



**Written Submission**  
**for the**  
**Royal Society for the Protection of Birds**  
**Response to the Examining Authority's First Written Questions**  
**(ExQ1)**

**Issued on 28 February 2022**

**Submitted for Deadline 2**  
**29 March 2022**

**Planning Act 2008 (as amended)**

**In the matter of:**

**Application by Hornsea Project Four Limited for an Order**  
**Granting Development Consent for the Hornsea Project Four Offshore Wind**  
**Farm**

**Planning Inspectorate Ref: EN010098**  
**RSPB Registration Identification Ref: 20029909**

# Contents

1. Introduction .....	3
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## 1. Introduction

- 1.1. The RSPB's responses to the Examining Authority's First Written questions (ExQ1) are set out in the table below. Where helpful, we have cross-referred to the RSPB's main written representation submitted at Deadline 2.

## Responses to the Examining Authority's First Written Questions

ExQ1	Question to:	Question	RSPB response
<b>Environmental Statement (ES)</b>			
ES.1.7	Applicant Natural England RSPB	<b>Dudgeon and Sheringham Shoal Extension</b> In light of the Secretary of State's Norfolk Vanguard decision letter and the publication of the proposed Dudgeon and Sheringham Shoal Extension projects' Preliminary Environmental Impact Report (PEIR) on 29 April 2021, are any changes needed to the cumulative assessment, given that some topics were screened out at the time of the assessment due to low data confidence?	From review of APP-051, Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy none of the screened out sites will have changed
ES.1.23	Applicant Natural England RSPB	<b>Compensation site selection</b> The Compensation Project Description [APP-057] notes that further site selection information is provided in the Derogation Information documents. However, while addressing site selection criteria, these appear to fall short of identifying sites that could be secured, should they be deemed necessary. In the light of the SoS's decision on the Norfolk Boreas and Norfolk Vanguard projects, and in particular the requests for evidence of the location and deliverability of the proposed compensation measures (notably in relation to the kittiwake interest feature of the Flamborough and Filey Coast Special Protection Area (SPA), is further assessment (EIA) required? If so, how will this be addressed in the ES and on what timescale, noting the Secretary of State's indications of an expectation that	As set out in section 5 of the RSPB's Written Representation (paragraphs 5.31-5.32).  The RSPB notes that the Applicant has carried out what it proposes to be an environmental assessment of its proposed compensation measures. <sup>1</sup> However, we consider this exercise to be of very limited (if any) practical value at this stage given the lack of precise information relating to any of the proposed compensation measures in respect of their location, design, implementation and management methodologies and other relevant factors. As a consequence, it is not possible to properly screen, scope and environmentally assess any of the compensation measures at this stage. Therefore, the assessment of likely environmental effects set out in

<sup>1</sup> Document references: APP-057, APP-058, APP-059, APP-061, APP-062, APP-063, APP-064, APP-065 and APP-066

ExQ1	Question to:	Question	RSPB response
		such matters, if required, should in future be dealt with in Examination? If not, why not?	the Environmental Statement (APP-057) and associated documents cannot be relied upon at this stage and no weight should be placed on the information provided.
ES.1.25	Applicant Natural England MMO ERYC East Suffolk Council	<b>Environmental assessment of compensation measure sites</b> Given the lack of refinement of possible sites for the proposed compensation measures, how reliable is the assessment of likely environmental effects set out in the ES [APP-057] for them? Please explain your reasoning.	We would expect detailed information to be provided on each compensation measure as part of the application documentation, such that the claimed benefits and any environmental effects of each measure can be scrutinised during the examination. At this stage, such detail has not been provided by the Applicant. We would welcome clarification from the Applicant on when further detailed information on each specific compensation measure will be provided, including but not limited to location, design, implementation methods and management, monitoring etc.
<b>Habitats Regulations Assessment (HRA)</b>			
HRA.1.2	Applicant Natural England RSPB The Wildlife Trusts	<b>Research findings</b> The Report to Inform the Appropriate Assessment (RIAA) [APP-174] draws extensively on guidance, technical reports and published scientific papers, with the list summarised in Part 8 of the RIAA. Given the currency and dynamic nature of the topics considered, have any relevant references been published subsequently that should be taken into account in the HRA, and, if so, what are they and might they change the outcome materially?	We have reviewed APP-174 and have the following minor comments.  The following reference: <i>Natural England and JNCC (2017). Joint Statutory Nature Conservation Bodies (SNCB) Interim Displacement Advice Note – Advice on How to Present Assessment Information on the Extent and Potential Consequences of Seabird Displacement from Offshore Windfarm Developments</i> has been updated from January 2022. This is also the same as the document referenced in the second section: “ <i>SNCBs (2017). Advice on Assessing Displacement of Birds from Offshore Wind Farms</i> ”

