

Date: 27 July 2022
Our ref: Case: 13622
Your ref: EN010098



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Dear Sir/Madam,

Hornsea Four Offshore Wind Farm

The following constitutes Natural England's formal statutory response for Examination Deadline 6.

1. Natural England Deadline 6 Submissions

Natural England has reviewed the documents submitted by the Applicant at Deadline 5 & 5a. We would like to highlight to the Examining Authority, that only new documents (version 1) or revised versions of outline documents/plans where amendments have been formally made will be responded to by Natural England at each relevant Deadline. Where possible, comments on documents are provided in our Risk and Issues Log to note where concerns have been addressed, rather than provided in a separate Annex for each document. As such, the documents submitted by Natural England at Deadline 6 are as follows:

- EN010098 Natural England's Risk & Issues Log Deadline 6
- EN010098 H4 Appendix B6.1 - NE response to G5.34 Applicants response to NEs additional auk apportioning guidance
- EN010098 H4 Appendix B6.2 - NE comments on G4.7 Ornithological Assessment Sensitivity Report
- EN010098 H4 Appendix B6.3 - NE response to G5.6 Indirect Effects of Forage Fish and Ornithology
- EN010098 Hornsea 4 Actions Log Deadline 6

The documents reviewed by Natural England to inform these submissions are as follows:

- REP5-003 A1.4 Project Description (Tracked) Revision: 5
- REP5-013 B2.2 Report to Inform Appropriate Assessment Part 1 (Tracked) Revision: 03
- REP5-015 B2.2.2 Habitats Regulations Assessment Compensation Measures Part 1 (Tracked) - Revision: 02
- REP5-017 B2.7 Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Kittiwake Compensation Plan (Tracked) - Revision: 02
- REP5-019 B2.7.2 Volume B2, Annex 7.2: Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Kittiwake Offshore Artificial Nesting Roadmap (Tracked) - Revision 04
- REP5-023 B2.7.6 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA) Overview (Tracked) - Revision 02
- REP5-025 B2.7.6 Outline Kittiwake Compensation Implementation and Monitoring Plan (Tracked) - Revision 02
- REP5-027 B2.8 Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Guillemot and Razorbill Compensation Plan (Tracked) - Revision: 02
- REP5-029 B2.8.2 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Guillemot and Razorbill Bycatch Reduction: Roadmap (Tracked) - Revision: 04
- REP5-031 B2.8.4 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Predator Eradication: Roadmap (Tracked) Revision: 04
- REP5-035 B2.8.7 Outline Gannet, Guillemot and Razorbill Compensation Implementation and Monitoring Plan (Tracked) - Revision 02
- REP5-036 C1.1.1 Schedule of Changes to the draft Development Consent Order (DCO) and Deemed Marine Licences (DML)
- REP5-049 G1.10 Hornsea Four Clarification Note on Peak Herring Spawning Period and Seasonal Piling Restriction (Tracked) Revision: 03
- REP5-058 G1.33 Predator Eradication Island Suitability Assessment: Bailiwick of Guernsey (Tracked) Revision: 02
- REP5-065 G4.7 Ornithological Assessment Sensitivity Report - Revision: 2
- REP5-066 G5.10 Professor Mike Elliot's Marine Processes Report Review - Revision: 01
- REP5-068 G5.13 Bycatch Reduction Technology Selection Phase Summary - Revision: 01
- REP5-074 G5.2 Applicant's Responses to the Examining Authority's Second Written Questions (ExQ2)
- REP5-078 G5.25 Ornithology Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) Annex
- REP5-081 G5.3 Applicant's comments on other submissions received at Deadline 4
- REP5-082 G5.4 Predator Eradication Implementation Study Update - Revision: 01
- REP5-083 G5.5 Clarification Note on Drill Arisings and Deposited Sediments - Revision: 01
- REP5-085 G5.7 Indirect Effects of Forage Fish and Ornithology - Revision: 01
- REP5-086 G5.8 Orsted's approach to strategic ecological compensation - Revision: 01
- REP5-087 G5.9 Revised Ornithology Baseline - Revision: 01
- REP5-089 Updated draft Development Consent Order (dDCO) (Tracked)

