



THE PLANNING ACT 2008
THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

NORFOLK BOREAS OFFSHORE WIND FARM

Planning Inspectorate Reference: EN010087

Deadline 7

**Natural England's response to Applicants responses to Examining
Authority's Further Written Questions**

31st March 2020

NE.NB.D7.04. ExaFurtherWQ

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1 Introduction

Please find below Natural England's comments on the following documents as submitted at Deadline 5.

Applicant's Responses to the Examining Authority's Further Written Questions (REP5-045).

2 Detailed Comments

PINS Question Number	Question is addressed to:	Question:	Applicant's Response	Natural England's Response
2.2.0.5	The Applicant, Natural England Marine Management Organisation	Marine Mammal Monitoring: Natural England, MMO and Applicant to provide an update regarding drafting of a condition for marine mammal monitoring	The Applicant's position is that given the low contribution of the project to marine mammal impacts any marine mammal monitoring should be undertaken at a strategic level. The wording provided within the IPMP allows for the participation of Norfolk Boreas in any strategic monitoring as required at the time of agreement of the final plans and therefore it is not necessary to include a specific condition within the DCO to commit the Applicant to marine mammal monitoring specifically. Furthermore, it is not appropriate to include a condition requiring a strategic approach to monitoring if equivalent conditions are not included within DCOs for other wind farm developments within the vicinity of Norfolk Boreas, which can contribute to that strategic approach. The Applicant is not aware of any other DCOs including such a condition. Therefore, if the Applicant were to include such a condition it could put the project in the position of having to undertake strategic monitoring without the participation of other projects. Notwithstanding this position the Applicant has discussed this with the MMO and Natural England (17th February 2020) and have agreed to consider proposed wording for a potential condition which will be provided by Natural England (in consultation with the MMO) for Deadline 6.	Natural England advise that text such as that suggested below be included within conditions and linked to the IPMP. <i>Pre-construction monitoring condition</i> Appropriate surveys of existing marine mammal activity required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme. <i>Post-construction monitoring condition</i> Appropriate marine mammal surveys required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme.
2.2.2.1	The Applicant	Population Viability Analysis: Can the Applicant either re-run the EIA scale PVA for	The Applicant has discussed the planned updates to the Population Viability Analysis (PVA) with Natural England. It has been confirmed by Natural England that these will be delayed until the end of	Natural England advised the Applicant (in an email dated 03/03/2020) that version 2 of the PVA Tool has been uploaded. A link to the new version was sent to the Applicant. We noted

