP's compensation requirements. This would be undertaken in the post-consent phase.</p>
Q4.14.1.6	Applicant	<p>Derogation Funding</p> <p>During Examination, the package of compensatory measures has changed and varied with different locations and measures being explored. Submit an up-to-date derogation funding statement to reflect these changes.</p>	<p>The Applicant is intending to update Appendix 5 Derogation Funding Statement (Habitats Regulations and Marine and Coastal Access Act) [APP-076] at Deadline 8.</p>
Q4.14.1.7	<p>Natural England</p> <p>Royal Society for the Protection of Birds</p> <p>National Trust</p>	<p>Issue Specific Hearing 7 questions</p> <p>Firstly, refer to the agenda for ISH7 and then review the transcripts and recordings [EV- 092] to [EV-102]. Subsequently, please answer the following regarding the newly identified sandwich tern compensatory measures at Blakeney (rat eradication):</p> <ol style="list-style-type: none"> Does this compensatory measure have both merit and your support? Would this new measure at Blakeney offer suitable resilience and be of a suitable scale to cover for any mortality debt accrued whilst the Loch Ryan proposals are establishing? Is the measure sufficiently developed to carry weight in the decision-making process and 	<p>Appendix 2 Sandwich Tern Compensation Document (Revision B) [document reference 5.5.2] has been submitted at Deadline 7. Meetings have been held between the Applicant, the National Trust, Natural England and RSPB on 8 June (Natural England and National Trust), 16 June 2023 (National Trust only) and 30 June 2023 (Natural England, National Trust and RSPB) to further discuss the potential delivery of compensation at Blakeney. Subsequent to the 30 June 2023 meeting, National Trust, Natural England and RSPB provided written comments on a draft of the proposals which the Applicant has sought to address in the updated document.</p> <p>It is noted that National Trust [AS-067] and Natural England [REP6-028] are supportive of the proposals.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>reassure you that the harm caused by the Proposed Development would be offset?</p> <p>d) Any other comments regarding this compensatory measure that are important and relevant for the Examination?</p>	
Q4.14.1.8	National Trust Natural England RSPB	<p>Derogation case in the round</p> <p>Whilst the SoS, as the competent authority, is to secure compensatory measures (as required), the ExA must be confident that the overall package of compensatory measures are taken to ensure the coherence of the NSN is protected. To this extent, we would like to hear the final positions of the parties as to whether the derogations case, with the compensatory measures, as a whole, is justified and would ensure that the coherence of the NSN is maintained. Refer to any legislation, guidance and national policy as necessary.</p>	-
Q4.14.1.9	Natural England	<p>Confirmation of Position</p> <p>If the Hornsea Project Four DCO was refused by the SoS, would your position regarding AEoI on any species (bird or marine mammal) change? Explain with reasons.</p>	<p>In this instance, the Applicant would anticipate that Natural England's position would be that AEoI of the guillemot and razorbill features of the FFC SPA can be ruled out.</p>
Q4.14.1.10	Natural England	<p>Red-throated Diver and SEP</p> <p>In terms of concerns about physical displacement and disturbance to red-throated divers, much of the proposed new windfarm at SEP would be positioned to the northeast of the existing windfarm of SOW. To that extent, would not the displacement and disturbance effect have already occurred and therefore any effects from SEP would not have any greater influence? (for instance, would the divers already be avoiding that part of the GWSPA because of the physical presence of SOW and,</p>	<p>The Applicant notes that the existing displacement effect from SOW (and also Race Bank OWF) means that for significant areas of GW SPA within 10km of SEP, there would be no measurable increase in effect on GW red-throated divers due to SEP. This forms the basis of the Applicant's assessment, and additional detail has been provided in Section 13 of the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision D) [document reference 13.3]. Furthermore, areas within GW SPA (within 10km of SEP) lie outside of the 'Maximum Curvature Analysis' (MCA) area for red-throated diver. The MCA was the area used to determine the</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		with SEP being further away, that means the extent of the disturbance/displacement would not cause a further reduction?)	<p>GW SPA boundary at designation, and the fact that parts of the SPA within 10km of SEP are outside of the MCA (i.e. those parts of the SPA were primarily designated for another species (little gull)), provides further evidence that additional effects on the GW SPA red-throated diver population are very unlikely to occur.</p> <p>It is noted that, following discussion with Natural England, the Applicant has agreed to exclude turbines from a 4.5km² area in the southeast corner of SEP (see the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision D) [document reference 13.3]). This would remove all remaining potential effects on GW SPA red-throated diver populations due to the presence of wind turbines at SEP, when the effects of existing OWFs and the MCA boundary are taken into account. On that basis, the Applicant concludes that there would be no measurable effect on red-throated diver populations from GW SPA.</p>
Q4.14.1.11	Applicant Natural England	<p>Hornsea Project Four</p> <p>The Applicant reports [REP5-043, paragraph 38] that the Hornsea Project Four applicant strongly objected to the 'bespoke approach' to assessment advocated by NE. At several other times in that document, it is highlighted that the Hornsea Project Four applicant held strong reservations for the 'bespoke approach.' The ExA notes that Natural England have advocated the same/ similar approach in this instance.</p> <p>Applicant</p> <ol style="list-style-type: none"> a) In simple terms, do you share the same concerns as the Hornsea Project Four applicant? b) What weight, if any, do you feel the ExA should give to the 'bespoke approach' and the ultimate results of it on your assessments? 	<p>The Applicant would like to clarify that Natural England has not asked for the HP4 'Natural England bespoke approach' to be used for the SEP and DEP (project alone) assessment. Rather, the outputs from the HP4 project alone assessment have been used for the in-combination values presented by the Applicant for guillemot and razorbill in the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision D) [document reference 13.3], using the three different approaches presented by HP4 (the HP4 Applicant's 'preferred approach'; 'NE standard approach'; and 'NE bespoke approach'). The approach used by HP4 results in significant differences in the predicted in-combination mortality (particularly for the 'NE bespoke approach', which results in significantly increased mortality estimates); however, the contribution of SEP and DEP is unchanged in all cases.</p> <p>a) The Applicant considers that it is for the SoS, when deciding the application for HP4, to determine the validity (or otherwise) of the 'NE bespoke approach'. However, in general terms, the Applicant</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>NE</p> <p>c) Set out clearly the reasoning, rationale and justification for using the 'bespoke approach' when it appears, from the evidence before this Examination, to deviate significantly from your standard approach and guidance.</p>	<p>confirms that it would share the HP4 Applicant's concerns regarding the application of the 'NE bespoke approach', and that the HP4 'applicant's approach' or 'NE standard approach' are likely to generate more realistic (but nonetheless precautionary) mortality estimates for these species.</p> <p>b) On the basis of (a) above, it is the Applicant's view that the ExA for SEP and DEP should place greatest weight to outputs that use the HP4 'applicant's approach' or 'NE standard approach' in considering the conclusions of the assessment. The ExA is entitled to conclude that the HP4 'applicant's approach' or the 'NE standard approach' are appropriate means of assessment.</p>
Q4.14.1.12	Applicant Natural England	<p>Pink Footed Geese</p> <p>Provide a concluding statement which fully summarises the progress made on agreeing a pink-footed geese management plan. If a management plan cannot be agreed before the close of the Examination, explain with reasons why this will not be possible. In addition, set out specific areas where agreement has not been reached and explain what is required in order for both parties to reach agreement on a management plan.</p>	<p>The Applicant and Natural England have been involved in ongoing discussions to agree a pink-footed goose (PFG) mitigation approach. Natural England has provided some information concerning its emerging PFG mitigation strategy, which has two mitigation route options. One of these options (referred to in brief as 'supplementary feeding') may be suitable but it is not sufficiently developed/finalised for the Applicant to include commitment to it within the dDCO.</p> <p>In addition, given the absence of any sightings of PFG within the Order Limits from the two winters of bird surveys (2019-2021), the Applicant considers that adopting either of the Natural England mitigation routes in full could be disproportionate to the risks posed by SEP and DEP. The Applicant therefore proposes that a refined iteration of Natural England's PFG mitigation strategy would be more appropriate.</p> <p>The approach proposed by the Applicant would involve identification of any fields within the Order Limits (and surrounding 200m buffer) and within 10.4km of the North Norfolk Coast SPA/Ramsar site which are potentially suitable for PFG. These fields would then be monitored before and during the key November-January period when wintering PFG forage inland. Construction works would not</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>commence in any fields in which PFG are present, until PFG had concluded their use of the field. Once this stage is reached the field would be considered to have been exhausted as a feeding resource which constitutes part of the PFG population's functionally linked land, and construction works in such fields could then commence. Any fields which are suitable for PFG but at which no PFG are recorded throughout the November to January season will be retained (i.e. construction will not commence in these fields between November and January) to ensure there is no pre-emptive depletion of potential functional linked foraging land.</p> <p>The Applicant considers the above approach would be effective at ensuring SEP and DEP would not lead to an Adverse Effect on the Integrity of the North Norfolk Coast SPA/Ramsar site by impacting these sites' PFG qualifying features. It would ensure any PFG foraging on fields within/bordering the Order Limits were not disturbed or displaced by construction works, and it would not remove any potentially suitable functionally linked land unless and until that land had been exhausted as a foraging resource.</p> <p>The Applicant has highlighted that the mitigation approach proposed for skylark (a species which was abundantly recorded during the breeding bird surveys) involves a similar watching brief and avoidance of areas being actively used by these birds. Although the nature of breeding bird use is different to foraging geese using functionally linked land, the Applicant has suggested that the effectiveness of this as a mitigation measure is the pertinent issue; this measure has not been objected to by stakeholders for nesting skylark.</p> <p>Discussions between the Applicant and Natural England continue. However, discussions at present acknowledge there is insufficient time remaining prior to this submission for both parties to reach agreement on the PFG mitigation approach. A further update on this will be provided at Deadline 8.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Further details of the proposed mitigation approach are provided in the Outline Ecological Management Plan (OEMP) (Revision D) [document reference 9.19] submitted at Deadline 7. The EMP to be provided post-consent will provide the full details of the PFG mitigation plan, and this plan will be approved by the relevant LPAs in consultation with Natural England.</p>