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			We think reference to “DECC (2021) Changes to the Habitats Regulations 2017” should refer to “Defra (2021)”.
HRA.1.8	Natural England RSPB The Wildlife Trusts	<p><b>In-combination assessment for kittiwake</b></p> <p>Do Natural England and the other nature conservation bodies agree with the approach used in compiling the RIAA [APP-167] that the contribution to the losses of the kittiwake feature of the Flamborough and Filey Coast SPA as a result of the Hornsea Three project is compensated for and that the project's contribution to an in-combination assessment can therefore be discounted?</p> <p>Can the same rationale now be applied to the Norfolk Boreas and Norfolk Vanguard projects?</p> <p>If so, does this change any of the positions reached in representations to date on whether it is possible to exclude Adverse Effects on Integrity on the SPA in relation to in-combination effects on kittiwake?</p>	<p>We refer the Examining Authority to paragraphs 3.16-3.19 in our main Written Representation for a fuller response on this issue. Below we provide a summarised response.</p> <p>Compensatory measures only enter the equation when it has been determined that there will be adverse effects on the integrity of the site (under regulation 63) or there is a lack of certainty as to the absence of adverse effects and the need for the competent authority to decide whether consent should be granted under regulation 64.</p> <p>It therefore follows that if compensation measures have been required for a project then that project has been identified as giving rise to potential adverse impacts on the integrity of a protected site. Therefore potential adverse effects from that project are also relevant when considering whether a later project is:</p> <ul style="list-style-type: none"> <li>• likely to have a significant effect on a designated site, whether on its own or in combination with other plans and projects, and subsequently</li> <li>• whether the competent authority can be satisfied that there will not be adverse effects on the integrity of the European site whether taken alone or in combination with other projects.</li> </ul>

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			<p>It is difficult to see on what basis the fact that compensation has been provided for potential adverse effects of the first scheme should mean that the effects of that scheme should be removed from the equation when carrying out the assessments required by regulation 63 for a later scheme, although it may well be relevant when considering whether consent should be granted under regulation 64 for the second scheme and/or what compensation measures should be required at that stage.</p>
HRA.1.10	Applicant Natural England RSPB	<p><b>Offshore ornithology modelling</b></p> <p>Natural England's Relevant Representation [RR-029] raises fundamental concerns about possible errors in the application of the model used to analyse the baseline offshore ornithological characterisation data to produce the density and abundance estimates that underpin the HRA.</p> <p>Has the Applicant engaged with Natural England subsequently, has progress been made towards a resolution, and will further assessment be submitted into the Examination? If so, when, given the fundamental importance of this issue to the HRA? If not, why not?</p> <p>In the absence of further assessment based on an agreed methodology, what would be the implications for decision-making in terms of quantification and understanding of the likely effects on the offshore ornithology interests of European sites of the Proposed Development?</p>	<p>Section 4 of the RSPB's Written Representation addresses these issues in detail.</p> <p>Since the submission of the Application documents and relevant representations there has been no update on the baseline bird density modelling seen by the RSPB. In REP1-065 (Examination Deliverables Summary), the only document pertaining to this seems to be the "MRSea Baseline Sensitivity Report – Gannet" to be submitted for Deadline 2. Since this modelling is fundamental to the whole assessment (not only for gannet), it is impossible to reach any conclusions with regard to significance of impacts without reassurance that it has been done correctly. As such <b>it is impossible to come to conclusions as to the significance or otherwise of the impacts arising from the development</b> and all the conclusions on AEOI given above can only be considered tentative.</p> <p>The RSPB are also concerned as to the lack of correct output metrics of the population viability analysis.</p>