		<p>gannet, kittiwake, Lesser Black Backed Gull and Greater Black Backed Gull for the Biologically Defined Minimum Population Scale and biogeographic population scales using the updated Natural England commissioned Seabird PVA tool [REP4-040] or provide justification as to why this isn't necessary.</p>	<p>February at the earliest (these were originally due mid-January 2020). Natural England has also confirmed that their internal testing of the updated PVA has found the results (compared to the original version as used by the Applicant and reported in REP2-035) are not materially different and therefore the existing counterfactual estimates are robust and appropriate for assessment and Natural England will refer to these when reaching conclusions (so long as the models have been run using parameters as advised by Natural England). Therefore, the Applicant proposes to attempt to re-run models where Natural England has indicated insufficient simulations were conducted (i.e. fewer than 1,000). However, it may be that the Applicant encounters the same issues as previously (i.e. the model failed to run with larger number of simulations), in which case this will be discussed with Natural England and a note submitted. The species and populations for which model re-runs for more simulations were requested were: kittiwake at the North Sea scale (CIA) and guillemot at the Flamborough and Filey Coast SPA scale.</p>	<p>that the guidance documents etc. had also been updated and were available from the links sent to the Applicant. Therefore, we welcome the commitment from the Applicant that they propose to re-run the models where Natural England has indicated insufficient simulations had been conducted. We also advised the Applicant that there is a bug in version 2 which is affecting the annualised growth rates presented in the full table of outputs – however this is only an issue for the year prior to the impact being added. The bug doesn't affect any of the other metrics – it is just affecting the way the table presents values for the run of years prior to when an impact is added. Furthermore, if the tool is run with respect to a baseline population it doesn't affect the table outputs for this. Finally, it is noted that when the model is run with an impact, it doesn't affect the annualised growth rate calculations in the full table of outputs for the period when the impact is applied.</p>
2.5.3.5	The Applicant	<p>Requirements 18 and 24: The responses to Q9.3.2, Q9.3.3, Q9.3.4 and Q9.3.5 raise uncertainties regarding how the hedgerow replacement planting would be approved and secured. The response to Q9.3.4 says it would be via the Hedgerow Mitigation Plan which is a part of the Ecological Management Plan (EMP), secured via R24 and the response to Q9.3.5 states it</p>	<p>1. Hedgerow replacement planting is secured through Requirements 18, 19 and 24. Requirements 18 and 19 relate to landscape mitigation and the production of a Landscaping Management Scheme (in accordance with document 8.7 Outline Landscape and Ecological Management Strategy) which will provide details of all planting removed and the location, number, species, size and planting density of the proposed replacement planting to mitigate landscape effects. Requirement 24 relates to ecological mitigation, which includes hedgerow planting to replace hedgerow habitat that has been removed. A Hedgerow Mitigation Plan, which will sit as part of the</p>	<p>It is not currently clear how those commitments in the clarification Note Ecological Enhancement have been included in the OCOCP or OLEMS. In particular in relation to different planting specifications. Given the number of Ex A WQ in relation to hedgerows and the number of overlapping documents Natural England suggest that an Outline Hedgerow Mitigation Plan is submitted as part of DCO to ensure that all commitments made within various documents can be implemented without any contradiction.</p>

		<p>would be via R18. The Schedule of Mitigation [REP2-006] shows R18, R19 and R24.</p> <p>1. The Applicant to provide clarity on what it considers would be approved by which plan.</p> <p>2. The ExA considers that clarity on this needs to be given in the dDCO, Outline plan(s) and the Schedule of Mitigation.</p>	<p>final Ecological Management Plan, will detail the reinstatement approach specific for replacement of hedgerow habitat and any monitoring and maintenance requirements.</p> <p>As such the details of the hedgerow replacement will be captured in both the Landscape Management Scheme and the Hedgerow Mitigation Plan (part of the final Ecological Management Plan) to ensure it meets the requirements in terms of landscape mitigation and ecological mitigation as the replacement has a dual purpose. There will be collaborative working between both the landscape and ecological specialists to ensure the hedgerow replacement satisfies all requirements.</p> <p>2. Text clarifying this has been added to the</p>	
2.8.3.1	The Applicant, Natural England, Marine Management Organisation	<p>Sediment disposal: Applicant, MMO and Natural England to provide update on discussions relating to the wording of a condition for sediment disposal.</p>	<p>This was discussed with the MMO and Natural England on the 17th February. Currently neither the MMO nor Natural England have been able to provide an example of such a condition. The Applicant is confident that the additional mitigation proposed to ensure that sediment is disposed of as close to its origin as possible negates the requirement for such a condition. The mitigation as stated in the outline HHW SAC SIP [REP1-034] site integrity plan is:</p> <ul style="list-style-type: none"> · Dispose of any material dredged from the seabed for sandwave levelling (also referred to as pre-sweeping) in a linear “strip” along the cable route. · Dispose of material as close as possible to cable route (and therefore as close as possible to where it was dredged from · Dispose of material updrift of where it was dredged from to allow infill through natural processes. · Dispose of material close to the seabed. This will be achieved through the use of fall pipe (also referred to as a down pipe) employed by the dredging vessel. <p>The MMO response at Deadline 4 [REP4-35] states: The MMO agreed with the Applicant and Natural</p>	<p>Please be advised that the proposed mitigation does not ensure that the sediment will be disposed of in areas of similar particle size. Therefore we do not agree with the Applicant's response to the ExA question. Discussion of potential wording of a condition regarding sediment size is ongoing.</p>