Table 15 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.15

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.15. Historic Environment and Cultural Heritage			
Offshore Matters			
Q4.15.1 Adequacy of Baseline Surveys and Environmental Information			
Q4.15.1.1	Applicant Historic England	<p>Statement of Common Ground</p> <p>Submit a SoCG in a format agreed between the Applicant and HE or provide detailed reasoning which explains why a SoCG cannot be submitted and which highlights the areas where agreement has not been reached, the reasons for this and steps being taken to resolve any outstanding matters of disagreement.</p>	<p>The Applicant has agreed the format for a Draft Statement of Common Ground with Historic England (Onshore and Offshore) [document reference 20.19], it is anticipated that this will be submitted at Deadline 7.</p>
Q4.15.1.2	Historic England	<p>Response in Lieu of Attendance at ISH7</p> <p>Please review the agenda for ISH7 [EV-092] and the recording [EV-104] of the Hearing and provide responses in full, where appropriate, to the matters discussed.</p>	<p>As stated above, a SoCG with Historic England which covers both the onshore and offshore historic environment has been agreed and will be submitted at Deadline 7 [document reference 20.19].</p>
Onshore Matters			
Q4.15.2 Adequacy of baseline surveys and information			
No further questions in this section at this stage.			
Q4.15.3 Effects on Designated and Non-designated Heritage Assets			
No further questions in this section at this stage.			

Table 16 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.16

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.16. Land Use			
Q4.16.1 Effect on Agricultural Land and Businesses and Recreational Assets			
Q4.16.1.1	Applicant National Farmers Union	<p>Outline Management Plan for Agricultural Matters</p> <p>a) The ExA notes [REP5-083, Q3.16.1.1] that the Construction Practice Addendum is still under discussion between the Applicant and the NFU. Provide an update on the latest position and whether an agreement will be reached before the close of examination.</p> <p>b) The Applicant has committed in the Draft SOCG with the NFU [REP6-011] that the final agreed wording in the Construction Practice Addendum will be included in the final CoCP post consent. Applicant, provide a revised OCoCP that also makes this commitment.</p> <p>c) The NFU is of the view [REP5-083, Q3.16.1.1] that it is very important that the wording is agreed in the OCoCP because its provisions will be incorporated into contracts for the construction of the project. Applicant, explain fully why you do not agree with this.</p> <p>d) The NFU has raised concerns [REP5-083, Q3.16.1.1] that there are no details on how field drainage will be reinstated, if a private or mains supply is affected how this will be reinstated on a temporary or permanent basis and that there is no mention of irrigation within the OCoCP. The ExA considers more detail is required for these areas for it to be content that they</p>	<p>a) The Applicant issued its latest version of the Construction Practice Addendum (CPA) on 15th May 2023. A response was received from NFU and LIG on 12th June 2023 which included additional requests as well as clarifications of points. However, a further NFU and LIG proposed amendment is not acceptable to the Applicant as it would require the involvement of all landowners and occupiers in the Applicant's procurement process when appointing a Soil Expert. The Applicant will be responding to NFU and LIG imminently to provide clarification and proposals for outstanding matters.</p> <p>The Applicant will update the ExA on the status of the CPA before the close of examination.</p> <p>b) The Outline Code of Construction Practice (Revision F) [document reference 9.17] has been updated to include the Applicant's commitment to include final agreed wording within the CPA on soil handling, land/field drainage and irrigation and water supply within the final Code of Construction Practice. This is reflected in Section 8.</p> <p>c) Nationally significant infrastructure projects are developments of a scale and complexity that they require a range of mitigation measures to be put in place to mitigate their impacts, which are often better detailed in a management plan than secured by individual requirements in a DCO. The purpose of any Code of Construction Practice (or similar management plan) is to secure necessary mitigation identified through the Environmental Impact Assessment</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>can be suitably managed and mitigated. Applicant, provide further detail in a revised OCoCP.</p>	<p>(EIA) process development activities, and likely requirements associated with any development consent.</p> <p>Management plans that secure mitigation measures need to be able to be applied by the Applicant (and their contractor) across all or part of the development. The nature and level of detail included within them needs to be appropriate for this purpose.</p> <p>It is not uncommon for landowners/occupiers that are affected by a development to request more detail of the practical measures that a developer will take when carrying out the development on their land and/or mitigating any impacts. A developer may enter into private agreements on a voluntary basis with landowners/occupiers or other affected parties that provides additional detail. Such an agreement would be legally enforceable by the landowner/occupier against the developer.</p> <p>However, it is not the case that the additional detail that might be agreed with an individual landowner/occupier is necessary or appropriate to be included within a management plan, particularly when the plan is at an outline stage at the point of application/determination.</p> <p>The concept of the CPA was introduced by NFU and LIG as a means of addressing landowner and occupier concerns around how practical land matters such as drainage, soil management and irrigation would be considered when it came to construction works. The Applicant, NFU and LIG acknowledged during negotiations that the level of detail on such matters within precedent DCO application documents such as the Outline Code of Construction Practice (Revision F) [document reference 9.17] often does not offer landowners and occupiers sufficient comfort when</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>considering whether or not to enter into a voluntary agreement.</p> <p>Notwithstanding that, the Applicant has endeavoured to address the NFU and LIG's concerns so far as it considers it possible to do so. The Applicant has sought to strike a fair and reasonable balance within the CPA so that it offers sufficient comfort to landowners and occupiers around practical matters whilst retaining a degree of flexibility around working practices as is intended within precedented Outline Code of Construction Practice. At no point during negotiations has it been raised to the Applicant that the expectation was for the content of the CPA to be included within the Outline Code of Construction Practice (Revision F) [document reference 9.17] (emphasis added) and no examples have been provided where this has been agreed for other developments.</p> <p>The Applicant has proceeded on the basis that the detail within the CPA would be included within the <u>final</u> Code of Construction Practice to be prepared post-consent in line with Requirement 19 of the draft DCO (Revision J) [document reference 3.1] as committed to in Q3.16.1.1 of The Applicant's Responses to the Examining Authority's Third Written Questions [REP5-049].</p> <p>Aspects of the draft CPA that the Applicant considered were appropriate to include within the Outline Code of Construction Practice have previously been incorporated. For example, the Applicant updated the Outline Code of Construction Practice (Revision C) [REP3-064] at Deadline 3 to include a level of additional detail in relation to the role of the Agricultural Liaison Officer (ALO). As set out in part b) the Applicant has now made clear in the Outline Code of Construction Practice (Revision F) [document reference</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>9.17] that the provisions the CPA relevant to soil handling, land/field drainage and irrigation and water supply will also form part of Code of Construction Practice to be submitted to the Planning Authority for approval post-consent.</p> <p>From a practical perspective, the content of the CPA is still in negotiation with NFU and LIG. It is therefore not possible to include the provisions of the CPA within the Outline Code of Construction Practice (Revision F) [document reference 9.17]. However, the Applicant considers that the amendments that have now been made to the Outline Code of Construction Practice (Revision F) [document reference 9.17] to make clear that the relevant aspects of the final CPA will form part of the final management plan ought to be sufficient to address the NFU and LIG's concerns.</p> <p>For completeness, the Applicant notes that the CPA, once agreed, will be annexed to the legally binding option agreements that will be entered into with landowners. As set out in Q2.8.2.2 of The Applicant's Responses to the Examining Authority's Second Written Questions [REP3-101], occupiers of land subject to a voluntary agreement will also benefit from the contents of the CPA. The CPA will be enforceable by landowners directly against the Applicant.</p> <p>In practical terms, when it comes to appointment of contractors whose scope of works are relevant to areas covered within the CPA, any appointment will require the contractor to comply with the CPA due to it forming part of legally binding landowner agreements.</p> <p>In summary, the Applicant considers that the Outline Code of Construction Practice (Revision F) [document reference 9.17] now includes an appropriate level of detail to provide certainty that the relevant provisions of the CPA will be included within the final Code of Construction Practice. The</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>final Code of Construction Practice will require to be adhered to by contractors appointed by the Applicant and will be enforceable by the Planning Authority. Landowners and occupiers will therefore be protected by the contents of the CPA whether or not they enter into voluntary agreements with the Applicant.</p> <p>d) Further to the Applicant's response to part c) above, the Applicant can confirm that within the CPA, Section 4 prescribes measures concerning land drains, Section 6 prescribes measures concerning water supply and Section 5 prescribes measures concerning irrigation. These measures are still under discussion and have not yet been agreed therefore the Applicant deems it inappropriate to present these within an updated version of the Outline Code of Construction Practice and, for the reasons set out in c) above, considers this unnecessary.</p> <p>Given the detail is contained within the CPA, a document exists to demonstrate to the ExA, LIG and NFU that measures to suitably manage and mitigate land drainage, water supply and irrigation will be adhered to. To reiterate:</p> <ul style="list-style-type: none"> • the CPA will form part of legally binding landowner agreements; and • furthermore, the Applicant has already committed to including the final agreed wording of the CPA within the final Code of Construction Practice and this commitment is now also included within the latest Outline Code of Construction Practice (Revision F) [document reference 9.17] to be submitted at Deadline 7. <p>The CPA is designed to make commitments to and in agreement with landowners and occupiers. The final Code of Construction Practice on the other hand, is designed for Local</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Authorities approval to enable the project to be constructed in line with agreed prescribed mitigation (which will include the agreed final wording in the CPA).</p> <p>The Applicant would also like to confirm that land drainage surveys of existing drainage systems of the land that will be affected by the construction works are currently ongoing at pre-consent stage. These surveys will inform the pre-construction drainage scheme which will allow drainage to be maintained during construction and it is intended that the ALO will coordinate any remaining drainage surveys which have not been undertaken pre application.</p> <p>As secured via Requirement 19 of the draft DCO (Revision J) [document reference 3.1], paragraph 29 of the Outline Code of Construction Practice (Revision F) [document reference 9.17] sets out the need for pre and post construction drainage plans to be developed by a qualified Drainage Specialist.</p> <p>Requirement 25 of the draft DCO (Revision J) [document reference 3.1] secures the need for land used temporarily for construction to be reinstated to its former condition or such a condition as the relevant planning authority may approve.</p>
<p>Q4.16.2 Soils and Soil handling, Ground Conditions, Contamination and Minerals</p>			
<p>No further questions in this section as this stage.</p>			

