



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

The Applicant's comments on Natural England's
Deadline 4 Submission

Revision A
Deadline 5
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| Prepared by: | |
| Royal HaskoningDHV | |
| Approved by: | Date: |
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1 The Applicant's comments on Natural England Deadline 4 Submission

1. This document presents the Applicant's comments on Natural England's Deadline 4 submission [REP4-049]. Also see [The Applicant's Response to Natural England's Risk and Issues Log: Terrestrial Ecology](#) [document reference 19.23] submitted at Deadline 5.

Table 1 The Applicant's comments on Natural England Deadline 4 Submission

| ID | Stakeholder Comment | Applicant Comment |
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| 1 Natural England's Deadline 4 Submissions | | |
| 1 | Natural England has screened the relevant documents submitted by the Applicant at Deadline 3. As stated in our cover letter submitted at Deadline 3 [REP3-142], due to the short number of working days coupled with resource constraints, there has been insufficient time to thoroughly review the documents submitted Deadline 3. Thereby, the majority of our advice on the new and updated documents will be submitted at the next deadline (D5) on 13 June 2023. | Noted. |
| 2 | We are continuing to work with the Applicant where possible to progress issues. Please find a summary of Natural England's position regarding these documents in Annex 1 below. With inevitably limited progress at Deadline 4, an updated Risk and Issues Log will next be submitted at Deadline 5. | Noted. The Applicant will be providing our comments to the Risk and Issues log submitted by NE at Deadline 3 ahead of the Deadline 5 submission so that they may be taken into consideration ahead of Natural England's submission. |
| 2 Natural England's Response to the Deadline 3 Submission from the Norfolk Coast AONB [REP3-149] | | |
| 3 | As the Government's statutory advisor for seascape and landscape, Natural England is concerned with the response presented by the Norfolk Coast AONB to the Examining Authority's Second Written Questions (WQ2). We will provide a detailed response at Deadline 5. | Noted. The Applicant will review the Natural England response at Deadline 5 and respond as appropriate. |
| 3 Marine Processes Technical Note (Revision B) [REP3-093] | | |
| 4 | Natural England welcomes the inclusion of additional bathymetric data and seabed profiles for all six sites within the DOW array area. However, as we previously highlighted [REP2-062], these data still do not cover a long enough time period, post-completion of DOW, to support the conclusion that observed changes are driven by naturally occurring processes alone. We therefore advise continued monitoring, in line with the Applicant's commitment in their In Principle Monitoring Plan (IPMP) [APP289], to establish a longer time series to inform understanding of trends and patterns of morphological change to validate predictions of sandwave recovery. | Noted. The Applicant has committed to monitoring of sandwave and sandbank migration within the Offshore In Principle Monitoring Plan (Revision B) [REP4-014] which was updated at Deadline 4. |
| 5 | As per our advice within Appendix E of our Relevant Representations [RR-063], we continue to advise that there is a requirement to monitor change in sand bank composition topography within the SEP and DEP wind farm site and offshore cable corridor survey areas. This monitoring should be carried out using full | The Offshore In-Principle Monitoring (Revision B) (Tracked) [REP4-015] includes provision for monitoring of sandwave and sandbank recovery and migration using swathe-bathymetry. The Applicant considers that it is implicit within the description of the |

