

Application by Norfolk Boreas Limited for an Order Granting Development Consent for the Norfolk Boreas Offshore Wind Farm

RSPB Response to the Examining Authority's First Written Questions

Submitted for Deadline 2: 10 December 2019

Planning Inspectorate Ref: EN010087

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2. Biodiversity, Biological Environment and Ecology		
2.0 General		
Q2.0.1	The Applicant	<p>The Applicant [AS-024] explained that it has updated numerous assessments and/or plans relevant to ecological matters. The ExA has noted the following are proposed:</p> <ul style="list-style-type: none"> • Updated red throated diver displacement assessment • Updated gannet displacement assessment • Updated kittiwake collision risk assessment • Assessment of combined collision and displacement (alone and in-combination/cumulatively) • Assessment of impacts to seabird assemblage of Flamborough and Filey Coast SPA • Updated ornithological in-combination/cumulative assessment • Revised population viability analysis (PVA) for gannet, kittiwake and greater black-backed gull (at the EIA scale) • Revised PVA for Flamborough and Filey Coast SPA • Updated Haisborough, Hammond and Winterton SAC Site Integrity Plan • Interim Cable Burial Study • Updated Scour and cable protection plan • Updated offshore operations and maintenance plan • Updated Outline Landscape and Ecological Management Strategy • Drilling fluid breakout clarification note. <p>The Applicant is requested to submit these at Deadline 2 of the Examination.</p>
		<p>The RSPB notes the additional assessments that will be submitted at Deadline 2. Whilst we will endeavor to review key documents by Deadline 3 the nature of the assessments and the need for these technical documents to be reviewed by specialist staff will make a full review challenging in the space of only seven days. This is particularly in light of other key deadlines for Hornsea Three Offshore Wind Farm which also has a deadline for 19th December. The RSPB notes that Natural England have indicated that they will provide comments in detail by 17th January 2020. This will be in advance of the hearing on 22nd January. The RSPB will attempt to submit some comments by 19th December but will ensure our detailed comments are submitted to coincide with NE's detailed submission.</p> <p>Due to staff availability the RSPB will not be able to attend the hearing session on 22nd January, but we will continue to work with the applicant and Natural England to address outstanding concerns and continue to provide written representations.</p>

2.3 Onshore ornithology		
Q2.3.1	The Applicant	<p>Razorbill and guillemot</p> <p>The Applicant (Table 8 row 33 of [AS-024]) stated it did not agree with NE in relation to cumulative operational displacement to razorbill or guillemot at the EIA scale. The Applicant refers to SPAs, as opposed to EIA scale populations. The Applicant to further justify its position in relation to these species at the EIA scale.</p>
	<p>The RSPB supports Natural England’s position regarding the need to ensure that assessments are based on all projects that could impact on the SPA populations have been included in the cumulative and in-combination assessments. As highlighted by Natural England, a number of sites are missing from the assessment of cumulative/in-combination mortality for guillemot and razorbill. These are Beatrice Demonstrator, Gunfleet Sands, Kentish Flats, Kentish Flats Extension, Methil, Rampion and Scroby Sands. Although the RSPB acknowledges that these are likely to result in only a few additional mortalities, without them the assessment is incomplete and likely to underestimate the number of resultant mortalities.</p>	
Q2.3.2	Natural England	<p>Post-construction monitoring</p> <p>Is NE content with the Applicant’s explanation [AS-024] of why there is no post- construction monitoring of bird habitat temporarily disturbed during construction?</p>
	<p>Whilst this question is directed to Natural England, the RSPB supports the need to ensure post-construction monitoring is appropriate to enable the success of mitigation measures to be measured. Should the mitigation measures implemented prove unsuccessful, monitoring provides the opportunity to review and revise the scheme to ensure damaging impacts from the scheme are addressed.</p>	

