

# Hornsea Offshore Wind Farm

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Project Two

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## Response to TWT's Deadline V submission

Appendix B to the Response submitted for Deadline VI

Application Reference: EN010053

26 November 2015

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## Response to The Wildlife Trusts (TWT) Deadline V Response

The Applicant notes that The Wildlife Trust (TWT), at Deadline V, has provided a number of comments on the Applicant's response to the Ex. A question EOMM26 submitted at Deadline IV. The key points raised by TWT in their Deadline V response are outlined below:

- TWT believes that there is uncertainty in concluding 'no adverse effect on integrity' in the Addendum to the Habitats Regulations Assessment (HRA) (Appendix Q of the Applicant's response at Deadline IV) and in particular that the assessment should focus on the protected site rather than the population-level effects over the North Sea Management Unit. Accordingly, the Addendum to the HRA should be treated as an interim assessment in the absence of the conservation objectives of the Southern North Sea draft Special Area of Conservation (dSAC);
- TWT suggests that, in any case, the population-level effects are uncertain and there is insufficient evidence to conclude no long-term effects;
- TWT is concerned that the figures presented in Volume 2, Chapter 4: Marine Mammals of the ES (Doc ref No 7.2.4) and the Addendum to the HRA (Appendix Q of the Applicant's response at Deadline IV) exceed the 2 to 4% threshold suggested in the JNCC draft guidelines on deliberate disturbance to EPS<sup>1</sup>;
- TWT do not believe it is valid to assume that there are no population-level effects for displaced animals due to the extent of similar habitat elsewhere; and
- TWT believes that there are even greater levels of uncertainty around cumulative impacts. TWT draws on results from a TNO Report<sup>2</sup>, which uses the interim PCoD (Population Consequences of Disturbance) model to support their response.

With reference to key points raised by TWT at Deadline V, the Applicant has prepared the following statement.

### **Conclusions of the HRA and Conservation Objectives of the dSAC**

The Applicant highlights that TWT have acknowledged that there is no definitive information on site boundaries and conservation objectives to feed into the Addendum to the HRA (submitted at Appendix Q of the Applicant's response to Deadline IV) for the Southern North Sea dSAC at this stage. The Applicant would draw the Ex. A's attention to the consultation and agreement reached with Natural England in the Addendum to the HRA, which states that (paragraph 1.2.5) "*The Applicant remains committed to working with Natural England on this matter and, once the draft consultation material is released, to further supplement this HRA if necessary in due course*". Thus, it is the intention that should the conservation objectives, management measures, reference population and site boundary be published in the future the Applicant will consult with Natural England to determine whether any additional information is required to inform any Appropriate Assessment.

The Applicant emphasises that the process taken in the Addendum to the HRA was agreed with Natural England as a "*sensible way to address the question*" and was based upon the best available information at the time. Furthermore, until the

<sup>1</sup> JNCC (2008) The deliberate disturbance of marine European Protected Species: Guidance for English and Welsh territorial waters and the UK offshore marine area. March 2008.

<sup>2</sup> Heinis, F. And de Jong, C.A.F. (2015) Cumulative effects of impulsive underwater sound on marine mammals. TNO Report 2015 R10335-A. April 2015

conservation objectives are published and the detailed population information identified for the site, the current approach remains the most robust and accurate assessment of the potential for Likely Significant Effect (LSE) on the Project alone and in combination.

In preparing the Addendum to the HRA, the Applicant has used the most up-to-date baseline and quantification of possible effects as described in the Volume 2, Chapter 4, Marine Mammals of the ES (Doc ref No 7.2.4). Whilst this information does mirror that described in the HRA (Doc ref No 12.6) and Addendum to the HRA, in terms of the significance of the predicted effects, the HRA is focussed on possible long-term effects on the population. Volume 2, Chapter 4 of the ES concluded there were moderate adverse effects in the short to medium term (and therefore significant under the EIA Regulations), but in the long term, the population was predicted to return to baseline levels and therefore in HRA terms there was predicted to be no LSE.

### **Long-term population-level effects**

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With regard to TWT's concern regarding the conclusion of the Addendum to the HRA and the grounds upon which this conclusion was reached, the Applicant highlights that the approach taken to assess the impacts was inherently conservative in order to deal with the uncertainties to which TWT refers. The Applicant draws the Ex. A's attention to the Statement of Common Ground (SoCG) between the Applicant and Natural England (see paragraph 7.2.14 of Appendix XX of the Applicant's response to Deadline I) which states "*it is agreed that the impact assessment provided a very conservative approach and the quantification of effects is therefore likely to be less than those described in Chapter 4, Volume 2 of the Environmental Statement.*" The Applicant highlights, however, that despite the precautionary approach taken to deal with uncertainty, the conclusions drawn on this basis were a matter of disagreement in the SoCG between the Applicant and with TWT (Appendix OO of the Applicant's response to Deadline I).

