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East Anglia TWO Offshore Wind Farm

Appendix A15b to the Natural England Deadline 7 Submission

**Natural England's Response to Offshore Ornithology Compensation and
Derogation Documents [REP6-044, REP6-045 and REP6-046]**

For:

The construction and operation of East Anglia TWO Offshore Wind Farm, a 900MW wind farm which could consist of up to 75 turbines, generators and associated infrastructure, located 37km from Lowestoft and 32km from Southwold.

Planning Inspectorate Reference: EN010078

4th March 2021



Natural England's Response to East Anglia ONE North and East Anglia TWO Offshore Windfarm Offshore Ornithology Compensation and Derogation Documents [REP6-044, REP6-045 and REP6-046]

This document is applicable to both the East Anglia ONE North and East Anglia TWO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's (ExA) procedural decisions on document management of 23rd December 2019. Whilst for completeness of the record this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it again for the other project.

Introduction

This Appendix includes comments on the following documents submitted by the Applicant at Deadline 6:

- Habitat Regulations Assessment Derogation Case [REP6-044]
- Offshore Ornithology Without Prejudice Compensatory Measures [REP6-045]
Offshore Ornithology Without Prejudice Compensation Mechanisms - Annex 1 - Prey Availability Compensation Mechanisms [REP6-046]

Summary

1. Natural England notes that the Applicant's position continues to be that there would be no Adverse Effect on Integrity (AEoI) of any site as a result of either project alone or in-combination effects. We also acknowledge that the Applicant has produced this document to respond to the ExA Rule 6 letter of 16th July 2020 to engage with the derogation tests.
2. Natural England's view remains, as set out in our offshore ornithological update at Deadline 3 [REP3-117] that an AEoI cannot be ruled out beyond reasonable scientific doubt for the following sites and features:



HRA species and site	EA1N & EA2 alone	EA1N/EA2 in-combination* with other plans & projects
Red-throated diver, Outer Thames Estuary SPA: displacement	AEol cannot be ruled out due to displacement from EA1N	AEol cannot be ruled out due to displacement from EA1N/EA2 and in-combination with existing plans and projects
Gannet, Flamborough & Filey Coast (FFC) SPA: collision	No adverse effect on site integrity (AEol)	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & H4**
Gannet, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & H4**
Gannet, Flamborough & Filey Coast SPA: collision + displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**
Kittiwake, Flamborough & Filey Coast SPA: collision	No AEol	Unable to rule out AEol excl. and incl. H4**
Guillemot, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**
Razorbill, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**
Seabird assemblage, Flamborough & Filey Coast SPA	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**
Lesser black-backed gull, Alde-Ore Estuary SPA: collision	No AEol	Unable to rule out AEol (NB: NE agrees with no collisions being apportioned from HP3 & HP4)

* This position is subject to change once finalised figures for Hornsea Project 3 are available

** The Hornsea 4 figures are those provided as part of pre-application S42 (PEIR) and are therefore subject to change

3. Natural England notes that for all species subject to compensation the mean/central prediction has been used to determine the required compensation. We highlight that the predicted impacts are estimations underpinned by a number of assumptions, several of which have considerable uncertainty associated with them. As a result, Natural England advises that a range-based approach is undertaken to consider impacts. Accordingly, we advise that the Applicant should estimate the degree of compensation potentially required using the upper 95% confidence estimate of mortality, not the mean figure. Otherwise, and if a 1:1 ratio



is used for example, due to the level of uncertainty the compensation measures may not fully compensate for the actual impact.

4. Natural England notes that only a single project-specific compensatory option is proposed for each of the species. However, it is our view that the most ecologically effective compensatory measures should all be presented to ExA and SoS, setting out clearly what would be required in order to secure and deliver those options (however challenging). This will enable more informed decisions to be made and where appropriate reinforce the need for mechanisms to be developed to progress strategic options.
5. The Applicant's assert that the details of the compensatory measures can be addressed once a decision on the need to compensate for the Project has been made by the SoS. Natural England's view is that this is not acceptable and advise that at the point of decision the SoS should be provided with sufficient confidence that appropriate compensation measures are available and have been or can be secured. In this context, our advice is to leave as little as is possible regarding the nature and implementation of the compensatory measures to the post-consent period, as the level of specific detail provided will be a key factor with respect to confidence in the success of the measures and securing them. Please be advised that the level of outstanding detail associated with the Hornsea Project 3 compensatory measures raises significant challenges to implementation and therefore we counsel against proceeding on the basis that an equivalent level of information to that provided by Hornsea Project 3 will necessarily be sufficient.
6. Natural England has agreed with the Applicant to consider more detailed compensatory proposals to those provided at Deadline 6 which will be provided by the Applicant in support of a workshop on 10th March 2021. However, within this submission we have provided some high-level initial comments/advice on the Applicant's submissions in REP6-044 and REP6-045.