Table 17 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.17

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.17. Landscape and Visual Effects			
Q4.17.1 Effect on Landscape Character and Views			
No further questions in this section as this stage.			
Q4.17.2 Effects on designated and historic landscapes, including Areas of Outstanding Natural Beauty and Ancient Woodlands			
No further questions in this section as this stage.			
Q4.17.3 Effectiveness of mitigation proposals			
No further questions in this section as this stage.			

Table 18 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.18

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.18. Seascape and Visual Effects			
Q4.18.1 Effects on Designated and Historic Landscapes			
Q4.18.1.1	Natural England Norfolk Coast Partnership	<p>Effects on the statutory purpose of the Norfolk Coast AONB</p> <p>NE refers to further clarification on this subject from Norfolk Coast Partnership, expected at D6 [REP6-028]. No further information has been submitted. Provide final concluding statements, or a joint concluding statement, setting out your position on this subject.</p>	App to refer to points from hearing /hearing summary
Q4.18.2 Cumulative Effects			
No further questions in this section as this stage.			

Table 19 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.19

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.19. Navigation and Shipping			
Q4.19.1 Navigational Risk and Effect on Navigational Safety			
Q4.19.1.1	Applicant	<p>Collision Risk for Outer Dowsing Channel</p> <p>Provide a collision risk assessment for the Outer Dowsing Channel (west of DEP-North) alone, including base data and calculations, setting out the difference in collision risk both with and without the DEP-N proposed wind farm. The results should be set out as per Table 7.1 of the Navigational Safety Technical Note [REP3-031] (to include the 10% and 20% additional traffic) and also set out as a percentage difference from existing to the situation with DEP-N.</p>	<p>The localised results of the NRA modelling with DEP North are given in the following table compared to the results of the sensitivity analysis (without DEP North). This includes percentage increases.</p> <p>The Applicant would like to make clear that:</p> <ul style="list-style-type: none"> As stated in ISH 7 [EV-096], focusing in on a localised area in this manner is highly unusual and was only done so at MCA's request. A percentage change in isolation does not provide sufficient information upon which to define whether that change is acceptable, and the absolute value of the risk must also be considered. As stated in ISH 7 [EV-096], based on the modelling it is more likely that a collision will not occur over the operational lifespan of the project in the localised area off DEP North regardless of whether its fully built out or not.

PINS Question Number	Question is addressed to	Question	Applicant Response																
			<ul style="list-style-type: none"> It is standard for risk changes to vary significantly on a percentage basis across localised areas of any collision assessment. Risk will increase in some areas, decrease in others, or stay the same depending on the changes in routing. These localised changes do not necessarily inform whether global risk in the study area is increasing or decreasing. This is why NRA's consider the full study area and how risk overall has changed. There is nothing unusual around a change of 23% in such assessments, and there are other localised areas within the NRA study area where the change in risk is larger on a percentage basis and where the risk is reduced by a significant percentage. The future case percentage increases are considered conservative assumptions, in particular the 20% case. These future case increases have been applied to all vessels. <table border="1" data-bbox="1346 1031 2069 1377"> <thead> <tr> <th>Scenario</th> <th>With SEP&DEP (NRA Modelling)</th> <th>With -out build out of DEP-N – (Sensitivity)</th> <th>% Change</th> </tr> </thead> <tbody> <tr> <td>Base Case (0% traffic increase)</td> <td>1 in 140 years</td> <td>1 in 172 years</td> <td>23%</td> </tr> <tr> <td>10% traffic increase</td> <td>1 in 115 years</td> <td>1 in 142 years</td> <td>24%</td> </tr> <tr> <td>20% traffic increase</td> <td>1 in 96 years</td> <td>1 in 119 years</td> <td>24%</td> </tr> </tbody> </table>	Scenario	With SEP&DEP (NRA Modelling)	With -out build out of DEP-N – (Sensitivity)	% Change	Base Case (0% traffic increase)	1 in 140 years	1 in 172 years	23%	10% traffic increase	1 in 115 years	1 in 142 years	24%	20% traffic increase	1 in 96 years	1 in 119 years	24%
Scenario	With SEP&DEP (NRA Modelling)	With -out build out of DEP-N – (Sensitivity)	% Change																
Base Case (0% traffic increase)	1 in 140 years	1 in 172 years	23%																
10% traffic increase	1 in 115 years	1 in 142 years	24%																
20% traffic increase	1 in 96 years	1 in 119 years	24%																

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>COLLRISK</p> <p>The collision risk is calculated via Anatec's COLLRISK software modelling suite. This constitutes software based modelling and therefore it is not possible to submit the "model" itself into the examination. However, a summary of the model inputs, process and considerations is provided below.</p> <p>Anatec's COLLRISK software has been used to quantify risk for numerous NRAs undertaken for successfully consented UK wind farms. Notable examples include (but not limited to) Norfolk Boreas, Norfolk Vanguard, Hornsea One, Hornsea Two, Hornsea Three, Moray West, East Anglia One North and East Anglia Two.</p> <p>Baseline traffic data is used to input route positions, widths, traffic volumes and traffic compositions into the model via exposure times stored within a grid of cells for the area. An illustration of the route width and position assumptions made for DEP North was provided at Deadline 5 [REP5-050].</p> <p>The model considers the following influencing factors identified from analysis of historical data:</p> <ul style="list-style-type: none"> • Vessel types; • Vessel sizes; • Vessel speeds; • Encounter situation (e.g., head-on, overtaking or crossing); and • Visibility. <p>Historical incident data used for calibration purposes spans a 20 year period.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.19.1.2	Marine and Coastguard Agency	<p>Size of Ships</p> <p>The Applicant has stated that the route west of DEP-N (Outer Dowsing Channel) has mainly smaller or mid-sized ships traversing through the area. How does this effect the assessment of collision risk through this area and does it allow more flexibility for routes through for example?</p>	<p>When considering navigation risk within the Outer Dowsing Channel it is important to recognise the type of area it is, and the type of traffic that navigates within it. The area off the Norfolk coast is an area of sand banks that is complex to navigate and therefore it is typically smaller (on the scale of vessel sizes) and more regular operators who navigate within it. Larger vessels are of course not prohibited from navigating in the area but are generally found instead routeing within the Deep-Water Route to the east.</p> <p>This is evidenced by the maximum vessel length of 240m recorded within the Outer Dowsing Channel, an average length of vessels through the Outer Dowsing Channel of 130m and by the average draught of 6m. The Navigation Risk Assessment for the Norfolk Boreas Project¹ (2019) shows the maximum vessel length within the DR1 Lightbuoys Deep Water Route to be 336m (noting the world's largest is around 400m), and averages within the study were 149m (summer) and 165m (winter) and average draughts of 7m (summer) and 8m (winter).</p>
Q4.19.1.3	Maritime Coastguard Agency	<p>Frequency of Ships Passing</p> <p>The Navigational Safety Technical Note [REP3-031] states that there are on average 13 ships passing through the Outer Dowsing Channel (west of DEP-N). This could mean that for most times it is unlikely that there would be more than one ship travelling though this channel adjacent to DEP-N at any one time. How has this been considered in your assessment</p>	<p>The Applicant agrees that it is unlikely that multiple vessels will be passing DEP North at the same time. Associated analysis was submitted in submissions The Applicant's Comments on Responses to the Examining Authority's Third Written Questions [REP6-013] (Table 5) and Evidence to support the Applicant's response to ISH7 Agenda Item 4.ii [REP6-024] (p15 concurrent vessel analysis).</p>