4. Cumulative effects of other proposals		
4.0 General cumulative effects, including phasing		
Q4.0.1	The Applicant All Interested Parties	<p>Relevant projects for cumulative assessment</p> <ol style="list-style-type: none"> 1. A number of the ES aspect chapters explain that the projects identified for potential cumulative impacts were agreed as part of the PEIR consultation (November 2018). Taking into account the time that has elapsed since the PEIR consultation and the potential for developments that might have cumulative effects to have come forward since this date, IPs are asked to confirm that they are content that all the relevant projects have been included in the cumulative effects assessment. If not, list those projects which you think should be included. 2. Specifically, the ExA notes that extensions to the existing Dudgeon and Sheringham Shoal have been received by the Planning Inspectorate for a scoping opinion. Comments in respect of these projects are specifically requested. 3. The Applicant is invited to comment and to set out how the cumulative effects relating to the proposed extensions to the existing Dudgeon and Sheringham Shoal have been considered, 4. With either proposed option, the Dudgeon and Sheringham Shoal onshore cable would cross the Norfolk Boreas onshore cable. How have these cumulative effects been considered?
	<p>The RSPB supports the need for the Dudgeon and Sheringham Shoal offshore wind farm extensions to be included in updated cumulative and in-combination impact assessments. The additional contribution of these schemes to the potential seabird mortality must be considered to ensure appropriate decisions are made with respect to the Flamborough to Filey SPA and Alde-Ore Estuary SPA.</p> <p>In addition, the RSPB notes that extensions have also been submitted for the Galloper and Greater Gabbard offshore wind farms. The location of these schemes will have further impacts on species such as gannet and kittiwake from the Flamborough to Filey SPA, and lesser black backed gull from the Alde-Ore Estuary SPA. It is essential that these schemes are assessed in an updated cumulative and in-combination impact assessment</p> <p>A number of sites are missing from the assessment of cumulative/in-combination mortality for guillemot and razorbill. These are Beatrice Demonstrator, Gunfleet Sands, Kentish Flats, Kentish Flats Extension, Methil, Rampion and Scroby Sands.</p>	
Q4.0.2	Interested Parties	<p>Cumulative assessments and other infrastructure users</p> <p>Provide any comments on the Applicant's cumulative assessments offshore [APP-245] and onshore [APP-246] and/or comments on the assessment of infrastructure and other users [APP-231].</p>
	Please refer to the RSPB's responses to Q4.0.1 and Q8.4.2	

8. Habitats Regulation Assessment		
8.4 River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC		
Q8.4.2	The Applicant, Natural England, RSPB	<p>In combination assessments</p> <p>In-combination assessments for the River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC have not been undertaken as the Applicant considers there is no potential for AEOI to these sites and no real potential of an in-combination effect occurring with other plans or projects [APP-201]. However, the Applicant has acknowledged the potential for small effects from a number of different projects to add up to an effect of greater magnitude in some of the HRA in-combination assessments e.g. Paston Great Barn SAC, HHW SAC, FFC SPA and Alde-Ore Estuary SPA.</p> <p>The Applicant is requested to provide greater justification for not undertake in- combination effects for the River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC. Do any Interested Parties have comments on the in-combination assessments for these sites?</p>
	<p>The RSPB has no comments on this issue at this point in the examination, but supports the need to ensure all sites have been included in the screening stages of alone and in-combination assessments to ensure that all impacts are identified and all necessary mitigation measures are implemented. Where sites are in unfavourable condition it is imperative that potential impact pathways to them do not exacerbate the problems and, ideally, support measures to maintain and restore the sites. We will review any updated assessments and provide additional comments through the examination if required.</p>	
8.6 Offshore ornithology		
Q8.6.1	The Applicant, Natural England, RSPB	<p>CRM Assessment</p> <p>The ExA has had regard to the RRs [RR-054, RR-099] raised in relation to offshore ornithology and is aware of the complex arguments and disagreement between the various parties. Noting these positions, the ExA requests that the Applicant, NE, RSPB and other relevant parties work collaboratively to respond effectively to each of the points raised in RR's on this issue.</p>
	<p>The RSPB remains committed to working collaboratively with all parties to attempt to address the outstanding issues. We will review the new assessments when they are made available and continue to work with the applicant and other parties in advance of the 22nd January hearing.</p>	
Q8.6.3	Natural England	<p>Stochastic Collision Model</p> <p>Confirmation is required from NE that it accepts the inability of the Applicant to use Marine Scotland Science's Stochastic Collision Model, due to issues with the model providing accurate outputs (no timescale for when this model will be fixed), and that NE accepts the Applicant's proposed modelling outputs.</p>

