THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix B12 to Natural England's Deadline 5a Submission

Natural England's comments on the Applicants Lesser Black Backed Gull Compensation Quantum

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

8th April 2025

Morecambe Generation Offshore Ornithology Specialist Comments

1. Major/Complex comments

In formulating these comments, the following documents have been considered:

- [REP3-009] 4.11.1 Habitats Regulations Assessment Without Prejudice Derogation Case - Revision 03 (Volume 4) (Tracked)

1.1 Summary

Natural England currently considers the Hornsea 3 Part 2 (‘H3pt2’) method to be the most ecologically complete to calculate the number of breeding pairs that might be required to generate sufficient recruits to compensate for a specified mortality impact. It is of note that the H3pt2 method was conceived to inform the design parameters of artificial nesting structures (ANS) for black-legged kittiwake (kittiwake hereafter). The method is also, in principle, suitable for wider application to other measures and for other seabird species. However, it may not be possible to adequately populate the H3pt2 method for all species as the required demographic information may be lacking, or poorly evidenced.

Following testing of the H3pt2 method for guillemot, razorbill and lesser black-backed gull, it has become apparent that lower levels of natal dispersal, compounded by older recruitment ages and lower productivity can produce unrealistic and disproportionate requirements for scaling compensatory measures for other seabird species. Furthermore, it is not clear that some of the necessary demographic information is well evidenced, which can introduce significant uncertainty into any calculations reliant on those data.

In such cases and pending further refinement and updates to best practice advice, Natural England consider that given the current absence of a robust alternative option for these species, it is appropriate for the Hornsea 4 (‘H4’) method to be used, in conjunction with other steps as set out below. Depending on the species, proposed measure(s) and the location(s) they are to be deployed, we advise that the calculations may also need to take account of philopatry.

Natural England advises that the scale of implementation of seabird compensatory measures should be sufficient to address the 95% upper confidence limit (UCL) predicted impact value. The mean or central impact value (CIV) should be used to inform and define success criteria, if appropriate.

The application of a ratio to address the uncertainty of success should continue to be set on a case-by-case basis, considering the level of impact, the feasibility of the measure, and its potential effectiveness. The ratio should be applied to scale the implementation of a measure, for example by delivering at multiple distinct sites, each capable of addressing the impact alone.

Natural England highlight that the application of any method to calculate the scale of compensatory measures with respect to the number of breeding pairs required to compensate a specified annual mortality impact remains somewhat contentious. The pressing need for independent expert advice on the topic led to the BTO being contracted by Natural England (on behalf of the Collaboration on Offshore Wind Strategic Compensation) to critically review the available methods and determine the most appropriate, or to identify an alternative method. The outputs of this project have not been finalised in time for proper consideration within this examination, and in any case, primarily relate to kittiwake ANS.

Our case-specific advice on this topic set out below reflects current knowledge and the application of expert judgement to the potential of the Project's proposed measure to deliver tangible benefits, but we acknowledge the need for greater clarity of advice and guidance in this challenging area.

1.2 Detailed comments

Morecambe Bay and Duddon Estuary (MBDE) SPA and Ribble and Alt Estuaries (RAE) SPA lesser black-backed gull (LBBG)

Predicted impacts – the CIV is **1.02** adults from the two SPAs combined per annum (0.33 from MBDE and 0.69 from RAE), with a 95% UCL value of **3.43** adults (1.11 from MDBE and 2.32 from RAE). Natural England advises that an adverse effect on the integrity (AEOI) of the SPA cannot be ruled out for either site.

We are satisfied that the above are appropriate values for the purposes of impact assessment and scaling compensatory measures.

Natural England's general advice on the proposals

Natural England considers that the Applicant has made substantial progress with developing the Steepholm scrub clearance project and we believe an appropriate compensatory measure can be secured for the estimated level of impact. We consider that the exact scale of the minimum area to be cleared is the only major aspect of the project to be resolved. We acknowledge that this is largely because we were yet to give clear advice on this matter to the Applicant, while review of the work being undertaken by the BTO has been ongoing.

Information provided by the Applicant on compensation requirements

In the most recent update to the Without Prejudice Derogations Case [REP3-009], the Applicant has presented a compensation quantum based on the CIV. Following advice from Natural England, the Applicant has attempted to replicate the H3pt2 method but has been unable to do so. Instead, they have proposed an approximate multiplier of 25.6 based on examination of the method's previous outputs. This suggests 26 nest spaces (1.02 x 25.6) as a target for compensation.