¹<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000742-6.3.15.1%20Environmental%20Statement%20Appendix%2015.1%20Navigation%20Risk%20Assessment.pdf>

PINS Question Number	Question is addressed to	Question	Applicant Response
		that concluded that the navigational risk created by the DEP-N site is unacceptable?	The NRA process has followed the Formal Safety Assessment process required by the MCA Methodology which considers both frequency and consequence.
Q4.19.1.4	Trinity House UK Chamber of Shipping	<p>Passage Planning Guide</p> <p>Provide a copy of The Passage Planning Guide referred to by Trinity House/UK Chamber of Shipping in ISH7 [EV-095 and EV-099] highlighting relevant sections, including that regarding the nautical mile clearance to wind farms.</p>	<p>The Applicant notes that the 'Wetherbys Passage Planning Guidelines' is a third-party publication to aid vessels in passage planning. It is not a publication that is required under the International Maritime Organizations 'Publications Carriage Requirements' as per the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)1978 and has no mandatory remit. The Applicant highlights that there is no mandatory safe passing distance for vessels transiting in proximity to offshore wind farms and, as per Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions [REP5-050], evidence demonstrates that vessels do pass closer than 1 nautical mile.</p>
Q4.19.1.5	Applicant	<p>Calculations for Sensitivity Modelling</p> <p>Provide more detail of calculations and modelling used which resulted in the 3% difference for collision risk data for the area between developing DEP-N and not developing DEP-N to be provided, as set out in the Navigational Safety Technical Note [REP3-031]</p>	<p>As detailed in the response to Q4.19.1.1 above, Anatec's COLLRISK software has been used in the NRA [APP-198] to calculate the estimated change in collision risk arising from the SEP and DEP projects. This software has been used to quantify risk for numerous NRAs undertaken for successfully consented UK wind farms. Notable examples include (but are not limited to) Norfolk Boreas, Norfolk Vanguard, Hornsea One, Hornsea Two, Hornsea Three, Moray West, East Anglia One North and East Anglia Two.</p> <p>Further details of the inputs it considers are provided under the "COLLRISK" heading below and in response to Q4.19.1.1.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response									
			<p>Navigational Safety Technical Note</p> <p>The 3% value was an output of the modelling undertaken for the Navigational Safety Technical Note [REP3-031]. The analysis compared the following:</p> <ul style="list-style-type: none"> • The output of the COLLRISK collision modelling assuming DEP North is fully built out i.e., what was assumed in the NRA [APP-198]; and • Additional COLLRISK collision modelling undertaken assuming DEP North was not fully built out, such that the full pre wind farm percentile width was unchanged i.e., the sensitivity modelling undertaken in the Navigational Safety Technical Note [REP3-031]. <p>The results of these scenarios showed the annual frequency of a collision in the study area were as follows:</p> <table border="1" data-bbox="1346 1034 2074 1289"> <thead> <tr> <th>Scenario</th> <th>Annual Frequency</th> <th>Return Period</th> </tr> </thead> <tbody> <tr> <td>NRA Modelling (Full build out of DEP North)</td> <td>1.18 x 10⁻¹</td> <td>8.5 years</td> </tr> <tr> <td>Sensitivity Modelling (Partial build out of DEP North)</td> <td>1.15 x 10⁻¹</td> <td>8.7 years</td> </tr> </tbody> </table> <p>The 3% value represents the change in risk between these two scenarios:</p>	Scenario	Annual Frequency	Return Period	NRA Modelling (Full build out of DEP North)	1.18 x 10 ⁻¹	8.5 years	Sensitivity Modelling (Partial build out of DEP North)	1.15 x 10 ⁻¹	8.7 years
Scenario	Annual Frequency	Return Period										
NRA Modelling (Full build out of DEP North)	1.18 x 10 ⁻¹	8.5 years										
Sensitivity Modelling (Partial build out of DEP North)	1.15 x 10 ⁻¹	8.7 years										

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>1.18 x 10⁻¹ divided by 1.15 x 10⁻¹ equals 1.03</p> <p>COLLRISK</p> <p>The collision risk is calculated in COLLRISK using the exposure times stored within a grid of cells for the area (calculated from the baseline data studied for the NRA) as well as the following influencing factors identified from analysis of historical data:</p> <ul style="list-style-type: none"> • Vessel types; • Vessel sizes; • Vessel speeds; • Encounter situation (e.g., head-on, overtaking or crossing); and • Visibility. <p>The model is calibrated using 20 years of historical incident data.</p>
Q4.19.1.6	Applicant Maritime and Coastguard Agency	<p>Without prejudice mitigation wording</p> <p>At ISH7 [EV-096] [EV-100] it was suggested that a potential mitigation would be an exclusion of wind turbines and any other associated infrastructure from an area in between and to the west of the Mid-Outer Dowsing buoy and Dudgeon buoy, thus allowing greater sea room. The ExA acknowledges that the Applicant strongly opposes this measure and would not wish it to be proposed. Nonetheless, to aid the ExA's understanding of the possibilities before it, and to inform the SoS's decision, provide the following information without prejudice:</p>	<p>a) After careful reflection, the Applicant is not prepared to make a without prejudice proposal for an exclusion zone (surface structures free area) based on the MCA's proposed surface structures free area between and to the west of the Mid Outer Dowsing buoy and Dudgeon buoy (the buoy to buoy line). The MCA's position simply does not withstand scrutiny and cannot be justified applying the normal navigation risk technical analysis and principles which inform navigation risk judgments for new wind farms. The basis on which the MCA has submitted its boundary line appears to be based on a demonstrably false premise regarding the governing water depth (the controlling depth) coupled with the</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		<ul style="list-style-type: none"> a) Applicant and MCA, show this exclusion zone on a map/diagram with an easily recognisable title. b) In its post Examination considerations, if the ExA considers it is essential to include a provision for an infrastructure free zone in line with MCA's representations (as outlined in Section 7 and Figure 2 (Recommended Boundary Amendment) of their submission at Deadline 5) [], Applicant and MCA advise if the map/diagram would need to be included as a certified document or if it should be included in the ES or the Offshore Project Environmental Management Plan. c) Applicant and MCA, provide dDCO drafting, be it a new article, new requirement or amendment to an existing requirement, and any relevant definitions that puts the exclusion zone into effect. d) Applicant, provide any details of how this restriction may or may not affect the ability of DEP-N to be developed on its own (i.e. does this mean the full quantum of turbines for DEP could no longer be delivered solely in DEP-N, regardless of any commercial decision?) e) Applicant, provide an assessment of how the exclusion would affect any assessment provided in the ES. Provide any corresponding amends to the ES as relevant. f) Applicant and MCA, to provide responses to the above questions in agreement in a joint statement. 	<p>application of guidance which does not apply to these facts, among other concerns. It is important to note that Trinity House, which is the relevant expert on the controlling depth, agrees with the Applicant that the correct governing depth is 10m and not the 15.3m used by the MCA (this was confirmed by Trinity House at Issue Specific Hearing 7 [EV-095]).</p> <p>The Applicant has, however, <u>with extreme reluctance</u>, decided to submit an alternative without prejudice surface structures free area. A without prejudice version of the Offshore Works Plans (Without Prejudice) [document reference 2.7.2] has been produced and submitted at Deadline 7 which shows a surface structures free area that complies with the MCA's calculation for adequate sea room to allow four vessels to safely pass each other in the Outer Dowsing Channel, with the western extent defined by the 10m controlling depth as confirmed by Trinity House. As the ExA is aware, the Applicant firmly stands behind the conclusions of the NRA and does not consider that any surface structures free area is required. The Applicant's full position in relation to the MCA's proposed surface structures free area and the Applicant's alternative without prejudice surface structures free area is explained in its response to The Applicant's Comments on Maritime and Coastguard Agency Deadline 6 Submission [document reference 21.11].</p> <p>b) The Offshore Works Plans are certified documents. An update to these work plans is sufficient to achieve a surface structures free area.</p> <p>It is worth noting here that Figure 2 (Recommended Boundary Amendment) of the MCA submission at</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Deadline 5 [REP5-081] conflates the terms of navigable sea room and the current extent of traffic. Subtracting the clearance distance from the remaining safe sea room <u>contradicts</u> other submissions from the MCA where they provide justification for clearance distances based upon vessels putting safe navigable water between their passage routes and structures which can be used if they need to make an extreme manoeuvre to avoid collision (360-degree turn). Please see Appendix B of The Applicant's Comments on Maritime and Coastguard Agency Deadline 6 Submission (Question 3.19.1.10) [document reference 21.11].</p> <p>c) The most straightforward mechanism to secure a surface structures free area within the Order Limits at DEP North in the Draft DCO is to alter the Offshore Works Plans. It is not necessary to have a new article, Requirement or other provision (nor to amend any existing articles, Requirements or other provisions) to achieve a surface structures free area. The Applicant has submitted a without prejudice version of the offshore works plans (see Works Plans (Offshore) (Without Prejudice) [document reference 2.7.2]). The without prejudice offshore works plans have been amended to <u>exclude</u> Work Nos. 1B (Dudgeon Extension wind turbines) and 3B (Dudgeon Extension substation platform) from the Applicant's proposed alternative without prejudice surface structures free area. The corresponding coordinates, for information, for the Applicant's alternative without prejudice surface structures free area are:</p>