- REP5a-001 B2.6 Compensation measures for Flamborough and Filey Coast Special Protection Area overview - Revision: 03
- REP5a-003 C.1.1 Draft Development Consent Order (Tracked)
- REP5a-010 G5.9 Revised Ornithology Baseline (Tracked) - Revision: 02
- REP5a-012 G5.25 Ornithology Environmental Impact Assessment and Habitats Regulations Assessment Annex (Tracked) - Revision: 02
- REP5a-014 G5.30 Applicant's comments on other submissions received at Deadline 5 - Revision: 01
- REP5a-016 G5.32 Endurance No Overlap Environmental Impact Assessment and Habitats Regulations Assessment Review - Revision: 01
- REP5a-017 G5.33 Clarification Note on Marine Processes Mitigation and Monitoring - Revision: 01
- REP5a-018 G5.34 Applicant's response to Natural England's additional guidance on apportioning of seabirds to FFC SPA for Hornsea Project Four - Revision: 01
- REP5a-019 G5.35 Predator eradication and control opportunities within the Bailiwick of Guernsey - Revision: 02
- REP5a-020 G5.36 Clarification Note on Seismic Surveys - Revision: 01
- REP5a-024 G5.40 Clarification Note Revised Ornithology Baseline - Revision: 01
- AS-036 G6.5 Applicants Comments on Natural England's DCO Submissions received at Deadline 5a

2. Response to Rule 17 request for information letter dated 25th July 2022.

Natural England acknowledges receipt of the Rule 17 letter dated 25th July 2022 [PD-014]. The Examining Authority (ExA) has highlighted a number of actions points arising from Issue Specific Hearings (ISH) week commencing 18th July where they would like Natural England to respond. Natural England has responded to these in Appendix 1 below.

Natural England were also asked to provide a written response in follow up to Further Written Question OWE.2.2 directed at the Environment Agency and Applicant [REP5-099] following an additional Written Ministerial Statement on this topic on 20th July 2022. Our response is below:

The announcement of the Nutrient Mitigation Scheme by Ministers on 20th July 2022 has no bearing on the Hornsea Four Offshore Wind Project. The regulations around Nutrient Neutrality are only for developments in affected areas that are likely to increase nutrient loading, either directly or indirectly and focuses on residential/overnight accommodation development. The Hornsea Project Four development should have no pathway to cause increased nutrient levels within the environment and therefore no action is required.

We also note from the Applicants response to the question [REP5-074] that the Project's order limits do not overlap with Hornsea Mere Special Protection Area (SPA; a site identified as needing to recover from excess nutrients) which is located entirely within the catchment of the Stream Dyke river water body (GB104026066620). The Proposed Development would not be located in any part of the Stream Dyke catchment, and as such there is no mechanism for Hornsea Four to result in an increase in the supply of nitrogen and phosphorus to this system.

Finally, the Rule 17 letter asked Natural England to provide views on the Applicant's reference to the recently published '*Offshore Round 4 Leasing Plan-level Habitats Regulations Assessment (Crown Estate, July 2022)*' at Deadline 7. As requested, Natural England will comment on this in our Deadline 7 submission.

3. Gannet position

At the Applicant's request we have prioritised forming a view on the gannet feature of Flamborough and Filey Coast Special Protection Area (FFC SPA). In AS-040 (Natural England Written submission in lieu of attendance at Issue Specific Hearings (ISH) 7, ISH10, ISH11 and ISH12), Natural England noted an inconsistency in the density data for kittiwake and gannet presented in the Revised Ornithology baseline [REP5a-010] and the data apparently used for Collision Risk Modelling (CRM) in the Ornithology EIA and HRA Annex (tracked)[REP5a-012]. The Applicant provided clarification on this matter to Natural England on 20th July 2022, confirming that the correct densities were used in the CRM. We understand that this clarification and updated documents will be formally submitted into Examination at Deadline 6.

