

National Infrastructure Directorate
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Orsted Hornsea Project Four Limited
Development Consent Order (DCO) Application for Hornsea Project Four
Offshore Windfarm
Application Reference: EN010098

16 May 2023

Response to Request for Information

Our ref. EN010098

Dear Mr Johansson

Please accept this cover letter and supporting documents on behalf of the Applicant, in response to the Request For Information (RFI) letter made available via the Planning Inspectorate website, dated 5 April 2023.

A. Impact of Protective Provisions on Seabird Modelling

The Applicant has provided in document [G13.2: Technical Note: Impact of Protective Provisions on Seabird Modelling](#) of this response, a Technical Note in which the Applicant has reviewed the 13 protective provision scenarios previously presented and, where appropriate, undertaken revised mortality assessments.

Each scenario modelled, if implemented, has been carried out on the assumption that the scenario would result in a change in the size of the final array area (and subsequent buffers). On that assumption, each scenario has the potential to change the level of impact from Hornsea Four apportioned to the qualifying seabird features of the Flamborough and Filey Coast Special Protection Area (FFC SPA), and subsequent compensation requirements.

Not all 13 scenarios have been modelled, for the reasons set out in the Technical Note, largely relating to some of the scenarios having no potential for any discernable change in impact levels against either the base case or against other scenarios which have been modelled. This has been discussed with Natural England with agreement reached on seven appropriate scenarios to model.

Modelling results have been presented for the following approaches to assessment:

1. **Kittiwake (collision):**
 - a. Applicant's preferred apportioning approach and Applicant's parameters;
 - b. Applicant's preferred apportioning approach and Natural England's Annex 1: Interim guidance;

- c. Natural England's preferred apportioning approach and Natural England's parameters;
 - d. Natural England's preferred apportioning approach and Natural England's Annex 1: Interim guidance.
2. **Gannet (collision):**
- a. Applicant's preferred apportioning approach and Applicant's parameters;
 - b. Applicant's preferred apportioning approach and Natural England's Annex 1: Interim guidance;
 - c. Natural England's preferred apportioning approach and Natural England's parameters;
 - d. Natural England's preferred apportioning approach and Natural England's Annex 1: Interim guidance.
3. **Gannet (displacement):**
- a. Applicant's preferred apportioning approach and seasonality;
 - b. Natural England's preferred apportioning approach and seasonality.
4. **Guillemot (displacement)**
- a. Applicant's preferred apportioning approach and weighted mean peak non-breeding bio-season abundance;
 - b. Applicant's preferred apportioning approach and standard mean peak bio-season abundance;
 - c. Natural England's standard apportioning approach;
 - d. Natural England's bespoke approach to apportionment and seasonality.
5. **Razorbill (displacement)**
- a. Applicant's preferred approach to apportionment;
 - b. Natural England's standard apportioning approach;
 - c. Natural England's bespoke apportionment approach.

Our ref. EN010098

The Technical Note concludes that the Applicant's position on the potential for an adverse effect on integrity (AEoI) at the FFC SPA remain unchanged, and an AEoI can be discounted for all seabird species at the FFC SPA, other than kittiwake (in-combination).

Important and relevant context to the Secretary of State's decision-making

As essential context to the provision of the Technical Note, the Applicant wishes to make the following points clear to the Secretary of State (SoS) with regards to the assessment of auks:

Scenario 1 and Scenario 9

Of the modelled scenarios, Scenario 9 provides the second largest reduction in potential mortality of auks (guillemot and razorbill), although it is closely followed by Scenario 1, which differs by as little as 1-2%. Notwithstanding the very small additional reductions offered by Scenario 9 as against Scenario 1, Scenario 9

would result in a significantly more challenging project. As highlighted at paragraphs 4.1.2 and 4.1.7 of [G11.4: Totality of Impact of Protective Provisions on Hornsea Project Four](#), the combined effect of Protective Provisions presented in Scenario 9 is likely to lead to a **further** reduction of approximately 500 Megawatts (MW) of capacity over and above a substantial reduction of approximately 500MW expected should the Secretary of State apply bp's protective provisions presented in Scenario 1. Whilst not rendered unviable, Scenario 9 would render Hornsea Four significantly more technically complex, and significantly less competitive, for almost imperceptible ecological benefit.

