From: James Dawkins [mailto:James.Dawkins@rspb.org.uk]
Sent: 08 February 2019 20:11
To: Hornsea Project Three
Subject: The RSPB's submission for Deadline 6
Importance: High

I attach the RSPB's submissions for Deadline 6.

There are two files:
The RSPB's main submission
A document from the Norfolk Vanguard examination, Appendix 3.2 – Collision Risk Modelling: update and clarification, which we cite in our main response.

Please could you acknowledge safe delivery.

Kind regards,
James

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Let's give nature a home

Written Submission for Deadline 6
for
The Royal Society for the Protection of Birds

8 February 2019

Planning Act 2008 (as amended)

In the matter of:

Application by Ørsted Hornsea Project Three (UK) Ltd for an Order Granting Development Consent for the

Hornsea Project Three Offshore Wind Farm

Planning Inspectorate Ref: EN010080
Registration Identification Ref: 20010702

rspb giving nature a home

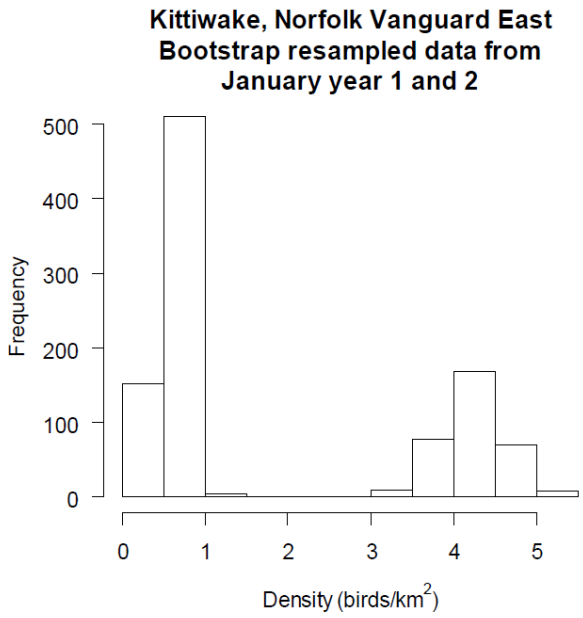
Contents

Introduction

Due to the extensive materials supplied by the Applicant the RSPB is not undertaking a point-by-point rebuttal. Instead we offer comments on key points only.

Examining Authority's Questions 2.2.4 and 2.2.6

As a further consideration on the point of incomplete survey raised in ExA Q2.2.4. and Q2.2.6. the RSPB would like to draw the examiners attention to a graph recently submitted in the Norfolk Vanguard examination showing the difference in kittiwake density in January in two survey years (*Figure 1 in Norfolk Vanguard The Applicant Responses to First Written Questions Appendix 3.2., ExA;WQApp3.2;10.D1.3*). This document is appended to this response. There is a clear difference in density between the two years, highlighting the importance of two full year's survey, even during the winter months. If the assessment had been based on only one of these years there would have been potential underestimation (or overestimation) of the predicted mortalities.



The Applicant's response to Q.2.2.10

The Applicant has provided a narrative of how it is widely accepted that that most parameters used for collision risk modelling have been conservatively estimated and overestimate the collision risk. For the avoidance of doubt, this "widespread acceptance" does not include the RSPB. Furthermore this narrative has omitted the fact that the recent Bowgen and Cook (2018) report on avoidance rates has *reduced* the avoidance rate previously estimated for kittiwake by Cook *et al.* (2014 and 2018) thereby increasing predicted mortality. This is also a marked reduction from the avoidance rate recommended by Skov *et al.* (2018).

Bowgen and Cook (2018) also highlighted that flight heights *measured* by Skov *et al.* (2018) were higher than those *estimated* (such as in the Hornsea zone) elsewhere and the pColl (proportion of collisions) value calculated by the Band model differed from the empirically derived value from Skov *et al.* (2018) by underestimating collision by a factor of four.