1) Derogations

7. The mitigation proposals which have been submitted to the examination [REP1-047] and [REP3-073] do not fully mitigate the collision impacts on those SPA



qualifying features at risk from in-combination levels of collision. Neither, by the Applicant's own admission does the 2km buffer between EA1N and the Outer Thames Estuary SPA mitigate the displacement of red throated diver to an acceptable level, as detailed in Natural England's advice on red throated divers in the Outer Thames Estuary [REP4-087].

8. Natural England wishes to re-iterate the advice we provided in our written submissions [RR-059, REP1-172, REP4-088, REP5-082], namely that before progressing to the other derogations tests it should be demonstrated that every effort has been made to avoid, reduce and mitigate the impacts from East Anglia ONE North and East Anglia TWO.
9. Natural England's continued advice is that mitigation to remove an AEoI on the Outer Thames Estuary SPA could be provided by increasing the buffer between the SPA boundary and EA1N i.e. in the form of a smaller array. This could be considered as a suitable project-level 'alternative solution', as set out in the EEC Article 6.4 Derogations guidance¹. Whether the project has demonstrated that the alternative solutions test has been met, thereby allowing progression to further stages such as IROPI and compensation, is a matter for ExA and SoS consideration. However, we do wish to highlight that the proposed compensatory measures for red throated diver are not fit for purpose and that compensating for these impacts will be highly challenging, and therefore stress that it is imperative to exhaust the potential of mitigation measures to avoid AEoI first.

2) Fisheries management

10. As noted by the Applicant, appropriate fisheries management measures would be ecologically beneficial compensation for several seabird species including kittiwake, gannet, guillemot and razorbill. Therefore, the progression of one compensatory measure could be beneficial to several species from the same SPA.

¹ - EEC Article 6.4 guidance-
https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf



11. We understand the Applicant's position that because fisheries management is under government control and therefore action would need to be taken to enable a more strategic approach to providing this ecologically beneficial compensatory measure. To some degree we agree with this position, however, we do not believe that this is insurmountable.
12. We agree with the Applicant that in the case of kittiwake, compensation should not be used to address issues that are causing designated habitats or species to be in an unfavourable condition. However, there is limited evidence available that can quantify the extent to which prey availability is causing the unfavourable condition alone. Therefore, increased fisheries management as a compensatory measure through increasing prey availability is considered to have the potential to go above and beyond site management measures and address the impacts of developments.
13. It is important to highlight that Natural England considers prey availability of key importance, and therefore recommends that this measure be part of a sustainable package of measures in providing compensatory measures. Given evidence of widespread declines in kittiwake productivity and abundance, provision of additional nesting opportunities for kittiwake in isolation carries a significant degree of uncertainty of long-term success if prey availability issues are not also dealt with.
14. Natural England maintain that in identifying compensatory measures to increase kittiwake productivity (and other seabird species) through increased prey availability needs to be kept under consideration, even if there are challenges with delivering this in the short term. Natural England acknowledges that certain mechanisms related to increasing prey availability might require a Government led and/or strategic response; however this does not preclude the Applicant's involvement in such a response.
15. Additionally, it is possible that there are options to increase prey availability that have not yet been fully explored, that could more easily be delivered through mechanisms that are less reliant on a Government led/strategic response, for example buying fishing vessel licences and not using the quota.



16. We note that Annex 1 of this document is a summary and update of the review of prey availability compensation mechanism by Ørsted for the Hornsea Three project. We have provided a link to Natural England's response to BEIS dated 2nd November 2020². Natural England can provide further comment on the Applicant's update and the fisheries options at the next deadline.

17. We acknowledge the challenges of relying on regulator-led approach to achieve a deliverable compensatory measure within the timeframes required. Nevertheless, whilst we appreciate why only the provision of artificial nest structures are proposed by the Applicant, Natural England maintains that such a measure would be significantly enhanced if this formed part of a package that also seeks to improve prey availability for birds using those structures.

3) Appendix 1: Kittiwake from the Flamborough and Filey Coast (FFC) SPA

3.1 Conservation Objectives

18. Natural England's position regarding the 1987 count data and the evidence base that supports this position and its continued use is set out in an Natural England Evidence Statement (2020)³.

3.2 Quantification of effect

19. Natural England has agreed that the project alone will not result in AEol. However, as noted above, it should be demonstrated the degree of compensation required would be able to address the upper 95% confidence estimate of mortality given the level of uncertainty regarding impacts.