	Whilst this question is directed to Natural England, the RSPB agrees that the Applicant is unable to use the Marine Scotland Science's Stochastic Collision Risk Model. Until the issues with this model version are resolved, the RSPB prefer that the Band 2012 model version is used, using a range of input parameters to reflect stochasticity arising through uncertainty and variability.	
Q8.6.4	The Applicant	Reducing collision impacts The Applicant to provide an update on the additional measures being considered for reducing collision impacts noted in [AS-024] in response to NE's recommendation for raising turbine draught height.
	Whilst directed to the Applicant, the RSPB recommends that mitigation is provided through raising the turbine draught height for the purposes of reducing the project's collision risk when considered alone, and its contribution to in-combination collision risk. We therefore request that collision risk to key species for height rises up to and including 35m are modelled.	
8.7 Alde-Ore Estuary SPA		
Q8.7.1	Natural England	Lesser black backed gull The commentary that supports the Applicant's in-combination assessment for lesser black backed gull of Alde-Ore Estuary SPA infers that reliance has been placed on the as-built scenarios for other offshore wind farm developments. The RSPB has raised concerns with this Approach. What is NE's advice??
	<p>It is stated that many of the collision estimates for other windfarms are based on higher numbers of turbines than were actually installed. Based on a method of updating collision estimates presented by EATL (2016)¹ this is stated to overestimate cumulative mortality, for example, great black-backed gull by some 30%. This is an acceptable point for windfarms where the DCO has been amended and therefore there is legal certainty regarding the reduction, but where windfarms still have their original DCOs, it is not appropriate to do anything less than assess the full extent of those DCOs when considering in-combination/cumulative effects, as the final layout and therefore required assessment parameters will not be known.</p> <p>¹ EATL (2016) Revised CRM. Submitted for Deadline 5: Available online at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010056/EN010056-001644-EA3%20-%20Revised%20CRM.pdf</p>	

8.8 Alde-Ore Estuary SPA and Flamborough and Filey Coast SPA		
Q8.8.1	The Applicant	<p>Compensation</p> <p>NE and RSPB advise that an AEOI cannot be ruled out for Alde-Ore Estuary SPA, Flamborough and Filey Coast SPA. It is acknowledged that NE and RSPB previously reached these conclusions for Norfolk Vanguard and that Norfolk Boreas is proposing to add additional mortalities to those figures. In light of this, the Applicant is requested to present information relevant to the subsequent stages of the HRA process; namely consideration of alternatives, compensation and information to inform an IROPI case for these sites.</p>
	<p>We will review further information on these issues as it is presented and provide more detailed comments.</p> <p>In this context, the RSPB draws the Examiners' attention to BEIS's decisions to delay determination of Hornsea Three² and Norfolk Vanguard³ offshore wind farms. The delay on each scheme is to, among other things, seek the views of the applicants and interested parties in respect of the in-combination impacts on the Flamborough to Filey Coast SPA (and in the case of Norfolk Vanguard, also the Alde-Ore Estuary SPA) and the implications of those impacts for the derogation tests set out in the Habitats and Offshore Regulations and summarised in paragraph 3.2.2 of our Written Representation for Deadline 2. The RSPB considers such matters are directly relevant to the examination of the Norfolk Boreas scheme.</p>	
8.9 Greater Wash SPA and Outer Thames Estuary SPA		
Q8.9.1	Natural England	<p>Mortality Rates</p> <p>NE [RR-099] states that definitive mortality rates are unknown, therefore a range of mortality rates between 1% and 10% should be presented. It disagrees with the Applicants evidence review and that a magnitude of 100% out to 4km is over precautionary. NE calculates 0.87-2.46% increase in baseline mortality during construction phase, which it states is not insignificant. The Applicant [AS-024] states that the full range of outputs was presented in its assessment. Does NE have further comments?</p>
	<p>Whilst this question is directed to Natural England, the RSPB supports the full range of mortality rates to be provided. The alone assessment for Norfolk Boreas must be based on mean bird densities based on birds in flight and on the water, as advised by Natural England, and the outputs incorporated into a revised cumulative assessment. The assessment should then consider cumulative mortality based on displacement rates of up to 100% and mortality rates of up to 10% and, given that it would be expected that this would result in an increase of 2% or more on baseline mortality, PVA is then be required to assess the effect on the population. In order to rule out cumulative effects, density independent PVA outputs in the form of counterfactuals of population size must be presented to be considered alongside contextual information such as population status and importance, other potential sources of mortality and the extent of uncertainty in assessment.</p>	

