Response to Deadline 3 submissions

for the

Royal Society for the Protection of Birds

Submitted for Deadline 4

25 April 2025

Planning Act 2008 (as amended)

In the matter of:

Application by North Falls Offshore Wind Farm Limited for an Order Granting Development Consent for the North Falls Offshore Wind Farm

Planning Inspectorate Ref: EN010119

RSPB Registration Identification Ref: 20051053

Contents

1. Introduction

The RSPB

1.1. The Royal Society for the Protection of Birds (the RSPB) was set up in 1889. It is a registered charity incorporated by Royal Charter and is Europe's largest wildlife conservation organisation, with a membership of over 1.1 million[1]. The principal objective of the RSPB is the conservation of wild birds and their habitats. The RSPB therefore attaches great importance to all international, EU and national law, policy and guidance that assist in the attainment of this objective. It campaigns throughout the UK and internationally for the development, strengthening and enforcement of such law and policy. In so doing, it also plays an active role in the domestic processes by which development plans and proposals are scrutinised and considered, offering ornithological and other wider environmental expertise. This includes making representations to, and appearing at, public inquiries and hearings during the examination of applications for development consents.

The RSPB's interest in offshore wind development

1.2. Faced with the threats of climate change to the natural world the RSPB considers that a low-carbon energy revolution to reach net zero is essential to safeguard biodiversity. However, inappropriately designed and/or sited developments can also cause serious and irreparable harm to biodiversity and damage the public acceptability of the necessary low-carbon energy transition technologies.

1.3. The RSPB recognises the significant role that offshore wind will play in decarbonising our energy systems and the renewed urgency with which this must happen. Installing this technology at the scale and pace needed is no easy task: there are significant challenges rooted in the planning frameworks and the state of our seas which threaten both nature *and* our ability to reach net zero.

1.4. The UK is of outstanding international importance for its breeding seabirds, including northern gannet for which the UK supports over 50% of the world population and around 10% of the world populations of kittiwake and puffin. The UK is also of international importance for its non-breeding seabirds and waterbirds. The latest review of the UK Birds of Conservation Concern[2] highlights alarming recent declines in UK seabird populations meaning that ten seabirds are now red-listed.

1.5. The available evidence suggests that the main risks of offshore wind farms for birds are collision, disturbance/displacement, barriers to movement (e.g. migrating birds, or disruption of access between the breeding areas and feeding areas), and habitat change particularly with associated changes in food availability and the cumulative and in-combination effects of these across multiple wind farms.

1.6. Such impacts are avoidable, and the RSPB has spent considerable time working with stakeholders in the UK offshore wind industry to ensure that decisions about deployment of

[1] https://www.rspb.org.uk/about-us/annual-report Accessed 14 October 2024.
[2] https://www.rspb.org.uk/whats-happening/news/alarming-declines-in-uk-seabird-species-sees-five-more-added-to-the-red-list Accessed 14 October 2024.

renewable energy infrastructure take account of environmental constraints and seek to avoid or minimise impacts wherever possible. The RSPB therefore strongly advocates the use of rigorous, participative environmental assessments to inform the development of projects.

Scope of written submission

1.7. Due to unforeseen circumstances resulting in significant staff absences at critical times, this submission comprises the RSPB's response to submissions at both Deadlines 2 and 3, as well as elements of what would have been included in our Written Representation. It covers the following:

- The nature conservation importance of the seabirds affected by the North Falls Offshore wind farm scheme
- Nature conservation legislation and policy background
- Offshore ornithology
- Derogation case: the RSPB's approach to evaluating compensation measures under the Conservation of Habitats and Species Regulations 2017 (as amended)
- RSPB's detailed comments on the Applicant's specific compensation proposals

1.8. In compiling this submission, the RSPB has considered the application documents, including in particular the following:

Section 4 (offshore ornithology)

- APP – 027, 3.1.15 Environmental Statement Chapter 13 Offshore Ornithology
- APP – 058, 3.2.9 Environmental Statement Chapter 13 Figures
- APP – 102, 3.3.12 Environmental Statement Appendix 13.1 Offshore Ornithology Consultation
- APP – 103, 3.3.13 Environmental Statement Appendix 13.2 Offshore Ornithology Technical Report

Sections 5 and 6 – compensatory measures

- APP – 173, 7.1.1 RIAA Part 1 Introduction
- APP – 174, 7.1.1.1 RIAA Appendix 1.1 HRA Screening
- APP – 178, 7.1.4 RIAA Part 4 Offshore Ornithology Birds Directive Annex 1 and Migratory Species
- APP – 179, 7.1.4.1 RIAA Appendix 4.1 Modelling the abundance of red-throated divers in the area of overlap between North Falls digital aerial surveys (12km buffer) and the Outer Thames Estuary Special Protection Area
- APP – 180, 7.1.4.2 Appendix 4.2 Population Viability Analysis
- APP – 181, 7.1.5 RIAA Part 5 Onshore European and Ramsar Sites
- APP – 182, 7.1.6 RIAA Part 6 Summary
- APP – 183, 7.2 Habitats Regulations Derogation Provision of Evidence
- APP – 184, 7.2.1 Appendix 1 Compensatory Measures Overview
- APP – 185, 7.2.1.1 Annex 1A Habitats Regulations Assessment Compensation Consultation

- APP – 186, 7.2.1.2 Annex 1B Compensation Funding Statement
- APP – 187, 7.2.1.3 Annex 1C In Principle Letter of Agreement from Dogger Bank South East and West
- APP – 188, 7.2.2 Appendix 2 Lesser Black-backed Gull Compensation Document
- APP – 189, 7.2.2.1 Annex 2A Outline Lesser Black-backed Gull Compensation Implementation and Monitoring Plan
- APP – 190, 7.2.3 Appendix 3 Red Throated Diver Compensation Document
- APP – 191, 7.2.3.1 Annex 3A Outline Red Throated Diver Compensation Implementation and Monitoring Plan
- APP – 192, 7.2.4 Appendix 4 Kittiwake Compensation Document
- APP – 193, 7.2.4.1 Annex 4A Outline Kittiwake Compensation Implementation and Monitoring Plan
- APP – 194, 7.2.5 Appendix 5 Guillemot and Razorbill Compensation Document
- APP – 195, 7.2.5.1 Annex 5A Outline Guillemot and Razorbill Compensation Implementation and Monitoring Plan

Response to Applicant's documents submitted at Deadline 1

1.9. The RSPB is aware that the Applicant submitted a number of new documents at Deadline 1 of relevance to the RSPB's concerns, in particular the following new documents:

- REP1 – 044, 9.1 Applicant's Response to Relevant Representation from Natural England (Rev O).
- REP1 – 045, 9.2 Applicant's Response to Relevant Representations from Statutory Consultees and Non-Prescribed Consultees (Rev O).
- REP1 – 048, 9.5 Applicant's Response to Relevant Representations Received from Members of the Public (Rev O).

1.10. At Deadline 1, the Applicant submitted further documents also of relevance to RSPB's concerns:

- REP1 – 016,7.2.1 Habitats Regulations Assessment Appendix 1 Compensatory Measures Overview (Rev 1) (Tracked)
- REP1 – 018, 7.2.2 Habitats Regulations Assessment Appendix 2 Lesser Black-backed Gull Compensation Document (Rev 1) (Tracked)
- REP1 – 020, 7.2.2.1 Habitats Regulations Assessment Annex 2A Outline Lesser Black-backed Gull Compensation Implementation and Monitoring Plan (Rev 1) (Tracked)
- REP1 – 022, 7.2.3 Habitats Regulations Assessment Appendix 3 Red Throated Diver Compensation Document (Rev 1) (Tracked)
- REP1 – 024, 7.2.3.1 Habitats Regulations Assessment Annex 3A Outline Red-Throated Diver Compensation Implementation and Monitoring Plan (Rev 1) (Tracked)
- REP1 – 026, 7.2.4.1 Habitats Regulations Assessment Annex 4A Outline Kittiwake Compensation Implementation and Monitoring Plan (Rev 1) (Tracked)
- REP1 – 028, 7.2.5 Habitats Regulations Assessment Appendix 5 Guillemot and Razorbill Compensation Document (Rev 1) (Tracked)

- REP1 – 030, 7.2.5.1 Habitats Regulations Assessment Annex 5A Outline Guillemot and Razorbill Implementation and Monitoring Plan (Rev 1) (Tracked)
- REP1 – 044, 9.1 Applicant's Response to Relevant Representations from Natural England (Rev 0)
- REP1 – 045, 9.2 Applicant's Response to Relevant Representations from Statutory Consultees and Non Prescribed Consultees (Rev 0)
- REP1 – 056, 9.13 Habitats Regulations Assessment Shadow Appropriate Assessment for Guillemot at the Farne Islands SPA (Rev 0)
- REP1 – 058, 9.15 Habitats Regulations Assessment Update to Breeding Season Apportioning of Lesser Black-backed gull at the Alde-Ore Estuary Special Protection Area

1.11. We have also responded to submissions made at Deadlines 2 and 3.

1.12. The RSPB would welcome any further information from the Applicant in respect of its timetable for updating key application documents related to offshore ornithology and compensation measures. This will enable the RSPB to plan its work to be able to respond appropriately in order to assist the Examination and Examining Authority.

2. The nature conservation importance of the seabirds affected by the North Falls offshore wind farm scheme

Introduction

2.1. As set out in section 1, the UK is of outstanding international importance for its breeding seabirds. As with all Annex I and regularly occurring migratory species, the UK has particular responsibility under the Birds Directive[3] to secure the conservation of these important seabird populations.

2.2. As set out in our Relevant Representation, the RSPB is particularly concerned regarding the impacts on the following designated sites:

- Alde-Ore Estuary SPA
- Flamborough and Filey Coast SPA
- Outer Thames Estuary SPA

2.3. Natural England has referred to the conservation advice for each of the designated sites listed above in Table 5.1 in their Relevant Representation (RR – 243) including providing weblinks to current Conservation Objectives and Supplementary Advice on Conservation Objectives.

Conservation objectives

2.4. The Conservation Objectives for the SPAs generally follow the same format i.e.:

"…to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The populations of each of the qualifying features
- The distribution of the qualifying features within the site."

Supplementary Advice on Conservation Objectives

2.5. Natural England's Supplementary Advice on the Conservation Objectives for the various SPAs identifies, for each SPA feature, key attributes and targets. Attributes are the ecological characteristics or requirements of the classified features within the SPA and deemed to best describe the site's ecological integrity. If safeguarded this will enable achievement of the Conservation Objectives and favourable conservation status for all the designation features, including any assemblage feature.

[3] Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version) (the Birds Directive).

2.6. For each qualifying feature, targets are typically set in respect of the following attributes (as appropriate):

- (Non-) Breeding population: abundance;
- Connectivity with supporting habitats;
- Disturbance caused by human activity;
- Extent and distribution of supporting habitat for the (non-) breeding season; and
- Food availability.

2.7. The RSPB considers these attributes and targets are particularly relevant to consideration of the North Falls Offshore Wind Farm as they respectively relate to:

- the population levels at which the features should be maintained or restored to;
- the need to:
  - maintain or restore safe passage of birds moving between their nesting and/or feeding areas;
  - reduce/avoid disturbance to foraging, feeding, moulting and/or loafing birds;
  - maintain the extent, distribution and availability of suitable (non-) breeding habitat which supports the feature; and
  - maintain or restore the distribution, abundance and availability of key food and prey items.

2.8. The RSPB considers these attributes and targets are directly relevant to the consideration of whether an SPA's conservation objective to maintain or restore site integrity can be met and the SPA achieve favourable conservation status for all its features including, where appropriate, the seabird assemblage throughout the lifetime of the development and any subsequent period here its impacts continue to affect the SPA features.

Alde-Ore Estuary SPA supplementary advice: Lesser Black-backed Gull

2.9. In respect of the breeding Lesser Black-backed Gull feature of the Alde-Ore Estuary SPA, it is important to note that this feature is in (very) unfavourable condition. Natural England's Supplementary Advice states that the latest available 5-year mean for the breeding population is 1,940 pairs (2011-2015), just 14% of the favourable condition target set out in Natural England's supplementary advice (emphasis added)[4]:

"Restore the size of the breeding population to a level which is above 14,074 **whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.**"

2.10. The current population of LBBG within the Alde-Ore Estuary SPA comprises the main colony (RSPB Havergate Island) and a satellite colony recently established on the southern spit of Orfordness. In 2023, these two colonies totalled 1,737 Apparently Occupied Nests (AON): 1,524 AON at Havergate and 213 AON at the southern spit of Orfordness. The most recent

[4] See: https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9009112&SiteName=&SiteNameDisplay=Alde-Ore+Estuary+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=8

5-year mean for Havergate (2019-2023) was 1,602 AON. Allowing for annual fluctuations, this suggests the current SPA population is at or below the 5-year mean set out in Natural England's Supplementary Advice from which there should be no further deterioration.

Summary

2.11. It is vital to consider whether an SPA and its qualifying features meet the attributes and targets set by Natural England when considering whether the SPA's conservation objectives to maintain or restore site integrity can be met and the SPA achieve favourable conservation status throughout the lifetime of the development and any subsequent period where its impacts continue to affect the SPA features.

3. Nature conservation legislation and policy background

Introduction

3.1. Below we summarise the RSPB's understanding of the key nature conservation legislation and related policy background relevant to the RSPB's concerns.

The Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017

3.2. SACs and SPAs are protected as "European sites" in inshore waters (up to 12 nautical miles from the baselines) under provisions within the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations)(as amended); and in offshore waters (i.e. from 12-200 nautical miles) under provisions within the Conservation of Offshore Marine Habitats and Species Regulations 2017 (Offshore Habitats Regulations)(as amended)[5].

3.3. The Habitats & Offshore Habitats Regulations set out the sequence of steps to be taken by the competent authority (here the Secretary of State for Energy Security and Net Zero (DESNZ)) when considering authorisation for a project *likely to have an effect* on a European site and its species before deciding to authorise that project. These are as follows (with references to just the Habitats Regulations):

- Step 1: consider whether the project is directly connected with or necessary to the management of the SPA and its species (regulation 63 (1)). If not –
- Step 2: consider, on a precautionary basis, whether the project is likely to have a significant effect on the SPA and its species, either alone or in combination with other plans or projects (the Likely Significance Test) (regulation 63 (1)).
- Step 3: make an appropriate assessment of the implications for the SPA and its species in view of its conservation objectives with the aims and objectives of the requirements including the National Sites Network management objectives (reg 16A) to also be considered. There is no requirement or ability at this stage to consider extraneous (non-conservation e.g. economics, renewable targets, public safety etc) matters in the appropriate assessment (regulation 63 (1)).
- Step 4: consider whether it can be ascertained that the project will not, alone or in combination with other plans or projects, adversely affect the integrity of the SPA and its species, having regard to the manner in which it is proposed to be carried out, and any conditions or restrictions subject to which that authorisation might be given (the Integrity Test) (regulation 63 (6)).
- Step 5: In light of the conclusions of the assessment, the competent authority shall agree to the project only after having ascertained that it will not adversely affect the integrity of the SPA, alone or in combination with other plans or projects (regulation 63 (5)).
- Step 6: only if the competent authority is satisfied that, there being no alternative solutions and the plan or project must be carried out for imperative reasons of

[5] The Conservation of Habitats and Species Regulations 2017: https://www.legislation.gov.uk/uksi/2017/1012/contents. The Conservation of Offshore Marine Habitats and Species Regulations 2017 are also relevant - https://www.legislation.gov.uk/uksi/2017/1013/contents.

overriding public interest (which, subject to (regulation 64(2)), may be of a social or economic nature), they may agree to the plan or project notwithstanding a negative assessment of the implications for the European site (regulation 64 (1)).

- Step 7: in the event of the no alternative solutions and imperative reasons of overriding public interest tests being satisfied, the Secretary of State must secure that any and all necessary compensatory measures are taken to ensure that the overall coherence of the National Site Network is protected (regulation 68) taking account of the National Site Network management objectives (reg 16A, as set out below).

3.4. It is important to add that in addition to the requirements set out above, in relation to both the inshore marine area and the offshore marine area, any competent authority must exercise its functions so as to secure compliance with the requirements of the Habitats Directive and the Birds Directive as set out in regulations 9 and 10, Habitats Regulations; and in particular to take such steps as it considers appropriate to secure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds[6], having regard to the requirements of Article 2 of the Birds Directive.[7] And for offshore SPAs and SACs regulation 26, Offshore Habitats Regulations requires competent authorities to exercise their functions (as far as possible) to secure steps to avoid the disturbance of species and the deterioration of habitats or habitats of species within those sites.

SPA and SAC Conservation Objectives

3.5. Under the Habitats Regulations, a site's Conservation Objectives are intrinsic to the Integrity Test when considering whether to grant consent for a plan or project – see Habitats Regulations 63(1).

3.6. In order to understand the Conservation Objectives and the Supplementary Advice in the context of Regulation 63(1) it is important to remind oneself of the role of SPAs within these legislative requirements. These protected sites are part of the requirement for special conservation measures in order to ensure that their contribution to national and international "conservation status" of the species[8] is maximised, as set out in the headline words at the start of all Conservation Objectives:

"Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring…"

3.7. The Conservation Objectives are to be an articulation of the contribution that it is appropriate for the SPA to make in an enduring way. It would be inconsistent with the purposes of the protection and the role of SPAs to have SPA Conservation Objectives (or the

[6] As required by Article 3, Birds Directive

[7] See regulation 9(1) and 10(1)(2)(3) and (8) of the Habitats Regulations and regulation 6 of the Offshore Regulations. Article 2 Birds Directive imposes a requirement on Member States to maintain all wild bird populations at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or if necessary, to restore the population of these species to that level (Article 2).

[8] Please see points below on the management objectives of the National Sites Network and the requirements for SPAs to ensure that the species are maintained and/or restored across their natural range.

interpretation of them) aiming for lower populations particularly since so many sites were designated at a time when populations were not in favourable condition.

Appropriate assessment

3.8. As part of the assessment requirements, regulation 63, Habitats Regulations (regulation 28, Offshore Habitats Regulations) require the application of the precautionary principle. Meaning that if it cannot be excluded, on the basis of objective scientific information, that it is likely to have a significant effect on an SPA or SAC and its species an appropriate assessment will be required: see *Waddenzee*.[9]

3.9. Following that appropriate assessment, a project may only be granted consent if the competent authority is convinced that it will not have an adverse effect on the integrity of the European site(s) and their species of concern, having applied the precautionary principle and taken account of the conservation objectives for those European sites and their habitats and species. *Waddenzee* confirmed that where doubt remains as to the absence of adverse effects on the integrity of the European site, approval should be refused[10] (subject to the considerations of alternative solutions, imperative reasons of overriding public interest and the provision of compensatory measures as set out in regulations 64 and 68).

3.10. An appropriate assessment requires all aspects of the project which could affect the European site, its species and its conservation objectives to be identified in the light of the best scientific knowledge in the field.[11] The competent authority,

"taking account of the conclusions of the appropriate assessment of the implications…for the site concerned, in the light of the conservation objectives, are to authorise such activity only if they have made certain that it will not adversely affect the integrity of the site. That is the case where no reasonable scientific doubt remains as to the absence of such effects"[12].

3.11. Defra Circular 01/2005 states at page 20, that the 'integrity of the site' should be defined as 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified'.[13] A European site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required. When looking at the 'integrity of the site', it is therefore important to take into account a range of factors, including the possibility of effects manifesting themselves in the short, medium and long-term".[14]

3.12. As is clear from the requirements of the Habitats and Offshore Habitats Regulations, the assessment of integrity is to be considered by reference to the impact of the project alone

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9 CJEU Case-127/02; [2004] ECR-7405 at [45].
10 [56]-[57].
11 [61].
12 [59].
13 Please note the Defra Circular 01/2005 is also titled ODPM Circular 6/2005.
14 See too the European Commission; Guidance document on wind energy developments and EU nature legislation, 2020, section 2.2.3.2, page 24.

and in-combination with other plans and projects, taking account of the European site(s) conservation objectives. As clearly set out in *Waddenzee*, para 61:

> 61 In view of the foregoing, the answer to the fourth question must be that, under Article 6(3) of the Habitats Directive, an appropriate assessment of the implications for the site concerned of the plan or project implies that, prior to its approval, all the aspects of the plan or project which can, by themselves or in combination with other plans or projects, affect the site's conservation objectives must be identified in the light of the best scientific knowledge in the field. The competent national authorities, taking account of the appropriate assessment of the implications of mechanical cockle fishing for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects. (emphasis added)

In-combination effects and compensation for other schemes

3.13. Compensatory measures only enter the equation when it has been determined that there will be adverse effects on the integrity of the site (under regulation 63) or there is a lack of certainty as to the absence of adverse effects and the need for the competent authority to decide whether consent should be granted under regulation 64.

3.14. It therefore follows that if compensation measures have been required for a project then that project has been identified as giving rise to potential adverse impacts on the integrity of a protected site. Therefore, potential adverse effects from that project are also relevant when considering whether a later project is:

- likely to have a significant effect on a designated site, whether on its own or in combination with other plans and projects, and subsequently
- whether the competent authority can be satisfied that there will not be adverse effects on the integrity of the European site whether taken alone or in combination with other projects.

3.15. It is difficult to see on what basis the fact that compensation has been provided for potential adverse effects of the first scheme should mean that the effects of that scheme should be removed from the equation when carrying out the assessments required by regulation 63 for a later scheme, although it may well be relevant when considering whether consent should be granted under regulation 64 for the second scheme and/or what compensation measures should be required at that stage. There are two points we would stress in that context:

Firstly, the admonition of AG Sharpston in *Sweetman (No 1)* at AG47. To exclude the adverse effects of scheme one when considering whether a later scheme would be likely *to* have significant effects / would not have an adverse effect on the integrity of a protected site in combination with other projects would seem to risk perpetuating the "death by a thousand cuts" phenomenon discussed in that case. (For the avoidance of doubt, we would stress that the starting point would always need to be the scheme itself – and there would

need to be some effect from the scheme which when combined with effects from the earlier scheme could give rise to likely significant effects / outcome);[15] and

Secondly, the uncertainty as to the effectiveness of measures that are designed to compensate for (for example) loss of habitat rather than to mitigate the harm which might otherwise be *caused*: see C-164/17 *Grace v Sweetman* at 52-3.

3.16. Such an approach would also seem inconsistent with the clear ruling of the CJEU in C-164/17 *Grace v Sweetman* that *compensatory* measures should not be taken into account at the Article 6(3) stage when carrying out an appropriate assessment for a particular project. It is difficult to see why the compensatory measures associated with an earlier scheme could, therefore, be taken into account (by effectively removing the adverse effects of scheme 1 from consideration) where the competent authority is deciding on a later scheme whether it was likely to have significant effects or would / would not have adverse effects on the integrity of the site in combination with other projects. We set out the material passages from that decision out below for ease of reference:

"50 In that regard, the Court has previously ruled that the measures provided for in a project which are aimed at compensating for the negative effects of the project cannot be taken into account in the assessment of the implications of the project provided for in Article 6(3) of the Habitats Directive…[16].
51 It is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area, that such a measure may be taken into consideration when the appropriate assessment is carried out[17].
52 As a general rule, any positive effects of the future creation of a new habitat, which is aimed at compensating for the loss of area and quality of that habitat type in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future[18].
53 It is not the fact that the habitat concerned in the main proceedings is in constant flux and that that area requires 'dynamic' management that is the cause of uncertainty. In fact, such uncertainty is the result of the identification of adverse effects, certain or potential, on the integrity of the area concerned as a habitat and foraging area and, therefore, on one of the constitutive characteristics of that area, and of the inclusion in the assessment of the implications of future benefits to be derived from the adoption of measures which, at the time that assessment is made, are only potential, as the measures have not yet been implemented. Accordingly, and subject to verifications to be carried out by the referring court, it was not possible for those benefits to be foreseen with the requisite degree of certainty when the authorities approved the contested development.
54 The foregoing considerations are confirmed by the fact that Article 6(3) of the Habitats Directive integrates the precautionary principle and makes it possible to prevent in an

[15] For the avoidance of doubt, we would stress that the starting point would always need to be the scheme itself – and there would need to be some effect from the scheme which when combined with effects from the earlier scheme could give rise to likely significant effects / outcome.
[16] Judgments of 15 May 2014, Briels and Others, C-521/12, EU:C:2014:330, paragraph 29, and of 21 July 2016, Orleans and Others, C-387/15 and C-388/15, EU:C:2016:583, paragraph 48
[17] See, to that effect, judgment of 26 April 2017, Commission v Germany, C-142/16, EU:C:2017:301, paragraph 38
[18] See, to that effect, judgment of 21 July 2016, Orleans and Others, C-387/15 and C-388/15, EU:C:2016:583, paragraphs 52 and 56 and the case-law cited

effective manner adverse effects on the integrity of protected areas as a result of the plans or projects being considered[19]."

Habitats Regulations General Duties

3.17. We would like to also highlight, in particular, the requirements in regulation 9(3)[20]:

9.— Duties relating to compliance with the Directives

(1) The appropriate authority, the nature conservation bodies and, in relation to the marine area, a competent authority must exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the Directives.

…

(3) Without prejudice to the preceding provisions, a competent authority, in exercising any of its functions, must have regard to the requirements of the [Birds and Habitats] Directives so far as they may be affected by the exercise of those functions.[21]

3.18. And the further duties in Regulation 10[22]:

10.— Duties in relation to wild bird habitat

(1) Without prejudice to regulation 9(1), the appropriate authority, the nature conservation bodies and, in relation to the marine area, a competent authority must take such steps in the exercise of their functions as they consider appropriate to secure the objective in paragraph (3), so far as lies within their powers.

…

(3) The objective is the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom including by means of the upkeep, management and creation of such habitat, as appropriate), having regard to the requirements of Article 2 of the new Birds Directive (measures to maintain the population of bird species).

…

(7) In considering which measures may be appropriate for the purpose of securing or contributing to the objective in paragraph (3), appropriate account must be taken of economic and recreational requirements.

…

[19] See, to that effect, judgment of 15 May 2014, Briels and Others, C-521/12, EU:C:2014:330, paragraph 26 and the case-law cited

[20] https://www.legislation.gov.uk/uksi/2017/1012/regulation/9

[21] The terms of regulation 9(3) are not amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations although it needs to be read with the amended definitions of the relevant Directives and with the new regulation 9(4A) – regard must be had to any Secretary of State guidance – currently we do not believe this has been fully produced

[22] https://www.legislation.gov.uk/uksi/2017/1012/regulation/10

(8) So far as lies within its powers, a competent authority in exercising any function in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the seaward limits of the offshore marine area (as defined in regulation 4(2)).”[23]

3.19. As mentioned above, following the UK’s departure from the EU these regulations have been changed to include (amongst other changes) management objectives for the National Sites Network. Although these requirements already existed, it is helpful to have them clearly within our domestic legislation.