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| | seabed coverage swathe-bathymetry to ensure there are no unexpected changes in terms of sandbank elevation, topography, and extent and to processes within coastal designated sites from any sediment transport disruption. We advise this is included within the In Principle Monitoring Plan. We would also wish to see consideration of, and collation with, the Dudgeon Offshore Wind Farm pre- and post-construction geophysical survey monitoring results within the DEP and SEP survey reports. | proposed monitoring that changes to sandbank elevation, topography and extent, and to coastal designated sites would be captured within this monitoring however proposes to provide clarity on this in a further update to the IPMP at Deadline 6 or 7 in anticipation that further comments on the document will be provided by Natural England at Deadline 5. |
| 4 Response on Ornithological Matters at Deadline 4. | | |
| 6 | We have reviewed the CRM Updates (EIA context) Technical Note (Revision B) and can confirm this adequately addresses our previous comments. The cumulative totals presented can be used by Natural England to formulate our positions on those species subject to collision risk. | Noted. The Applicant welcomes this position and considers this matter to be closed. |
| 7 | Natural England is continuing to engage with the Applicant on outstanding assessment issues. We have set out an appropriate scope of work and provided datasets to facilitate the submission of a Highly Pathogenic Avian Influenza (HPAI) impact assessment report. If as expected, the Applicant submits this information at Deadline 4, we aim to provide the majority of our positions at Deadline 5. | The Applicant confirms that it has submitted a Review of 2022 Highly Pathogenic Avian Influenza (HPAI) outbreak on relevant UK seabird colonies [REP4-042]. Natural England communicated to the Applicant during a meeting on 23 May 2023 that, with respect to gannet, the document provides the information required in order for Natural England to be able to rule out the requirement for compensation for the gannet feature of the Flamborough and Filey Coast Special Protection Area (SPA) and therefore the Applicant has updated Appendix 4 Gannet, Guillemot and Razorbill Compensation Document (Revision C) [document reference 5.5.4] to remove the material in relation to gannet. In addition, the Proposed Without Prejudice DCO Drafting (Revision C) [document reference 3.1.3] has been updated to remove the without prejudice DCO drafting for this species. |
| 8 | We draw attention to our comments submitted at Deadline 3 [REP3-143] in relation to the Applicant's Apportioning and HRA update [REP2-037]. In particular, we highlight the following outstanding requirements: the updating of Hornsea Project 4 impact figures for Flamborough & Filey Coast SPA guillemot and razorbill; the consideration of impacts from O&M vessels based on mortality rates of 1% and 10% (rather than 1% only) for red-throated divers within the Outer Thames Estuary (OTE) SPA; and the need for a more quantitative assessment of | The Applicant confirms that an update to the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision C) [document reference 13.3] has been submitted, which addresses Natural England's comments in respect of guillemot and razorbill, and provides clarification of some points in respect of red-throated diver. Further clarification is being sought from Natural England with regard to in-combination impacts from vessel activity on |

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| | in-combination impacts from vessel activity for both the OTE and Greater Wash SPAs. Until these are addressed, Natural England will not be able to provide definitive advice on the in-combination assessments for these species at FFC SPA and OTE/GW SPAs respectively. | red-throated diver. The Applicant has scheduled a meeting with Natural England for 26 June 2023 to discuss matters relating to red-throated diver and will aim to submit an update at D7, subject to the receipt of the required clarification. |
| 9 | Natural England further highlights that the EIA assessment for species subject to displacement (Auks, Gannet) has not been updated to reflect the correct Hornsea 4 figures (the presented numbers are taken from the Hornsea 4 PEIR). We recommend updated cumulative totals are presented for those species subject to displacement (auks, gannet) that incorporate the appropriate H4 figures. | The Applicant has submitted a Gannet and Auk Cumulative Displacement Updates Technical Note [document reference 19.21] which includes updated figures for Hornsea Project Four as well as figures from the Preliminary Environmental Information Reports (PEIR) of Rampion 2, North Falls and Five Estuaries. |
| 5 Natural England's Position on the use of a combined Outline Landscape and Ecological Management Strategy (OLEMS) | | |
| 10 | Within Appendix I of our Relevant Representations [RR-063] we advised that the Applicant combines the Landscape Management Plan (LMP) and the Ecological Management Plan (EMP) into an Outline Landscape and Ecological Management Strategy document. The Applicant stated within document 12.3 The Applicant's Comments to our Relevant Representations – Part 2 [REP1-034], and subsequently confirmed verbally, that it is their intention not to combine the EMP and LMP documents. Natural England fundamentally disagrees with this approach. | The Applicant notes Natural England's recommendation. The Applicant has engaged with the Local Authorities (LA) on the matter and following those discussions and experience of other projects which have also kept the LMP and EMP separate, the preference also remains to keep these documents separate. |
| 11 | We reiterate our advice provided at Deadline 2 [REP2-063] where we advised the Applicant combines the Outline Landscape Management Plan and the Outline Ecological Management Plan into a joint Outline Landscape and Ecological Management Strategy (OLEMS). This request is based upon our experience with other Offshore Wind Farm NSIPs and has been successfully undertaken by East Anglia ONE North (EA1N) and East Anglia TWO (EA2). Given the nature of these documents, there is a need to cross reference between documents, particularly in discharging DCO requirements post consent. This will result in increased workload and complexity to work through the documents, which would be reduced significantly when presented as a combined document. By recent case example, Natural England has recently received a high volume of consultations from the Local Planning Authority (LPAs) for the Norfolk Projects, currently in the pre-construction onshore DCO requirement discharge phase on multiple plans associated with these documents which has considerably slowed the process and reduced our ability to engage. Another case example is Hornsea Project THREE | See ID 10. |