			England on the details of where the material will be disposed of and how the Applicant will provide details of the disposal locations. And The MMO understands Natural England have ongoing concerns in relation to particle size and will continue discussions on the practicalities and potential wording of a condition.	
2.8.3.4	The Applicant	Cable protection: The Applicant [REP4-014] committed to “no cable protection in the priority areas to be managed as reef within the HHW SAC”. How is this secured?	The Outline HHW SAC SIP (Document 8.20) has been updated and submitted at Deadline 5 to include this commitment. Section 5.5.3 (Total area and Volume of Cable Protection in the SAC) and Table 5.2 (overview of mitigation commitments) now contain the following: <i>“Norfolk Boreas Limited has made a commitment to install no cable protection in the priority areas to be managed as reef within the HHW SAC, unless otherwise agreed with the MMO in consultation with Natural England.”</i>	Natural England welcomes the inclusion of the commitment; however we disagree with the use of the term 'priority areas' as set out in previous Written Representations.
2.8.3.5	The Applicant, Marine Management Organisation	Monitoring sandwave recovery: The SoCG with the MMO [REP2-051] highlights a disagreement regarding the need for monitoring of sandwave recovery following sweeping. Applicant and MMO to provide an update	This has been discussed between the Applicant and the MMO at a number of meetings, most recently on the 17th February where it was agreed that this matter is now resolved in the Statement of common ground. The MMO are satisfied that due to the inclusion of the following text within the IPMP there is sufficient security that sand waves will be monitored to ensure that recovery has occurred: <i>"further surveys may be required at a frequency to be agreed with the MMO (e.g. 3 years non-consecutive e.g. 1, 3 and 6 years or 1, 5 and 10 years). If evidence of recovery is recorded and agreed with the MMO, monitoring will cease”.</i>	Natural England agrees.
2.8.3.6	The Applicant	Site Integrity Plan: Without prejudice to the ExA's recommendation, the Applicant to comment on Natural England's suggestion	The Applicant has provided a full response to Natural England's position paper [REP4-041] within the Applicant's position paper submitted at Deadline 5 [ExA.AS-6.D5.V1]. With regards to this specific issue the Applicant does not consider it necessary to	Please see Natural England's detailed response to the Applicant Position Paper at Deadline 7 (Our Ref: NE.NB.D7.O7.HHWSAC Paper)

		[REP4-041] to amend condition 9(1)(m) of Schedules 11 and 12 of the dDCO. Are there any concerns regarding the implementation of such an amendment, irrespective of whether the ExA recommends an AEOI can or cannot be ruled out?	change the wording of the proposed condition as suggested by Natural England. As drafted the formulation of the condition: <ul style="list-style-type: none"> · Follows an accepted approach used for mitigation relating to the Southern North Sea Site Integrity Plan, and the Applicant sees no reason to depart from this; and · Does not preclude the MMO from undertaking an appropriate assessment at that point in time if considered necessary by the MMO, but includes flexibility for the MMO by not <i>requiring</i> an appropriate assessment to be undertaken. In relation to this latter point, for example, to the extent that there is no or limited change in the extent and distribution of the sabellaria across the cable corridor at the point of construction, such that the Applicant is able to demonstrate that it remains possible to microsite the cables to avoid sabellaria, it would not be necessary to undertake a further appropriate assessment beyond that undertaken at the consenting stage.	
2.8.3.7	The Applicant	Consideration of Alternatives: What alternative solutions were considered by the Applicant and would any of these have avoided adverse effects on the integrity of the sites?	The Applicant's firm position is that adverse effect on integrity (AEOI) as a result of the project, both alone and in-combination, can be ruled out. However, the Applicant acknowledges that, for the Norfolk Vanguard 'sister' project, the Secretary of State has requested evidence as to whether there are feasible alternative solutions which could lessen or avoid AEOI, 'in addition, or alternatively' to further mitigation in respect of offshore ornithology impacts, and in 'the absence of any identifiable mitigation measures' in the case of impacts resulting from cable protection. The Applicant has submitted further mitigation in relation to both offshore ornithology impacts (Offshore Ornithology Assessment Update, Project Alone submitted at Deadline [ExA.AS-8.D5.V1] and impacts as a result of cable protection [The HHW SAC SIP (Document 8.20 updated for	We welcome the Applicant's further mitigation and note that it does considerably reduce the predicted collision impacts from the project. However, the project continues to make a meaningful contribution to the in-combination collision totals and our position remains that we cannot rule out AEOI from in-combination collision risk to kittiwakes from the Flamborough and Filey Coast SPA and lesser black-backed gull from the Alde-Ore Estuary SPA (for our reasoning please see REP4-040 and our D7 response (NE.NB.D7.08 CRM) to the Applicant's updated cumulative/in-combination collision totals in REP6-024). Natural England is still of the opinion that AEOI cannot be excluded for HHW SAC.