3.20. In summary regulation 16A[24], Habitats Regulations sets out the requirements for the Network jointly and separately recognising the differences between SPAs and SACs (as set out above).

3.21. Authorities with relevant responsibilities must manage the National Site Network with a view to contributing to the achievement of the management objectives of it, namely (focusing just on SPAs):

3.22. **For SPAs** to contribute, in their area of distribution, to ensuring the survival and reproduction of:

- the species of birds listed in Annex I to the new Wild Birds Directive;
- regularly occurring migratory species of birds; and
- to contribute, to securing compliance with regulation 9(1) (as set out above).

3.23. **Overall**, take account of:

- the importance of SACs and SPAs;
- the importance of the sites for the coherence of National Site Network;
- the threats of degradation or destruction (including deterioration and disturbance of protected features) to which the sites are exposed; and
- in the case of migratory bird species, the importance of their breeding, moulting and wintering areas and staging points along their migration routes.

3.24. The RSPB believes it is essential both during the appropriate assessment and consideration of compensation measures stages for these management objectives to be taken into account.

Environmental Impact Assessment

3.25. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)[25] state that development consent cannot be granted for Environmental Impact Assessment (EIA) development unless the decision-maker has taken into account environmental information including an environmental statement which describes the

[23] Again the terms of regulation 10 are not amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations although it needs to be read with the amended definitions of the relevant Directives
[24] https://www.legislation.gov.uk/uksi/2017/1012/regulation/16A Accessed 14 October 2024.
[25] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017: http://www.legislation.gov.uk/uksi/2017/572/contents/made Accessed 14 October 2024.

significant effects, including cumulative effects, of the development on the environment. This will include effects on all wild bird species whether SPA species or not.

3.26. Offshore wind farms have the potential to impact on birds through collision with rotating blades, direct habitat loss, disturbance from construction activities, displacement during the operational phase (resulting in loss of foraging/roosting area) and impact on bird flight lines (i.e. barrier effect) and associated increased energy use by birds for commuting flights between roosting and foraging areas. This is acknowledged in NPS EN-3[26]. These potential impacts have been taken into account by the RSPB and its remaining concerns with the applications are set out below, in the context of the legislative provisions summarised above, in particular those relating to appropriate assessment.

Summary

3.27. There is a statutory duty to comply with the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations, as amended) which offer protection for protected sites (Ramsar, SPA, SAC) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (Offshore Regulations)(as amended). The Habitats and Offshore Regulations set out a sequence of steps to be taken by the competent authority (here the Secretary of State for Energy Security and Net Zero (DESNZ)) when considering authorisation for a project *likely to have an effect* on a European site and its species before deciding to authorise that project.

3.28. We set out a series of related matters to be considered in this context, including:

- SPA and SAC Conservation Objectives;
- Appropriate assessment;
- In-combination effects and compensation for other schemes;
- Habitats Regulations General Duties;
- Environmental Impact Assessment.

[26] Paragraph 2.8.136; see paragraphs 2.8.136-146 generally. Effects on foraging areas outside a SPA are to be taken into account when assessing the effects on bird populations of the SPA: see *Hargreaves v Secretary of State for Communities and Local Government* [2011] EWHC 1999 (Admin), which concerned effects on pink-footed geese which commuted inland from their roosting sites in the SPA to feed on grain and winter cereal crops on fields adjacent to the proposed development site.

4. Offshore ornithology

Introduction

4.1. In our Relevant Representations, the RSPB highlighted six fundamental issues with the assessment, which are:

- Inadequate details of digital aerial survey methodology.
- The application of a macro-avoidance correction factor to predicted Northern Gannet collision mortalities.
- Screening out of Kittiwake collision mortality at Flamborough and Filey Coast SPA
- Inadequate consideration of the conservation objectives of the Outer Thames Estuary SPA.
- A lack of consideration of impacts compounded by Highly Pathogenic Avian Influenza.
- Inadequate consideration of wider ecosystem impacts

4.2. These issues are described in more detail below. For Northern Gannet, these mean that the assessment is inadequate, and therefore insufficient for the robust consideration required to enable a proper understanding of the likely impacts of the scheme. The RSPB reserves the right to add to and/or amend its position on these and other aspects of the assessment in light of changes to and/or any new, information submitted by the Applicant, in particular if and when the Applicant presents information to resolve the issues highlighted above.

4.3. The RSPB is also concerned with the prejudicial use of language throughout the assessment, whereby recommended methods and parameters are described as, for example, "highly" or "extremely" precautionary". Where this language has been used, it is in cases that the assessment has been carried out using the SNCB recommended methods and parameters and these parameters are described as "worse case scenario". These have been drawn up in consultation with leading experts and we consider it inappropriate to constantly undermine and challenge these recommendations while presenting the Applicant's own preferred methods as the most accurate and as "evidence led". The SNCB guidance is designed to be suitably precautionary, particularly in the context of the huge amount of uncertainty inherent in the assessment process; it is not set out to be overly precautionary and is revised considering any new evidence. The Applicant does not present any new evidence that has not been considered by the SNCBs or the Secretary of State in recent decisions.

Conclusions on AEOI

Project alone – RSPB AEOI conclusions

4.4. We conclude there will be an adverse effect on site integrity on the following features of the Alde-Ore Estuary SPA:

- The impact of collision mortality on the Lesser Black-backed Gull (LBBG) population

4.5. As a result of methodological concerns, set out below, the RSPB considers that the impacts have not been adequately assessed and, as such consider that an adverse effect on the integrity (AEOI) on the following qualifying features of the Flamborough and Filey Coast Special Protection Area (SPA) cannot be ruled out:

- The impact of combined collision and displacement mortality on the Northern Gannet population.
- The impact of collision mortality on the Kittiwake population.

4.6. We cannot rule out an adverse effect on site integrity on the following feature of the Outer Thames Estuary SPA:

- The impact of distributional change on the Red-throated Diver population, arising from vessel movements during construction, decommissioning and operations and maintenance.

Project in combination with other plans and projects – RSPB AEOI conclusions

4.7. We agree with the Applicant and conclude there will be an adverse effect on site integrity on the following features of the Alde-Ore Estuary SPA:

- The impact of collision mortality on the Lesser Black-backed Gull (LBBG) population

4.8. We conclude there will be an adverse effect on site integrity on the following features of the Flamborough and Filey Coast SPA:

- The impact of mortality arising from collision and distributional change combined on the Kittiwake population.
- The impact of mortality arising from distributional change on the Guillemot population.
- The impact of mortality arising from distributional change on the Razorbill population.

4.9. We cannot rule out an adverse effect on site integrity on the following features of the Flamborough and Filey Coast SPA:

- The impact of mortality arising from collision and distributional change combined on the Northern Gannet population.
- The impact of combined collision and displacement mortality on the seabird assemblage.

4.10. We cannot rule out an adverse effect on site integrity on the following feature of the Outer Thames Estuary SPA:

- The impact of distributional change on the Red-throated Diver population arising from vessel movements during construction, decommissioning and operations and maintenance.

4.11. The RSPB notes from NE's latest Risk and Issues Log (REP3-064) that it will be responding at Deadline 4 to the Applicant's shadow Appropriate Assessment for Guillemot at the Farne Islands SPA (REP1-056). This was provided in response to an earlier request from Natural England. The RSPB will review Natural England's submission and respond on this issue at Deadline 5.

Impact Assessment -Conclusions

4.12. The RSPB note that further updated information for cumulative effects has been provided at Deadline 3. These are not expected to materially alter our conclusions but the RSPB will review fully and respond at Deadline 5.

Project alone

4.13. From mortalities derived using the methods advocated by Natural England and the RSPB, the impacts arising from collision associated with the North Falls Offshore Wind Farm alone are predicted to result in the annual population growth rate of **Lesser Black-backed Gull** at the **Alde-Ore Estuary SPA** declining, with a ratio of impacted to unimpacted population growth rate of 0.999. This means that after the 30-year lifetime of the Wind Farm, the population size of the SPA is expected to be **98.1%** of what it would have been in the absence of the development. While these population scale impacts seem minor, the RSPB consider that due to the severe population decreases at the SPA detailed above at 2.9 that any additional mortality should be considered significant.

Project in-combination with other plans and projects

4.14. From mortalities derived using the methods advocated by Natural England and the RSPB, the impacts arising from collision associated with the North Falls Offshore Wind Farm in-combination with other projects are predicted to result in the annual population growth rate of **Lesser Black-backed Gull** at the **Alde-Ore Estuary SPA** declining, with a ratio of impacted to unimpacted population growth rate of 0.988. This means that after the 30-year lifetime of the Wind Farm, the population size of the SPA is expected to be **69.6%** of what it would have been in the absence of the development in-combination with other projects.

4.15. As described below, the RSPB does not believe an adequate assessment of the impacts of the Flamborough and Filey Coast SPA kittiwakes has been carried out as impacts from the breeding season have not been included nor potential impacts arising from distributional change. However even with these impacts excluded the predicted mortalities arising from collisions associated with the North Falls Offshore Wind Farm in-combination with other projects are predicted to result in the annual population growth rate of **Kittiwake** at the **Flamborough and Filey Coast SPA** declining, with a ratio of impacted to unimpacted population growth rate of 0.997. This means that after the 30-year lifetime of the Wind Farm, the population size of the SPA is expected to be **89.8%** of what it would have been in the absence of the development in-combination with other projects. While these are not the full impacts, they are already significant, and will become more significant if the additional mortality arising from breeding season and displacement impacts are included.

4.16. Within the range of likely mortalities derived using the methods advocated by Natural England, the impacts arising from distributional change associated with the North Falls Offshore Wind Farm development in-combination with other projects are predicted to result in the annual population growth rate of **Guillemot** at the **Flamborough and Filey Coast SPA** declining, with a ratio of impacted to unimpacted population growth rate of between 0.974 and 0.999. This means that after the 40-year lifetime of the Wind Farm, the population size of the SPA is expected to be between **44.7 and 96.6%** of what it would have been in the

absence of the development. Using the Applicant's preferred methods, the development in-combination with other projects are predicted to result in the annual population growth rate declining, with a ratio of impacted to unimpacted population growth rate of between 0.997 and 0.999. This means that after the 30 year lifetime of the Wind Farm, the population size of the SPA is expected to be between **91.9 and 97.1%** of what it would have been in the absence of the development.

4.17. Within the range of likely mortalities derived using the methods advocated by Natural England, the impacts arising from distributional change associated with the North Falls Offshore Wind Farm development in-combination with other projects are predicted to result in the annual population growth rate of **Razorbill** at the **Flamborough and Filey Coast SPA** declining, with a ratio of impacted to unimpacted population growth rate of between 0.999 and 0.982. This means that after the 40-year lifetime of the Wind Farm, the population size of the SPA is expected to be between **65.7 and 98.2%** of what it would have been in the absence of the development. Using the Applicants preferred methods, the development in-combination with other projects are predicted to result in the annual population growth rate declining, with a ratio of impacted to unimpacted population growth rate of between 0.997 and 0.999. This means that after the 40-year lifetime of the Wind Farm, the population size of the SPA is expected to be between **91.9 and 97.1%** of what it would have been in the absence of the development.

4.18. For **red throated diver**, as described below, the Applicant has not fully considered the Conservation Objectives relevant to the Outer Thames Estuary SPA population. As such, it is not possible to rule out an Adverse Effect on the Integrity of the SPA population for the projects in-combination.

Methodological Concerns

Inadequate details of digital aerial survey methodology

4.19. As highlighted in our Relevant Representation, the RSPB are content that digital aerial surveys can provide useful data in order to provide baseline characterisation of an offshore wind farm footprint.

4.20. However full methodological detail needs to be provided alongside the outputs and the details the Applicant has provided are scant.

4.21. However, the RSPB have outstanding concerns with the following:

- Insufficient consideration of potential biases in the survey and analysis methods. For example, these could be biases arising from both the camera system, such as imperfect detection of smaller species, or from the imperfect identification by the surveyor of the digital images. Any biases such should have been carefully described;
- spatial autocorrelation has not been demonstrably evaluated or accounted for. Spatial autocorrelation in this instance is the correlation among values of a count variable strictly attributable to their relatively close locational positions, introducing a deviation from the assumption of independent observation. The assessment should explicitly

demonstrate an analysis of the data showing whether spatial auto-correlation is present or not;

- There is no consideration of potential response of birds to disturbance arising from the survey e.g. from aircraft shadow. This could be behavioural responses such as flight take off rate or diving rate, that would have implications for the accuracy of the assessment;
- There is no detailed rationale provided as to why a transect rather than grid survey design has been used. Both survey designs are commonly used in the assessment of the impacts of offshore wind farms, and both have strengths and weaknesses. Detail is required as to why a transect design was used for this assessment;
- There is no detail given of any independent validation of identification and detection rates. While it is clear that this validation is carried out as part of the internal quality assurance procedures of the survey providers, no detail of any independent external quality assurance appears to have been carried out.