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| | <p>where not only are there multiple documents and/or consultations associated onshore DCO requirement discharge, but multiple LPAs where consistency in advice and approach is required. In both cases we believe that the resource burden for all interested parties could have been lessened by having a combined OLEMS.</p> | |

Table 2 The Applicant's comments on Natural England's Further Response to the Examining Authority's Written Questions 2

| ID | Question | Natural England Responses | Applicant's Comment |
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| Q2.5 Construction Effects Offshore | | | |
| Q2.5.1 Development Scenarios and Rochdale Envelope | | | |
| Q2.5.1.4 | <p>Statistical Differences between DEP-N and DEP as a whole</p> <p>The intention of the Applicant to retain optionality for DEP-N to be developed fully as opposed to being in conjunction with DEP-S, and the statistical basis underpinning this is stated [REP2-040].</p> <p>a) Is NE satisfied and in agreement with the justification?</p> <p>b) If not, in light of the statistical position put forward by the Applicant, explain why a minimal number of turbines should be built in DEP-N.</p> <p>c) Applicant and NE, if a commitment to reducing turbine numbers in DEP-N was required, where would this best be secured?</p> | <p>a) We are not persuaded by the Applicant's conclusion that there is no statistical difference between DEP as a whole and DEP-N, given that it is also conceded that there is an inadequate sample size to characterise DEP-N alone. NE highlights that the configuration of Digital Aerial Survey (DAS) transects was not designed to characterise DEP-N alone, but DEP as a whole.</p> <p>b) As set out in our Relevant Reps [RR063], DEP-N supports higher densities of several seabird species, including sensitive collision risk receptors such as sandwich tern and kittiwake. If the 'consent envelope' being sought includes a scenario where DEP-N alone is brought forward, Natural England considers that the worst-case scenario (WCS) as regards collision mortality has not been clearly established in the Environmental Statement. Deriving an accurate WCS for DEP-N alone would not be straightforward, given the data available for DEP N alone, but there are potential options that NE could explore with the Applicant.</p> <p>Conversely, given a DEP-N alone scenario would result in a reduced spatial spread of turbines, displacement effects on species such as guillemot and razorbill are likely to be reduced - although given the higher densities of those species in DEP-N, the reduction in effect would need to be estimated. In any event, as the Applicant is seeking the ability to develop in both DEP-N and DEP-S, this would not result in a change to the 'displacement WCS'. This highlights some of the complexities inherent in the Rochdale envelope approach, particularly when dealing with discrete</p> | <p>The Applicant refers to its detailed response to WQ1 (Q1.5.1.2) [REP1-036] and reiterates that development consent is being sought for DEP as a whole and that whether to utilise both the DEP-N and DEP-S array areas, or just DEP-N is a detailed design decision that would be made post-consent.</p> <p>a) The Applicant does not follow Natural England's argument fully on this point because it seems clear (and essentially indisputable) that the densities of key seabird species are not statistically significantly higher for DEP-N alone than for DEP as a whole. The Applicant highlights that (as acknowledged by Natural England) the aerial surveys were designed to provide data of the expected level of reliability and precision for the entire DEP site. Therefore, attempting to subset the DEP site into smaller sub-areas results in the data from such sub-areas deriving from small sample sizes which provide little statistical power to test for differences with other sub-areas or with the entire DEP site. Consequently, it is highly unlikely that comparisons involving such sub-areas would show statistically significant differences in the densities of the key species.</p> <p>However, the above should not be taken to imply that bird densities in DEP-N should be assumed to be higher than for DEP as a whole. Instead, it means that the data are not able to reliably determine whether densities in DEP-N differ from those throughout the whole of the DEP site.</p> <p>It is also the case that this inability to demonstrate statistically significant differences in bird densities for such sub-areas should not be taken to indicate inadequacies in the design of, and subsequent data from, the aerial survey programme. As stated above, the</p> |