PINS Question Number	Question is addressed to	Question	Applicant Response		
			Point ID	Latitude (DMS)	Longitude (DMS)
			0	53° 21' 9.275" N	1° 10' 11.081" E
			1	53° 21' 9.295" N	1° 10' 27.857" E
			2	53° 19' 7.543" N	1° 12' 31.716" E
			3	53° 19' 2.699" N	1° 12' 19.932" E
			4	53° 21' 9.275" N	1° 10' 11.081" E
			<p>d) Chapter 4 Project Description of the Environmental Statement (Revision C) [REP5-021] and the Scenarios Statement [APP-314] (see Section 8.6) set out how flexibility in the design options for SEP and DEP has been accommodated within the Rochdale Envelope of parameters assessed within the ES,</p> <p>Paragraph 114 of the Scenarios Statement highlights the importance of a key design decision, namely whether to use the DEP North and DEP South array areas, or whether to use DEP North array area only. It is set out that this design decision will be determined based on a range of technical and commercial factors such as wind yield, wake losses and ground conditions. Supply chain factors such as the size of available wind turbine generators on the market at the time of procurement will also influence the final detailed design of DEP. This in turn will influence the number of turbines and possible layout options. The DEP North only design option has benefits in that it reduces the overall amount of interlink cabling required between SEP and DEP (or between DEP North and DEP South in a non-integrated transmission system scenario).</p>		

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Any restriction on buildable area within DEP North will restrict the overall flexibility of delivering DEP in the DEP North array area only. The ExA will be aware that DEP North is an unusual shape as it sits within an area which is particularly constrained by existing infrastructure including the Waveney oil and gas platform and the Waveney – Durango pipeline. The boundary has also been influenced by an area of shallow water to the west of the DEP North boundary as can be seen on the charts.</p> <p>The Applicant explained at Issue Specific Hearing 7 (ISH7) [document reference 21.3] that, as well as taking into consideration areas of greatest wind resource (wake losses are highest downwind (northeast) of the existing Dudgeon Offshore Windfarm (DOW)) and suitable water depth, DEP North also contains areas of high-density chalk, particularly in the eastern extent which preclude the use of certain foundation types. It should also be noted that the MCA guidance requires a 1nm set back distance between existing arrays and Extension arrays if it is not possible to align the Search and Rescue (SAR) lanes with one another. Under almost all design options such an alignment will not be possible given the step change in turbine size. This buffer presents another restriction on usable buildable area within the arrays.</p> <p>It is possible that despite the MCA buoy to buoy restriction on surface structures, that when considering only the most high level constraints (existing no-build areas, minimum turbine spacing), the Project probably could site all 30 wind turbine generators (which would be the greatest number of smallest turbines in the envelope) into the DEP North array area and deliver an array which accords with the layout commitments agreed with the</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>MCA and secured in the DCO application. However, when considering the existing hard constraints alongside technical/commercial considerations that influence siting of the turbines (such as wind resource), and factoring a conservative loss of developable area due to as yet unknown design considerations such as ground conditions in precise locations targeted for installation, the Applicant is strongly of the view that the ability of DEP North to be developed on its own using the full quantum of wind turbine generators will be compromised.</p> <p>e) Review of the assessment set out in the ES confirms that the project would still fall within the parameters outlined in the Project Description and no new worst-case scenarios would arise as a result of the possible exclusion. However, it is noted that any reduction in buildable area reduces flexibility in the final design. The need for flexibility in the final design is set out in the Project Description, also noting the additional points made in this regard at point (d) above.</p> <p>f) In relation to question (a), the Applicant is not submitting the ('buoy to buoy') plan requested by the ExA, but has submitted an alternative plan, as explained above. The Applicant communicated to the MCA that it would be submitting an alternative without prejudice position on 5th July 2023. In relation to question (b), the Applicant has not discussed this point specifically with the MCA, but considers that the point it has made above is uncontroversial. In relation to question (c), the Applicant understands the MCA is putting forward wording in the form of a new requirement, though as already explained the only change which is required (and which aligns with how the DCO is drafted) is a change to the Offshore</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			Works Plans. In relation to question (d), this is a matter for the Applicant only. In relation to question (e), this has not been discussed with the MCA, but the Applicant considers its response is uncontroversial.
Q4.19.1.7	Applicant	<p>Navigation Routes</p> <p>Provide evidence from regulators/shipping companies, of the routes that they use or intend to use post development of DEP-N, including charts showing these routes in respect of proximity to existing and proposed wind farms.</p>	<p>The Applicant has provided the following:</p> <ul style="list-style-type: none"> • Email correspondence from DFDS (one of the largest commercial ferry operators in the UK) stating their Newcastle / Ijmuiden vessels are “quite satisfied that we will not be adversely affected” and “our vessels between Immingham and Vlaardingen do not see an issue either”. This includes a figure provided by DFDS showing their planned minor deviation around DEP North. It is noted that this route is already used by DFDS in adverse weather. • Minutes from a meeting with P&O (again one of the largest commercial ferry operators in the UK) stating “there were no navigational safety concerns”, and “P&O vessels safely navigate in more restricted areas than would be the case here”. It is noted that the 195m vessel “Bore Song” referenced by the MCA in their Deadline 3 submission [REP3-134] is a chartered P&O vessel. • Appendix A.12 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1].
Q4.19.1.8	Applicant	<p>Adverse Weather Route</p> <p>Submit evidence that there are shipping vessels which use the Outer Dowsing channel route as an adverse weather route.</p>	As per response to Q4.19.1.7, the Applicant has submitted email correspondence from DFDS which shows they use the area off DEP North during adverse weather conditions.