Taking all these into account will increase the number of predicted collisions, and therefore demonstrate that the parameters used in collision risk modelling are not always conservative.

The Applicant's response to Q2.2.16 and17

The RSPB welcome the Applicant's presentation of the timing of surveys. The RSPB would also welcome details of when the actual surveys occurred and not just the timings of the flights as presented, as this is likely to represent an even narrower survey window.

The RSPB agree with the Applicant that these surveys are all aggregated around the middle of the day. As such the assessment is likely to have missed peaks in activity and will therefore underestimate the mortality arising from the development.

The Applicant says that the issues arising from carrying out surveys in a narrow window around midday should be dealt with by adjusting avoidance rate, but has not done so with their presentation of avoidance rates. The RSPB agree with the Applicant that this merits correction and requests that the Applicant does so.

The Applicant's response to Q2.2.18

The RSPB welcome the Applicant's submission at Deadline 4 (Appendix 28; REP4-049). Although it does not change the RSPB's preferred avoidance rates it does help to provide a comparison of the consequences of the use of different rates.

The RSPB note that the alternative analyses presented show a wide range of values (for example kittiwake in table 1.3 have a range of predicted mortalities apportioned to the FFC SPA between 4 and 211) indicative of the high level of uncertainty in these mortality predictions and the considerable debate that is continuing as to what are the correct input parameters.

The statement in paragraph 1.9. claiming that JNCC have changed their advice with regard to Avoidance Rates is incorrect. JNCC commissioned the report cited (Bowgen and Cook, 2018), but as yet have not changed theirs or the collective SNCB position on avoidance rate.

The Applicant's Comments on Interested Parties Responses to the ExA's Second Written Questions, response to Q2.2.19

The Applicant is wrong to look at the proportion of birds from the SPA that go to the array area as the important metric in comparison with their calculation of an apportioning value; the key point is that kittiwake from the SPA colony are present at the site. There is no evidence of birds from other colonies being present. Therefore it is reasonable to conclude that all the breeding birds recorded at the site are associated with the Flamborough and Filey Coast SPA.

Furthermore, it is important to note that the data presented by the RSPB in response to Deadline 5, from 2010 to 2015, were based on birds only tracked during late incubation and the early chick rearing period and therefore the data only represent the flights of birds during this period of the annual cycle. This limitation is due to the technologies available, the tracking devices only allowing for relatively short deployment periods and requiring retrieval, which is only possible when birds return to active (or very rarely, recently failed) nests early during the breeding season. As our more recent tracking work (Wischnewski *et al.,* 2018) confirms, the distribution of birds often shifts during the breeding cycle and shows a greater foraging range and use of the Hornsea Three area later in the breeding season.

The RSPB disagrees with the Applicant's implication that a significant proportion of the tracked birds were failed breeders. The tracking studies carried out from 2010 to 2015 used a different attachment method to those carried out in 2017 (and 2018) which meant that the birds had to be recaptured at the nest. It is very unusual for birds that have failed to be recaptured, as while failed breeders can come back to the nest, they do not always do so and the probability of them doing so drops with time after failure as does the recapture probability. Therefore the majority of the birds tracked in 2010-2015 were successful breeders. The RSPB is examining the data to see if this proportion can be quantified and will report to Deadline 7.

The tracking carried out in 2017 (Wischnewski *et al*., 2018) used a different attachment method and tagging technology that meant that birds did not need to be recaptured and could be tracked for a longer period. It was also possible to determine the breeding status of the birds and continue to track failed breeders. The results of this showed that while there was little difference in the flight patterns of the tracked successful and failed breeders, the longest foraging range recorded was in fact from a successful breeder.