4.22. A sub-group of NatureScot's Scientific Advisory Committee was established in 2022 to undertake a focused review of Digital Aerial Surveys methodologies as applied to impact assessment and monitoring for marine birds at offshore windfarms. This review was published in 2023[27], and the recommendations within that should form the basis for the Applicant providing more detail on the DAS methodology.

The application of a macro-avoidance correction factor to predicted gannet collision mortalities

4.23. In order to assess the mortality that could arise from avian collision with turbine blades, the Applicant has used the deterministic formulation of the Band Collision Risk Model (CRM)[28] [29]. This approach is welcomed by the RSPB. This method combines a series of parameters describing the turbine design and operation with estimates of a bird's size and behaviour to generate a predicted number of birds that would collide with a turbine over a given time period. A further, stochastic, formulation was initially developed by Masden (2015)[30] and then produced in an easier to use interface by McGregor et al, (2018)[27]. The stochastic version allows for some account of uncertainty and variability in parameters to be made. As such, this formulation is preferred by the RSPB, but has not been used by the Applicant and so the predicted collision rates do not account for variability in a number of parameters.

4.24. The input parameters related to bird size and behaviour include a parameter known as "Avoidance Rate". This is defined by Band (2012)[26] as the inverse of the ratio of the number of actual collisions to number of predicted collisions. As such "Avoidance Rate" is a misnomer; it is a catch all term for the inconsistency between predicted and actual

[27] https://www.nature.scot/doc/offshore-wind-ornithological-impact-assessment-review-digital-aerial-survey-methods

[28] Band, B. 2012. Using a Collision Risk Model to Assess Bird Collision Risks for Offshore Wind Farms. Report by British Trust for Ornithology (BTO). Report for The Crown Estate.

[29] McGregor, R.M., King, S., Donovan, C.R., Caneco, B. and Webb, A. (2018) A Stochastic Collision Risk Model for Seabirds in Flight. Report to Marine Scotland Science

[30] Masden, E. (2015). Scottish Marine and Freshwater Science Vol 6 No 14: Developing an avian collision risk model to incorporate variability and uncertainty. Published by Marine Scotland Science. DOI: 10.7489/1659-1. http://www.scotland.gov.uk/Resource/0048/00486433.pdf

mortalities, an inconsistency that can be derived from a variety of sources, including avoidance behaviour per se, survey error and model misparameterisation.

4.25. The Applicant has used Avoidance Rates (see above) in the CRM, as recommended by the Statutory Nature Conservation Bodies (SNCBs 2014[31]) including Natural England. Whilst the RSPB agree with the majority of the advised rates, in our opinion, calculations using a 98% avoidance rate should be presented alongside the recommended values as this may be more appropriate for breeding gannets. This is because the figures used for the calculation of avoidance rates advocated by the SNCBs are largely derived from the non-breeding season for gannet[32] [33]. During the breeding season, gannets are constrained to act as central placed foragers meaning they return to the colony after feeding in order to maintain territories, incubate eggs and provide for chicks. Once chicks have fledged adult gannets remain at sea and no longer visit the colony. Differences in behaviour between the breeding and non-breeding season are likely to result in changes in avoidance behaviour.

4.26. There is evidence that the foraging movements and behaviour of gannets will vary in relation to stage of the breeding season in response to changes in the distribution and abundance of prey and changing constraints as they progress from pre-laying to chick-rearing[34]. GPS tracking of gannets breeding on the Bass Rock between 2010 and 2021 has shown variation in the two-dimensional foraging behaviour of birds across the breeding season (prior to chick-rearing and during chick-rearing), between sexes, and between years[35] [36] [37]. Three-dimensional tracking of gannets during chick-rearing has also revealed that flight height and flight speed both vary according to behaviour, sex and wind conditions[38] [39] [40] and

[31] SNCBs. 2014. Joint Response from the Statutory Nature Conservation Bodies to the Marine Scotland Science Avoidance Rate Review. https://www.nature.scot/sites/default/files/2018-

[32] Cook, A S C P, Humphreys, E. M., Masden, E. A., & Burton, N. H. K. 2014. The Avoidance Rates of Collision Between Birds and Offshore Turbines. Edinburgh.

[33] Cook, A.S.C.P., Humphreys, E.M., Bennet, F., Masden, E.A., Burton, N.H.K. 2018 Quantifying avian avoidance of offshore wind turbines: Current evidence and key knowledge gaps. Marine Environmental Research, 140, 278-288

[34] Lane, J.V., Jeavons, R., Deakin, Z., Sherley, R.B., Pollock, C.J., Wanless, R.J., Hamer, K. C., 2020. Vulnerability of northern gannets to offshore wind farms; seasonal and sex specific collision risk and demographic consequences. Marine Environmental Research. 162.

[35] Cleasby, I.R., Wakefield, E.D., Bodey, T.W., Davies, R.D., Patrick, S.C., Newton, J., Votier, S.C., Bearhop, S., Hamer, K.C. 2015a. Sexual segregation in a wide-ranging marine predator is a consequence of habitat selection. Marine Ecology Progress Series, 518, 1-12.

[36] Lane, J.V., Jeavons, R., Deakin, Z., Sherley, R.B., Pollock, C.J., Wanless, R.J., Hamer, K. C., 2020. Vulnerability of northern gannets to offshore wind farms; seasonal and sex specific collision risk and demographic consequences. Marine Environmental Research. 162.

[37] Lane, J.V. and Hamer, K.C. 2021. Annual adult survival and foraging of gannets at Bass Rock, Scotland: Report to the Ornithology subgroup of the Forth and Tay Regional Advisory Group (FTRAG-O) – October 2021

[38] Cleasby, I.R., Wakefield, E.D., Bearhop, S., Bodey, T.W., Votier, S.C., Hamer, K.C., 2015b. Three-dimensional tracking of a wide-ranging marine predator: flight heights and vulnerability to offshore wind farms. Journal of Applied Ecology, 52, 1474–1482

[39] Lane, J.V., Spracklen, D.V., Hamer, K.C., 2019. Effects of windscape on three-dimensional foraging behaviour in a wide-ranging marine predator, the northern gannet. Marine Ecology Progress Series, 628, 183–193.

[40] Lane, J.V., Jeavons, R., Deakin, Z., Sherley, R.B., Pollock, C.J., Wanless, R.J., Hamer, K. C., 2020. Vulnerability of northern gannets to offshore wind farms; seasonal and sex specific collision risk and demographic consequences. Marine Environmental Research. 162.

similar patterns have been recorded in other seabirds[41]. Because any error in the use of flight height and flight speed as input parameters in the sCRM should be corrected for in the use of the Avoidance Rate, any seasonal variation in these parameters should also be reflected in variation in the Avoidance Rate, in the absence of any actual evidence from the breeding season.

4.27. Further to advice from Natural England, the Applicant has applied a correction factor of 70% to the baseline densities inputted into the gannet collision risk modelling in order to account for macro-avoidance. This approach follows suggestions in Cook (2021[42])

4.28. The current evidence of a strong macro avoidance of wind farms by gannets, established from observed behaviour, is almost entirely derived from non-breeding birds[43]. The evidence for macro avoidance during the breeding season is limited with the exception of a study of gannets breeding on Helgoland[44] in the German North Sea. However, it is unclear from this study what the breeding status of the tracked birds was, or how their behaviour differed from what would have been expected pre-construction as two of the three wind farms were already operational during the first year of tracking. What the study does clearly show is that breeding gannets do fly through offshore wind farms, often showing no avoidance behaviour at all. Below we reproduce Figure 2 from this paper showing tracked gannets' movements in respect to wind farms. While some show clear avoidance others do not and may even be attracted to the wind farm.

4.29. In the Cook (2021) report that suggests the application of macro avoidance to baseline densities, the suggestion is based on reviews that do not include this German tracking study, although it does acknowledge that it shows clear differences between individuals in relation to their response to wind farms. The previous gannet recommended avoidance rate was based on 'all gulls' data because no gannet data were available. The evidence of macro avoidance of gulls in response to wind farms is equivocal, so this rate was only calculated from 'within wind farm' avoidance. As gannets can show macro avoidance it therefore was suggested that this was applied to the baseline densities, and then collision risk modelling was carried out using the 'all gull' avoidance rate, so effectively applying avoidance twice. The SNCBs have responded differently to this suggestion, Natural England have adopted it whereas NatureScot do not agree with the approach. The RSPB are in agreement with NatureScot and are actively engaged in research programmes to understand the reactive behaviour of gannet in the vicinity of wind farms.

4.30. Notwithstanding the above, the RSPB does not agree with the approach for two reasons. Firstly, it does not take into account the likely seasonal variation in macro avoidance as

[41] Masden, E.A., Cook, A.S.C.P., McCluskie, A., Bouten, W., Burton, N.H.K, Thaxter, C. 2021. When speed matters: the importance of flight speed in an avian collision risk model. Environmental Impact Assessment Review, 90

[42] Cook A.S.C.P. (2021) Additional analysis to inform SNCB recommendations regarding collision risk modelling. BTO research report 739

[43] Dierschke, V., Furness, R. W., Garthe, S. 2016. Seabirds and offshore wind farms in European waters: Avoidance and attraction. Biological Conservation, 202, 59–68.

[44] Peschko, V., Mendel, B., Merker, M., Dierschke, J., Garthe, S. 2021. Northern gannets (Morus bassanus) are strongly affected by operating offshore wind farms during the breeding season. Journal of Environmental Management. 279.

described above, and as highlighted in a recent review and analysis of post construction displacement effects (Lamb et al, 2024[45]). Secondly, by basing the 'within wind farm' avoidance rate on the 'all gull' rate, it assumes that gannets will have the same 'within wind farm' reactive flight response as gulls. This assumption is very unlikely to be met, as gannets have much lower flight manoeuvrability than gulls[46].This will result in a lesser ability to make rapid reactions and consequently have a greater risk of collision. This should be reflected in the 'within wind farm' avoidance rate if any further changes are to be made.

4.31. Any evidence of macro avoidance should also be seen in the context of recent work in Belgian offshore windfarms that has shown potential habituation to the presence of turbines. This effectively results in lower macro avoidance[47] and so an elevated risk of collision. It is also important to acknowledge that corpses of Northern Gannets with injuries consistent with collisions with offshore wind farms have been recovered (Rothery et al., 2009[48]), and the imperfect detection of these corpses indicate that there may be many more.

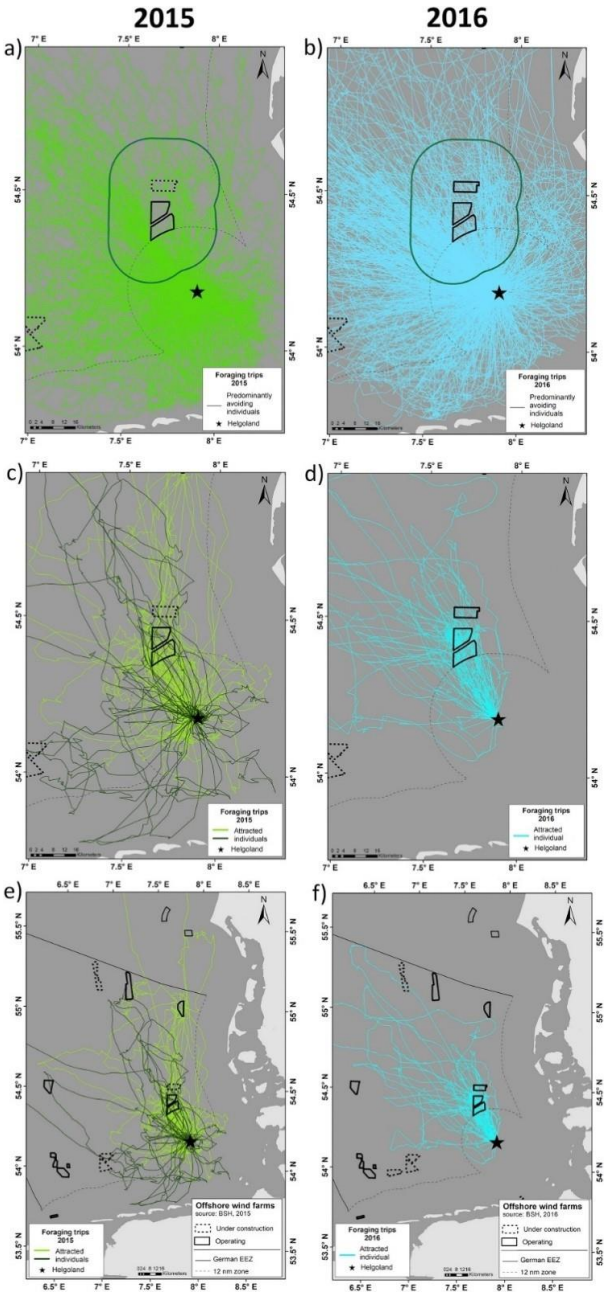
[45] Lamb, J., Gulka, J., Adams, E., Cook, A., & Williams, K. A. (2024). A synthetic analysis of post-construction displacement and attraction of marine birds at offshore wind energy installations. *Environmental Impact Assessment Review*, *108*, 107611.

[46] Furness, R. W., Wade, H. M., & Masden, E. A. (2013). Assessing vulnerability of marine bird populations to offshore wind farms. *Journal of environmental management*, *119*, 56-66.