Q8.9.3	Natural England	<p>Red throated diver NE [RR-099] recommends avoiding/reducing cable laying activities during the non- breeding season/period of peak red throated diver numbers. The Applicant [AS-024] confirms that the same mitigation agreed for Norfolk Vanguard has been adopted for Norfolk Boreas, as included in the outline PEMP [APP-705]. Does the Applicant's commitment to mitigation for red throated diver of the Greater Wash SPA, as included in section 6.1.3 of the outline PEMP [APP-705] enable NE to agree to rule out an AEOI?</p>
<p>Whilst this question is directed to Natural England, the RSPB notes that the proposed benefits of the measures set out in Section 6.1.3 of the outline PEMP have not been quantified. The current proposal appears uncertain with respect to the benefit that would be derived from the operational constraints being proposed in the PEMP and whether these would be sufficiently coordinated with other activities to ensure disturbance and displacement effects are minimised such that cumulative impacts can be considered to avoid adverse effects on integrity. We will review Natural England's response and provide additional comments as appropriate.</p>		
Q8.9.4	Natural England	<p>Red throated diver Can NE confirm whether its comments regarding cumulative operational displacement to red throated diver in section 6.2 of Appendix 1 of its Relevant Representation [RR-099] also apply to red-throated diver qualifying features of Greater Wash SPA and Outer Thames Estuary SPA?</p>
<p>The RSPB appreciates that this question is directed towards Natural England. However, given the range of activities taking place within both the Greater Wash SPA and the Outer Thames Estuary SPA we would anticipate red-throated divers in both sites should be assessed to ensure impacts on both sites have been adequately considered.</p>		
Q8.9.6	The Applicant	<p>Little gull collision risk NE states the Applicant has not considered variability/uncertainty and a range of collision impacts for little gull. What is the Applicant's response?</p>
<p>Whilst the RSPB has not commented on little gull previously, it is a species for which we do have growing concerns. We will review future assessments and provide comments as appropriate.</p>		
<p>8.10 Flamborough and Filey Coast SPA</p>		
Q8.10.1	The Applicant	<p>Kittiwake</p> <ol style="list-style-type: none"> 1. NE [RR-099] and RSPB [RR-054] do not agree the apportionment of 26.1% of kittiwakes to the FFC SPA to be appropriate. The IPs recommend that a range of apportionment rates should be considered, up to 100%. 2. NE was unable to rule out AEOI for Norfolk Vanguard from in-combination collision risk, and Boreas is adding more birds. 3. RSPB does not agree no AEOI from in-combination collision mortality. <p>The Applicant to respond to these concerns.</p>