On the basis that the discrepancies between the data presented within REP5a-010 and REP5a-012 are resolved and do not materially change the output values from the CRM, Natural England advise that we can rule out an adverse effect on integrity (AEol) alone or in-combination with other consented plans and projects for gannet at FFC SPA. We therefore consider that compensation would not be required for this species from Hornsea 4. We do note that we cannot rule out AEol when Sheringham Extension, Dudgeon Extension and Rampion 2 are included in the in-combination totals, because the data from these projects is extracted from the Preliminary Environmental Information Reports (PEIR) and is therefore subject to change.

4. Provision of NE's final positions

Natural England had hoped to provide final positions in relation to EIA and HRA for Marine Processes and Ornithology (including the derogations) at this deadline. Although we have fully reviewed the majority of Deadline 5 and 5a submissions, we have been unable to compile our final positions for Deadline 6. We recognise that this is of great interest to the ExA and on this basis we are working hard to submit them as soon as we are able, or by Deadline 7 at the latest.

5. Note on Ornithology

Natural England highlight that we continue to fundamentally disagree with the Applicant's approach to multiple aspects of their ornithological assessment for EIA and HRA. At this stage in the Examination our focus is therefore on utilising the information that the Applicant has provided using Natural England's advised methodologies and parameters to draw our EIA and HRA conclusions. We have updated our Risk and Issues Log to reflect where this is the case.

6. Action Log

Noting that a number of issues continue to remain outstanding at this late stage in the Examination, Natural England have compiled an "Action Log". This is a log of all outstanding actions we have asked the Applicant to address in order to close out specific issues within our main Risk and Issues Log. As well as the proposed action, we have also included a RAG status for if the action is completed, to indicate the level of progress that could be achieved.

We compiled this list when working on the Statement of Common Ground with the Applicant to help us move towards a position of agreement on as many issues as possible. The Applicant has seen elements of this list via email between Deadline 5a and Deadline 6.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours faithfully,

Emma John
Yorkshire and North Lincolnshire Area Team

[Redacted]

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Appendix 1: Natural England response to actions from Issue Specific Hearings week commencing 18th July 2022

ISH 7 – DCO

Question number	Question	Response
ISH7 - 6	Review documents submitted by the Applicant including its [AS-036] response to Natural England's (NE) [REP5a-031] and provide a written response on any outstanding matters of concern.	Natural England has reviewed AS-036 and updated our DCO comments within a new tab of the Risk and Issues Log submitted at Deadline 6.
ISH7 - 31	Review document submitted by Applicant [AS-036] and respond with any concerns.	Natural England has reviewed AS-036 and updated our DCO comments within a new tab of the Risk and Issues Log submitted at Deadline 6.
ISH7 - 32	Applicant to review the timescales for the Implementation Plans. NE to provide examples of windfarm DCOs that timescales apply to.	NE note that requesting Plans to be submitted 6 months ahead of works is a new request we are making based on our experience of the post-consent discharge process in order to ensure that this process runs more smoothly for future projects. As this is a new request, we cannot provide an example of where it has already been implemented.
ISH7 - 36	Liaise to produce final, signed Position Statements including any areas of disagreement if required.	Natural England can confirm we are working with the Applicant to update our Statements of Common Ground and intend to submit final versions into Examination at Deadline 7.