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		<p><i>(If not fully addressed in the Applicant's Deadline 1 response to Relevant Representations) (Cross-reference may be made to relevant responses to ExQ1 Marine Ecology, provided any specific HRA implications are detailed in this response.)</i></p>	<p>Despite this being highlighted by both Natural England and RSPB there has been no engagement with the RSPB since the submission of Application Documents, no new documentation submitted at Deadline 1 and there appears to be no plans to do so set out in REP1-065 (Examination Deliverables Summary) i.e. it is not apparent it will be submitted to subsequent deadlines. Due to the inadequate manner in which the results of the PVA have been presented, without including the correct model output parameters, it is impossible to reach conclusions as to the significance of impacts on the Flamborough and Filey Coast SPA.</p> <p>Whilst we appreciate the Applicant may provide more information (and we reserve the right to review our comments and concerns in light of it) unless the Applicant resolves these fundamental issues, in our view the assessment currently before the Examination is not fit for purpose.</p>
HRA.1.15	Applicant Natural England RSPB	<p><b>Comparison with Sula Sgeir gannet colony</b></p> <p>At various places in the RIAA [APP-167], the Applicant makes a comparison with the harvesting of chicks from the Sula Sgeir gannet colony when discussing gannet mortality impacts and the Population Viability Analysis. The comparison seems to seek to demonstrate that even the loss of several thousand birds annually from the Sula Sgeir colony does not challenge the resilience of the colony. What weight</p>	<p>For long lived species, the population consequences of the loss of an adult bird are potentially much greater than that of a chick<sup>2</sup>, so the loss of chicks to harvesting is not directly comparable with the mortality of adults from collision and displacement mortality. This consequence is in part driven by changes in survival; for gannet mean 0-1<sup>st</sup> year survival is considered to be 0.426, for adults (5 years or older) it is 0.919 (Horswill and Robinson, 2015<sup>3</sup>). It is also because of the relatively</p>

<sup>2</sup> Sæther BE, Bakke Ø. 2000. Avian life history variation and contribution of demographic traits to the population growth rate. *Ecology*, 81, 642-653

<sup>3</sup> Horswill, C. & Robinson R. A. 2015. Review of seabird demographic rates and density dependence. JNCC Report No. 552. Joint Nature Conservation Committee, Peterborough.



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		<p>should be placed on this comparison, given the likely material difference in average natural survival rates of gannet chicks and adult breeding birds?</p>	<p>large number of years before the bird reaches sexual maturity.</p> <p>The Sula Sgeir analogy is also not entirely straightforward. The numbers given as harvested are the numbers for which a license is given to harvest, not the actual number harvested. The latter amount is likely to be significantly lower as the license is only issued to a very restricted number of people</p>
HRA.1.26	Applicant Natural England RSPB	<p><b>Norfolk Boreas and Norfolk Vanguard DCO decisions</b></p> <p>Do the SoS's HRAs and decisions on the Norfolk Boreas and Norfolk Vanguard projects affect the process or conclusions of the shadow HRA undertaken for this Proposed Development by the Applicant, including the deliverability and timing of the proposed compensation measures, especially in relation to the kittiwake interest feature of the Flamborough and Filey Coast SPA?</p>	<p>As set out in section 5 of the RSPB's Written Representation, the RSPB considers there are significant, detailed considerations for compensation measures that are essential to consider before consent is granted; rather than assume an outline compensation measure can be translated in to a detailed and workable measure "on the ground" at a later date and all the necessary consents and agreements successfully secured.</p> <p>The RSPB considers that much greater detail about the location, design and implementation, monitoring and review of any proposed compensatory measures is needed to inform the application and examination process and enable proper public scrutiny.</p> <p>This information informs discussions and decisions relating to critical matters such as the scale of compensation required, the lead-in times required.</p> <p>On the latter the RSPB shares Natural England's concerns that the Applicant has proposed shorter lead in times than adopted by the Secretary of State in</p>

