THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES

2010

East Anglia TWO Offshore Wind Farm

Appendix A20 to the Natural England Deadline 8 Submission

Natural England's Red-Throated Diver Displacement Clarification Note

For:

The construction and operation of East Anglia TWO Offshore Windfarm, a 900MW windfarm which could consist of up to 67 turbines, generators and associated infrastructure, located 37km from Lowestoft and 32km from Southwold.

Planning Inspectorate Reference: EN010078

25th March 2021

Natural England's Red-Throated Diver Displacement Clarification Note

This document is applicable to both the East Anglia ONE North (EA1N) and East Anglia TWO (EA2) 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

Natural England have reviewed the Applicant's Deadline 7 Submission EA1N & EA2 Applicants' Comments on Natural England's Deadline 6 Submissions [REP7-053].

Summary

Natural England's previous advice remains unchanged. This response is provided to help provide further clarity on our previous advice, based on the Applicant response to that.

Specific Comments

a) Model Outputs

1. Natural England's concerns around lack of model validation remain, with our understanding being that the Applicant is not intending to fully address the issues raised by Natural England**. Therefore, the model outputs will not change and neither will our advice on the scientific robustness of the model data, and certainty around conclusions drawn from it**.

2. Due to the continuing concerns around the outputs of the models, we advise a more precautionary approach which considers a range of displacement scenarios.

In particular, when assessing the area of supporting habitat impacted by displacement for the in-combination assessment, we advise that the SoS uses a range to include the 55% - 95% reduction at London Array as a worst-case scenario for within-windfarm displacement. This approach takes into account the consistently high levels of within windfarm displacement reported regardless of survey platform or location of the study. This is the literature review provided in Appendix 2 of REP3-049 and REP6-019.

b) Ecological consequences

3. Natural England's advice is that the ecological consequences resulting from further effective habitat loss due to the displacement effects from the proposed turbines is not fully understood. However, the consequences for the HRA are that at least 0.5% of the entire SPA (using the Applicants' model outputs) or 1.4% of the SPA (using percentages from the London Array monitoring) will be impacted. On the basis on considering the Applicant's modelling, **Natural England maintains that an AEoI from EA1N alone cannot be ruled out beyond reasonable scientific doubt.**

c) Compensation

4. Natural England's view as stated in REP7-071 remains that the compensatory measures proposed for red throated diver displacement with the OTE SPA are not adequate. Whilst we accept that the vessel management measures mitigate the temporary effects of displacement from vessel movements transiting the SPA, **the proposed measures do not compensate for the ongoing and long-term displacement effects from the turbines themselves.**

d) EA2 In-combination

5. We welcome the inclusion of East Anglia TWO into the in-combination assessment. We acknowledge that EA2's contribution to the overall displacement effects is small compared to EA1N's contribution. However, it is nevertheless important that EA2's contribution to the area of SPA subjected to displacement is captured in the in-combination assessment.

e) Displacement due to survey platform

6. We note the Applicant's assertion about higher displacement rates from studies using boat-based surveys. However, as stated previously high levels of displacement within windfarm are reported consistently, regardless of survey platform. For example, at the Lincs OWF within the Greater Wash SPA HiDef (2017) reported 83% displacement within the windfarm area. The Lincs study also used a combination of visual and digital aerial survey results, and any boat-based surveys were excluded from the assessment.