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| | | <p>arrays.</p> <p>c) NE notes that the Norfolk Vanguard Examination involved the Applicant for that project investigating, and then committing to, limits to the proportion of turbines that could be installed in the discrete West and East arrays of that project, as part of reducing the collision risk for target species (including kittiwake). These limits were secured in the DCO (Part 3, Detailed Offshore Parameters).</p> | <p>survey programme was designed for the purposes of providing density estimates for the whole DEP site. Attempting to examine bird densities within sub-areas of other offshore wind farm sites would likely encounter similar problems.</p> <p>Thus, the Applicant's position remains that there is not sufficient evidence to justify any restriction on the placement of turbines within any particular part of the DEP wind farm site.</p> <p>b) As above, the Applicant maintains that the data do not support a conclusion that a DEP-N scenario would represent the WCS. Furthermore, as Natural England has highlighted, it would be very difficult to derive DEP-N collision mortality estimates for species other than Sandwich tern (which have already been presented using model-based density estimates, but, as above, differences between DEP-N and all-DEP are small and not statistically significant). Even if it were possible to derive DEP-N CRM estimates for other species, it is not plausible that these could demonstrate any meaningful difference between DEP-N and all-DEP. This follows from the Applicant's arguments above and is acknowledged by Natural England in point (a) above; i.e. 'it is also conceded that there is an inadequate sample size to characterise DEP-N alone'.</p> <p>The Applicant agrees that the risk for displacement-sensitive species would be reduced in a DEP-N only scenario; this would remain the case even if densities in DEP-N were higher than all-DEP (unless no birds were present in DEP-S, which is not the case).</p> <p>c) The Applicant refers Natural England to its response to Q3.5.1.1c in the Applicant's responses to the Examining Authority's Third Written Questions.</p> |

| ID | Question | Natural England Responses | Applicant's Comment |
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| Q2.12 Habitats and Ecology Offshore | | | |
| Q2.12.1 Effects on Ornithology | | | |
| Q2.12.1.1 | <p>Rates and Assumptions Within the Models</p> <p>Following the Applicant's submission [REP2-036] can NE confirm that there is no disagreement with the Applicant regarding:</p> <ul style="list-style-type: none"> • Application of the Population Viability Analysis • Use of the Biologically Defined Minimum Population Scale • Avoidance rates (including use of macro avoidance) • Mortality rates • Counterfactuals • Determination of the 95% CI • The use, or not, of ranges <p>If there is disagreement, NE identify and expand on the precise issues and specify what re-modelling or reassurances are required.</p> | <p>NE can confirm that on the whole we have either reached agreement with the Applicant, or the Applicant has presented appropriate alternatives to their preferred impact assessment outputs to enable us to draw conclusions regarding the impacts to seabird species from SADEP. There are still some species that require further information to be presented (namely guillemot, razorbill, common scoter and RTD), as described by NE at Deadline 3 [REP3-142] and [REP3-143]. This outstanding information has an impact on application of the PVA (for guillemot and razorbill) and mortality rates/ranges (for RTD).</p> <p>In some cases the range or scenario that NE will refer to in order to determine the impacts will differ from the approach taken by the Applicant. For example, NE place an emphasis on considering a range of displacement rates while the Applicant may place more emphasis on one rate to determine impact. However, this does not prevent NE from drawing conclusions.</p> | <p>The Applicant has provided further information to address comments provided by Natural England in REP3-143 with respect to the following:</p> <ul style="list-style-type: none"> • Guillemot and razorbill: Updated in-combination values (incorporating the most recent values for HP4) are presented in the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision C) [document reference 13.3]. • Common scoter: a screening assessment has been included within the HRA Screening Matrices (Revision B) [REP4-009]. • RTD: Clarification is provided in the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision C) [document reference 13.3]. As set out at ID8 of Table 1 above, further clarification is being sought from Natural England with regard to in-combination impacts from vessel activity on red-throated diver; this will be addressed in a further update, subject to receipt of the required clarification. |
| Q2.12.1.4 | <p>Outline Project Environmental Management Plan</p> <p>The Applicant submits that mitigation for red-throated divers is contained in the OPEMP [REP1-017]. For this species, and in general, do you consider the OPEMP to be sufficiently detailed to give you assurances that appropriate mitigation will be implemented? Explain with reasons.</p> | <p>Natural England anticipates that the Applicant will respond to our comments at Deadline 3 regarding RTD and AEOI for GW SPA ([REP2-037] [REP2-049]). Therefore NE will defer to Deadline 5 for further comment. Whilst we welcome that the Applicant intends to adopt the Best Practice Protocol, we have outstanding concerns regarding displacement and therefore wish to discuss other mitigation measures, including seasonal restrictions</p> | <p>Noted. The Applicant has scheduled a meeting with Natural England for 26 June 2023 to discuss matters relating to red-throated diver.</p> |