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			<p>recent offshore wind farm decisions. Lead-in times should reflect a careful assessment of the breeding ecology of the affected seabird and the predicted effectiveness of the proposed compensation measure (including any uncertainty surrounding that).</p> <p>As set out in section 7 of our Written Representation (comments on the draft DCO/DML), the RSPB has proposed that the current outline draft Compensation Plan documents submitted by the Applicant should be amended and filled out during the examination process to contain the necessary detail on the compensation measures that we have described elsewhere in our Written Representation and associated annexes.</p> <p>This will provide the Examining Authority and interested parties a full opportunity to scrutinise and test the robustness of the proposed compensation measures, whether they will be ecologically effective in practice, and whether they have been secured such that the overall coherence of the National Site Network for affected species will be protected.</p>
HRA.1.35	Applicant Natural England RSPB	<p><b>Quantum of compensation measures</b></p> <p>Uncertainties have been highlighted regarding the offshore ornithological modelling and completeness of the assessment, for example with respect to functionally-linked habitat for auks and the effects of changes to marine processes on seabirds: consequentially, the outcomes with respect to Adverse Effects on Integrity are also highlighted as uncertain. Natural England and the RSPB have raised</p>	<p>The RSPB is not aware of any progress having been made towards resolution regarding the quantum of compensation, as per our answer to HRA.1.10 above and as set out in sections 4 (offshore ornithology), and section 5 (Derogation case: the RSPB's approach to evaluating compensation measures under the Conservation of Habitats and Species Regulations 2017 (as amended)), in particular paragraphs 5.23-5.25 (on scale of compensation). Here we agree with Natural</p>

ExQ1	Question to:	Question	RSPB response
		<p>concerns that the scale and extent of any compensation that might be necessary cannot therefore be determined.</p> <p>Has any progress been made towards resolution regarding the quantum of compensation, and will further assessment be submitted into the Examination? If so, when, noting that it would be required as soon as possible. If not, why not?</p> <p><i>(If not fully addressed in the Applicant's Deadline 1 response to Relevant Representations. Cross-reference may be made to relevant responses to ExQ1 Marine Ecology, provided any specific HRA implications are detailed in this response.)</i></p>	<p>England that the scale of compensation required for all [compensation] measures cannot currently be determined.</p> <p>We have identified the need for progress on this matter at various places in our Written Representation.</p>
HRA.1.36	Applicant Natural England RSPB	<p><b>Seabird colony dynamics and population limiting factors</b></p> <p>The Applicant reports that the guillemot and razorbill colonies at Flamborough Head have increased in recent years [APP-196]. Are there national or regional differences in colony dynamics, for example is there any evidence that warming waters along the south coast of the UK are causing reduced prey availability and affecting colonies on cliffs and islands there, including the Channel Islands?</p> <p>What evidence is there that the auk colonies associated with islands targeted for rat eradication have been reduced or lost as a result of predation by rats rather than other influences such as reduced prey availability?</p>	<p><b>In answer to:</b></p> <p><i>The Applicant reports that the guillemot and razorbill colonies at Flamborough Head have increased in recent years [APP-196]. Are there national or regional differences in colony dynamics, for example is there any evidence that warming waters along the south coast of the UK are causing reduced prey availability and affecting colonies on cliffs and islands there, including the Channel Islands?</i></p> <p>Seabird populations will fluctuate at different rates both nationally and regionally and these are likely to be in part related to prey, although abiotic factors, such as tides and currents will also interact. There is evidence for prey availability and quality impacting on guillemot and razorbill. However, because of differences in foraging technique, the impacts will be different</p>