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.19.1.9	Applicant	<p>Opinions/Concerns of Shipping Operators</p> <p>Following the Applicant's suggestion in ISH7 [EV-092 to EV-102] that there are no significant concerns from shipping operators with use of the Outer Dowsing Channel, particularly if DEP-N is built out as a wind farm, provide evidence to this effect including any correspondence from such shipping operators.</p>	<p>In addition to the evidence submitted as per Q4.19.1.7, the Applicant notes that:</p> <ul style="list-style-type: none"> • The consultation approach for the NRA [APP-198] process was agreed with MCA and Trinity House in June 2020. • In line with this, the NRA [APP-198] process included a full and comprehensive vessel operator outreach. Further details of regular operator consultation are provided in Section 4.3 of the NRA [APP-198]. • Key / major ferry operators were in attendance at the hazard workshop (DFDS, Stena, P&O, and CLdN). The Applicant has submitted the slides shown at the workshop in Appendix A.10 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1] to demonstrate they were given sufficient information upon which to base their opinion. • The Chamber of Shipping agreed via the Final SOCG [document reference 14.22] that appropriate consultation had been undertaken with them including "<i>consultation with COS members that were identified in regular operator consultation or responded at PEIR</i>".
Q4.19.1.10	Applicant Marine and Coastguard Agency	<p>Joint Position Statement</p> <p>ExA requires a joint position statement from both parties to set out what is a mutually agreeable position to alleviate any navigational risk to ALARP.</p>	<p>The SoCG submitted at Deadline 3 [REP3-079] already outlines areas where the MCA have a joint position and where differences exist. The Applicant has sought to engage extensively with the MCA outside of the formal Examination process with a view to understanding its position, and finding ways that the parties could reach a common understanding of the matters raised, but is yet to reach a mutual position on</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>key matters. The Applicant contacted the MCA to discuss what might be possible regarding a Joint Position Statement and the MCA noted that the ExA already has the SoCG available to it.</p> <p>The Applicant's position is that the navigational risk is tolerable and ALARP as per the conclusion of the NRA and no further mitigation is required to alleviate risk.</p> <p>The Applicant is in agreement with the MCA that the NRA complied with MGN 654 and the conclusions of the NRA are agreed with Trinity House (see Final SoCG with Trinity House [document reference 12.12] and the final SoCG with the Chamber of Shipping [document reference 14.22]). After thorough consultation no other shipping and navigation stakeholders have raised any concerns with the ALARP statements and conclusions of the NRA.</p>
<p>Q4.19.2 Impact on Radar, Search and Rescue</p>			
<p>No further questions in this section at this time.</p>			

Table 20 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.20

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.20. Noise and Vibration			
Q4.20.1 Adequacy of the Assessments for Construction			
No further questions in this section as this stage.			
Q4.20.2 Construction Effects on Sensitive Receptors			
Q4.20.2.1	Applicant	<p>HDD Works – Solar Park</p> <p>The revised OCoCP [REP5-029, Paragraph 186] sets out that a worst-case scenario could occur requiring night time working for the HDDs at the Solar Park. However, the Applicant has set out [REP5-049, Q3.20.2.1] that other than the specific crossings of Stakeholders' apparatus, such as Network Rail who stipulate continuous HDD for safety reasons, the HDDs are not required to be continuous and will follow the agreed site working hours set out in Requirement 20 (Construction hours) of the dDCO (Revision H).</p> <ul style="list-style-type: none"> a) Confirm definitively whether HDD works are required at the Solar Park at night other than in an emergency. b) If not, should the mitigation be more generic about avoiding emergencies necessitating HDD works at night for all such crossings, as well as at the Solar Park. 	<ul style="list-style-type: none"> a) The Applicant confirms that HDD works at the Solar Park would only be carried out at night if there was an emergency situation. b) The Applicant has revised Section 11.1.3 of the Outline Code of Construction Practice (Revision F) [document reference 9.17], submitted at Deadline 7.
Q4.20.2.2	Applicant	<p>HDD Works – Assessment</p> <p>The Applicant noted [REP3-101, Q2.20.4.1] that the longest proposed drill is approximately 600m; hence, the absolute maximum duration of night-time emergency HDD works is 6.25 days and night-time emergency HDD works would not last for more than 10 days in any 15 consecutive days. It is consequently considered in accordance with the criteria</p>	<ul style="list-style-type: none"> a) The longest proposed drill is at the Solar Park (Crossing ID 200). As described in the response to Q4.20.2.4, the Crossing Schedule (Revision E) [document reference 6.3.4.1] has been corrected to include the option to open-cut at this location where possible. It is therefore highly unlikely that a 600m drill will be required. The length of the HDD will be minimised as far as possible. HDD is only required

PINS Question Number	Question is addressed to	Question	Applicant Response
		<p>presented in ES [APP-109, Section 23.4.3.3], the associated noise effects will be not significant. Section 23.4.3.3 notes that based on the guidance in BS 5228-1, construction noise levels above the Threshold Value for less than 10-days (or 10-evenings/weekends or nights) in any 15, or 40-days or less (or 40 evenings/weekends or nights) in any 6-month period would not normally be considered significant. However, it also notes that with regards to the timing of the effect, night time impacts being more likely to be considered significant than daytime impacts.</p> <p>a) Given the above, provide further justification that 6 consecutive nights of HDD drilling would not have significant adverse effects on sensitive receptors.</p> <p>b) Is the Applicant suggesting that as emergency HDD works would not last for more than 10 days in any 15 consecutive days it would not seek to implement mitigation to minimise impacts as far as possible to sensitive receptors at night?</p> <p>c) Provide further evidence about what mitigation could be used should emergency HDD works be required at night to minimise impacts on sensitive receptors and include this in a revised draft of the OCoCP.</p>	<p>underneath the solar farm photovoltaic panels, the final location of which is not known at this time.</p> <p>The predicted construction noise effects are based on guidance in BS 5228-1, which is an accepted approach as industry best practice in the UK Acoustics industry. Based on the criteria in BS 5228-1, the effects of night-time noise are assessed as not significant. For further context, BS5228-1 uses evidence taken from the WHO publication Night Noise Guidelines for Europe (NNG) for its night-time noise level criteria. The WHO NNG guidance sets thresholds in terms of outdoor annual average night-time noise levels to avoid potential health effects because sleep is being disturbed over a long period of time. Sleep disturbance is typically classified by the number and type of awakening events, noting that there are various kinds of awakening as follows:</p> <ul style="list-style-type: none"> • Behavioural awakening - equivalent to the everyday understanding of conscious 'awakening', when the subject is usually aware of being conscious at the time and can often recall being 'awake' the next day; • Physiological awakening – defined by changes in sleep stages which the subject may not be aware of at the time or recall the next day; and • The onset and degree of 'motility' i.e. body movements which the subject may not be aware of at the time or recall the next day. <p>The adopted criterion is designed to avoid significant health effects, as a result of noise-associated awakenings over a long time period, without requiring residents to close their windows. The WHO NNG guidance assumed windows were partially open and an outdoor to indoor noise level difference of 15dB; thereby implying an indoor noise level of 40dB L_{Aeq} for the onset of high effects and 35dB L_{Aeq} for medium effects.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>With windows closed, the outdoor to indoor noise level difference is 25 to 30dB L_{Aeq} i.e. 10 to 15 dB higher than that with windows open. If the residents close their windows, the potential worst-case indoor noise levels from construction would be 25 to 30dB L_{Aeq} (CCR16B) and 28 to 32dB L_{Aeq} (CCR16C). These indoor noise levels are at least 3dB below the threshold for the onset of medium effects. Hence, significant adverse effects are not anticipated.</p> <p>b) The Applicant is not suggesting that it would not seek to implement mitigation to minimise impacts at night. Mitigation will be implemented to minimise impacts at night as far as possible. This could include:</p> <ul style="list-style-type: none"> • minimising the length of the drill, as outlined in the answer to Q4.20.2.2a); • implementation of Best Practicable Means as specified in Section 10.1.1 of the Outline Code of Construction Practice (Revision F) [document reference 9.17]; • specify final cable location and crossing design to locate trenchless crossing entry pits as far as possible from receptors; • increased separation distance of noisy plant to receptors; • works scheduling to avoid high noise levels at receptors for more than 10 days in any 15 consecutive days, or 40 days in any 6 consecutive months; and • the use of temporary noise barriers. <p>The final mitigation specification will be identified in the Construction Noise (and vibration) Management Plan (CNMP), as required by the Outline Code of Construction Practice (Revision F) [document reference 9.17]. The final Code of Construction Practice will accord with the Outline Code of Construction Practice (Revision F) [document</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>reference 9.17] and must be submitted to and approved by the relevant planning authority, as secured by draft DCO (Revision J) [document reference 3.1] Requirement 19 [REP6-002]. This approach to construction noise mitigation has been agreed with the relevant planning authorities, see Draft Statement of Common Ground with South Norfolk Council (Revision B) [REP4-018] and Draft Statement of Common Ground with Broadland District Council (Revision B) [REP4-019].</p> <p>c) The Outline Code of Construction Practice (Revision F) [document reference 9.17] has been updated to clarify that the CNMP will include an assessment of the potential for emergency 24-hour working to cause significant effects. If the CNMP finds that significant effects could occur due to emergency 24-hour working, a supply of temporary acoustic barriers will be available at the trenchless crossing location. If an emergency occurs and 24-hour working is required, these will be erected in compliance with the requirements of the CNMP. This requirement has been added to Section 10.1.6 of the Outline Code of Construction Practice (Revision F) [document reference 9.17] submitted at Deadline 7.</p>
Q4.20.2.3	Applicant	<p>HDD Works in the dDCO</p> <p>Having regard to the Applicant's reply to DC1.2.1.2 [REP5-051], the ExA consider that as currently drafted R20 (2)(d) [REP5-005] would allow all HDD works to be undertaken at night. This would run contrary to the Applicant's reply to Q2.20.4.2 [REP3-101]. To avoid potentially significant impacts from noise, the ExA remains of the view that R20 (2)(d) of the dDCO should make clear that such works only relate to the A11 (RDX048), Cambridge to Norwich Railway</p>	<p>The Applicant is in negotiations with the relevant Statutory Undertakers on their requirements in relation to proposed trenchless crossings of their assets, which may include 24-hour working. If the Statutory Undertakers require 24-hour working at a trenchless crossing, depending on the length of the crossing, this may result in planned night-time works. The noise impact of these works will be identified in the CNMP, and mitigation will be incorporated as required by the Outline Code of Construction Practice (Revision F) [document reference 9.17] and subject to agreement with the relevant</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		(RLX002) and North Norfolk Railway line (RLX001) crossings. Applicant, provide such wording.	<p>planning authority, as per the process outlined in the response to Q4.20.2.2b).</p> <p>Whilst the Applicant notes that there is recent precedent for the form of wording used in R20(2)(d) in both the Norfolk Vanguard Offshore Wind Farm Order 2022 and the Norfolk Boreas Offshore Wind Farm Order 2021, it has updated R20(2) in line with the equivalent requirement in The East Anglia One North Offshore Wind Farm Order 2022 and The East Anglia Two Offshore Wind Farm Order 2022. As such, sub-paragraph 2(d) has been removed and 2(a) has been amended as follows:</p> <p>'(a) continuous periods of operation that are required as assessed in the environmental statement, such as concrete pouring, drilling, dewatering, cable jointing, and pulling cables (including fibre optic cables) through ducts and HDD.'</p>
Q4.20.2.4	Applicant	<p>Crossing Schedule</p> <p>The ExA note [REP5-025] that changes have been made to the Crossing Schedule [REP5-025] and, amongst others, the crossing technique has been altered for the Solar Park (Crossing 200) and The Street (Crossing 202). Explain the reason for each change in the revision and what implications there are for the ES.</p>	<p>The following changes have been made to the Crossing Schedule at Deadline 5:</p> <ol style="list-style-type: none"> ID193 (Farm Access Track) <p>The crossing technique was originally identified as 'Open Cut' and has been updated to 'Open Cut / Trenchless'.</p> <p>The Applicant is aware of plans to develop part of the site for a solar farm (planning permission reference 20211249 and 20211288). This would mean that it would be necessary to use HDD crossing to drill under the photovoltaic panels. The intention was always to use a combination of HDD and Open Cut methods in this area, depending upon the final location of</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>the photovoltaic panels. The change to the Crossing Schedule is therefore correcting an error.</p> <p>2. ID200 (Stark Energy – Proposed Solar Park Development) and associated Crossing IDs 196 - 202</p> <p>ID 196 (Hedgerow): will be crossed via trenchless crossing. ID 197 (Track): will be crossed via trenchless crossing. ID 198 (Hedgerow): will be crossed via trenchless crossing. ID 199 (Cables): will be crossed via trenchless crossing. ID 200 (Stark Energy – Proposed Solar Park Development): The crossing technique was originally identified as 'Trenchless' and has been updated to 'Open Cut / Trenchless'. ID 199 (Cables): will be crossed via trenchless crossing. ID 202 (Minor Road): will be crossed via trenchless crossing.</p> <p>As set out above, the Applicant is aware of plans to develop part of the site for a solar farm (planning permission reference 20211249 and 20211288). The intention was always to use a combination of HDD and Open Cut methods in this area (ID200) depending upon the final location of the photovoltaic panels. The change to the Crossing Schedule is therefore correcting an error. In addition, the Applicant's refers to Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions, Appendix A.3 Indicative trenchless crossing locations at</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p>Stark Energy proposed solar park development [document reference 21.5.1] for further illustration.</p> <p>3. ID496 (Church Road)</p> <p>The crossing technique was originally identified as 'Open Cut' and has been updated to 'Open Cut / Trenchless'.</p> <p>The Applicant is considering using a Trenchless technique in this location to reduce impact to existing vegetation and access in this area and has updated the Crossing Schedule accordingly.</p> <p>Two out of the three changes listed above are corrections. The change at ID496 has been made to potentially reduce the impact of the works on existing vegetation and access. HDD activities would be theoretically noisier when compared to open cut at this location however, given the distance of the works to the closest Noise Sensitive Receptors, significant effects are not anticipated. The construction methodology, and detailed mitigations associated with the construction works, will be provided at detailed design stage and submitted as part of the Code of Construction Practice, controlled under Requirement 19 of the draft DCO (Revision J) [document reference 3.1]. These include Construction Method Statements and Construction Noise (and vibration) Management Plan, amongst others.</p>
<p>Q4.20.3 Cumulative Effects Assessment</p>			
<p>No further questions in this section as this stage.</p>			