### **JNCC draft guidelines on thresholds**

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In their comments on the Addendum to the HRA, TWT has placed considerable emphasis on thresholds taken from the JNCC *draft* guidelines<sup>3</sup>. Whilst these guidelines suggest possible thresholds of 2 to 4% for all cetaceans, this recommendation should be taken in the context of the guidelines, whereby JNCC were seeking consultation on these suggested values. The Applicant notes that it may therefore not be appropriate to apply these as a metric here, particularly as emphasised by TWT in their response at Deadline V, there are uncertainties in the population effects of disturbance and therefore such thresholds remain untested and arbitrary.

### **Availability of similar habitat (resources) for displaced animals**

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TWT have expressed concerns that there is insufficient evidence that animals displaced as a result of the Project will find sufficient food resources elsewhere. They highlight that the Hornsea Zone is a hotspot and that this is reflective of high foraging opportunities. The Applicant provided a response to this concern when it was raised in TWT's Written Representation (see Item 4, Appendix G of the Applicant's response at Deadline II). The HRA Report (Doc ref No 12.6; paragraph 5.7.150) highlights one of the main points: that high resource availability is a key driver for animals to return quickly to an area between disturbance events, unless resources are plentiful

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<sup>3</sup> JNCC (2008) The deliberate disturbance of marine European Protected Species: Guidance for English and Welsh territorial waters and the UK offshore marine area. March 2008.

elsewhere, in which case population-level effects would not be expected anyway. Under the worst case temporal scenario, pile-driving would take a maximum of 1.32 years and this would be phased over a five year period. Therefore there would be long periods of non-piling over this construction phase, allowing animals to continue to exploit the resources.

### **Cumulative assessment and population modelling**

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In reaching the conclusions on the cumulative impacts of piling in Volume 2, Chapter 4 of the ES, the Applicant drew on the interim findings of the strategic research programme, DEPONS (Disturbance of harbour porpoise in the North Sea), which has been supported by the Applicant. Incorporating empirical data from the Dan Tysk wind farm, the initial findings from DEPONS suggested that even with a worst case scenario of concurrent piling at North Sea wind farms, there would be no long term population-level effects<sup>4</sup>. A copy of an interim status report published by the DEPONS project was submitted at Appendix AA of the Applicant's response to Deadline 1. Whilst the Applicant appreciates that this study is still in progress and therefore the results are not conclusive, there is preliminary evidence to support the conclusion of no long-term population level effects on harbour porpoise. The Applicant considers that TWT has overlooked the contribution that DEPONS has made to industry knowledge and instead has focussed on the findings of a study (TNO report<sup>5</sup>) that also uses an interim population model – in this case the PCoD model.

The Applicant believes it is misleading to present the TNO report, as TWT does in their response, as *“the only instrument currently operational that establishes a quantitative link between disturbance and consequences for populations as a whole”*. The DEPONS model does exactly this, as will the updated PCoD model that Sea Mammal Research Unit (SMRU) are currently running for Natural England. It is worth noting that the PCoD model relies on a large number of assumptions. Fundamentally, the estimates for responses of harbour porpoise to disturbance were obtained via a process of expert elicitation and there was high variability in the opinions received from this process. Also important is that the interim PCoD model does not incorporate density-dependence which means that after a decrease in numbers arising from pile-driving activities, the population in the model will not recover after the activity ceases. The authors acknowledge that this is not realistic. Further discussion of the limitations of the PCoD model are provided in paragraph 4.6.49 of Volume 2, Chapter 4 of the ES.

Since the TNO study was undertaken, the Applicant understands that the PCoD model software has been updated (minor programming amendments), although the model is still an interim version, and currently the SMRU are undertaking a cumulative assessment using this PCoD model on behalf of Natural England. The Applicant has taken the opportunity to input to this study and has provided detailed site-specific data (including the correct maximum hammer energy and density estimates for the Hornsea Zone) to feed into the model. In addition, the Applicant continues to contribute to the DEPONS study. To this extent the Applicant is helping the industry move forward in understanding the potential behavioural effects of piling.

### **Summary**

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<sup>4</sup> Van Beest, F.M., Nabe-Neilsen, J., Carstensen, J., Teilmann, J., Tougaard, J., (2015) Disturbance effects on the harbour porpoise population in the North Sea (DEPONS): Status report on model development. Scientific Report from DCE No 140. February 2015.

<sup>5</sup> Heinis, F. And de Jong, C.A.F. (2015) Cumulative effects of impulsive underwater sound on marine mammals. TNO Report 2015 R10335-A. April 2015.

In conclusion, the Applicant maintains that the assessment, as it stands in the Addendum to the HRA, has adopted a robust and highly precautionary approach, using the best available information, which has been designed, and agreed with Natural England, as appropriate for assessing the possible effects of behavioural disturbance, in the light of current uncertainties. It has been agreed with Natural England that the HRA and Addendum to the HRA provides a suitable assessment for determining long-term LSE on harbour porpoise, but with the understanding that the assessment may need to be updated (at a site specific level) in due course, once consultation commences on the Southern North Sea dSAC.