



THE PLANNING ACT 2008  
THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)  
RULES 2010

NORFOLK BOREAS OFFSHORE WIND FARM

Planning Inspectorate Reference: EN010087

Deadline 17

**Natural England's response to the Applicant's responses to the  
Examining Authority's Sixth round of Written Questions and Deadline 16  
Response**

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07 October 2020

## **Comments on Norfolk Boreas Addendum to REP11-012: In Principle Habitats Regulations Derogation Provision of Evidence Appendix 1 Flamborough and Filey Coast Special Protection Area (kittiwake) In Principle Compensation [as set out in REP16-003 from the Applicant]**

Natural England welcomes the additional information provided by the Applicant in REP16-003 regarding the in principle compensation measures for the impacts of the Norfolk Boreas proposal on Flamborough and Filey Coast (FFC) SPA kittiwake. We consider that taking into consideration the time available to the Applicant, a fairly comprehensive compilation and analysis of the information has been provided.

However, there remain some areas of uncertainty or where further detail is required. Natural England's strong preference is to leave as little as is possible regarding the compensatory measures to the post-consent period, and highlight that the level of specific detail provided will be a key factor with respect to confidence in the success of the measures. We acknowledge the limited time available to the Applicant before the close of the Examination, and recognise the effort already made in REP16-003 to refine the proposals. In this context, we welcome the necessary commitment by the Applicant to undertake the relevant feasibility studies of other artificial kittiwake nest sites in 2021 in order to assesses the likely success of any proposals for such sites should compensation measures be required. We also welcome the proposed assessment of urban Tyneside kittiwake nesting sites in summer 2021, and consider that this should also assess the extent to which availability of nesting space is a limiting factor on population growth in this location, in order to better understand the potential scale of nest site provision that will deliver compensatory measures here.

We also welcome the Applicant's amendment of the draft DCO/DML condition wording to provide flexibility regarding the potential nature of compensatory/adaptive measures, rather than referring solely to artificial structures. This ensures that the compensatory measures/adaptive management can extend to the delivery of other possible options. This should include addressing any issues identified with prey availability, which may well prove to be a limiting factor in the medium-long term, should measures such as e.g. improved management of sand-eel stocks become a more readily deliverable compensatory measure within the timeframes required.

Natural England's detailed comments on the specific aspects covered in REP16-003 follows below.

### **1. Identification of potential/suitable locations for nest site provision**

Natural England welcomes the consideration of spatial factors and the RAG status assessment, together with the inclusion of figures showing potential structure locations, kittiwake foraging ranges, sand-eel and sprat grounds and offshore wind farm locations. Whilst potential onshore coastal locations of Lowestoft and the Tyne have been identified, no further potential offshore locations other than within the Norfolk Boreas order limit have been considered or discussed, although the option of an offshore location is still included by the Applicant. Therefore, our previous concerns raised in REP9-046 regarding increased potential for collision risk to birds at a potential offshore colony remain outstanding.

In terms of the potential coastal locations identified by the Applicant, we welcome that the Applicant has been in contact with the local ringing group who monitor the Lowestoft colonies. Potential constraints/opportunities to implementing artificial nest sites in all potential areas

identified (i.e. the Tyne as well as Lowestoft), together with potential offshore areas (if these are to be considered further) should be explored through more detailed local feasibility assessments. These should draw upon local knowledge and monitoring where possible e.g. Tyne Kittiwakes Partnership as well as the Kessingland Ringing Group. We acknowledge the limited time available to the Applicant before the close of the Examination, therefore we welcome the commitment by the Applicant in Section 1.5 of REP16-003 to undertake a feasibility review of other artificial kittiwake nest sites (both in the vicinity of the proposed nest sites and more widely).

We note the information from the local Lowestoft ringing group that the Lowestoft wall has been abandoned due to fox and large gull predation, and that it has been indicated that simple modifications could be made to the existing structure which would be expected to enable successful breeding at this location to recommence (e.g. adding an overhang to prevent large gull access and installing barriers to foxes). Therefore, we welcome the Applicant's commitment in REP16-003 that the provision of such measures, once the feasibility is determined, would be included in any proposals by the Applicant for provision of additional nest sites at Lowestoft (or any other) location and that any lessons to be learned about minimising predation risk would also be applied to the design of new structures. It is critical that compensatory measures are given the best possible chance of succeeding rather than relying on modifications at a later date.

