THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

NORTH FALLS OFFSHORE WIND FARM

Appendix G4.1 to the Natural England Deadline 4 Submission

Natural England's Lesser Black Backed Gull (LBBG) Compensation Advice on the Applicant's Deadline 1 Documents [REP1-018, REP1-020 and REP1-058]

For:

The construction and operation of North Falls Offshore Wind Farm, located approximately 40 km from the East Anglia Coast in the Southern North Sea.

Planning Inspectorate Reference EN010119

25 April 2025

Appendix G4.1 Natural England's LBBG Compensation Advice on the Applicant's Deadline 1 Documents

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

- [REP1-058] 9.15 HRA Update to Breeding Season Apportioning of LBBG at AOE SPA

Table 1: Natural England's advice on: Lesser black-backed gull HRA apportioning

Document reviewed	Update made	Issue resolved?
REP1-058	The Applicant has updated their apportioning of lesser black-backed gull breeding at the Alde-Ore Estuary Special Protection Area (AOE SPA) in line with Natural England's advice.	Yes

1. Detailed Comments

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

- [REP1-018] North Falls 7.2.2 Habitats Regulations Assessment Appendix 2 Lesser Black-backed Gull Compensation Document (Rev 1) (Tracked)
- [REP1-020] North Falls 7.2.2.1 Habitats Regulations Assessment Annex 2A Outline Lesser Black-backed Gull Compensation Implementation and Monitoring Plan (Rev 1) (Tracked)
- [REP1-058] 9.15 HRA Update to Breeding Season Apportioning of LBBG at AOE SPA

1.1 Summary

Natural England welcomes the additional work conducted and further information presented in the updated lesser black-backed gull (LBBG) compensation, and Habitats Regulations Assessment (HRA) apportioning documents. We are content with the Applicant's updated apportioning of impacts to the LBBG feature of the AOE SPA. Furthermore, we are supportive of the general approach to compensation, including the calculations to inform scale and targets (though see our detailed advice), and the short-listing of the Lantern Marshes and Gedgrave Marshes sites for the predator-exclusion fencing measure. Natural England agree with the Applicant that a 4ha site is likely to be sufficient to compensate for the estimated level of impact.

While we are highly supportive in principle, we retain some concerns regarding the potential for the measure to be delivered collaboratively with respect to scale, and the apportionment of benefits. We suggest that further clarity on specific aspects, and suitable justification, is required to evidence the approach. Specifically, we are not persuaded that the proposed contribution (i.e., 0.2ha) to a shared measure is at all sufficient, especially if that were to be delivered in place of a project-alone site of 4ha. Nevertheless, we welcome the Applicant's continued interest in other sites (i.e. Outer Trial Bank, Five Estuaries VE2 site) and encourage continued investigation into the feasibility of these sites.

1.2 General comments on scaling compensatory measures for LBBG

Natural England currently considers the Hornsea 3 Part 2 ('H3pt2') method to be the most ecologically complete for calculating 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. That is to say, for a LBBG measure involving predator exclusion from a discrete area, we consider that the area should be sufficient to accommodate a population that would be expected to produce enough recruits to compensate the Upper Confidence Interval (UCI) impact, scaled up by a ratio. However, the actual target population that would be required (to colonise and breed) to deem the measure successful will be smaller, with their productivity only needing to address the estimated CIV.

The application of a ratio to address the uncertainty of success should be set on a case-by-case basis with consideration given to 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. Natural England has commissioned the British Trust for Ornithology (BTO) to review available methods, determine the most appropriate and/or to identify an alternative method, with a particular focus on kittiwake and ANS. Natural England is currently considering the recommendations made in the BTO report and will update our advice, if necessary, in due course. We have provided the Applicant with an 'in press' copy of the BTO report to inform their approach, noting that the formal research report is not scheduled to be published until sometime in May.

In the meantime, our advice remains that given in recent Examination submissions, that the Hornsea 3 part 2 method should be used to calculate the number of breeding pairs required to compensate for impacts on Kittiwake, but we will accept the use of the Hornsea 4 method for other species provided that this is based on the 95% upper confidence limit and noting that additional calculations to factor in philopatry may be required.

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.

1.2.1 Advice on calculating required scale and target populations for compensation by 'breeding enhancement' (e.g. predator eradication/control)

Natural England highlight that the proposals should be able to demonstrate that the measure;

- could compensate for the UCI value should the impacts of the project be greater than the CIV, and
- is scaled using a ratio to increase confidence that sufficient benefits will still arise, should the measure underperform, and
- takes account of philopatry if necessary, to increase the prospect of a significant contribution to National Site Network (NSN) coherence

Natural England considers that the target for the compensatory measure should be set with respect to the CIV. We advise the application of the H4 method, with additional consideration being made for philopatry if necessary. We advise that for the proposed sites within or immediately adjacent to the AOE SPA, no account needs to be made for natal dispersal. This is because we are content that measures here will directly and demonstrably contribute to the coherence of the NSN. However, if a measure is implemented at a location outside of, and remote from the NSN (e.g. Outer Trial Bank) we advise that the calculation of scale and targets should relate to birds expected to disperse, and thus potentially recruit back into the NSN. We do continue to consider that Outer Trial Bank offers significant benefits, by restoring an important colony that will export additional LBBG into NSN sites.