20. Natural England considers that there is an AEol of this feature due to in-combination collision mortality. The contribution is 1.7 birds from EA2 per annum and 0.7 birds per annum from EA1N, out of a total of 359 birds per annum if Hornsea 4 is excluded, and 515 per annum if Hornsea 4 is included. Natural

² <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003257-Natural%20England.pdf>

³ [Natural England Evidence Statement Regarding Kittiwake Count Data Used to Classify the Flamborough Head & Bempton Cliffs SPA - EIN050](#)



England notes that we have already advised at Hornsea 2 and East Anglia 3 examinations onwards that it was not possible to rule out an AEoI on the FFC SPA from operational and consented projects due to the level of annual in-combination collision mortality predicted for kittiwake.

3.3 Provision of artificial nest sites

21. We note that this is the only measure proposed to be taken forward by the Applicant. We do not consider it is appropriate to restrict the potential compensation for kittiwakes at the FFC SPA to just the option of providing artificial nesting sites at this this time. The compensatory measures/adaptive management should extend to the delivery of the most ecologically beneficial proposals, which should include improving prey availability, as a means of ensuring the measures are successful throughout the lifetime of the project.

22. One aspect of particular concern with the proposal is that the broad locations of the artificial nest structures proposed are the same as those suggested by other offshore windfarms. This is a concern because without certainty regarding specific structures in specific locations, and lack of detail regarding the mechanism for two or more projects to collaborate, it is unclear whether all the projects will be able to deliver their compensation commitments. It is therefore important that a more detailed package of specific measures is submitted during the examination. As set out in Issue Specific Hearing 3 and REP4-088, Natural England has raised concerns about Lowestoft as a potential location for artificial structures, and other locations will also have practical constraints that need further exploration.

23. As regards the ecological rationale for the measures, there are several areas where there is uncertainty or further detail is required, including:
 1. Consideration of the availability of new recruits to use the structures. It is unclear to what extent the proposed compensatory measures will provide 'new' recruits to the breeding population that otherwise would not have bred in that year, or the provision of superior nesting locations than otherwise might have been available, leading to improved productivity of birds that would otherwise have failed in their breeding attempt or experienced low levels of success. It is of course possible that both mechanisms would be in operation.



2. Consideration to the likely rate of structure colonisation. There is evidence that bespoke structures are not always colonised – for example one of the ‘kittiwake towers’ on the Tyne was not colonised and was demolished, and at least one of the structures at Boulogne has not been used.
 3. Assessment of the likely rate of colonisation and then increase for bespoke structures: whilst some colonies may show immediate and rapid colonisation, this may be more likely to be the case where the existing nest sites have or are being removed. We would welcome a more detailed consideration of the likely rate and the level of colonisation, given artificial structures appear to be rarely ‘fully occupied’.
 4. Consideration of suitability of the structure(s). This needs a detailed review of various aspects of structures to determine feasibility and to ensure structures are appropriately designed.
24. It is not clear if several developers are proposing the same compensatory measures in the same location, and how this will be delivered. We welcome that the Applicant’s intention is to work collaboratively and strategically to deliver the compensation measures. However, more detail on how this would work in practice should be provided.
25. In addition, the SNCBs believe that it would be worthwhile exploring the opportunities for existing offshore infrastructure being modified to become artificial nest sites and the requirements needed to enable that to be delivered.

4) Appendix 2: Gannet from the Flamborough and Filey Coast (FFC) SPA

4.1 Provision of artificial nest sites and/or establishment of new colonies

26. We note that only one measure is planned to be taken forward: the provision of artificial nest sites and/or establishment of new colonies. The Applicant anticipates that compensation measures will not be required, on the basis that gannet numbers at FFC are far above the population size at designation. However, we advise that it should be noted that the abundance target is caveated by “... whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.” (our emphasis)



27. We advise that rather limited evidence has been provided in support of gannet having successfully used artificial nests sites. In addition, we are unable to advise on the appropriateness and feasibility of this compensatory measures as no information is provided on the size of structure required, likely colonisation, potential recruits, emigration of birds hatched at new colony, expected productivity of new colony birds etc. This detail will need to be provided.
28. Additionally, no detail is provided on potential locations of potential structures/new colonies. As stated in the kittiwake section, it is important that a detailed package is submitted during the examination. The level of specific detail provided will be a key factor with respect to confidence in the success of the measures, or how the measures will be secured.

5) Appendix 3 and 4: Guillemot and Razorbill from the Flamborough and Filey Coast (FFC) SPA

5.1 Rat eradication from breeding colonies

29. We note that only rat eradication from breeding colonies is proposed to be taken forward by the Applicants for both Guillemot and Razorbill. However, the measures are not presented with a sufficient level of detail to enable Natural England to advice on the appropriateness and feasibility of this compensatory measure. Potential candidate sites need to be identified and appraised for their suitability. Therefore, it is critical that appropriate candidate sites that meet specific criteria are identified.
30. Predation by rats is not likely to be the key population driver for guillemot colonies. We acknowledge there is some evidence from Lundy that in certain locations rat eradication may lead to increased productivity, increases in the numbers of occupied nest sites and/or recolonisation of areas. However, given other potentially more important population drivers such as prey availability and climate change, the results will be highly specific to the location chosen, and therefore potential locations where meaningful increases in productivity could be achieve need to be identified.