We note that there is currently a range of interest in the creation of artificial nests sites for kittiwakes from other parties. We therefore welcome the commitment from the Applicant in REP16-003 that where other parties have an interest in the creation of erecting artificial nest structures for kittiwakes the Applicant will seek to engage with them to work collaboratively and strategically where appropriate.

Given the declines identified in breeding kittiwake in Kent and the uncertainty over whether a breeding kittiwake population still persists in the county, we agree with the Applicant that this option is not progressed further.

Regarding Dunbar we agree with the Applicant that this is not considered as a suitable location for the current proposal, although the information included regarding this location is useful in terms of the wider understanding of the nesting behaviour and requirements of this species in urban locations.

## **2. Assessment of evidence regarding potential recruits**

We note that Ruffino et al. (2020) identified a significant shortage of evidence regarding the quantification of the pool of potential recruits in the North Sea. Whilst the analysis in REP16-003 regarding potential recruits carries some weight, it remains 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.

We welcome that for the purposes of calculating the number of nest spaces required, the Applicant has taken a precautionary option to use the difference in productivity between that which is currently being achieved at FFC SPA, as a large colony with high competition for prey resources currently experiencing low productivity, and that predicted at a new colony, i.e. the assumption being that the new structure supports birds that could manage to nest elsewhere but would be obliged to do so in locations where productivity is sub-optimal. However, we do not consider that it

is safe to assume that productivity at any artificial colony created by the Applicant will be 1.2 chicks per nest. We note that the assumed productivity figure of 1.2 chicks per nest is the highest productivity figure from the data presented in REP16-003 for existing artificial sites (Lowestoft average 1.1 chicks per nest for 2010-17; Tyne artificial sites averaged 0.96 chicks per nest for 2010-19 and over 1 chick per nest at some of the structures within that group of sites; Dunbar averaged 1.2 chicks per nest for 1991-2007). We also note that as no evidence is presented for productivity of kittiwakes breeding on artificial structures offshore. Given the above we consider a rate of 1.2 chicks per nest is overly optimistic, which in turn indicates that the Applicant's predicted requirement to provide up to 200 nests is unlikely to be sufficiently precautionary.

### **3. Detailed calculations of number of nests required**

The central predicted collision impact from Norfolk Boreas of 14 predicted adult kittiwake collisions per annum from FFC SPA is an estimation which is underpinned by a number of assumptions, several of which have considerable uncertainty associated with them. We therefore welcome that the Applicant's calculations in REP16-003 include consideration of the number of nests required to compensate for up to the upper range of predicted collisions from Norfolk Boreas (based on the upper 95% confidence interval of bird density), i.e. up to 28 collisions of adult birds per annum, in accordance with Natural England's advice on the matter.

We do not agree with the Applicant's assertion that colonisation of any structures at Lowestoft or the Tyne would be effectively 100%. Firstly, this is because 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. In addition, the current predator and site abandonment issues at the Lowestoft wall (as noted by the Applicant in REP16-003) would need to be addressed before there could be any confidence in 100% colonisation at this site. Secondly, it appears to be the case that artificial structures infrequently reach full occupation levels, meaning that the number of nest spaces provided is unlikely to equate to the number of kittiwakes nesting. It is therefore not appropriate to assume that even if all structures drew in breeding kittiwakes they will in due course be fully occupied. We also remain unsure whether the assessment realistically reflects 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 acknowledge that there does seem to be a trend towards artificial nest locations being more productive than natural sites. However, it does not appear to be a clear cut distinction, and productivity probably depends on a range factors irrespective of whether the sites are natural/artificial. This highlights the need to determine what are the key factors in this, and how best to design any structure and its location to optimise these.

We note that in the UK compensatory measures have generally been provided with a 'multiplier' that expresses the likelihood of success of the measure in question. 1:1 compensation rates have only been accepted where there is a high degree of confidence in the measure e.g. creation of a readily-created habitat. Elsewhere ratios for habitat creation have been e.g. 2:1 or 3:1. The provision of artificial nest structures away from the impacted SPA as a compensatory measure is a novel one, and as noted above there is some uncertainty regarding how the measure will operate. A 1:1 ratio would also not take account of variability in demographic rates (age of first breeding, and proportions at 2-10 years, breeding success in first year, survival to first breeding).

Compensatory measures should be designed to deliver compensation at a ratio that would give the

Secretary of State sufficient confidence that the impacts will be addressed, drawing on previous compensation cases whilst also reflecting the precedent-setting nature of the compensation proposed, not least it taking place away from the impacted SPA. In this context we question whether the provision of 200 nests will provide sufficient confidence in the compensatory measures being successful in the light of evidence indicating that some structures fail to attract breeding kittiwakes and that full colonisation is rarely achieved. This is all the more likely to be the case with respect to locations where such structures are not already in place and for offshore locations.