Our ref. EN010098

Scenario 13

Whilst Scenario 13 provides the largest reduction in mortality across the displacement matrices and across assessment approaches, Scenario 13 would render Hornsea Four unviable. If Scenario 13 were imposed, then Hornsea Four would not be developed and the UK would lose multiple Gigawatts (GW) of clean energy which can be delivered this decade.

Natural England's preferred parameters

As requested by the Secretary of State, modelling has been presented using Natural England's assumed preferred parameters for assessment, noting that the Applicant has presented technical evidence throughout Examination as to why it considers these parameters are over-precautionary for Hornsea Four.

One of the key methodological differences between the Applicant and Natural England's ornithology assessments is the appropriate "range" to be used to determine mortality impacts from displacement of auks.

As set out in [Applicant's comments on Natural England's Deadline 7 Ornithology Submissions \(REP8-012\)](#), the Applicant notes that for other recent offshore wind decisions, specifically Norfolk Boreas, Norfolk Vanguard and East Anglia ONE North offshore wind farms (BEIS, 2022), the Secretary of State has adopted what is sometimes referred to in those HRAs, on the evidence presented in those cases, as a "reasonable scenario" of a 70% displacement rate and 2% mortality rate for the purposes of assessment of impacts on guillemot and razorbill at the FFC SPA alone and in-combination.

The Applicant considers that this "reasonable" scenario allows for substantial levels of precaution and **REP8-012** establishes that an AEoI can be ruled out for Hornsea Four alone and in-combination for auks using the thresholds and displacement scenarios adopted for recent offshore wind farm projects. The contents of that document are not repeated here, however, the Applicant continues to advocate for its conclusions and considers them to be important and relevant factors to consider in the Secretary of State's HRA and decision-making.

The other key methodological point of difference between the Applicant and Natural England is Natural England's promotion of a "bespoke" approach to

apportioning for Hornsea Four. This bespoke approach deviates from the UK Statutory Nature Conservation Bodies (SNCBs) standard approach used on all other recent projects and significantly increases the proportion of auks apportioned to FFC SPA, and thus, the mortalities attributed to Hornsea Four (which otherwise are substantially lower using Natural England's preferred parameters and the SNCB standard approach to apportioning).

Our ref. EN010098

The Applicant has presented evidence as to why that approach is inappropriate for assessment of Hornsea Four as set out in [G5.34: Applicant's response to Natural England's additional guidance on apportioning of seabirds to FFC SPA for Hornsea Project Four \(REP5a-018\)](#) and [G7.4: Applicants Ornithology Position Paper \(REP7-085\)](#). Again, the contents of those documents are not repeated here, however, the Applicant continues to advocate for their conclusions and considers them to be important and relevant factors to consider in the Secretary of State's HRA and decision-making.

Further to this evidence, the Applicant would like to draw the Secretary of State's attention to the latest FFC SPA Seabird Monitoring report (Cope et al. 2022)¹ and Seabird Colony Count and Population Trends report (Clarkson et al. 2022)². The Applicant acknowledges that the Seabird Monitoring report shows a decrease in productivity (substantial in the case of Razorbill) in 2021 caused by corvid predation and displacement by other birds, however the Seabird Colony and Population Trends report shows that both the guillemot and razorbill qualifying features of the FFC SPA colony continue to grow substantially (124% increase for guillemot and 230% increase for razorbill) since 2000. This signifies overall the strong resilience at the colony to change and further reiterates that the assumptions made by Natural England to conclude their bespoke approach to assessment are over-precautionary.

