Hornsea Project Four

Applicant's Response to Deadline 6 Ornithology submissions

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Revision Summary

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Glossary

Term	Definition
Appropriate Assessment (AA)	An assessment to determine the implications of a plan or project on a European site in view of the site's Conservation Objectives. An AA forms part of the Habitats Regulations Assessment and is required when a plan or project is likely to have a significant effect on a European site.
Bio-season	Bird behaviour and abundance is recognised to differ across a calendar year, with particular months recognised as being part of different seasons. The biologically defined minimum population scales (BDMPS) bio-seasons used in this report are based on those in Furness (2015), hereafter referred to as bio-seasons.
Common guillemot biogeographic population	The north east Atlantic breeding population of guillemot which includes the *Uria aalge albionis* and *Uria aalge aalge* subspecies and includes individuals from the Flamborough and Filey Coast SPA (Stroud *et al.,* 2016). Proposed compensation measures will be undertaken within this populations breeding and migratory range.
Compensation / Compensatory Measures	If an Adverse Effect on the Integrity on a designated site is determined during the Secretary of State's Appropriate Assessment, compensatory measures for the impacted site (and relevant features) will be required. The term compensatory measures is not defined in the Habitats Regulations. Compensatory measures are however, considered to comprise those measures which are independent of the project, including any associated mitigation measures, and are intended to offset the negative effects of the plan or project so that the overall ecological coherence of the national site network is maintained.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Projects (NSIP).
Displacement	The potential for birds and other animals to avoid an area due to the presence of the wind turbines or from vessel activity.
HRA Derogation Provisions	Provisions set out under Regulations 64 and 68 of the Conservation of Habitats and Species Regulations 2017 and Regulations 29 and 36 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 that permit a plan or project with AEOI on a European site(s) to be consented provided the tests derived from Article 6(4) are met i.e. there are no alternative solutions, there are imperative reasons of overriding public interest and that necessary compensation measures are secured.
European site	A Special Area of Conservation (SAC) or candidate SAC (cSAC), a Special Protection Area (SPA) or a site listed as a Site of Community Importance (SCI). Potential SPAs (pSPAs), possible SACs (pSACs) and Ramsar sites are also afforded the same protection as European

	sites by the National Planning Policy Framework – para 176 (Ministry of Housing, Communities and Local Government, 2019). European offshore marine sites are also referred to as "European sites" for the purposes of this document.
Habitats Directive	European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Habitats Regulations	The Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017.
Habitats Regulations Assessment (HRA)	A process which helps determine likely significant effects and (where appropriate) assesses adverse impacts on the integrity of European sites. The process consists of up to four stages: screening, appropriate assessment, assessment of alternative solutions and assessment of imperative reasons of over-riding public interest (IROPI) and compensatory measures.
Hornsea Project Four Offshore Wind Farm	The proposed Hornsea Project Four Offshore Wind Farm project. The term covers all elements of the project (i.e. both the offshore and onshore). Hornsea Four infrastructure will include offshore generating stations (wind turbines), electrical export cables to landfall, and connection to the electricity transmission network. Hereafter referred to as Hornsea Four.
In-Combination Effect	The effect of Hornsea Four in-combination with the effects from other plans and projects on the same feature/receptor.
National Site Network	The network of European Sites in the UK. Prior to the UK's exit from the EU and the coming into force of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 these sites formed part of the EU ecological network knows as "Natura 2000".
Nature Directives	The EU Habitats Directive (European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) and EU Wild Birds Directive (79/409/EEC amended in 2009 to become Directive 2009/147/EC).
Net zero by 2050 commitment	The UK governments legally binding target of achieving net zero greenhouse gas emissions by 2050 as set out in the Climate Change Act 2008 (2050 Target Amendment) Order 2019.
Offshore Ornithology Engagement Group (OOEG)	The Hornsea Four Offshore Ornithology Engagement Group means the group that will assist, through consultation the undertaker in relation to the delivery of each compensation measures as identified in the kittiwake compensation plan, and the guillemot and razorbill compensation plan. Matters to be consulted upon to be determined by the Applicant and will include site selection, project/study design, methodology for implementing the measure, monitoring, and adaptive management options as set out in the kittiwake compensation plan, and the guillemot and razorbill compensation plan.
Orsted Hornsea Project Four Ltd.	The Applicant for the proposed Hornsea Project Four Offshore Wind Farm Development Consent Order (DCO).