The Applicant's response to Q2.2.20 and Appendix 30

The RSPB began an intense seabird tracking programme under the EU LIFE funded FAME (Future of the Atlantic Marine Environment) project and continued this work under STAR (Seabird Tracking and Research). We work with a consortium of project partners and funders which has allowed us to build up the largest database of seabird tracks in the world. The most recent analysis of these tracking programmes are presented in Cleasby *et al*. (2018). These build upon and complement the results of a RSPB paper Wakefield *et al*. (2017) that developed sophisticated models to predict the at-sea distribution for the four breeding seabirds: kittiwake, guillemot, razorbill and shag. Cleasby *et al*. (2018) used these distributions to identify potential hotspots to inform the identification of protected areas at sea and improve the management of the marine environment. There are important caveats to this work in that there are limitations associated with the use of tracking data.

One limitation, acknowledged by the report authors, is that the species distribution of Wakefield *et al.* (2017) were based on birds tracked during late incubation and the early chick rearing period. Thus, the distribution maps and the hotspots analyses presented there only represent the foraging distribution of birds during this period of the annual cycle. This limitation is due to the technologies available, the tracking devices usually only allowing for relatively short deployment periods and requiring retrieval which is only possible when birds return to active (or very rarely, recently failed) nests early during the breeding season. This is particularly true for smaller seabird species such as the Black-legged kittiwake that need lighter tags with smaller batteries and are often susceptible to long-term attachment methods such as harnesses. As our recent tracking work (Wischnewski *et al.,* 2018) confirms, the spatial distribution at sea of birds often shifts during the breeding cycle, therefore distribution maps from the early chick rearing period may not reflect flight behaviour throughout the whole breeding season.

Another, again acknowledged, limitation is that it was not possible to ascertain the temporal variability in hotspot location across years. Wakefield *et al.* (2017) pooled data across years as running separate species distribution models on a year-by-year basis would have required more tracking data per year to ensure results were representative. Consequently, it is unclear whether the hotspots identified by Cleasby *et al.* (2018) will be consistent across years.

In addition, the species distribution models of Wakefield *et al.* (2017) did not distinguish between different behaviours whilst birds were at sea. Therefore, the hotspots identified in the Cleasby *et al.* (2018) report are based upon commuting and loafing behaviour as well as foraging behaviour. As a consequence, the importance (in terms of foraging) of areas close to the colony may be upweighted as birds may spend a significant amount of time rafting close to the colony or commuting through such areas even if these areas are not key foraging sites. The identification of hotspots purely based on foraging behaviour species distribution models may result in stronger associations between habitat and distribution as well as allowing identification of areas that are particularly at risk from activities that disproportionately impact on foraging birds. The current RSPB tracking work will seek to do this and is being carried out in partnership with Ørsted.

As such the hotspot maps presented in Cleasby *et al*. (2018), while an important analysis and of great value, should be considered as identifying areas of greatest importance, but not precluding other areas from being of importance and unsuitable for development. As detailed above, kittiwake from the SPA colony are present at the site and there is no evidence of birds from other colonies being present. Therefore it is reasonable to conclude that all the breeding birds recorded at the site are associated with the Flamborough and Filey Coast SPA.

The Applicant's response to Q2.2.28.

The RSPB agrees with the Applicant in their response to this question that there are scant numerical data regarding the non-breeding component of the North-sea auk population. However this does not prevent the Applicant from carrying out the sensitivity analysis as suggested by the RSPB in our previous answer to this question.

The Applicant's further response to Q2.2.32.

Please see our response to Q2.2.19 and Q2.2.20. It is clear that, kittiwake from the SPA colony are present at the site and there is no evidence of birds from other colonies being present. Therefore it is reasonable to conclude that all the breeding birds recorded at the site are associated with the Flamborough and Filey Coast SPA.

Appendix 6 to Deadline 5

The Applicant has presented an apportioning approach for immature auks based on the SNH apportioning approach for breeding seabirds. The RSPB welcome this and will discuss this further with the Applicant in order to incorporate our response into the Statement of Common Ground.