			Deadline 5)], which provide further confidence in the Applicant's assessment that there will be no AEOI either alone or in-combination. Notwithstanding this, the Applicant is preparing evidence for a derogation case which, in the event that the Secretary of State concludes that AEOI cannot be ruled out, will confirm that there are no feasible alternative solutions for the project which could avoid or lessen	
2.8.3.8	The Applicant	Compensatory Measures: Following on from Q2.8.4.5 what compensatory measures could be proposed to ensure that the overall coherence of the network of Natura 2000 sites is protected?	As set out in response to WQ 2.8.3.7 above the Applicant is currently preparing evidence for a derogation case, in the event that the Secretary of State cannot rule out AEOI, notwithstanding the Applicant's clear position that AEOI can be ruled out. The Applicant is working closely with Natural England and Norfolk Vanguard Limited to agree in-principle compensatory measures. Norfolk Vanguard will be providing details of in-principle compensatory measures to the Secretary of State on 28 February 2020. The derogation case being prepared by the Applicant will also include details on in-principle compensatory measures. As set out above, this will be submitted to the Examination as soon as possible.	Natural England is currently in the process of reviewing the Hornsea Project 3 and Norfolk Vanguard documents in order to provide our statutory advice to the SoS. We do not wish to prejudice our advice on either project therefore we will provide further advice on Norfolk Boreas Derogation after the 9th April HP3 deadline and the 27th April NVG deadline (i.e. Boreas Deadline 9).
2.8.4.3	The Applicant	Turbine draught height: To provide an update on the consideration of raising the draught height of turbines.	The Applicant has undertaken detailed investigations into options for raising draught heights in tandem with consideration of other mitigation measures which could reduce potential collision impacts. This investigation has identified that a key constraint for the Norfolk Boreas project is the maximum height to which available construction vessels can install turbines, which, when combined with the length of rotor blade for associated turbine models, determines the draught height. The Applicant can confirm that the minimum draught height for the project has been increased from 22m to 30m (from Mean High Water Springs, MHWS) for turbines rated at 14.7MW and higher and increased to 35m from MHWS for turbines rated at up to 14.6MW. In	Please see our D7 response (NE.NB.D7.08 CRM) to the Applicant's updated CRM for Boreas alone

			<p>addition, the smaller capacity turbines (10MW and 11MW) have been removed from the design envelope, with the 11.55MW now the smallest wind turbine model which could be installed. Thus, the maximum number of turbines to be installed has been reduced from 180 to 158 (11.55MW) or 124 (14.7MW). The turbine revision on its own achieves a reduction in collision impacts equivalent to an increase in draught height of 5m for the original 10MW scenario. Together these design revisions (increase in draught height and turbine model) substantially reduce collisions risks, with reductions of 74% for gannet, 73% for little gull, 72% for kittiwake, 64% for lesser black backed gull, 63% for herring gull and great black backed gull (these are for the 14.7MW turbine at 30m which is the new project worst case option for collision risk). Details of the project alone CRM have been submitted at Deadline 5 (ExA.AS-8.D5.V2).</p>	
2.8.4.7	The Applicant	<p>Number of construction vessels: The Applicant's assessment of effects of displacement [APP-201] has assumed a maximum of two construction vessels, how is this secured?</p>	<p>The Applicant provided a response to a similar question in the Examiner's first written questions at Deadline 2 (REP2-021, Qu. 8.9.5) which is reproduced below and provides details of how this will be secured.</p> <p>Q8.9.5 The Applicant to explain how it would ensure that there would not be more than two construction vessels in use in any one non-breeding season.</p> <p><i>In the Habitats Regulations Assessment [APP-201] the Applicant stated that the worst case impact for disturbance of red-throated diver due to cable installation through the Greater Wash SPA would result from the presence of a maximum of two main cable laying vessels during the non-breeding season. In the draft DCO submitted at Deadline 1 (Norfolk</i></p>	Please see our response to first round of ExA written questions, number 8.9.3 in REP2-080