[47] Vanermen, N.; Courtens, W.;.; Van de walle, M.; Verstraete, H.; Stienen, E. 2021. Macro-avoidance of GPS-tagged lesser black-backed gulls and potential habituation of auks and gannets. In Degraer, Brabant, Rumes & Vigin (eds) 2021. *Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea, avoidance and habitat use at various spatial scales.* Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management

[48] Rothery, P., Newton, I., & Little, B. (2009). Observations of seabirds at offshore wind turbines near Blyth in northeast England. *Bird Study*, *56*(1), 1-14.

"Figure 2": from Peschko et al 2021[49] showing flight of tagged birds from Heligoland (indicated by a star) in the vicinity of wind farms (outlined in black). Original figure legend is: "Flight behaviours of gannets tagged in 2015 (n = 10) (a) and 2016 (n = 15) (b) that 'predominantly avoided' the OWFs (all individuals shown in the same colour). Gannets tagged in 2015 (n = 2) (c) and 2016 (n = 1) (d) that were classified as 'attracted individuals' (individuals shown in different colours). (e) & (f) Large-scale movements of individuals shown in (c) and (d). OWFs: dashed black = under construction, solid black = operating, dark green line = 15 km buffer applied for PPM analysis."



[49] Peschko, V., Mendel, B., Merker, M., Dierschke, J., Garthe, S. 2021. Northern Gannets (Morus bassanus) are strongly affected by operating offshore wind farms during the breeding season. Journal of Environmental Management. 279

Screening out of Kittiwake collision mortality at Flamborough and Filey Coast SPA

4.32. The Applicant has screened out breeding season collision impacts on the Kittiwake population of the Flamborough and Filey Coast SPA, despite the colony being within the Mean Max Foraging Range + 1 Standard Deviation (300.6 km) and within the maximum range recorded at that colony (324 km). The Applicant has argued that tracking studies have not shown any overlap with the array footprint and therefore there is no connectivity with the colony. However, while tracking studies are extremely valuable, they are of relatively few birds in a relatively short temporal window and so absence of evidence from these studies of a spatial overall of foraging trips and the array should not be taken of evidence of no overlap.

4.33. In addition, only impacts arising through collision have been considered. It would be preferred if impacts arising through distributional responses, such as displacement and barrier effects, were also considered for this species. While the evidence for displacement and barrier effects acting on kittiwakes is equivocal, there is evidence from the Southern North Sea of strong effects during the breeding season, acting at up to 20km from the wind farm boundaries[50]

4.34. Consequently, the RSPB do not believe that the impacts on the Kittiwake population of the SPA have been adequately assessed, and therefore cannot come to conclusions with regard to any adverse effects on site integrity.

Inadequate consideration of the conservation objectives of the Outer Thames Estuary SPA

4.35. The RSPB cannot rule out an adverse effect on the integrity of the Outer Thames Estuary SPA, arising through the project alone and in combination. This is due to the impact of displacement (from vessel movements during construction, decommissioning and operations and maintenance) on the SPA's Red-throated Diver population. The Applicant has not fully considered the Conservation Objectives relevant to that population, particularly the objective to maintain or restore the distribution of qualifying features within the site, rather has focused population effects via mortality as a potential consequence of distributional change. The numbers of red-throated divers, their distribution within the SPA and their ability to use all suitable habitat contained in the SPA are all relevant to the SPA conservation objectives but are not considered by the Applicant. If red-throated divers are displaced from part of the SPA which would otherwise be suitable for them the effect is to reduce the functional size of the SPA, thereby undermining the conservation objectives.

4.36. Displacement arises when there is a significant reduction in the density of birds within the wind farm footprint and the surrounding area (the buffer zones), which may be partial or total displacement, compared with the baseline situation. Displacement is equivalent to habitat loss and may be temporary or permanent, depending on whether or not there is habituation, i.e. adjustment to the presence of the wind farm and a resumption of use of the

[50] Peschko, V., Mendel, B., Müller, S., Markones, N., Mercker, M., & Garthe, S. (2020). Effects of offshore windfarms on seabird abundance: Strong effects in spring and in the breeding season. *Marine Environmental Research*, *162*, 105157.

area. It may be triggered during construction, or during operation, depending on the direct cause. The Joint SNCB Interim Advice Note (2017, updated 2022[51]) defines displacement as affecting birds present *both in the air and on the water*.

4.37. Barrier effects arise when an obstacle, such as a wind farm, causes birds to divert from their intended path in order to reach their original destination. It is generally considered to act mainly on birds in flight (SNCBs 2022). As such they are similar, though not the same, as displacement effects. However, in practical terms it is currently not possible to disentangle the two and so barrier and displacement effects are considered together in impact assessment, as per SNCB advice (*Ibid.*)

4.38. The conservation objectives for the Outer Thames Estuary SPA are:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

4.39. Red throated divers are one of the most sensitive species to displacement effects from offshore windfarms, ranked as having the highest species concern value (along with black-throated diver) in relation to displacement of all the species considered in an assessment of vulnerability of seabirds to offshore windfarms (Furness et al., 2013)[52]. Similarly, a review of attraction and avoidance of offshore windfarms by seabirds clearly demonstrated that divers showed strong avoidance of turbines (Dierschke et al., 2016)[53]. This strong displacement effect has been shown in studies in the German North Sea to be significant at 15km from the wind farm, based on before and after studies on a long-term data set (Mendel et al., 2019)[54], a finding confirmed by satellite tracking and digital aerial surveys (Heinänen et al. 2020)[55]. Recent analysis by the Centre for Research into Ecological and Environmental Modelling of aerial surveys carried out in Liverpool Bay also showed a strong effect whereby, in all cases, the presence of a wind farm decreased the estimated number of birds compared to the

[51] Statutory Nature Conservation Bodies (Natural Resources Wales (NRW), Department of Agriculture, Environment and Rural Affairs / Northern Ireland Environment Agency (DAERA/NIEA), Natural England (NE), Scottish Natural Heritage (SNH) and Joint Nature Conservation Committee (JNCC)) (2022) Joint SNCB1 Interim Displacement Advice Note.

[52] Furness, R. W., Wade, H. M., & Masden, E. A. (2013). Assessing vulnerability of marine bird populations to offshore wind farms. *Journal of environmental management*, *119*, 56-66

[53] Dierschke, V., Furness, R. W., & Garthe, S. (2016). Seabirds and offshore wind farms in European waters: Avoidance and attraction. *Biological Conservation*, *202*, 59-68

[54] Mendel, B., Schwemmer, P., Peschko, V., Müller, S., Schwemmer, H., Mercker, M., & Garthe, S. (2019). Operational offshore wind farms and associated ship traffic cause profound changes in distribution patterns of Loons (Gavia spp.). *Journal of environmental management*, *231*, 429-438

[55] Heinänen, S., Žydelis, R., Kleinschmidt, B., Dorsch, M., Burger, C., Morkūnas, J., ... & Nehls, G. (2020). Satellite telemetry and digital aerial surveys show strong displacement of red-throated divers (Gavia stellata) from offshore wind farms. *Marine environmental research*, *160*, 104989

absence of a wind farm. This effect was apparent up to 3.8km from the centre of the wind farm (Burt et al., 2022)[56].

4.40. As such, there is clear evidence of the displacement of red-throated diver from offshore wind farms with a significant effect detectable in some cases at considerable distance from the wind farm. The numbers of red throated divers, their distribution within the SPA and their ability to use all suitable habitat contained in the SPA are relevant to the SPA conservation objectives but are not considered by the Applicant. If, as the evidence suggests, red-throated divers are displaced from part of the SPA which would otherwise be suitable for them the effect is to reduce the functional size of the SPA, undermining the conservation objectives. As detailed by Natural England, there already are extensive current OWF projects in the vicinity of the SPA as well as those that have received planning permission but are not constructed. These will already be causing perturbation to the SPA red-throated diver population and any further disturbance will exacerbate this. The RSPB therefore cannot rule out an adverse impact of displacement on the integrity of the Outer Thames Estuary SPA, arising through the project alone and in combination.

A lack of consideration of impacts compounded by Highly Pathogenic Avian Influenza

4.41. The current H5N1 strain of Highly Pathogenic Avian Influenza (HPAI) has affected UK wild bird populations on an unprecedented scale since it was first recorded in the country in Great Skuas in summer 2021, with seabirds and waterfowl particularly affected. The extent of reported mortalities attributed to HPAI in the UK and across Europe in 2022 demonstrated that HPAI had become one of the biggest immediate conservation threats faced by multiple seabird species, including some for which the UK population is of global importance. Many species impacted by HPAI are of conservation concern in the UK, and the outbreak comes on top of widespread declines reported by the latest seabird census (Burnell et al, 2023). RSPB conducted a repeat census in 2023 to determine the scale of impact of the outbreak on seabird populations, which for multiple species showed a decrease of >10% in overall counts across all UK sites that were surveyed in 2023. A further outbreak of HPAI in 2023, which largely occurred after the counts were undertaken, means that impacts of HPAI on the breeding populations of affected species is likely to be worse than indicated in the report. There remains the potential for ongoing impacts as the disease progresses.

4.42. The impacts of HPAI and thus reductions in colony sizes may be manifested through the direct effects of mortality or the indirect effects arising through physiological constraints due to infection. These could arise for example, through impaired foraging ability or lower productivity. The severity and rate of recovery from these effects will determine the utilisation of space by seabird populations and consequently their interactions with wind farms. As well as changes to population numbers, HPAI infection is likely to cause variation in space use over time between individual birds and colonies, in part due to a likely decrease in competition, but also potentially related to physiological changes, such as in vision and fitness. This change in space use will be reflected in changes in the extent of interactions

[56] Burt, M.L., Mackenzie, M.L., Bradbury, G. and Darke, J. 2022. Investigating effects of shipping on common scoter and red-throated diver distributions in Liverpool Bay SPA. NECR425. Natural England

with wind farms, and in the lethal and sub-lethal consequences of those interactions. Recent research into the impact of the 2022 HPAI outbreak on gannet movements and space use has revealed that surviving gannets instigated unprecedented long-distance exploratory movements during the outbreak, likely as a short-term response to HPAI-related disturbance (Jeglinski et al. 2023[57]). Breeding gannets tracked several months following the outbreak showed a high degree of breeding colony fidelity and foraging time budgets that are characteristic for the species, but birds showed reduced foraging effort, that is foraging trips were shorter in duration, and in maximal and total distance travelled, compared to data from previous years, likely because of reduced competition (Gremillet et al. 2023[58]). The RSPB is concerned that the implications arising from the HPAI outbreak have not been fully considered in the assessment.

4.43. It is currently unclear what the ultimate population scale impacts of the outbreak will be, but it is likely that they will be severe. This scale of impact means that seabird populations will be much less robust to any additional mortality arising from offshore wind farm developments. It also means that there may need to be a reassessment of whether SPA populations are in Favourable Conservation Status. With such uncertainty as to the future of these populations, there is the need for a high level of precaution to be included in examination of impacts arising from the proposed development. This caution must also be applied to claims on the potential success of proposed compensation measures.

Inadequate consideration of wider ecosystem impacts

4.44. The RSPB do not consider that the Applicant has given adequate consideration to the potential wider ecosystem impacts that may arise through the construction and operation of the wind farm. For example, there is potential for seabirds to have greater energy expenditure as a result of loss of foraging opportunities, greater commuting flight times, and increased metabolic costs of flight in areas with turbulence flumes. While these to a limited extent are considered with the analysis of displacement and barrier effects under mortality rate, they are not explicitly considered in the assessment.

4.45. Changes in ocean stratification have also not been explicitly considered. Such changes in hydrodynamic regimes can have subsequent effects on the stability and strength of oceanographic features such as tidal mixing fronts[59]. These fronts are important drivers of the spatio-temporal availability of prey species for seabirds[60] and so modification to these through the presence of turbines can have profound effects on the distribution and fitness

[57] Jeglinski, J.W., Lane, J.V., Votier, S.C., Furness, R.W., Hamer, K.C., McCafferty, D.J., Nager, R.G., Sheddan, M., Wanless, S. and Matthiopoulos, J., 2024. HPAIV outbreak triggers short-term colony connectivity in a seabird metapopulation. Scientific Reports, 14(1), p.3126

[58] Grémillet, D., Ponchon, A., Provost, P., Gamble, A., Abed-Zahar, M., Bernard, A., Courbin, N., Delavaud, G., Deniau, A., Fort, J. and Hamer, K.C., 2023. Strong breeding colony fidelity in northern gannets following high pathogenicity avian influenza virus (HPAIV) outbreak. Biological Conservation, 286, p.110269.

[59] Isaksson, N., Scott, B.E., Hunt, G.L., Benninghaus, E., Declerck, M., Gormley, K., Harris, C., Sjöstrand, S., Trifonova, N.I., Waggitt, J.J. and Wihsgott, J.U., 2023. A paradigm for understanding whole ecosystem effects of offshore wind farms in shelf seas. *ICES Journal of Marine Science*, p.fsad194.

[60] Cleasby, I.R., Owen, E., Miller, P.I., Jones, R.J., Wilson, L.J. and Bolton, M., 2024. Functional responses of a medium-ranging marine predator highlight the importance of frontal zones as foraging locations. *Marine Ecology Progress Series*, *740*, pp.175-191.

of these species. The RSPB is concerned that these consequences of modifications to oceanographic dynamics have not been properly addressed.