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.20.4 Adequacy and Design of Proposed Mitigation			
No further questions in this section as this stage.			

Table 21 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.21

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.21. Oil, Gas and Other offshore infrastructure and activities			
Q4.21.1 Helicopter Access			
Q4.21.1.1	Perenco	Take Off Space Required Provide a view, following the discussions at ISH 7 [EV-097 to EV-101], of whether 1.01nm is sufficient distance to allow for One Engine Inoperable take-offs.	No response required. Please see the Applicant's response to Q4.21.1.3 below.
Q4.21.1.2	Perenco	Required Approach Distance Please provide a view, following the discussions at ISH 7 [EV-097 to EV-101], of whether 1.34nm for the approach is necessary and the effects on flights if it is less than 1.34nm.	No response required. Please see the Applicant's response to Q4.21.1.3 below.
Q4.21.1.3	Applicant	dDCO amendments Provide any amendments necessary to reflect the calculated 1.01nm considered necessary by the Applicant within the dDCO, as referred to at ISH 7 [EV-097 to EV-101].	Please see the protective provisions included for the benefit of Perenco at Part 15 of Schedule 14 of the draft DCO (Revision J) [document reference 3.1]. The Applicant notes that following discussions with Perenco it has included a restriction up to 1.01nm within its version of the protective provisions included within the draft DCO (Revision J) [document reference 3.1].
Q4.21.1.4	Perenco Applicant	Joint Statement Whilst it is apparent that there have been negotiations between Perenco and the Applicant, with a hope of an agreed negotiated position before the end of examination, at D7 please provide a joint statement setting out each party's position at that time and any remaining points of dispute, together with identified steps to a potential resolution within the Examination.	A joint statement has been prepared in agreement with Perenco. This includes a comparison of the relative positions on access with a summary and an update on the status of negotiations. The joint position statement is provided in Appendix A.7 in Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions [document reference 21.5.1].
Q4.21.2 Effectiveness of Proposed Mitigation			

PINS Question Number	Question is addressed to	Question	Applicant Response
No further questions in this section as this stage.			

Table 22 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.22

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.22. Socio-economics effects			
Q4.22.1 Effects on recreation, tourism and business			
No further questions in this section as this stage.			
Q4.22.2 Effects on jobs and skills			
No further questions in this section as this stage.			
Q4.22.3 Effects on Individuals and Communities			
No further questions in this section as this stage.			
Q4.22.4 Inter-related Effects on Human Health and Community Well-being			
No further questions in this section as this stage.			

Table 23 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.23

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.23. Traffic and Transport			
Q4.23.1 Effects from Construction Vehicles on the Highway Network and Living Conditions			
Q4.23.1.1	Applicant National Highways	<p>Driver Delay, Capacity and Assessment Methodology</p> <p>NH has raised queries [REP5-085, Q3.23.1.1] in relation to the driver delay, capacity and assessment methodology. Subsequently, the Applicant provided a technical note titled, 'Junction Modelling Clarifications'</p> <ul style="list-style-type: none"> a) Applicant, please provide this document. b) NH, please provide your review of this document and explain in full if any highway safety concerns remain. 	<ul style="list-style-type: none"> a) The Applicant has provided a copy of the requested note at Deadline 7 - Junction Modelling Clarifications Technical Note [document reference 21.21]. b) The Applicant further clarifies that the formerly outstanding queries related to driver delay and not highway safety. Notwithstanding, the Applicant refers the ExA to the latest Statement of Common Ground with National Highways (Revision D) [document reference 12.22] (submitted at Deadline 7), in particular ID16, 17 and 19, which now shows National Highways agreement with the Driver Delay and Road Safety assessments.
Q4.23.2 Traffic Management Proposals and Impacts on the Highway Network			
No further questions in this section as this stage.			
Q4.23.3 Cumulative Traffic Effects with Other Local Projects			
No further questions in this section as this stage.			
Q4.23.4 Effects on Recreational Routes, such as Public Rights of Way			
No further questions in this section as this stage.			
Q4.23.5 Suitability of Access Strategy			
Q4.23.5.1	Applicant	<p>Accesses ACC25 and ACC25b</p> <p>Revision D of the OCTMP [REP5-027] does not appear to fully reflect the detailed mitigation set out by NCC [REP5-069,</p>	The Applicant clarifies that Revision D of the Outline Construction Traffic Management Plan (OCTMP) [REP5-027] reflects the approach agreed with Norfolk County