ISH 10 – Marine processes and ecology

Question number	Question	Response
ISH10 - 5	Provide feedback on the Clarification Note on Marine Processes Mitigation and Monitoring [REP5a-017], including the Applicant's proposals for monitoring any effects on the Flamborough Front.	Please see AS-048 for Natural England's advice re monitoring of the Flamborough Front.
ISH10 - 6	Provide feedback on any implications of the updated marine processes information for the reliability of the benthic ecology baseline	There are no implications for the reliability of the benthic ecology baseline that can be attributed to the Marine Processes Supplementary Report.
ISH10 - 9	Provide current position on the adequacy of scope of marine process receptors (if not fully covered by recent submission [AS-048]).	Please see AS-048 for Natural England's position on the adequacy of scope of marine process receptors.
ISH10 - 13	Review the Cable Specification and Installation Plan [REP2-031] and	Please see AS-048 for Natural England's current position on reinstatement of HDD exit

	provide an updated view on the Applicant's reinstatement proposals for the HDD exit pits, which remains as an amber issue on your risk log (if not fully covered by recent submission [AS-048])	pits.
ISH10 - 15	Provide a response to the Applicant's Clarification Note on Drill Arisings and Deposited Sediments [REP5- 083] (if not fully covered by your recent submission [AS-048]).	Please see AS-048 for Natural England's current position on Drill Arising and Deposited sediment.
ISH10 - 16	Respond to the written submissions and the oral evidence on the Maximum Design Scenario for rock protection across Smithic Bank and provide a final position on this matter (if not fully covered by your recent submission [AS-048]).	<p>Natural England have listened to the recording of ISH10 agenda item 7 (Rock protection maximum design scenario) and noted it was covered earlier in the ISH and potentially in ISH7 as well. Whilst we listened to the views of MMO and the Applicant under item 2.2 of ISH10, we found no references to rock protection in ISH7.</p> <p>We can confirm that AS-048 does represent Natural England's current position on rock protection across Smithic Bank. Our position is also presented in E28 of our Risk and Issues Log and separately in the Action Log. This position does align with views expressed by MMO at the hearing.</p> <p>We continue to urge the Applicant to commit to no cable protection over Smithic Bank in order to avoid impacts on sediment transport.</p>

ISH 11 – Offshore Ornithology

Question number	Question	Response
ISH11 - 3	NE to clarify its comment in the Additional Submission [AS-048] that, "As v2 of the baseline has been agreed and demonstrated to be a significant improvement against v1, we do not consider it appropriate and/or necessary to compare the outputs of the two."	<p>As v1 of the baseline has been shown to be incorrect due to the modelling being conducted incorrectly, we do not consider it appropriate to use the outputs of assessments based on those values.</p> <p>We welcome that assessments have been updated in line with the revised baseline and advise that the Environmental Statement (ES) is now updated accordingly. We note from Action 5 that the Applicant's preference may be to include their revised assessments as certified documents. However, for clarity both for this Project in its post consent phase and for other Projects undertaking cumulative assessments, we consider it important that the ES itself reflects the corrected values and updated assessments.</p>

ISH11 - 7	NE and RSPB to update their positions on the suitability of the revised ornithological baseline for use in the assessment.	Following further clarifications from the Applicant, Natural England agrees that the baseline data using the agreed updated approach and modelling is fit for purpose. See D6 Risk and Issues Log B1.
ISH11 - 10	In relation to the disagreement over the use of the core breeding season, and your comment in [AS-048] that "... ultimately, the difference is only likely to affect gannet displacement numbers and is unlikely to make a material difference to our conclusions relating to significance of impact/ impact to site integrity", please clarify if this is intended to mean that there is no longer a perceived problem in relation to gannets, or if your position in the most up-to-date risk and issues log [REP5-112] remains.	The position provided within AS-048 was intended to offer the ExA an update, and therefore supersedes our Deadline 5 Risk and Issues Log. See also Row B13 of our D6 R&I log. For clarity, as noted in Section 3 of this letter, we are now able to rule out adverse effects on gannet alone and in-combination with other consented plans and projects at FFC SPA.
ISH11 - 11	NE to update on its position on the assessment of guillemot and razorbill displacement impacts, including whether this changes in the light of the Applicant's Ornithological Assessment Sensitivity Report [REP5-065], and its opinion on the degree to which outputs from the assessment vary between its preferred approach and that used by the Applicant. Provide specific comment on the outputs of the Applicant's Ornithological Assessment Sensitivity Report [REP5-065] in relation to NE's advocated upper limit for displacement of auks.	See Deadline 6 submissions B6.1 and B6.2.
ISH11 - 12	NE and RSPB to confirm whether they accept the Applicant's analysis that a kittiwake productivity rate of 0.800 should be used instead of 0.580?	Natural England welcome that the Applicant has provided PVAs with a productivity rate of 0.58 for kittiwake at FFC SPA as advised by NE. We acknowledge that they have also undertaken a validation exercise which they suggest means a higher productivity rate should be adopted. However, the issue with the PVA tool raised by Natural England in REP5a-029 could influence interpretation of the validation. We will provide further comment once a response to this matter has been provided.
ISH11 - 13	NE and RSPB to confirm whether they accept the Applicant's suggestion that guillemot survival data should be used as a proxy for razorbill data in the additional razorbill PVA modelling?	Natural England will respond to this action at Deadline 7.