Displacement and mortality rates used in the assessment of impacts on Guillemot and Razorbill arising through distributional responses

4.46. Following advice from Natural England, the Applicant has included a range of displacement and mortality rates in the displacement matrix for Guillemot and Razorbill for the worst case scenario. There are a range of scenarios favoured by different parties; Natural England previously favour a range of 30-70% displacement and 1-10% mortality and the Applicant favouring single values, 50% displacement and 1% mortality. Natural England have now revised that position for a range of mortality rates of 1-2%. This means that the worst case scenario is now 70% displacement rate and 2% mortality. The RSPB prefer that a single displacement rate is presented, 60%, and a range of mortality rates, 3-5% during the breeding season, and 1-3% in the non-breeding season, as these represent a most probable range of impacts, although a wider range would be plausible. This is also the position that NatureScot take in their assessments. This means that the worst case scenario would be 60% displacement and 5% breeding and 3% non-breeding mortality rate. While these values are included in the matrices, they are not taken forward for PVA assessment.

4.47. While this range of preferred rates is somewhat challenging to interpret, and further confused by the discrepancy in advice provided by the SNCBs, in fact it is reflective of both the inherent uncertainty within the assessment of displacement of offshore wind farms and the range of values that have been reported in studies of the effect of windfarms. For example, work by Peschko *et al*., (2020)[61] to examine displacement of guillemot breeding at Heligoland in the German North Sea revealed a 63% reduction in the resource selection of the wind farm areas, which increased to 79% when the blades were rotating. Conversely recent work by Trinder *et al,* (2024)[62] found no evidence of within wind farm displacement of auks. A recent independent and peer-reviewed synthesis of all available studies[63] found a significant negative effect of the presence of wind farms on auk species, with 60% of sites where auks had been recorded noting a negative effect. Moreover, this study highlighted the large variability in reported displacement rates.

4.48. Due to the range of possible rates, and the inherent dynamism of the marine environment, the RSPB believe it is appropriate to present a range of possible outcomes, and consequent to the uncertainty within them, apply a suitable degree of precaution to the assessment of the significance of these outcomes.

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[61] Peschko, V., Mercker, M., & Garthe, S. (2020). Telemetry reveals strong effects of offshore wind farms on behaviour and habitat use of common guillemots (Uria aalge) during the breeding season. *Marine Biology*, *167*(8), 118.

[62] Trinder, M., O'Brien, S. H., & Deimel, J. (2024). A new method for quantifying redistribution of seabirds within operational offshore wind farms finds no evidence of within-wind farm displacement. *Frontiers in Marine Science*, *11*, 1235061.

[63] Lamb, J., Gulka, J., Adams, E., Cook, A., & Williams, K. A. (2024). A synthetic analysis of post-construction displacement and attraction of marine birds at offshore wind energy installations. *Environmental Impact Assessment Review*, *108*, 107611.

5. Derogation case: the RSPB's approach to evaluating compensation measures under the Conservation of Habitats and Species Regulations 2017 (as amended)

Introduction

5.1. This section sets out the RSPB's approach to evaluating compensation measures. It includes our general approach to assessing compensation proposals and the level of detail we consider is required in order to evaluate compensation proposals as part of the Examination process, before drawing out some general issues raised by the Applicant's proposals. We have set it out under the following headings:

- The RSPB's approach to assessing compensation proposals;
- What level of detail is required on proposed compensation measures?
- Generic issues raised by the Applicant's compensation proposals:
  - Lack of specific proposals and locations for compensation measures
  - Scale of compensation
  - Lead-in times for compensation
  - Lifetime of compensation in relation to damage

5.2. Section 6 following sets out, as far as practicable at this time, the RSPB's more detailed comments on the Applicant's specific compensation proposals.

The RSPB's approach to assessing compensation proposals

5.3. The RSPB has reviewed both the EC[64] and Defra[65] guidance on compensatory measures. Both are in broad alignment as to the principles to adopt when considering compensatory measures. This review also draws on the RSPB's over 20 years' experience evaluating and negotiating compensation proposals under the Habitats Regulations by developers across various sectors. As the EC Guidance is fuller, we have used that as our primary reference, while drawing out any additional points made in the Defra guidance since it is UK focused.

5.4. In Table 1, we summarise the EC's criteria for designing compensatory measures and annotate them with additional commentary based on the RSPB's experience of the principles that should be applied when assessing compensatory measures. We will use the combination of the EC guidance and the RSPB's experience in this field to assess compensatory measures put forward by scheme proponents.

[64] EC (2018) Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (21/11/18) C(2018) 7621 final. Due to the further details this EU guidance provides, we believe it is important to also consider along with the Defra guidance

[65] Defra (2021) https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site. Accessed October 2024.

Table 1: Criteria for designing compensatory measures

EC criteria	EC guidance summary (emphasis added)	RSPB additional commentary
Targeted	Measures should be the **most appropriate to the impact predicted** and **focused on objectives and targets addressing the Natura 2000 elements affected**. Must **refer to structural and functional aspects of site integrity and habitats/species affected**. **Must consist of ecological measures**: payments to individuals/funds are not appropriate.	Clear objectives and success criteria must be established for the compensation measures. Must address the ecological functions and processes required by impacted species/habitat. Requires shared understanding and agreement on what the impacts are i.e. need to agree nature, magnitude including that they will continue for as long as the project's impacts. This includes the time likely to be required for the SAC/SPA to recover from those impacts in the case of proposals that are in place for a specified time period. This is in order to define objectives for compensation measures and to set out the success criteria to determine whether those objectives have been/are being achieved.
Effective	**Based on best scientific knowledge available alongside specific investigations for the location where the measures will be implemented**. Must be **feasible and operational in reinstating the conditions needed to ensure the overall coherence** of the Natura 2000 network. **Measures where no reasonable guarantee of success should not be considered**. The likely success of the compensation scheme should influence final approval of the plan or project in line with the prevention principle. The **most effective option, with the greatest chance of success, must be chosen**. **Detailed monitoring required** to ensure long-term effectiveness with remediation provisions if shown to be less effective.	Scientific evaluation of proposed measures must be carried out before consent is granted to avoid agreeing to measures that is/are not effective or technically feasible. This should include appropriate baseline survey and assessment. Compensation must address the impacted SPA/SAC (or Ramsar site) feature to ensure overall coherence of the network for that feature is maintained. Substitution is not acceptable. Must be clearly defined timescales for delivery and measuring success (See success criteria under Targeted above). Monitoring must directly relate to the target species or habitat and the relevant ecological functions and processes. The compensation measures should be provided in perpetuity in line with obligations to ensure the overall coherence of the National Site Network is maintained.

EC criteria	EC guidance summary (emphasis added)	RSPB additional commentary
		Where it is not possible to devise compensatory measures to offset the adverse effects on site integrity, the project should not proceed.
Technical feasibility	**Design must follow scientific criteria and evaluation** in line with best scientific knowledge and take into account the specific requirements of the ecological features to be reinstated.	See **Effective** above.
Extent	Extent required **directly related to**: - the **quantitative and qualitative aspects inherent to the elements of integrity likely to be impaired** - **estimated effectiveness of the measure(s)** Therefore, ratios best set on a case-by-case basis. Ratios should generally be well above 1:1. Ratios of 1:1 or below only considered when shown measures will be fully effective in reinstating structure and functionality in a short period of time.	Based on an assessment of the necessary ecological requirements to restore species' populations and the related habitat structure and functions identified in the compensation objectives. Determining the minimum appropriate quantity will require an understanding of the quality of the compensation measures and how effective they will be in reinstating the required structures and functions. Any identified uncertainty in success should be factored in to increased ratios. Ratios need to be used where they make ecological sense and will help secure a successful outcome by providing more of something. Simply multiplying capacity to address uncertainty risks giving a false level of confidence. If there is no reasonable guarantee of success that measure should not be considered (see **Effective** under EC criteria).
Location	**Located in areas where they will be most effective** in maintaining overall coherence of the Natura 2000 network. Pre-conditions to be met include: - **must be within same range/ migration route/wintering areas for bird species** and **provide functions comparable those justifying selection of original site esp. geographical distribution**; - **must have/be able to develop the ecological structure and functions required by the relevant species** (or habitat) - **must not jeopardise integrity of any other Natura 2000 site**. Spatial search hierarchy starting as close as possible to the impacted Natura 2000 site and working out from there.	While the preference is for compensation measures as geographically close to the location of the damage, it is important to consider whether or not the compensation measures will be subject to pressures impacting their efficacy in that location e.g. prey availability, disturbance, and/or other impacts from the same or similar developments such as collision risk or displacement due to offshore wind farms. Therefore, compensation measures should be located so as to maximise proximity while minimising external pressures that may reduce likelihood of success.

EC criteria	EC guidance summary (emphasis added)	RSPB additional commentary
		Compensation measures proposed to benefit one SPA/SAC/Ramsar site feature must not result in damage to the integrity of any other SPA/SAC/Ramsar site and their features.
Timing	Case by case approach but **must provide continuity in the ecological processes essential to maintain the structure and functions that contribute to the Natura 2000 network coherence**. Requires **tight co-ordination between implementation of the plan or project and the compensation measures**. Factors to consider include: - **no irreversible damage to the site before compensation in place** - **compensation operational at the time damage occurs**. If not possible, over-compensation required - **time lags only admissible if will not compromise objective of "no net loss" to coherence of Natura 2000 network**; - May be possible to scale down in time depending on whether the negative effects are expected to arise in short, medium or long term. **All technical, legal or financial provisions must be completed before plan or project implementation starts** to prevent unforeseen delays that compromise effective compensation measures.	Compensation measures should be fully functional before any damage occurs to ensure the overall coherence of the National Site Network is protected. This requires careful alignment of the timelines for implementing the plan or project and the compensation measures. Suggested time lags in delivering fully functional compensation will need to be carefully considered and can only be accepted where this will not compromise the continuity of essential ecological processes, Any effect of delay should be factored into the design and additional compensation measures provided (see also **Extent** above).
Long-term implementation	**Legal and financial security required for long-term implementation** and **for protection, monitoring and maintenance of sites to be secured before impacts occur.**	Legal rights to secure and implement the compensation measures must be in place prior to consent being granted. And robust financial guarantees are required to fund implementation, monitoring and any necessary remediation measures. In line with Government policy, the Government should commit to including compensation measures, once delivered, within the National Site Network.

5.5. The current Defra guidance (aimed at competent authorities) reinforces some of the points above:

- Must be confident the measures will fully compensate for negative effects.
- The measure is technically feasible based on scientific evidence and previous examples.

- Whether the compensation measure is financially feasible.
- Compensation should be no more than is needed (to protect the coherence of the National Site Network).
- How the compensation will be carried out, including how it will be managed and monitored over time, and how it has been secured.
- How long the compensation measure will take to reach the required quality.
- Should make sure the compensation measures will remain in place all the time they are needed.
- Must put in place all necessary legal, technical, financial and monitoring arrangements.
- Compensation measures should usually be in place and effective before the negative effect is allowed to occur.

5.6. Overall, this can be expressed in another way to help identify ecologically effective compensation and the options to deliver it:

- **Understanding and defining what is ecologically effective compensation for a given feature** i.e. what is needed to address the ecological functions affected by the predicted impact(s) e.g. improvements in breeding productivity of an impacted seabird species;
- **Identifying the potential options** to provide ecologically effective compensation in principle and agreeing the scale of compensation required to protect the overall coherence of the National Site Network for the impacted feature taking account of the management objectives for that Network. This should consider factors affecting the likely success of the compensation measure in order to identify appropriate search criteria. In the case of seabirds, this might include avoiding proximity to current and planned offshore wind farms while ensuring access to areas with good food supply etc;
- **Applying a hierarchical search for suitable locations** to carry out those options to determine where they might be feasible. This should follow the following spatial hierarchy based on where the benefit of the compensation will accrue:
    - Provides benefit to the impacted SPA/SAC where that is appropriate given the risk factors considered above. Note: this is not the same as being located inside the MPA, which in UK MPA terms is unlikely to be feasible given the constrained boundaries usually applied i.e. all areas within the boundary are integral to its functioning already;
    - Provides benefit to a different SPA/SAC for the impacted feature;
    - A “de nouveau” site that provides benefit to the feature itself and can be added into the relevant site network once it has met its compensation objectives.
- **Detailed assessment of the feasibility of successfully delivering the chosen option** in the selected location(s). It is important to separate out the type of measure (and its ecological effectiveness as compensation) and the likelihood of it succeeding in practice at a particular location to meet the required compensation objectives. Certainty of success of a specific measure per se is not the same as whether it will be ecologically effective as compensation. However, it needs to be deemed potentially ecologically effective as compensation first before detailed options are drawn up and assessed. If it is not potentially ecologically effective as compensation, then it should not be considered further (in line with existing Defra guidance).

Additionality

5.7. The EC guidance (section 5.4.1) makes the general, overarching point that:

"Compensatory measures should be additional to the actions that are normal practice under the Habitats and Birds Directives or obligations laid down in EU law"

5.8. In practical and legal terms, this means compensatory measures must be additional to:

- Measures necessary to site management of the affected SPA or SAC e.g. to restore a designated feature to favourable status;
- Measures designed to meet other obligations e.g. achievement of Good Environmental Status (GES) under the Marine Strategy Regulations 2010.[66]

What level of detail is required on proposed compensation measures?