Natural England's advice on compensation requirements

Natural England considers that the target for the compensatory measure should be set with respect to the CIV of 1.02. We advise the application of the H4 method, with additional consideration being made for philopatry. This is because Steepholm is outside of the NSN for this species. We are confident that adequate scrub clearance on Steepholm, adjacent to an already densely populated area of the existing colony, is highly likely to result in an increase in the number of lesser black-backed gulls nesting at the site. Natal dispersal could feasibly and directly contribute to NSN resilience by supplying recruits (via natal dispersal) into the impacted (or other) SPA populations.

We calculate a target colony size of approximately **10 breeding pairs** will be required to compensate the projects predicted level of impact (see Calculation 1 below).

However, it is important that the compensatory proposals should be able to demonstrate that

- they could compensate for the UCL value should the impacts of the project be greater than the CIV, and

- the measure is scaled using a ratio to increase confidence that sufficient benefits will still arise, should the measure underperform, and
- the measure takes account of philopatry, as only dispersing birds are likely to significantly contribute to NSN coherence (e.g. by recruiting into the site network) and thus compensate for the losses at impacted SPAs.

Thus, we consider that the compensatory measure should be scaled using the UCL impact value, applying the H4 method with additional consideration of philopatry to derive the quantum, and then applying a 3:1 ratio to generate the number of pairs the measure should be able to accommodate. Finally likely nesting densities should be considered to define a minimum area of scrub clearance.

Natural England would note that the application of a 3:1 ratio inevitably leads to a significant scaling up of the measure, albeit only in terms of the size of the area where scrub clearance should be undertaken (i.e., not the required size or productivity of the colony). In this case, we believe that significant scaling up of the area is justified due to the uncertainty around the level of impacts, and to reduce uncertainty around colonisation and increase the attractiveness of the area. We note that given the small project alone impacts to be compensated, it would not be proportionate to deliver the measure at multiple sites to reduce uncertainty. Thus, a significant scaling of a well-designed plan at an ecologically suitable site is appropriate and given the economies of scale at work, a proportionate approach to reducing uncertainty of success.

We calculate that this means that the measure should be scaled to provide sufficient space to potentially accommodate at least **100** nesting pairs. This will require the clearance and management of at least **0.21 Ha** of scrub to create suitable nesting habitat (see Calculation 2). This equates to an area of approximately a third of a football pitch.

Calculation 1- breeding pairs required to compensate the CIV

- CIV of 1.02 breeding recruits / (0.798 x 0.885 x 0.885 x 0.885 x 0.885) fledglings surviving to breeding age = 2.08 fledglings required
- To account for philopatry 2.08 / 0.470 = 4.43 fledglings required
- 4.43 / 0.45 average productivity = 9.85 = **10 pairs**

Calculation 2 – total scale of measure (minimum area of scrub clearance)

- UCL value of 3.43 breeding recruits / (0.798 x 0.885 x 0.885 x 0.885 x 0.885) fledglings surviving to breeding age = 7.01 fledglings required.
- To account for philopatry 7.01 / 0.470 = 14.91
- 14.91 / 0.45 average productivity = 33.13 breeding pairs
- 3:1 ratio = 33.13 x 3 = 99.4 **= 100 pairs**

Calculation of area required for 100 pairs / nesting density 0.0475 = 2105.26m^{-2} **= 0.21 Ha**

Table 1 – Model parameters for calculations, including demographic rates

Parameter	Rate	Comment
Juvenile survival (Age Class ‘0 to 1’)	0.798 (Herring gull)	Horswill and Robinson (2015) suggest low confidence in data informing the lesser black-backed gull rate.
Adult survival	0.885 (Lesser black-backed gull)	Horswill and Robinson (2015) do not give rates for the other immature age classes. Adult rate is assumed.
Natal dispersal	0.470	Horswill and Robinson (2015) rate for lesser black-backed gull.
Productivity	0.45	JNCC (2021).
Nest density	0.0475 m^{-2}	Density on Flatholm in 2008 reported by Ross-Smith *et al*. (2013).

References

JNCC. 2021. Seabird Population Trends and Causes of Change: 1986–2019 Report (https://jncc.gov.uk/our-work/smp-report-1986-2019). Joint Nature Conservation Committee, Peterborough. Updated 20 May 2021.

Ross-Smith, V.H., Grantham, M.J., Robinson, R.A. and Clark, J.A. 2014. Analysis of Lesser Black-backed Gull data to inform meta-population studies. BTO Research Report No. 654. Available at: https://www.bto.org/sites/default/files/shared_documents/publications/research-reports/2014/rr654.pdf

Ross-Smith, V.H., Johnston, A. and Ferns, P.N. 2015. Hatching success in Lesser Black-backed Gulls Larus fuscus - an island case study of the effects of egg and nest site quality. Seabird 28, 1-16

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