			<p><i>Boreas Updated draft DCO Version 3, REP1-008) it has been stated at pt. (4) Condition 19: During the months of January to March inclusive, construction activities consisting of cable installation for Work No. 4A and Work No. 4B must only take place with one main cable laying vessel. This commitment in the DCO thereby ensures that during the potentially most sensitive period of the year for red-throated diver disturbance, the maximum level of impact will in fact be half that which was assessed as the precautionary worst case (of two main cable laying vessels) in the original assessment [APP-201]. Furthermore, this commitment mirrors that proposed and agreed with Natural England for Norfolk Vanguard.</i></p>	
2.8.5.1	Royal Society for the Protection of Birds, Natural England	<p>Lesser black-backed gull: The RSPB [REP3-028] would prefer a wider range of apportioning values for lesser blackbacked gull during the breeding season of up to at least 40%, in order to fully capture the uncertainty inherent in the apportioning exercise and therefore incorporate a proportionate degree of precaution. Why is this precaution needed by the RSPB? Does Natural England have any views?</p>	<p>The Applicant considers that the lesser black-backed gull apportioning rates already contain a high degree of precaution, given the distance between the Alde-Ore Estuary SPA and the Norfolk Boreas wind farm (minimum of 115km), and evidence available from tracking studies (it is of note that a recent review of seabird foraging ranges has recommended a reduction in the foraging range estimates for this species, from 72km to 43km for the mean range and 141km to 127km for the mean maximum range; Woodward et al. 2019). Furthermore, the Applicant considers this to be an illustration of the over-precaution in individual elements of the assessment that results in the final estimates being over-precautionary to a potentially substantial degree (see REP4-014 for more details of the Applicant's position on this matter).</p>	Please see our response to second round of ExA written questions, number 2.8.5.1 in REP2-080
2.8.6.1	The Applicant, Natural England	<p>Consideration of Alternatives: Notwithstanding the Applicant's exploration of further mitigation for in-combination effects as</p>	<p>The Applicant's firm position is that AEOI as a result of the project, both alone and in-combination, can be ruled out. However, the Applicant acknowledges that, for the Norfolk Vanguard 'sister' project, the Secretary of State has requested evidence as to whether there</p>	Natural England agree that AEOI can be ruled out for both kittiwake at the Flamborough and Filey Coast (FFC) SPA and lesser black-backed gull (LBBG) at the Alde-Ore Estuary SPA from Norfolk Boreas alone (see our Deadline 7 response to REP5-059) and therefore, there is