5.9. In his decision[67] on the Hornsea Project Three scheme, the Secretary of State for Business, Energy and Industrial Strategy set out clear expectations that offshore wind (and other) developers should submit (what have been termed by other developers) "in principle" compensation measure packages as part of their application, following appropriate pre-application discussions with stakeholders (emphasis added):

"6.3 The Secretary of State is clear that the development consent process for nationally significant infrastructure projects is not designed for consultation on complex issues, such as HRA, to take place after the conclusion of the examination. On occasion, as a pragmatic response to particular circumstances, he may undertake such consultation, but no reliance should be placed on the fact that he will always do so. In this instance, he has, on balance, accepted that the situation in respect of potential significant adverse effects on the sites referred to in para 6.2 was novel and so has exercised his discretion, and allowed the Applicant to make further representations on the matter of possible compensatory measures for those sites. However, he wishes to make it clear that, in order to maintain the efficient functioning of the development consenting regime, he may not always request post-examination representations on such matters, indeed it should be assumed that he will not do so, and he may therefore make decisions on such evidence as is in front of him following his receipt of the ExA's report. ***It is therefore important that potential adverse impacts on the integrity of designated sites are identified during the pre-application period and full consideration is given to the need for derogation of the Habitats Regulations during the examination****. He expects Applicants and statutory nature conservation bodies ("SNCBs") to engage constructively during the pre-application period and* ***provide all necessary evidence on these matters, including possible compensatory measures, for consideration during the examination****.*

6.4 This does not mean that it is necessary for Applicants to agree with SNCBs if SNCBs consider that there would be significant adverse impacts on designated sites. The final

[66] Marine Strategy Regulations 2010. No. 1627. http://www.legislation.gov.uk/uksi/2010/1627/contents/made Accessed 22 October 2024.

[67] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003265-EN010080%20Hornsea%20Three%20-%20Secretary%20of%20State%20Decision%20Letter.pdf Accessed 22 October 2024.

decision on such matters remains for the Secretary of State (though the Secretary of State reserves the right not to request further evidence from Applicants following the examination). Applicants should be assured that where they disagree with SNCBs and maintain a position that there are no significant adverse impacts, but provide evidence of possible compensatory measures for consideration at the examination on a "without prejudice" basis, both the ExA in the examination and the Secretary of State in the decision period will give full and proper consideration to the question of whether there are or are not significant adverse impacts. It will not be assumed that the provision of information regarding possible compensatory measures signifies agreement as to the existence of significant adverse impacts. The ExA will be required to provide an opinion on the sufficiency of the proposed compensation even if it considers that compensation is not required (in case the Secretary of State disagrees with that conclusion), but such measures would only be required if the Secretary of State were to find that there would be significant adverse impacts (and that the proposed compensatory measures are appropriate)."

5.10. Statements to similar effect were made in subsequent Secretary of State decisions e.g. on the Norfolk Boreas and Norfolk Vanguard decisions.

5.11. In this context, the RSPB does not consider "in principle" equates to "outline" proposals such that all/most of the critical issues are deferred in order to be addressed post-DCO consent. We consider this would completely undermine confidence in what the compensation measures will comprise and that the public interest to protect the coherence of the National Site Network can be secured.

5.12. Based on its review of various offshore wind farm compensation proposals over the last 3-4 years, the RSPB considers that much greater detail about the location, design and implementation, monitoring and review of any proposed compensatory measures is needed to inform the application and examination process and enable proper public scrutiny. Details of the associated agreements, consents and permissions required to deliver the compensation measures should also be available for scrutiny. This in turn should provide the Secretary of State with the necessary confidence as to whether those measures can be secured and implemented with a reasonable guarantee of success, thereby protecting the coherence of the National Site Network.

5.13. We consider there are detailed requirements that should be subject to public scrutiny during the Examination process and settled before its conclusion. This would enable the final DCO to include all necessary conditions and requirements and any lack of confidence that compensation measures have/can be secured and/or will have a reasonable guarantee of success highlighted, so that the Examiners can take account of these concerns. Therefore, details of the proposals should be available as part of the application documentation in order that any potential interested parties have a full opportunity to review and assess their adequacy at an early stage of the Examination. This helps ensure that should further information and consideration be required this is possible within the Examination timetable, minimising the need for further submissions.

5.14. The following are key details, with some adaptation, common to all compensation measures that, we believe, should be included within proposals preferably with the application

documents or at least at the very early stages of the Examination. Once these have been completed and relevant processes completed, the Secretary of State should be satisfied that the relevant legal consents are secured before any decision on DCO consent, assuming consent for the compensation measure is granted by the relevant decision-making authority. If consent has not been granted, the Examining Authority and Secretary of State would know in advance.

- **Nature/magnitude of compensation**: sufficient detail to enable review of:
  - the scale of compensation required in relation to the predicted impacts;
  - the detailed compensation proposals including objectives and associated success criteria to address those impacts;
  - Identify the relevant consenting and/or licensing mechanisms required; Identify any potential impacts of the proposed measure on the receptor site(s) and surrounding environment and carry out appropriate screening;
  - Based on this, identify any particular impact assessment requirements necessary which might arise from likely direct and indirect effects of the compensation measure on other receptors (e.g. Environmental Impact Assessment, Habitats Regulations Assessment, SSSI consents etc);
  - best estimate of the timeline by which each proposed compensation measure can be fully implemented and when it will achieve its objectives (including assessment of ecological uncertainty), the latter to work out the lead-in time necessary to implement the compensation measure and ensure the overall coherence of the National Site Network is protected;
- **Location:** identification of precise location of compensation measure and legal securing of proposed compensation sites/measures with ability to scrutinise:
  - compensation design (detail);
  - evidence of relevant consents, licences, agreements etc being secured or at least being able to be legally secured;
  - both relevant processes and legal consents are included within the DCO; and
  - evidence of relevant legal agreements to secure land to ensure compatibility with compensation objectives are possible;
- **Monitoring and review:** detailed monitoring and review packages. As well as the relevant technical detail addressing the objectives for each compensation measure and success criteria, these should include:
  - Detailed terms of reference and ways of working for any “regulators group” to oversee implementation of measures, review periods, feedback loops etc;
  - Commitment to ensure the data and results of monitoring are publicly available to enable lessons to be learned and applied elsewhere, and to demonstrate the level of success and compliance.
- **Compliance and enforcement:** details and evidence of how the proposed compensation measures will be subject to review by the relevant regulator and the legal mechanisms available to those regulators to review and enforce any approved compensation plans e.g. if the agreed success criteria are not met. This is especially important if the proposed measures lie outside the jurisdiction of the decision-making authority.

5.15. At Annex G1 of Appendix G to its relevant representation (RR- 243) Natural England has included a checklist it has developed for compensatory measure submissions. We fully support Natural England's advice especially the approach and level of detail considered to be required as part of the application documentation. It flows from the criteria and other factors we have described above and provides a robust basis for the evidence on each proposed compensation measure that should be submitted as part of any application.

5.16. The RSPB considers there are significant, detailed considerations for compensation measures that are essential to consider before consent is granted; rather than assume an outline compensation measure can be translated in to a detailed and workable measure "on the ground" at a later date and all the necessary consents and agreements successfully secured.

5.17. Not only should these details be subject to public scrutiny as part of the Examination process but to enable these issues to be properly addressed by the Examiners and the Secretary of State, such confirmed details are vital for confidence to be placed on the measures proposed.

5.18. This would in turn enable the Examining Authority and Secretary of State to be able to make a fully informed decision on whether proposed compensatory measures have been secured, have a reasonable guarantee of success and therefore will protect the overall coherence of the National Site Network.

5.19. The criteria, guidance and associated requirements set out above will guide how the RSPB assesses the North Falls compensation measure proposals.

Generic issues raised by the Applicant's compensation proposals

Lack of specific proposals and locations for compensation measures

5.20. As set out in our relevant representation (RR-294), the RSPB's overarching comment is that the Applicant has failed to put forward the necessary detail to enable proper scrutiny of the compensation measures for any impacted species. Neither have any been secured. It is therefore not possible at this stage for the RSPB to assess any of the compensation measures properly and provide advice to the Examining Authority on whether each has a reasonable guarantee of success in meeting specific, agreed compensation objectives.

5.21. However, we have, as far as is practicable, provided comments in section 6 on each of the broad compensation measures.

Scale of compensation

5.22. The RSPB consider it would, as far as practicable, be sensible to agree the range of predicted mortalities (using the preferred outputs of the Applicant, Natural England and the RSPB) and apply these to an agreed approach to calculating the scale of compensation that may be required.

Lead-in times for compensation

5.23. Any implementation timetable must ensure that the compensation measure is in place and ecologically functional before the damage occurs. Factors that need to be taken in to account in developing the required timeline include:

- The breeding ecology of the impacts species and timescales likely to be required for the agreed compensation measure to be ecologically effective;
- The point at which the adverse effect is predicted to occur. This will depend on the nature of the impact e.g.:
  - For collision: it would be at the point the wind farm becomes operational;
  - For displacement: it would be at an agreed point relating to when the physical presence of the wind farm infrastructure (operational or not) is deemed to be giving rise to displacement that is impacting on the relevant seabird species' population.
- That it is highly unlikely that the compensation will be delivering at the scale required before the impacts occur or during any period of colony establishment.

Lifetime of compensation in relation to damage

5.24. It is the RSPB's view that compensation measures should remain in place for as long as the project's adverse impacts on the SAC/SPA/Ramsar site continue. Typically, this has been "in perpetuity" as impacts have been permanent. We recognise this is not automatically the case when dealing with offshore wind farms. However, it is also not as simple as just the lifetime of the development as proposed by the Applicant e.g. Schedule 15, paragraph 8 in REP3-008. This is in line with our advice to the Secretary of State regarding the Hornsea Project Three compensation. As noted in paragraph 2.18 of that response (November 2020)[68]:

"The length of time the compensation measures should be secured for must be based on the combination of the lifetime of the development plus the time it will take the affected seabird population to recover from the impacts."

5.25. Therefore, the apparent default proposal that the compensation measure will be decommissioned at around the end of the lifetime of the development is not acceptable. There are two key factors:

- Time lag in a new colony reaching the necessary population size meaning there is likely to be a significant delay before the required population is reached (assuming it is colonised);
- The time taken for the relevant population at the affected SPA to recover from the accumulated annual losses of e.g. breeding adults over the lifetime of the development, and once the wind farm has ceased operation. The development's impact on the affected SPA will likely go substantially beyond the lifetime of the development.

[68] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003259-RSPB.pdf Accessed 29 March 2022

5.26. We welcome the fact that the Secretary of State has followed our advice and that of Natural England on this matter in decisions on Hornsea Three and subsequent schemes by requiring that the various compensation measures be maintained beyond the operational lifetime of the development.

Summary

5.27. This section sets out the RSPB's approach to evaluating compensation measures. It includes our general approach to assessing compensation proposals and the level of detail we consider is required in order to evaluate compensation proposals as part of the examination process, before drawing out some general issues raised by the Applicant's proposals.

5.28. The RSPB has reviewed both the EC[69] and Defra[70] guidance on compensatory measures. This review also draws on the RSPB's over 20 years' experience evaluating and negotiating compensation proposals under the Habitats Regulations by developers across various sectors. As the EC Guidance is fuller, we have used that as our primary reference, while drawing out any additional points made in the Defra guidance since it is UK focused.

5.29. The RSPB will use the EC's criteria and its experience to evaluate the various compensation measures where sufficient detail is available:

- Targeted;
- Effective;
- Technical feasibility;
- Extent;
- Location;
- Timing;
- Long-term implementation;
- Additionality.

5.30. In addition, we have set out the level of detail we consider is required in any proposed compensation measures, and have gone on to identify generic issues raised by the Applicant's proposals:

- Lack of specific proposals and locations for compensation measures;
- Scale of compensation;
- Lead-in times for compensation;
- Lifetime of compensation in relation to damage.

[69] EC (2018) Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (21/11/18) C(2018) 7621 final.
[70] Defra (2021) https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site. Accessed October 2024.

6. RSPB detailed comments on the Applicant's specific compensation proposals

Introduction

6.1. Below we set out the RSPB's views on the following compensation measures put forward by the Applicant:

- Kittiwake.
- Guillemot and Razorbill.
- Lesser Black-backed Gull.
- Red-throated Diver.

6.2. As set out in our Relevant Representation, the RSPB considers the Applicant has failed to put forward the necessary detail to enable proper scrutiny of the compensation measures for any impacted species. Neither have any been secured. It is therefore not possible at this stage for the RSPB to assess any of the compensation measures properly and provide advice to the Examining Authority on whether each has a reasonable guarantee of success in meeting specific, agreed compensation objectives.

6.3. Our Relevant Representation submission (RR – 294) identified key issues where we consider further information is needed. To avoid repeating those submissions we have, where practicable, provided comment on the Applicant's response to the RSPB's Relevant Representation and focused on the latest Examination submissions. Any fuller evaluation of the proposed compensation measures will require more detailed information to be provided by the Applicant during the examination.

Kittiwake compensation measures

6.4. The Applicant's response to the RSPB's Relevant Representation on these measures is set out in REP1 – 045 at Rows 3, 4, 8, 13 and 14.

6.5. The Applicant highlights its conclusion that North Falls alone will have no adverse effect on integrity on any sites/species. It goes onto state that without prejudice compensatory measures are presented, and highlighting work is ongoing since the July 2024 submission. The Applicant re-iterates its conclusion to exclude collision impacts for the breeding season for Kittiwakes (Row 8), the RSPB disputes this position, as is explained in our Relevant Representation.