B. Flamborough Front

As stated in the response dated 17th April 2023 the Applicant has continued to engage with Natural England on the potential impacts from Hornsea Four on the Flamborough Front. This engagement has been constructive, and as a result the Applicant is committing to:

1. Removing gravity base structures (GBS) as a foundation type for wind turbine generators in the design envelope for Hornsea Four;

¹ Cope, R., Aitken, D., O'Hara, D. (2022). Flamborough and Filey Coast SPA Seabird Monitoring Programme 2022 Report. Available online: [\[REDACTED\]](#)

² Clarkson, K., Aitken, D., Cope, R., & O'Hara, D. (2022). Flamborough & Filey Coast SPA: 2022 seabird colony count and population trends. Available online: [\[REDACTED\]](#)

2. Updates to the Outline Marine Monitoring Plan (OMMP) for the relevant near-field and far-field monitoring to apply to other foundation types, and to clarify the extent of the monitoring as requested by Natural England; and
3. Give consideration to marine processes in the final layout design of the array where possible, and to inform selection of the monitoring locations, to be agreed with the Marine Management Organisation.

The Applicant and Natural England discussed what the trigger levels for adaptive management might be and sought to identify any adaptive management measures that could be implemented should an adverse impact be detected as requested. Both parties recognise and agree that there are no feasible/practicable adaptive management measures available but that a project commitment to monitoring (as detailed in the OMMP) will support better understanding of the Flamborough Front and any potential impacts on the feature from the construction of Hornsea Four. Therefore, trigger levels for adaptive management are not relevant given the in-principle monitoring commitments are agreed.

The Applicant has provided a table of proposed draft DCO amendments as an Appendix to this letter which are required to give effect to the commitment to remove GBS from the design envelope for WTGs. An updated version of the Outline Marine Monitoring Plan in clean and track changed copy is also submitted alongside this letter which have been provided for comments to Natural England and the Marine Management Organisation

With regard to the impact which any reductions to turbine numbers or the array area associated with the protective provision scenarios might have to the potential adverse effects on the Flamborough Front, the Applicant considers there should be no impact because the potential for large-scale hydrodynamic change is related to clusters of wind farms in seasonally stratified seas rather than individual turbine locations. The Applicant has also committed to removing GBS foundations as detailed above, which removes the potential for individual turbines to act in-combination with each other. In addition, any impact on the layout would be mitigated by the requirement in the detailed design parameters that each wind turbine generator must be no less than 810 metres from another in all directions (Schedule 1 Part 3 Requirements 2 (2) (d) of the draft DCO).

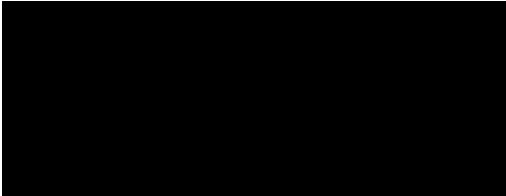
A total of 4 documents have been submitted alongside this letter to support the responses to the Request for Information.

Applicant Document Reference	Document Title
G13.2	Technical Note: Impact of Protective Positions on Seabird Modelling
G13.3	Appendix to Technical Note: Impact of Protective Positions on Seabird Modelling
F2.7	Outline Marine Monitoring Plan (clean)
F2.7	Outline Marine Monitoring Plan (tracked)

Our ref. EN010098

We are grateful for your consideration of the above.

Yours sincerely
Orsted Hornsea Project Four Ltd.



Jamie Baldwin



Appendix A

Our ref. EN010098

APPENDIX

Required amendments to draft DCO to remove GBS as a permitted foundation type for wind turbine generators

DCO Part	Reference	Amendment
Schedule 1 Part 1 (Authorised Development)	Paragraph 1 Definition of "Work No. 1(a)"	Delete "gravity base structures"
Schedule 1 Part 3 (Requirements)	Paragraph 2(4)	Delete "gravity base structures"
Schedule 1 Part 2 (Requirements)	Paragraph 2(13)	Amend to "The total number of gravity base structures may not exceed 10 for offshore electrical installations and offshore accommodation platforms".
Schedule 11 Part 1 (Licensed Marine Activities)	Paragraph 3 Definition of "Work No. 1(a)"	Delete "gravity base structures"
Schedule 11 Part 2 (Conditions)	Paragraph 1(4)(c)	Delete sub-paragraph "(c) gravity base structures"
Schedule 11 Part 2 (Conditions)	Paragraph 1(8)	Delete sub-paragraph "(8) The total number of gravity base structures for wind turbine generators may not exceed 80"
Schedule 11 Part 2 (Conditions)	Paragraph 13(1)(iv)	Add "(for the offshore accommodation platform only)" before "gravity base structures"