ExQ1	Question to:	Question	RSPB response
		<p>In its Relevant Representation [RR-029], Natural England considers it unclear if nesting habitat is a limiting factor for the breeding population of kittiwake in the southern North Sea. Is any further or updated evidence available to inform the Examination on this matter?</p>	<p>between the two species. Razorbill, which can carry multiple prey items are more affected by prey availability, whereas guillemot, which carry a single prey item, are affected by prey quality. In other words if a bird can only carry one prey item, it is more strongly influenced by the size of that prey item than by its abundance<sup>4</sup>.</p> <p>In broad terms, the southern colonies of the UK have all increased, but there is considerable variation in the extent of this increase, for example the guillemot population of Berry Head in Devon increased by 6% between 1986 to 2019 whereas that of the Isles of Scilly increased by 194% over roughly the same period. It is however difficult to attribute proximate causes to this variability.</p> <p><b>In answer to:</b></p> <p><i>What evidence is there that the auk colonies associated with islands targeted for rat eradication have been reduced or lost as a result of predation by rats rather than other influences such as reduced prey availability?</i></p> <p>The RSPB are not aware of evidence from cliff/ground (as opposed to burrow) nesting auk species relating to population loss solely as a result of predation by rats. Furthermore we have not come across such examples from our experience in the island restoration arena and</p>

<sup>4</sup> Frederiksen, M., Edwards, M., Richardson, A. J., Halliday, N. C., & Wanless, S. (2006). From plankton to top predators: bottom-up control of a marine food web across four trophic levels. *Journal of Animal Ecology*, 75(6), 1259-1268.

ExQ1	Question to:	Question	RSPB response
			<p>a preliminary search has not identified evidence to this effect. It should be noted that in many cases around the world rodents are removed from islands based on the expectation that they will be having an impact, i.e. there is not always the requirement to prove an impact prior to an eradication programme. In that way, increases in populations may be seen post rodent removal but direct evidence of predation as the cause of population decline may be lacking.</p> <p><b>In answer to:</b>  <i>In its Relevant Representation [RR-029], Natural England considers it unclear if nesting habitat is a limiting factor for the breeding population of kittiwake in the southern North Sea. Is any further or updated evidence available to inform the Examination on this matter?</i></p> <p>The RSPB is not aware of any further or updated evidence that demonstrates whether or not nesting habitat is a limiting factor for the breeding population of kittiwake in the southern North Sea.</p> <p>A carefully structured scientific research project is required to demonstrate whether nesting habitat is a limiting factor for the species in the southern North Sea and also whether artificial nesting structures would benefit the kittiwake regional population. It would be of benefit to the industry if such research was advanced</p>

ExQ1	Question to:	Question	RSPB response
HRA.1.43	Applicant Natural England RSPB	<p><b>Effectiveness of bycatch compensation measures</b></p> <p>Natural England [RR-029] highlights the high level of uncertainty associated with bycatch reduction compensation measures. The RSPB [RR-033] describes them as experimental research that could not yet be considered as a compensation measure. Are there any updates on research or trials? Is it the Applicant's intention to continue to put such measures forward as compensation?</p>	<p>RSPB work to develop gillnet bycatch mitigation has most recently led to the development of the 'Looming Eyes Buoy'<sup>5</sup> in collaboration with Fishtek Marine, which we are testing through trials in collaboration with gillnet fishers in Cornwall, and also in a gillnet fishery in Iceland. The RSPB is also testing a similar measure – predator-shaped kites attached to gillnets – in Cornwall and in Lithuania through collaboration with the local BirdLife partner. We await the results of these ongoing trials. Our assessment of the efficacy of those measures will be based on the results of these trials and published in the peer-reviewed literature, as we would expect for any proposed mitigation measure before wider implementation.</p> <p>We have not received any tangible updates on the LEB trial being conducted by the Applicant. We note that the Applicant proposes to provide a Summary of year 1 of its experimental trial at Deadline 5. To date, we are not aware of any new best practice technologies that make the proposed bycatch measures anything other than experimental research.</p>

<sup>5</sup> <https://royalsocietypublishing.org/doi/10.1098/rsos.210225>