6.6. At Deadline 2 the Applicant submitted an updated Kittiwake Compensation Document (REP2-012) which provided further information on the Applicant's without prejudice measures. The Applicant's preferred compensatory measures identifies the use of an existing Artificial Nesting Structure (ANS) in Gateshead. A letter of intent from the owners of the structure (RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (East) Limited) is presented at APP-187. REP2 – 012 goes onto to highlight that a formal agreement with RWE is being sought prior to determination for an allocation 'proportionate' to the effects associated with the proposal. No information is presented on the mechanism by which that proportionate interest is to be agreed.

6.7. We acknowledge the approach of utilising ANS, which requires further clarity on the allocation arrangements to be made regarding the relationship with other developers interests in the ANS. Further information should be provided to the Examination on the approach to allocations.

6.8. We welcome the commitment to a monitoring programme, incorporated in a Kittiwake Compensation, Implementation and Monitoring Plan, a draft of which is attached as APP-193, as updated at Deadline 1 by REP1-026.

Guillemot and Razorbill compensation measures

6.9. The Applicant's response to the RSPB's Relevant Representation on these measures is set out in REP1 – 045 at Rows 3, 4, 8, 13 and 14.

6.10. Our Relevant Representation described in detail the context surrounding the challenges of determining whether recreational disturbance is having an effect on breeding seabird colonies, and the requirement for essential monitoring to understand the nature of disturbance events at seabird colonies and the factors affecting colony productivity.

6.11. The Applicant presented without prejudice compensatory measures for these species in its Guillemot and Razorbill Compensation Document (APP-194), as updated at Deadline 1 by REP1-028. The measures centre on an approach (advocated by NE) to reduce recreational disturbance at breeding colonies of Guillemot and Razorbill in south west England known to have had historical declines by means of activities including wardening, fencing and signage (paragraph 65, REP1-028). Justification for the general approach is set out at paragraphs 66-83.

6.12. A longlist of potentially suitable sites is identified focused on colonies in Devon and Cornwall using existing seabird data. This long list has been condensed on the basis of further screening to a short list of a dozen locations as shown on Figures 2 and 3 of REP1 - 028. Final selection of sites is identified as taking place post consent, following further stakeholder consultation, site-based colony surveys and disturbance studies.

6.13. The RSPB consider there is currently much uncertainty over the likely efficacy of the Applicant's proposed compensation measures in the absence of more detail.

6.14. It is the RSPB's understanding that there remains significant scientific research required to determine the contribution of anthropogenic pressure (such as recreational disturbance) to the breeding success of Guillemot and Razorbill colonies in SW England, alongside other possible factors affecting those colonies, including critical factors such as food supply.

6.15. Considerably more detailed scientific study will be required to:

- Determine if breeding productivity in each Guillemot and Razorbill colony is lower (over time) than it should be (and by how much);
- Whether anthropogenic pressures are contributing to any lower productivity and to what extent, versus other potential contributory factors;
- The extent to which the proposed measures could contribute to an increase in breeding productivity;

- The likely ecological outcome in terms of increased breeding population and breeding productivity.

6.16. Without such information, we consider it premature to place reliance on any predicted population benefits from such measures.

6.17. We note Natural England's broad support for the Applicant's approach but consider the lack of information currently available to the Examination on the issues raised in our Relevant Representation and herein makes these unsuitable as measures the Secretary of State could rely upon as compensation.

Lesser Black-backed Gull compensation measures

6.18. The Applicant's response to the RSPB's Relevant Representation on these measures is set out in REP1 – 045 at Rows 3, 4, 8, 13 and 14.

6.19. The Applicant accepts compensatory measures are required in connection with the impacts of the proposal on the Alde-Ore Estuary SPA population of Lesser Black-backed Gulls, in combination with other offshore windfarm projects. This is set out in Part 4 of the Applicant's Report to Inform Appropriate Assessment (RIAA) (APP-178) and Habitats Regulations Assessment Appendix 2 Lesser Black-backed Gull Compensation Document (APP-188). The latter was updated at Deadline 1 as REP1-018.

6.20. It is the RSPB's position as set out in our Relevant Representation that an adverse effect on integrity on the Lesser Black-backed Gull population cannot be ruled out alone or in combination with other offshore wind farm proposals.

6.21. The Applicant identifies compensatory measures focused on breeding enhancement (through predator exclusion/control, habitat management and disturbance management) and has identified a search area focused on the Suffolk coast, and also a search area focused on an offshore island in The Wash known as Outer Trial Bank.

6.22. In APP-188 the Applicant identified two sites on Orford Ness, Lantern Marshes, a site owned by the National Trust and a separate parcel in private ownership known as 'VE2', which is the site identified as the preferred compensation site by the Five Estuaries Offshore Wind Farm project for delivering compensatory measures for Lesser Black-backed Gulls. Also identified in general terms was the 'Orfordness-Shingle Street' area, together with Outer Trial Bank. No preferred option was identified.

6.23. At Deadline 1, REP1-018, the revised Lesser Black-backed Gull Compensation Document identifies the current shortlist of locations for compensatory measures as including Lantern Marshes, VE2, Gedgrave Marshes and Outer Trial Bank, discounting the Orfordness-Shingle Street option. The Applicant currently suggests that due to third party involvement in the Orfordness-Shingle Street area (which is a very significant area of shingle habitat) the potential for further ecological gain is limited (paragraph 90). The RSPB is unclear of the full rationale for the exclusion of a potentially suitable location and would welcome further information being presented to the Examination.

6.24. Gedgrave Marshes, outside the Alde-Ore Estuary SPA, on the west bank of the River Ore is included as a potential location for compensatory measures. The RSPB is familiar with this

location, as it lies in proximity to our nature reserve landholdings at RSPB Havergate Island, just to the south. We have previously raised with the Applicant in informal discussions the suitability of this general location for compensatory measures, albeit this was before the Applicant's current focus on the parcels shown shaded pink on Figure 4 (REP1-018). The RSPB has concerns over the suitability of these parcels given their proximity to existing footpaths, which run close to the northern boundary of the parcels and also entirely along the eastern (river) boundary. These are attractive and popular paths currently used by walkers with and without dogs, and we anticipate an increase in use in the event the riverside footpath is incorporated into the King Charles III England Coastal Path, which we understand to be the identified route in this location. Given existing and likely increasing levels of disturbance in the location, we do not favour this as a compensatory measure location given the likely negative impacts of disturbance on settlement by Lesser Black-backed Gulls and the availability of more suitable alternatives.

6.25. We note the remaining aspiration to progress Outer Trial Bank, as a potential location for compensatory LBBG measures. We made detailed comments on our concerns surrounding this and the key ornithological issues in our Relevant Representation.

6.26. In our opinion a greater understanding of the island's ecology, current influences on LBBG productivity and the implications of a rat eradication and management project on Outer Trial Bank (and on the wider protected area) are all still required. We are aware that surveys planned for 2024 were unfortunately not completed, leaving considerable uncertainties over the dynamics of the site, and we understand these are now deferred until summer 2025. This means this key information will not be available to the Examination and may not be available until after determination of the North Falls proposal. Due to the data and other gaps referred to above and in our Relevant Representation, at this point in time, the RSPB cannot see how Outer Trial Bank is capable of progression as suitable compensation.

6.27. It is the RSPB's position that of the currently presented compensation locations, Lantern Marshes and VE2 presents the most promising opportunities for delivering Lesser Black backed Gull compensation, subject to our request for further information on the exclusion of the Orfordness-Shingle Street location above.

6.28. Any collaboration with Five Estuaries regarding the use of VE2 requires elaboration however, in order to be specific about individual project requirements. How this would be achieved and codified is not currently clear, and we would welcome further information to be presented to the Examination on how the collaboration would operate.

6.29. We note the Applicant's agreement to presenting the compensation quantum required using both the Applicant's preferred approach using national productivity rates and nesting densities alongside the RSPB's preferred approach using Havergate Island productivity rate and densities. We will be pleased to continue discussing the Orford Ness based options including densities with the Applicant during the Examination and will provide further comment at later Examination deadlines as necessary.

Red-throated Diver Compensation Measures

6.30. The Applicant presented without prejudice compensatory measures for Red-throated Diver in their Red-throated Diver Compensation Document (APP-190). This was substantially updated at Deadline 1 (REP1-022) following the Applicant's employment of specialists experienced in Red-throated Diver breeding ecology and requirements.

6.31. The Applicant's without prejudice compensatory measures identifies that breeding habitat enhancement (further described below) is the preferred option for project-led delivery. This has NE support, albeit with caveats regarding the scale and the benefits that accrue to the UK National Site Network for Red-throated Divers (NE, REP3-061).

6.32. The RSPB agrees with Natural England (REP3-061) that there is a mismatch between the expected benefits of the proposed compensation measures (increased breeding productivity) and the nature of the impact on the Outer Thames Estuary SPA (habitat loss/degradation). This is acknowledged by the Applicant and is, in part, a consequence of there being no effective project-led compensation measure being available that they can implement at or in close proximity to the SPA (see below).

6.33. As a consequence, various compensation criteria set out Table 1 above cannot be directly met by the proposed provision of nesting rafts/habitat management, for example:

- Targeted: the proposed measure addresses the same species but very different ecological functions;
- Effective: addresses different ecological functions in a different part of the UK SPA network for Red-throated Divers;
- Extent: uncertainty as to the scale of the benefit accruing to the UK National Site Network for Red-throated Divers, whether that is in terms of birds recruited to the breeding population or to the wintering population. The Applicant currently predicts its measures will result in an increase of 2 breeding adults per year to the UK breeding population (NE, REP3-061).

6.34. The Applicant originally presented two principal options, involving projects in Scotland and Finland (APP-190). Following NE advice, the Applicant has now determined to focus entirely on a UK solution, focusing compensatory measures delivery in Scotland (paragraphs 39-40, 44, REP1-022). This is to meet NEs advice that compensation should ensure a contribution to the UK National Site Network (NSN).

6.35. The Applicant recognises that ideally compensatory measures would be delivered at the impact site, namely the Outer Thames Estuary SPA and environs, but this is not feasible as a project-led measure.

6.36. In REP1-022 the Applicant sets out its proposed approach which centres on increasing Red-throated Diver breeding success by habitat manipulation. This involves the provision of artificial nesting rafts on waterbodies and/or breeding habitat management/restoration in Scotland.

6.37. REP1-022 sets out a rationale and methodology for delivering these measures. A long list of potential lochs where either habitat management or raft provision could be implemented are shown graphically on Figures 2 and 3. Refinement of the long list is described as involving gathering further ecological evidence of breeding divers, stakeholder feedback, landowner attitudes and site visits involving relevant experts in Red-throated Diver breeding ecology and land management.

6.38. Considerable uncertainty remains over the logistics of the options, especially regarding access, permits and licences. No information is presented on any preliminary agreements for lease/purchase of any site.

6.39. The RSPB accept that the provision of rafts and/or habitat management could deliver increased Red-throated Diver breeding productivity, albeit not directly to the population of Red-throated Divers using the Outer Thames Estuary SPA, but would contribute to populations within the UK National Site Network. However, for the reasons set out above, we share Natural England's concerns regarding the scale of the benefits to the UK breeding population and agree that a more ambitious approach should be adopted.

6.40. We understand from the Examination discussions on 8 April 2025 during Issue Specific Hearing 2 (transcript pages 25&26, EV6-007) that further information on compensation measures for Red-throated Divers is to be provided to the Examination, including commentary on monitoring periods and adaptive management. The RSPB will review any further information on Red-throated Diver compensation measures submitted at future Deadlines and provide submissions to the Examination as appropriate.

Summary

6.41. Section 6 sets out the RSPB's views on the following compensation measures put forward by the Applicant:

- Kittiwake
- Guillemot and Razorbill
- Lesser Black-backed Gull
- Red-throated Diver

6.42. As set out above, the RSPB's key and most critical concern is that the Applicant has failed to put forward detailed, proven and location specific compensation measures for any impacted species.

6.43. The RSPB's current assessment on the Applicant's proposed measures is summarised below:

- Kittiwake:
    - Further information on the allocation arrangements at the Gateshead ANS.
- Guillemot and Razorbill:
    - RSPB currently question the suitability of the recreational disturbance focused measures given challenges in determining baselines, including disturbance levels,

colony productivities and the efficacy of the suggested measures to reduce disturbance.

- Lesser Black-backed Gull:
    - RSPB will engage with the Applicant regarding LBBG compensatory measures, including discussions over site suitability, nesting densities and productivities.
    - RSPB regard the Outer Trial Bank compensatory measures option as requiring more investigation and based on the available information, cannot see how it is capable of progression as compensation.
- Red-throated Diver:
    - RSPB will engage with the Applicant regarding these compensatory measures, including involving RSPB expertise from our land and habitat management activities in Scotland and elsewhere.
    - However, greater detail is required especially on the practicalities of delivering site-based measures in terms of access and permissions.
    - RSPB will review the anticipated further Examination submissions on compensatory measures and provide feedback.

6.44. The Applicant refers in various documents to the potential for strategic or collaborative compensation, in substitution to project-led measures. Limited information is presented on this in the current submissions, but if such measures are being progressed, we would expect further information to be submitted to the Examination. This is essential if the Examining Authority and interested parties are to be able to understand the implications of this as a potential alternative compensatory measure capable of reliance upon by the Secretary of State in determining the DCO.