		described at the ISH on 22 January [REP4-014], in the event that no AEOI cannot be concluded what feasible alternative solutions to avoid or lessen any adverse effects on the integrity of these sites could be considered?	are feasible alternative solutions which could lessen or avoid AEOI, 'in addition, or alternatively' to further mitigation in respect of offshore ornithology impacts, and in 'the absence of any identifiable mitigation measures' in the case of impacts resulting from cable protection. The Applicant has submitted further mitigation in relation to both offshore ornithology impacts and impacts as a result of cable protection, which provide further confidence in the Applicant's assessment that there will be no AEOI either alone or in-combination. Notwithstanding this, the Applicant is preparing evidence for a derogation case which, in the event that the Secretary of State concludes that AEOI cannot be ruled out, will confirm that there are no feasible alternative solutions for the project which could avoid or lessen AEOI. This will be submitted to the Examination as soon as possible.	no need for compensation due to Norfolk Boreas alone. However, we consider that it is not possible to rule out AEOI for either of these features due to in-combination collision mortality and that includes a contribution from Norfolk Boreas (see our Deadline 7 response to Applicant's REP6-024 on updated cumulative/in-combination collision risk). We note Natural England's advice during the Thanet Extension examination was that whilst this project made a small contribution to the in-combination collision mortality, it could not be concluded that there would be no adverse effect on the integrity of the site by the project, when considered in-combination. We welcome the commitment from the Applicant that they will be submitting into the examination evidence for a derogation case and we note our advice regarding information to include in this in our D7 response to the Applicant's derogation position statement submitted at D6 (in REP6-025).
2.8.6.2	The Applicant, Natural England	Compensatory Measures: Following on from Q2.8.7.1 what compensatory measures could be proposed to ensure that the overall coherence of the network of Natura 2000 sites is protected?	As set out in response to WQ 2.8.6.1 above the Applicant is currently preparing evidence for a derogation case, in the event that the Secretary of State cannot rule out AEOI, notwithstanding the Applicant's clear position that AEOI can be ruled out. The Applicant is working closely with Natural England and Norfolk Vanguard Limited to agree in-principle compensatory measures. Norfolk Vanguard will be providing details of in-principle compensatory measures to the Secretary of State on 28 February 2020. The derogation case being prepared by the Applicant will also include details on in-principle compensatory measures. As set out above, this will be submitted to the Examination as soon as possible.	Natural England is currently in the process of reviewing the Hornsea Project 3 and Norfolk Vanguard documents in order to provide our statutory advice to the SoS. We do not wish to prejudice our advice on either project therefore we will provide further advice on Norfolk Boreas Derogation after the 9th April HP3 deadline and the 27th April NVG deadline (i.e. Boreas Deadline 9).
2.8.7.1	The Applicant	Population Viability Analysis:	Please see response to Question no. 2.2.2.1 above.	Please see our response to Question 2.2.2.1 above

		Can the Applicant either re-run the PVA for gannet, kittiwake, razorbill and guillemot at the FFC SPA using the updated Natural England commissioned Seabird PVA tool or provide justification as to why this isn't necessary.		
2.9.5.2	The Applicant, Natural England	<p>Wording in OLEMS and OCoCP regarding buffers for ancient woodland:</p> <p>1. The Applicant to update on progress of agreeing wording to be included in the OLEMS and the OCoCP, as indicated by Natural England in its response to Q12.0.5 [REP2-080] and the Applicant in its response to responses [REP3-003].</p> <p>2. The Applicant to update documents if agreement is reached. If not agreed, both parties to set out areas which are not resolved.</p>	1. and 2. The wording in OLEMS Version 2 [REP1-020] has been agreed with Natural England. This position is reflected in the Natural England Risk and Issues log submitted at Deadline 3 [REP3-024] where this issue (Onshore Ecology Page 7) is identified as green (Natural England supports the Applicant's approach) and Natural England state <i>'We note updated OLEMS submitted at Deadline 1 welcome that preconstruction survey mitigation will adhere to Forestry Commission and Natural England's Standing Advice.'</i>	We note that OLEMS was updated D1 Para 146 Page 45 to include adhere to standing advice regarding ancient woodland. However this has not been reflected throughout the document and advise that text is also included such as 'a buffer of at least 15m and as informed by an arboriculture survey' within Route refinement page 14 and embedded mitigation para 125.
2.15.0.11	The Applicant	Monitoring of residual adverse impacts on the water environment: What monitoring of residual adverse impacts on the water environment is proposed and how would it be secured?	Post-construction monitoring will be undertaken at each crossing location to identify any residual adverse impacts. This will include monitoring of the predominant geomorphological characteristics (bank form, substrate conditions, flow type, and evidence of instability, erosion or deposition) and ecological characteristics of each location. This will enable the effectiveness of the reinstatement to be evaluated, with comparison to the results of the pre-construction surveys secured	Natural England would welcome further specification on ecological monitoring and timeframes included in OCOCP, as detailed in the response to the OCOCP.

			<p>under the OCoCP. The post-construction monitoring requirement will be detailed in the site specific watercourse crossing plans and the OCoCP has been updated and submitted at Deadline 5 to reflect this commitment</p>	
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