The compensatory measure should be scaled using the UCI impact value, applying the H4 method with additional consideration of philopatry (if required – see above) to derive the quantum, and finally applying a 3:1 ratio to generate the number of pairs the measure should, theoretically, be able to accommodate. In addition, likely nesting densities should be considered to define a minimum area.

Table 2: Natural England's Advice On: Lesser Black-Backed Gull Apportioning and Compensation [REP1-058]

Document reviewed: [REP1-058] 9.15 HRA Update to Breeding Season Apportioning of LBBG at AOE SPA			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	Section 2.3, Para 12	*"During the breeding season 83% of predicted collisions are assumed to involve adult birds (para 195 in the RIAA Part 4, [APP-178]), and **47.2%** of these birds are predicted to be breeding at the AOE SPA".* Natural England assumes this should read **42.7%,** as previously detailed (section 2.2, para 11).	We advise that this should be revised, as necessary.

Table 3. Natural England's Advice On: Appendix 2 Lesser Black-Backed Gull Compensation Document [REP1-018]

Document reviewed: [REP1-018] 7.2.2 HRA Appendix 2 Lesser Black-backed Gull Compensation Document (Rev 1) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	Section 5 Table 5.1	Natural England notes that the Applicant has considered both the higher natal dispersal (lower natal philopatry) rate for herring gull as well as the more poorly evidenced rate for LBBG, stating *"Natural England (DAS/27843/458975) suggest the natal dispersal rate of herring gull from Horswill and Robinson is used, as the data quality supporting the LBBG rate is deemed 'poor', and gives a rate described as 'elevated'. Both options are shown in these calculation"* Natural England would note that in the referenced advice we did not explicitly recommend the use of the herring gull rate, only saying *"Data quality informing the natal dispersal*	Natural England advise that in cases where the scale and target of compensatory measures needs to take account of philopatry (see our detailed comments above) it is appropriate, and probably precautionary, to use the LBBG rate in any calculations.

		rate for lesser black-backed gull in Horswill & Robinson (2015) is poor, but the rate is characterised as "elevated" at 0.470. It is of note that this figure is relatively low compared to the other gulls. Data quality for Herring gull is good, and the natal dispersal rate is 0.629." Nonetheless, the application of both rates gives useful context. In-lieu of relevant new evidence, we consider that there is significant uncertainty regarding the application of any natal dispersal rate for LBBG.	
2	Section 5 Table 5.2	Natural England welcome the clear and concise presentation of number of breeding pairs required and the minimum area required to accommodate them to inform the scale of the compensatory measure. This fully considers a variety of dispersal rates, nesting densities, philopatric rates and compensation ratios. However, the table only addresses the requirements with respect to the CIV impact estimate. Natural England advise that the UCI impact estimate should be considered when scaling the measure (see detailed comments).	We request that the table is replicated for the UCI impact.
3	Section 8.2.1 & 8.2.2	The Applicant has short listed Lantern Marshes and Gedgrave Marshes. We note that potential collaboration with other projects is thought to be feasible here. Natural England consider both sites to be viable options in principle and are supportive of continued development and detailing of both options in order to determine whether they are suitable and deliverable in practice.	Natural England advise that any supporting evidence should be submitted into Examination to demonstrate the Applicant's ability to secure these sites for the delivery of compensatory measures.

		With respect to Lantern Marshes, the Applicant highlights that *"There have been positive discussions between the Applicant and the National Trust in respect of this site"*, although no substantive evidence has been submitted into the Examination to demonstrate that this site can be secured. This also applies to Gedgrave Marshes where the Applicant states, *"discussions between the Applicant and landowner are progressing".*	
4	Section 8.2 Para 89 Para 101	Natural England welcomes retention of the Five Estuaries 'VE2' site in the Applicant's shortlist as a collaborative measure. We note consideration of the Outer Trial Bank site will be informed by further surveys of LBBG nesting numbers and predator impacts. We consider this a sensible approach.	N/A
5	Section 9.1 Para 103	Natural England highlights that the Applicant's details on their proposed approach to monitoring are insufficient. For example, "*Monitoring will be undertaken until such time that the compensatory measure is found to be delivering the scale of required compensation"*.	Natural England advises that regardless of prior success, some level of monitoring will be required to evidence ongoing efficacy, and this should be clearly acknowledged by the Applicant. Given the requirement of the measure to deliver over the lifetime of the project, it cannot be assumed that the measure will continue to deliver at the required level once that level has been reached. We continue to highlight the need for compensatory measures to be monitored rigorously to evidence efficacy, improve the evidence base for future measure deployment. Natural England consider that detailed monitoring approaches are best discussed and agreed in consultation with the LBBG Compensation Steering Group (LBCSG).