ISH11 - 15	NE to provide a similar update to action point 14 for the RSPB but noting that in [AS-048], NE maintains both counterfactuals should be provided as has been done in “all recent OWF assessments”.	<p>Natural England maintains the position provided in AS-048. The Norfolk Boreas, Norfolk Vanguard, East Anglia One North and East Anglia Two OWFs all provided both counterfactuals.</p> <p>Whilst Natural England are able to form an initial position based on the counterfactuals of reduction in growth rate, we maintain that the counterfactuals of populations size should be provided to allow a full and transparent assessment of the PVA metrics. We are disappointed that the Applicant has still not provided these.</p>
ISH11 - 17	NE to comment on or signpost its up to-date position on the use of the migration-free breeding season rather than the full breeding season, given the outputs from the Applicant’s Sensitivity Report [REP5- 065], and noting its advice in its D5a letter [REP5a-029].	Please see rows B13, B82 and B84 of the Risk and Issues Log. Natural England maintains the position provided in REP5a-029.
ISH11 - 18	NE and RSPB to comment on the use of a 70% macro avoidance factor in the combined displacement and collision mortality assessment for gannet, noting that the Applicant does also provide a range around this central figure.	See B85 of the Risk and Issues Log and Section 3 of this letter. We support the approach that the Applicant has taken, though we reserve the right to provide updated advice to future projects once the macro-avoidance report commissioned by Natural England is published.
ISH11 - 19	Do NE and RSPB believe that the ExA and Secretary of State can now have full confidence in the marine ornithology environmental impact assessment, or is further work and commentary still needed before that stage is reached?	<p>Overall, we do not agree with the Applicant’s approach to the Ornithology EIA, but we now consider that they have provided sufficient information for us to assess the impacts and provide the ExA and SoS with advice. We therefore do not require any further work from the Applicant at this stage in the majority of instances.</p> <p>There are a small number of outstanding matters that are detailed in our Risk and Issues Log. Assuming that the Applicant can provide this information at DL6, we will provide our full and final position at DL7.</p>
ISH11 - 20	NE and RSPB to comment on the Applicant’s report into Indirect Effects of Forage Fish and Ornithology [REP5-085] and the extent to which they believe that the findings affect the overall ornithological assessment.	See DL6 submission B6.3.
ISH11 - 21	Deadline 7 - Update Statements of Common Ground with NE and RSPB so that the ExA can clearly identify any outstanding points of	Natural England can confirm we are working with the Applicant to update our Statements of Common Ground and intend to submit final versions into Examination at Deadline 7.

	difference that may remain at the close of the Examination.	
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ISH 12 – Habitat Regulation Assessment