	<p>The RSPB notes the additional assessments that are due to be submitted at deadline 2. We will review and aim to provide some comments by Deadline 3 and certainly in advance of the 22nd January hearing. We will consider the additional comments provided by the applicant.</p>	
Q8.102	RSPB	<p>Gannet RSPB [RR-054] does not agree no AEOI to gannets of Flamborough and Filey Coast SPA from collision mortality from the project alone and in-combination (but it may be able to rule out from the project alone through raising of draught height of turbines). Can the RSPB provide further details as to why it does not consider an AEOI to gannets of the Flamborough and Filey Coast SPA can be ruled out as a result of collision risk from the project alone?</p>
<p>We maintain our position that, whilst we agree with the use of a 98.9% avoidance rate for non-breeding gannets, in the breeding season, a 98% avoidance rate is appropriate. Cleasby <i>et al.</i>, (2015)¹, while not discussing avoidance rates, demonstrated that foraging birds are at more risk of collision than commuting birds. In order to provision chicks, gannets will need to forage more during the breeding season and will also be constrained by central place foraging. Such behavioural differences are likely to result in changes in avoidance behaviour (Cook <i>et al.</i>, 2018)², and since the figures used for the calculation of avoidance rates advocated by the SNCBs are largely derived from the non-breeding season for gannet (Cook <i>et al.</i>, 2014³ and Cook <i>et al.</i>, 2018) we recommend a more precautionary avoidance rate for the breeding season.</p> <p>The Applicant concludes that there will be no adverse effect on the integrity of the Flamborough and Filey Coast SPA as a result of collision mortality to gannets from the Norfolk Boreas project alone (para. 220 of the Information for HRA (doc. 5.3; APP-201)) or in-combination with other projects (para. 221 of the Information for HRA (doc. 5.3;APP-201)). We do not agree there can be sufficient confidence in these conclusions. The Applicant’s own calculations indicate that there will be a decrease in the SPA population of around 40% in the lifetime of the project. We therefore find it impossible to conclude no adverse effect on integrity of the Flamborough and Filey Coast SPA as a result of collision mortality through the project in combination. We also consider that it is not currently possible to rule out an adverse effect on integrity of the Flamborough and Filey Coast SPA arising from the project alone as the Applicant’s own calculations, with adjusted Avoidance Rate in the breeding season to RSPB preferred value, indicate a decline in the SPA population of up to 18% as a result of the project alone.</p> <p>¹ Cleasby, IR, Wakefield, ED, Bearhop, S, Bodey, T W, Votier, SC and Hamer, KC (2015), Three-dimensional tracking of a wide-ranging marine predator: flight heights and vulnerability to offshore wind farms. <i>J Appl Ecol</i>, 52: 1474–1482.</p> <p>² Cook, A., Humphreys, E., Bennet, F., Masden, E. & Burton, N. (2018) Quantifying avian avoidance of offshore windfarms: Current evidence and key knowledge gaps. <i>Marine Environmental Research</i> 140:278-288 https://doi.org/10.1016/j.marenvres.2018.06.017</p> <p>³ Cook, A., Humphreys, E., Masden, E. & Burton, N. (2014) The avoidance rates of collision between birds and offshore turbines. BTO Research Report No. 656. http://www.gov.scot/resource/0046/00464979.pdf</p>		