31. We agree that rat eradication is not a relevant option at the FFC SPA, but there may be some potential at other colonies, but these need to be identified at this stage. Consideration would need to be given to how close a candidate site is to the FFC SPA, driven by the premise that the closer to FFC the more likely birds may recruit to FFC, though we recognise that other English North Sea auk colonies are not known to be experiencing significant predation issues.

6) Appendix 5: Lesser black-backed gull (LBBG) from the Alde-Ore Estuary SPA

6.1 Quantification of effect

32. We agree that 1.6 birds per annum at EA2 and 0.3 per annum at EA1N will not result in AEol alone.

33. EA2/EA1N does however contribute 3.6% of the total in-combination total of 52.7 LBBG mortalities per annum from the Alde-Ore Estuary SPA. Therefore, we consider that it is not possible to rule out AEol of this feature due to in-combination collision mortality.

6.2 New Zealand style predator proof fencing

34. Natural England agrees that measures to reduce the egg and chick predation by mammals is likely to be the most ecologically beneficial measure to take forward. Therefore, the proposal of installing New Zealand style predator proof fencing (as opposed to more traditional electric post-and-wire fencing used to manage impacts on seabird colonies) is agreed in principle. We also agree that the priority area within the Alde Ore Estuary SPA where measures will be most effective is Orford Ness. However, it would increase the confidence in the measures if specific candidate locations for such fencing in that area could be identified and appraised.

35. We acknowledge that provision of predator-proof fencing for the benefit of SPA species has the potential to provide orders of magnitude greater than the risk from EA2/EA1N developments in isolation.



36. The idea of a proportionate approach where EA1N and EA2 contributes in proportion to their share of the predicted impact seems reasonable. It will be necessary to take account of the uncertainty in the in-combination predicted impact totals and of EA1N and EA2's individual contribution to the total. We note that delivery of this measure is dependent on further discussions with other stakeholders, including the landowners, and DEFRA as this would involve a strategic approach for delivery. If the proposal is to work collaboratively with other developers such as Norfolk Boreas Ltd, then further detail will be required on the mechanism on how these joint projects are to be delivered.

37. Natural England consider that it is achievable to have a suitable location identified and a predator proof fence erected before the construction of the windfarm.

7) Appendix 6: Red throated diver from the Outer Thames Estuary SPA

7.1 Quantification of effect

38. Natural England's view is that an AEoI from EA1N alone cannot be ruled out. We note that the Applicant's modelling approach has found that existing windfarms displace birds 7-8km, however as outlined in REP4-087 we consider that the modelling is likely to be underestimating the true extent of displacement.

39. In-combination effects from displacement on the Outer Thames Estuary SPA are likely to be under-estimated to an even greater extent. The issues Natural England has raised with the in-combination assessment are detailed in REP4-087 and in NE's legal submissions concerning red throated divers [REP3-049]. As there is evidence from London Array that displacement within the Outer Thames Estuary extends out to 11.5km we maintain that EA2 should be included in the in-combination assessment.

7.2 Navigation management

40. As stated in Natural England's Interim Comments on Requirement for Compensatory Measures [REP4-088], we identified the removal of anthropogenic pressures within the SPA as a potential measure. Management of vessel traffic was provided as one example of reducing anthropogenic influences and impacts from disturbance. However, management of vessel traffic is the only measure



proposed by the Applicant. Furthermore, the proposals are based on all vessels operated by SPR for East Anglia projects, which is likely to be a tiny fraction of the total shipping traffic.

41. Whilst we agree with the Applicant that this measure would not address the current levels of displacement within the SPA, we disagree that management of existing and planned vessel traffic in association with SPRs interests in the area would represent a reduction. This is because EA1N and EA2 have committed to a best practice protocol to minimise vessel disturbance [REP3-074]. A similar protocol is in place for East Anglia ONE. This includes:

- Avoid and minimise vessel traffic, where possible, during the most sensitive time period for red-throated diver between November and March 1st inclusive.
- Restrict vessel movements where possible to existing navigation routes (where the densities of divers are typically relatively low).
- Where it is necessary to go outside of established navigational routes, avoid rafting birds either on route to the windfarm sites from port and/or within the windfarm sites (dependent on location) and where possible avoid disturbance to areas with consistently high diver density.

42. Therefore, Natural England's advice is this proposal does not provide any means of reducing the displacement effects from the presence of the turbines.