In REP16-003 the Applicant notes that in practice it may be appropriate to aim to increase breeding numbers by over 100 pairs at more than one location and that adding new nesting sites at two artificial colonies would be more robust than doing so at only one. Natural England is in agreement with the principle of multiple structures/locations, as this would help minimise the risk of one structure failing to be colonised, which would improve confidence in the measures being successful.

The Applicant once again raises in REP16-003 their considerations of over precaution in the collision assessments (namely regarding avoidance rate, nocturnal activity, flight speed, breeding season apportionment and use of the upper predicted figure of the range of predictions). We again refer the ExA to our previous responses on these matters (REP4-039, REP4-040, REP4-043, our response to ExA second round question 2.8.4.4 in REP5-077; REP7-048 regarding kittiwake flight speeds; our response to ExA third round question 3.8.4.1 in REP7-049; our response to Rule 17 request point R17.1.2 in REP13-038).

#### **4. Detailed description of structure**

We welcome the proposed study at existing artificial colonies in summer 2021 to assess the nest sites selected and their associated breeding success, though the lessons learnt from this may only be applicable to an onshore structure. As noted above, we also recommend this study examines the extent to which nest availability is a limiting factor in the vicinity of the Tyne colonies.

We welcome the Applicant's addition regarding this feasibility study to sub-paragraph (3) of the draft condition which secures compensation for the FFC SPA in Section 5.1 of REP16-003 and that the Applicant states that this will be included in the final draft DCO to be submitted at Deadline 18. It will be important that this study includes identification of features required in particular locations or particular structures (e.g. it is suggested that mammalian predation is an issue with the Lowestoft wall structure, indicating predator exclusion measures may be needed here). There should also be a more comprehensive review of bespoke structures and reasons for their success/failure, in order to inform the detailed designs.

#### **5. Delivery mechanisms**

As noted above, we welcome the commitment to undertake a feasibility review of other artificial kittiwake nest sites (both in the vicinity of the proposed nest sites and more widely) and which assesses the likely success of the proposals through the proposed addition to sub-paragraph (3) of the draft condition which secures compensation for the FFC SPA in Section 5.1 of REP16-003 and that the Applicant states that this will be included in the final draft DCO to be submitted at Deadline 18.

With regard to prey availability, as noted above we welcome the Applicant's amendment of the draft DCO/DML condition wording to provide flexibility regarding the potential nature of compensatory/adaptive measures, rather than referring specifically to artificial structures.

## **6. Monitoring and Adaptive Management**

We welcome the Applicant's commitment to undertaken monitoring and adaptive management where required. We agree with the Applicant's proposal that where existing ringing or other monitoring is being carried out in the general area by other parties, additional monitoring should augment this, but where monitoring is currently not being undertaken it would function as a stand-alone package of works. We welcome the Applicant's commitment that the monitoring study design would be developed and agreed with Natural England, with the monitoring results provided for discussion.

Long-term monitoring of artificial nest sites will be necessary to assess their effectiveness and thereby identify the need for adaptive management should the level of occupation and/or chicks fledged be lower than calculated. In addition to nest numbers and productivity, monitoring should also attempt to identify whether the artificial nest sites are providing recruits into other colonies, for example by colour ringing. Diet studies would help identify whether prey availability is proving to be a limiting factor. Occupancy and productivity monitoring should also be carried out at local colonies to ensure that the provision of artificial nest sites is indeed growing the population in that area rather than just shifting its distribution, and that the productivity rates at the new colony are not being achieved at the expense of those at the existing colonies.

Adaptive management is a critical part of a compensation package of this nature. Should colonisation of the new structure(s) not occur (as has been the case in some locations) or take place at slower rates or lower levels than anticipated, or if productivity is not sufficient to provide enough recruits into other populations, the causes of these need to be identified through monitoring and measures identified and implemented. These would extend beyond maintaining the structure and could involve additional ledges or structures, changing position of structure, and addressing any issues identified with prey availability, which may well prove to be a limiting factor in the medium-long term.

## **REFERENCES**

Ruffino L., Thompson, D. & O'Brien, S. (2020) *Black-legged kittiwake population dynamics and wider drivers of population change in the context of offshore wind development*. JNCC Report No. 651, JNCC, Peterborough, ISSN 0963-8091.