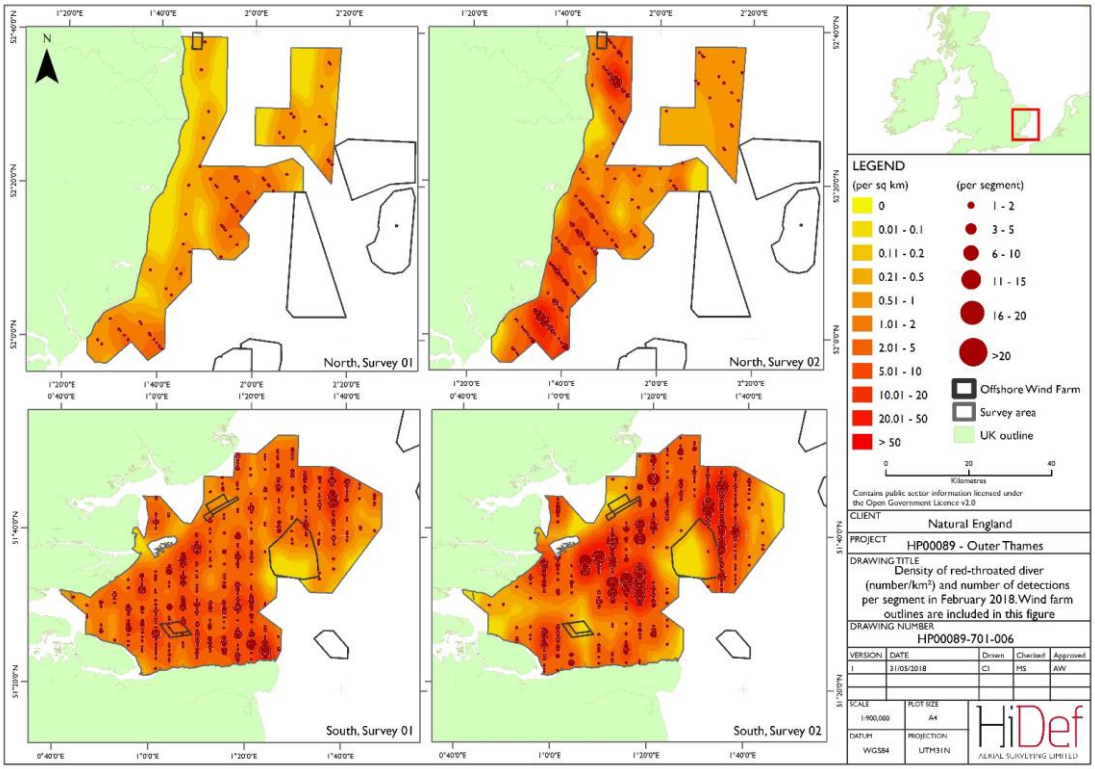
7. The empirical studies we are referring to are the studies in the Applicant's literature review of red throated diver displacement (Appendix 2 of REP3-049 REP5-025 and REP6-019). Some of these studies are based on pre-construction and post construction surveys, not modelling and are a direct comparison of diver densities before and after the presence of a windfarm. Regardless of whether the survey platform is boat-based surveys or aerial surveys, it is striking that findings are consistently demonstrating the high level of within windfarm displacement, regardless of location.

f) Bootstraps

8. We raised this issue as the number of replicates sounded low. However, Natural England notes the Applicant's response, and that the number of bootstraps was a decision partly determined by examination timescales, and due to the time to run the models. We accept that based on the information supplied additional simulations would not make a material difference to the confidence intervals.

g) Distribution and density

9. It is not possible to meaningfully compare the distribution and density reported in O'Brien et al. (2012), and that presented in the most recent surveys (Irwin et al. 2019), particularly without the outlines of the windfarms for context. However, when looking at Figure 8 from Irwin et al. 2019 (see figure below) which includes densities of red-throated diver (number/km²) together with the windfarm outlines, it is possible to see the effect of existing windfarms on diver distribution.



10. The lower densities of RTDs within windfarm footprints is clearly demonstrated in the bottom right image in Figure 8, and the largest density of divers is equidistant from the three windfarms – London Array, Kentish Flats and Gunfleet Sands.

h) Conservation Objectives

11. Natural England re-iterates that all the Conservation Objectives need to be considered. The guidance states that one of the principles for HRA is to: *"understand the conservation objectives for the relevant European site affected - these describe the ecological reasons for its protection".* Natural England's conservation objectives all follow the same format:

"*Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;*

- *The extent and distribution of the habitats of the qualifying features;*
- *The structure and function of the habitats of the qualifying features;*
- *The supporting processes on which the habitats of the qualifying features rely;*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site."*

12. There is nothing in the Defra HRA guidance relating to a hierarchy of attributes, and therefore the distribution of features should be considered as an integral part of site integrity. All the attributes contributing to site integrity in the conservation objectives carry equal weight.

i) Effective loss of supporting habitat

13. Using the Applicant's figures in Table 9 of REP6-019 the minimum estimated area of the SPA subject to displacement from EA1N is 19 km^2 or 0.5% of the SPA. If using Natural England's approach, a total of 51.4 km^2 or 1.4% of the SPA is subjected to displacement. **Natural England's advice is that the effective loss of supporting habitat of 19km^2 is at a level where it is not possible to rule out AEoI beyond reasonable scientific doubt.**