PINS Question Number	Question is addressed to	Question	Applicant Response
		Q3.23.5.2] for accesses ACC25 and ACC25b. Please provide a revised OCTMP to address this matter.	Council (NCC) at a meeting on the 24 May 2023 and confirmed between the parties via email on the 6 July 2023. Table 9, ID24 within the final Statement of Common Ground with Norfolk County Council to be submitted by both parties at Deadline 7 confirms this agreement [document reference 12.17].
Q4.23.5.2	National Highways	<p>Amendments to Access Strategy</p> <p>NH, are you content with amendments to the access strategy to remove the requirement to provide a new access (ACC48) from the north of Church Lane and instead utilise the existing Food Enterprise Park access?</p>	No response required.
Q4.23.5.3	Norfolk County Council	<p>Access to the North of the A47</p> <p>NH has recommended [REP3-138] the Applicant considers the implications to their construction programme of a 2-year period of no access to the north of the A47 or if access from Church Lane in the east is required to mitigate the risk. Are NCC content that Church Lane could be used in such an event?</p>	<p>The Applicant does not propose to take access from Church Lane and has not suggested this as an option. This can be evidenced from the Access to Works Plan (Revision E) [REP5-002] which does not show an option for access from Church Lane.</p> <p>The Applicant would direct the ExA to The Applicant's Responses to the Examining Authority's Third Written Questions [REP5-049] which states:</p> <p><i>"The Applicant has discussed this matter with National Highways at a meeting on the 6 June 2023. National Highways confirmed that if the Judicial Review for the A47 North Tuddenham to Easton Scheme upholds the A47 North Tuddenham to Easton DCO, the project would commence in 2024 and be open to traffic April 2026. It is therefore considered that as SEP and DEP would not commence until 2026 (at the earliest) that access would likely be available at ACC46 (shown in the Access to Works Plans (Revision E) [REP2-005]), subject to resolution of the acknowledged misalignment at this location.</i></p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			<p><i>Notwithstanding, the possibility of a delay to the completion of ACC46 was discussed between the parties on the 6 June 2023 and it was agreed to establish regular meetings to discuss how the respective projects co-operate on this matter. The Applicant is in discussions with National Highways to develop a co-operation agreement that will include a requirement for regular liaison meetings and to work together on access and other matters.</i></p> <p><i>Should work on the A47 Tuddenham Scheme for any reason not commence prior to commencement of SEP and DEP, access will be available from the existing A47 at access ACC47. Any overlap in construction should installation of SEP and DEP commence prior to the commencement of the A47 Tuddenham Scheme would be managed through the cooperation agreement.”</i></p>
Q4.23.6 Effectiveness of Proposed Mitigation Measures			
Q4.23.6.1	Norfolk County Council	<p>Monitoring and Enforcing Maximum Vehicle Trips Across the Study Area</p> <p>The Applicant has set out [REP5-049, Q3.6.1.1] that mitigation measures to manage traffic movements are included within the OCTMP to ensure that the assessed construction traffic parameters are not exceeded. Is it realistic for NCC to monitor and enforce the maximum daily vehicle trips set out in Annex A of the OCTMP on all links across the entire study area?</p>	<p>The Applicant clarifies that it has not stated that NCC will be required to monitor and enforce vehicle trips. The Applicant directs the ExA to ID30 in the Statement of Common Ground with Norfolk County Council [REP5-034] which confirms agreement between the parties on the matter of monitoring procedures within the Outline Construction Traffic Management Plan (OCTMP) [REP5-027].</p> <p>With regard to how the vehicle trips would be monitored and enforced the Applicant refers to Section 5 of the OCTMP. Section 5 includes an outline of how the targets and measures contained within the OCTMP would be monitored and enforced using mechanism such as booking systems, vehicle tracking and employee sign in. Section 5 of the OCTMP outlines that this monitoring and enforcement would be undertaken by the Construction Traffic Management Plan</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
			Co-ordinator (CTMPCo) who will be appointed by the contractor prior to commencement of construction. The results of the monitoring will then be shared with NCC and National Highways through issuing of Monitoring Reports and the Monitoring Group (detailed in section 5.2.7 of the OCTMP).
Q4.23.6.2	Applicant National Highways	Protective Provisions See related question in Compulsory Acquisition and Temporary Possession.	An update has been provided in The Applicant's Statutory Undertakers Position Statement (Revision D) [document reference 12.46]. Please also refer to the Applicants detailed response to this matter at Q4.6.1.1.
Q4.23.6.3	National Highways	Mitigation for the Strategic Road Network Further to discussion at CAH2 [EV-104] [EV-106], confirm (for both scenarios where protective provisions are agreed and not agreed by the end of the examination) whether mitigation measures in the dDCO and OCTMP are sufficient (without the need for a co-operation agreement, which is not before the Examination) to ensure there would be no unacceptable highway safety or capacity impacts on the strategic road network.	The Applicant refers the ExA to the latest Statement of Common Ground with National Highways (Revision D) [document reference 12.22] (submitted at Deadline 7) which shows agreement upon all technical matters including the assessment of driver delay and road safety. The Applicant continues to engage with National Highways to try and agree Protective Provisions and a co-operation agreement.

Table 24 Applicant's responses to the Examining Authority Fourth Written Questions: Q4.24

PINS Question Number	Question is addressed to	Question	Applicant Response
Q4.24. Water Quality and Resources			
Q4.24.1 Effects on Flood Risk and Drainage, including Adequacy of Sequential and Exception Tests			
Q4.24.1.1	Lead Local Flood Authority	<p>Onshore Substation Hydraulic Modelling – Sensitivity Testing</p> <p>The ExA understand [REP5-049, Q3.24.1.2] that further clarification on one element of the sensitivity testing, namely infiltration losses has been sought by the LLFA. The Applicant has provided an updated version of the Onshore Substation Hydraulic Modelling Report (Revision C) [REP5-045]. Confirm if this has addressed your outstanding concern in this regard?</p>	<p>The Applicant has received correspondence from the Lead Local Flooding Authority on 20th June 2023 confirming that they had no further comment in relation to the sensitivity testing that was presented in the Onshore Substation Hydraulic Modelling Report (Revision C) [REP5-045]. This is reflected in the updated Statement of Common Ground with NCC which will be submitted at Deadline 7.</p>
Q4.24.2 Effects on Water Resources and Water Quality, including Measures to Prevent Pollution of Aquifers			
No further questions in this section as this stage.			
Q4.24.3 Effects on Rivers, Streams, Canals and Ditches from Proposed Construction Methods and Crossing			
Q4.24.3.1	Applicant	<p>Crossing Schedule</p> <p>The NRIDB has [REP6-030] has identified an error in the Crossing Schedule [REP5-025]. Applicant, provide a revised schedule to correct this error.</p>	<p>The Applicant can confirm the ditch reference has been updated in line with the NRIDB's request. This will be presented in an updated version of the ES Appendix 4.1 - Crossing Schedule (Revision E) [document reference 6.3.4.1] submitted at Deadline 7.</p>
Q4.24.3.2	Applicant	<p>Statutory Undertakers Position Statement</p> <p>The NRIDB has [REP6-030] has requested some changes to the Applicant's Statutory Undertakers Position Statement [REP5-037]. Applicant, are these acceptable to you and if so, provide a revised Statutory Undertakers Position Statement to accommodate them.</p>	<p>The Applicant has updated the Statutory Undertakers' Position Statement (Revision D) [document 12.46] to reflect this drafting.</p>

PINS Question Number	Question is addressed to	Question	Applicant Response
		See related question in Compulsory Acquisition and Temporary Possession.	
Q4.24.4 Effectiveness of Mitigation Measures			
Q4.24.4.1	Applicant Environment Agency Lead Local Flood Authority Norfolk Rivers Internal Drainage Board	<p>Protective Provisions</p> <p>Provide an update on discussions to finalise the protective provisions still under discussion [REP5-049, Q3.24.4.1]. If agreement will not be reached by the end of the examination, please set out in full your reasons for any disagreements.</p> <p>See related question in Compulsory Acquisition and Temporary Possession.</p>	Please see The Applicant's Statutory Undertakers Position Statement (Revision D) [document reference 12.46].
Q4.24.4.2	Applicant	<p>Outline Code of Construction Practice</p> <p>The NRIDB has requested [REP6-030] several changes to the OCoCP [REP5-029, Paragraphs 126, 127 and 135]. Applicant, are these acceptable to you and if so, provide a revised OCoCP to accommodate them.</p>	The Applicant confirms that it accepts the proposed changes within the Outline Code of Construction Practice (Revision F) [document reference 9.17] by the NRIDB. These will be presented in an updated version of the document at Deadline 7.