6	Section 9.3 Para 115	Natural England recognises that it may not always be possible to implement certain compensation management measures at the most appropriate time of year. However, sub-adults may return to breeding colonies to prospect for nest sites before recruitment (Ross-Smith 2009; Camphuysen 2013) and initial nesting colony establishment is likely to be a particularly sensitive time for prospecting birds early in the season, when assessing how safe a novel site is likely to be. Any disturbance such as vegetation management at this time could delay uptake of the site and/or result in reduced nesting densities.	Natural England suggests that the Applicant should make every effort to avoid any management measures on the proposed site that may result in disturbance early in the breeding season, especially during the initial years of colony establishment.

Table 4. Natural England's Advice on Outline LBBG Compensation Implementation and Monitoring Plan [REP1-020]

Document reviewed: [REP1-020] North Falls 7.2.2.1 Habitats Regulations Assessment Annex 2A Outline Lesser Black-backed Gull Compensation Implementation and Monitoring Plan (Rev 1) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	Section 3.2 Para 18	We note that the minimum proposed fenced area to be created for lesser black-backed gull LBBG compensation will be 4hHa irrespective of whether the measure is developed as a project-led measure or in collaboration with other projects. If the measure is to be delivered collaboratively with other projects, the North Falls' contribution will be the equivalent to only 0.2ha. Natural England are not persuaded that the level of contribution to a collaborative measure is sufficient. No further information of relevance	Natural England seek clarification on both the apportioning of contributions to a collaborative measure, as well as any benefits arising. Specifically, the contribution of 0.2ha to a collaborative measure should be justified considering a project alone commitment to deliver a 4ha area. Natural England continue to advise that an appropriate 4ha area is likely sufficient to compensate the projects estimated impacts. It is not clear, and indeed appears unlikely, that a 0.2ha contribution to a collaborative measure is sufficient.

		is provided in the referenced section of REP1-018. Further work will be required to evidence that any collaborative measure is of an appropriate scale with respect to combined project impacts. Furthermore, the apportioning of benefits arising should be properly considered.	The approach to apportioning any benefits arising from a collaborative measure should be fully detailed.
2	Section 3.5 Para 31	It is the Applicant's stated intention to install the compensation measure three breeding seasons prior to operation. BBG typically reach breeding age maturity at 4-5 years old (BTO, 2024; Horswill and Robinson, 2015), with some delaying breeding until 7 years of age (O'Connell 1995, Camphuysen 2013). Thus, while the measure will be in place, even if the site is colonised immediately, the first fledglings from the compensation site will not necessarily have recruited into the adult breeding population by the scheduled commencement of OWF operations. Any resulting mortality debt will need to be recovered in future years, and the debt will most likely continue to compound while the colony establishes and grows to the required size. We recognise that a 4ha site should achieve the required productivity, even at low nesting densities, allowing for any mortality debt to be paid back sufficiently early in the operational lifetime of the measure. Nonetheless, we highlight the potential risk that adaptive management may be required if the compensatory measure fails, noting that the	Natural England advise that every effort should be made to implement the measure as soon as possible to reduce the risks of accumulating a mortality debt.

		existing compensatory measure on Orfordness has not yet attracted nesting LBBG after two breeding seasons. Furthermore, we highlight the guiding principle that compensatory measures should be operational at the point of impact.	
3	Section 3.8.1 Para 39	The Applicant states that the success of compensation would be determined through annual monitoring of breeding LBBG at the compensation site using standardised breeding seabird survey methods *"until such time that the compensatory measure is found to be delivering the scale of required compensation".*	Natural England advises that regardless of prior success, some level of monitoring will be required to evidence ongoing efficacy, and this should be clearly acknowledged by the Applicant. See our comment (Ref. No. 5, Table 3) above.
4	Section 3.8.1 Para 40	Natural England welcomes the suite of monitoring measures proposed, including counting the number of Adults on Nest (AONs), productivity studies and a colour-ringing scheme, which we consider essential to confirm the success of the proposed measure. We note the Applicant's concern for LBBG welfare but would highlight that drones have previously been used successfully for the purposes of monitoring gull colonies in the UK (Rush et al, 2018), including at OWF compensation sites, with little or no disturbance caused (Dalrymple, 2023). We agree that the use of a thermal drone could be advantageous for detecting nests in vegetation.	Natural England suggests that, since thermal imagery alone cannot differentiate between species (e.g. herring gull from LBBG), any use of thermal imagery should be used in combination with an RGB camera to aid species identification. With regards to limitations of other forms of monitoring (e.g. VP surveys), Natural England also suggests that the Applicant should consider whether a correction factor will need to be established to estimate the number of nesting pairs compared to number of individual birds present (Corregidor-Castro et al, 2022).
5	Section 3.8.2 Para 44	The Applicant states that in the event of adaptive management being required, consideration would be given to the potential of alternative or additional locations, such as Outer Trial Bank.	Natural England highlight the advantages of continuing with feasibility studies at all sites currently under consideration, so that adaptive management measures can be put in place quickly if the adopted compensation site is not sufficiently successful.

3. References

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