Question number	Question	Response
ISH12 - 1	Natural England (NE) to confirm if the Marine Processes Supplementary Report [REP4-043] now satisfies its concerns in relation to the identification of receptors for the Habitats Regulations Assessment (HRA).	No. The report concluded that there would be no change to sedimentary processes along the Holderness coast caused by cable installation or landfall activities. The paper presents Smithic Bank as being a closed system. However Natural England maintain there is not enough data across the bank to be confident it is a closed system therefore National Site Network receptors (SPAs and SACs) that could be affected by changes to sedimentary processes along the Holderness coast require further consideration.
ISH12 - 2	NE and the RSPB to provide comment on the adequacy of the revised ornithological baseline and any need for further assessment, mitigation and compensation considerations in relation to the HRA.	See ISH11-7 above. We note and welcome that the Applicant has already undertaken updated assessments in line with the revised baseline. Our final position on the Applicant's proposed compensatory measures will be provided at Deadline 7, though we highlight that our Risk & Issues log captures our current position. As regards mitigation and compensation, the Applicant should fully consider measures to avoid, mitigate and reduce their impacts through their project design as far as possible.
ISH12 - 4	In relation to NE's advocated approach to apportioning seabirds to the Flamborough and Filey Coast Special Protection Area, and having seen the Applicant's report and calculations, do NE and the RSPB have any further views on the approach that has been taken? Do they have any concerns around the quantum of compensation that NE's advocated approach appears to generate for guillemot in this case?	See DL6 submission B6.1 for NE's response to Applicant's comments on the apportioning approach. We will provide our final position on compensation at DL7. However, we consider it important to highlight that impact levels should be quantified using the best available evidence, and cannot be determined based on what might be considered feasible for compensation delivery.
ISH12 - 5	RSPB and NE to comment on any implications that come out of the report into Indirect Effects of Forage Fish and Ornithology [REP5-085] for the HRA.	See DL6 submission B6.3.
ISH12 - 6	NE and the RSPB to respond to the principles of the Applicant's	We will provide our final position on compensation giving consideration to this

	<p>suggested approach to strategic compensation. Also, to comment firstly on whether the Applicant's HRA compensation documentation provides a robust rationale and justification for the alternative strategic approach to compensation, and secondly, on whether the Applicant has demonstrated that the strategic approach could fully address the type and quantum of compensation that is required.</p>	<p>action at DL7.</p> <p>In the interim, please see row C43 of the Risk and Issues Log.</p>
ISH12 - 8	<p>RSPB and NE to respond to the updated predator eradication studies and compensation proposals, including the Applicant's further submissions about the future protection of any sites that could be utilised.</p>	<p>Our Deadline 6 Risk and Issues Log is up to date in terms of review of the most recent predator eradication documents. However, as we have focussed on the ornithological assessment at DL6, we will provide our final position on compensation giving consideration to the second half of this action at DL7.</p>
ISH12 - 9	<p>NE and RSPB to summarise their current positions in relation to project and in-combination HRA effects.</p>	<p>As noted in Section 3 of this letter, we are now able to rule out adverse effects on gannet alone and in-combination at FFC SPA. Our position on being unable to rule out AEol for kittiwake in-combination with other plans or projects remain unchanged (see AS-048). For guillemot, our current position is that we cannot rule out adverse effects alone or in-combination. For razorbill, our current position is that we cannot rule out adverse effects in-combination.</p> <p>We will provide our full and final position with respect to all species at Deadline 7.</p>
ISH12 - 13	<p>NE to confirm that it is now content in relation to barrier effects in the HRA process (following on from [REP5-111] and the Applicant's Deadline 5 submissions).</p>	<p>Natural England consider that given the Applicant has now included sitting and flying birds in the assessment of displacement, the potential for barrier effects is incorporated into the assessment for the required species. See AS-048.</p>
ISH12 - 14	<p>Following submission of the Ornithology EIA and HRA Annex [REP5-078] by the Applicant, NE to review its position on the Applicant's assessment of the seabird assemblage feature of Flamborough and Filey Coast Special Protection Area. Does this provide the information and assessment that NE requested in relation to the HRA process, or is further work required?</p>	<p>Natural England will provide our full and final position on the seabird assemblage feature at DL7. However, we are satisfied that sufficient information has been provided for us to be able to provide advice to the ExA on this matter.</p>