Q8.103	Natural England	<p>Breeding birds RSPB [RR-054] advises a 98% avoidance rate for breeding birds as the review from which the SNCB advice of a 98.9% avoidance rate acknowledges the majority of evidence of gannet avoidance behaviour is from non-breeding birds and that breeding birds would behave differently. What is NE's advice regarding RSPB's assertion that a 98% avoidance rate is more appropriate for breeding gannets, than the 98.9% they have advocated?</p>
The RSPB has added additional information on this point in Q8.10.2		
Q8.105	RSPB	<p>Auk RSPB [RR-054] does not agree no AEOI to razorbill and guillemot from in-combination operational displacement. Following the Applicant's response [AS-024] does RSPB have any further concerns?</p>
<p>There are few robust studies of displacement, results differ, and we do not know the consequences for mortality or population trajectories, hence it is appropriate to consider a range of putative displacement and mortality rates. We agree with Natural England that displacement of up to 100% and mortality of up to 10% represents an appropriate level of precaution and should be used in the assessment and welcomes the Applicant's presentation of a full range of displacement and mortality rates for guillemot, in accordance with SNCB advice. However, we do not agree with the Applicant that rates of 50% displacement and 1% mortality are precautionary. In the context of the considerable uncertainty inherent in the assessment, the upper range advocated by Natural England, 70% displacement and 10% mortality, can be considered <i>realistic</i> rather than over-precautionary.</p> <p>The assessment concludes that the magnitude of effect is negligible and that there will be no adverse effect on integrity of the Flamborough and Filey Coast SPA guillemot and razorbill populations. However, the Applicant's own calculations show an in-combination mortality of up to up to 1635 guillemots and 419 individuals apportioned to the Flamborough and Filey Coast SPA in the lifetime of the wind farm. The results of the PVA carried out to explore the population scale consequences of this displacement (table 6.23 of Information to inform HRA, document 5.3) show a potential decrease of 43% for both the guillemot and razorbill populations of the SPA. It is therefore not possible, in our view, to avoid an adverse impact on the integrity of the SPA.</p>		
Q8.106	The Applicant	<p>Puffin The screening matrix for FFC SPA [AS-002] identify a LSE for puffin from operational displacement, however puffin is not included in the FFC SPA integrity matrix, nor is it identified in the HRA Report [APP-201]. The ExA understands that puffin forms part of the seabird assemblage feature of the FFC SPA, which has not been included on the screening matrix. The Applicant to confirm whether a LSE should be screened in for the seabird assemblage of FFC SPA, and if so, provide information to support the making of an appropriate assessment for this feature.</p>
The RSPB understands that the Applicant has revised the screening matrix and puffin has now been included. The RSPB will review the updated document once it is made available.		

9.5 Outline Landscape and Ecological Management Strategy (OLEMS)		
Q9.5.9	The Applicant, Natural England, The RSPB	<p>Removal of Vegetation</p> <p>The Project Description [APP-218, para 417] proposes hedge and tree netting because hedge and tree removal is seasonal and removal ahead of the main works provides flexibility to account for seasonal restrictions and mitigates potential programme delays.</p> <ol style="list-style-type: none"> 1. Netting is not mentioned in the OLEMS or the OCoCP. Does that mean it is not proposed to use netting? 2. What is Natural England’s and the RSPB’s view of the use of netting?
<p>While the practice of netting is legal, the RSPB would like planners and developers to ensure that this approach is absolutely necessary. We have developed detailed, technical guidance for developers so they can follow this best practice and contact us for any advice:</p> <ul style="list-style-type: none"> • Think about whether it is really necessary to remove the hedges and trees that are vital for supporting wildlife; • Netting should not be the easy alternative. If the work is absolutely necessary, then the use of netting could be avoided by tree and hedge removal being completed outside of nesting season (September – February); • This should be backed up by a commitment to plant new trees and hedges; • It is essential developers work with a trained ecologist to ensure appropriate netting is used and is not the type that will catch and hold birds and other wildlife; • It is also essential that a trained ecologist ensures the correct netting is fitted in a way that wildlife cannot get through or behind the netting and then become trapped; • It is essential that netting is checked at least once a day (but ideally three times) by a trained ecologist to ensure that no wildlife is caught or that the netting has become defective. If any wildlife is seen to be caught within or trapped behind netting they must be freed immediately and the netting fixed or removed; • If anyone perceives birds and other wildlife to be harmed by netting, then the RSPB’s advice is for the Police Wildlife Crime Officer to be informed. 		