Planning Inspectorate (PINS)	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
Razorbill biogeographic population	The breeding population of razorbill which includes *Alca torda islandica* and includes individuals from the Flamborough and Filey Coast SPA (Stroud *et al.,* 2016). Proposed compensation measures will be undertaken within this populations breeding and migratory range
Report to Inform Appropriate Assessment	The information that the Competent Authority needs to inform an Appropriate Assessment at Stage 2 of the HRA process and which has been provided by the Applicant in [the RIAA (**Volume 2, Annex 2: Report to Inform Appropriate Assessment REP5-012, REP2-005, AS-013, REP1-012 and APP-171-APP-178**)).
Special Area of Conservation (SAC)	Strictly protected sites designated pursuant to Article 3 of the Habitats Directive (via the Habitats Regulations) for habitats listed on Annex I and species listed on Annex II of the directive.
Special Protection Area (SPA)	Strictly protected sites designated pursuant to Article 4 of the Birds Directive (via the Habitats Regulations) for species listed on Annex I of the Directive and for regularly occurring migratory species.

Acronyms

Acronym	Definition
AA	Appropriate Assessment
AEOI	Adverse Effect on Integrity
BRAG	Black, Red, Amber, Green.
cSAC	Candidate Special Area of Conservation
DCO	Development Consent Order
DML	Deemed Marine Licence
FFC	Flamborough and Filey Coast
GRCP	Guillemot and Razorbill Compensation Plan
GRCIMP	Guillemot and Razorbill Compensation Implementation and Monitoring Plan
HRA	Habitats Regulations Assessment
JNCC SMP	Join Nature Conservation Council Seabird Monitoring Programme
LEB	Looming Eye Buoy
MMO	Marine Management Organisation
NGO	Non-Governmental Organisation
NFFO	National Federation of Fisheries Organisation
OOEG	Offshore Ornithology Engagement Group
PINS	Planning Inspectorate
pSACs	Possible Special Area of Conservation
pSPAs	Potential Special Protection Area

Acronym	Definition
AA	Appropriate Assessment
RIAA	Report to Inform Appropriate Assessment
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SCI	Site of Community Importance
SNCBs	Statutory Nature Conservation Bodies
SPA	Special Protection Area
UK	United Kingdom

1 Introduction

1.1.1.1 The Applicant has reviewed all Deadline 6 and Deadline 7 submissions and responded on individual stakeholders' submissions on Ornithology in under the separate Section headings below. As set out at Deadline 7 (REP7-083) due to the volume and complexity of comments received from Natural England and RSPB in relation to matters pertaining to ornithology, the limited time available between Deadline 6 and 7 and the volume of ongoing works, the Applicant has responded in detail in this document submission at Deadline 8.

2 Natural England's response to G5.34 Applicant's response to Natural England's additional guidance on apportioning of seabirds to FFC SPA for Hornsea Project Four [REP5a-018]

2.1 Consistency with Joint SNCB advice on the assessment of displacement

2.1.1.1 The Applicant accepts that Natural England are allowed to deviate from the standard guidance if there are significant grounds to do so. However, this does not explain why Natural England have gone against their own guidance provided to the Applicant during the Evidence Plan (EP) process at Expert Topic Group meeting (ETG) nine. The advice provided by Natural England with respect to the non-breeding bio-season for guillemot was as follows:

2.1.1.2 "*the BDMPS report (in reference to Furness, 2015) underpins that advice (in reference to the Joint SNCB, Updated 2022) and uses the smallest geographic unit that can't be broken down further. Natural England stressed that there would be limited value in trying to break it down and there would be lots of complications inherent in that process, noting that is unlikely that Natural England will agree with the methodology.*"

2.1.1.3 As stated above Natural England's very clear stance on seasonality, expressed during the pre-application Evidence Plan process, was not to split the non-breeding season up into further additional seasons and in doing so, Natural England were unlikely to agree with such approach. Furthermore, Natural England's concluding remark on the subject was as follows:

2.1.1.4 "*Natural England reiterated that Hornsea Four should* ***follow Natural England's standard advice*** *and not get into complicated and time-consuming methods.*"

2.1.1.5 This advice was therefore followed by the Applicant when assessing guillemot for predicted impacts from Hornsea Four and followed when considering how to accommodate proportioning a higher number of individuals to the FFC SPA during the non-breeding bio-season (agreement OFF-ORN 6.12 & 6.13 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B.1.1.1: Evidence Plan** (**APP-130**)). Natural England's final approach to apportionment as specified in (**REP5-115**) does not follow standard guidance which is contrary to original advice provided. Natural England providing significantly different advice to previous consultation at such a late stage in the examination without significant consultation with the Applicant, diminishes the usefulness of consultation and the pre-application Evidence Plan process.

2.2 Implications if the advice was applied to all OWF plans and projects

2.2.1.1 The Applicant acknowledges that within Natural England's guidance on apportionment (**REP5-115**) was specific to Hornsea Four. However, as presented within The Round Four Plan

Level Habitat Regulations Assessment (HRA) (NIRAS, 2022), preferred projects 1, 2 and 3 are all in a similar proximity as Hornsea Four to the FFC SPA, and therefore have the potential to have the same level of connectivity and site interaction with features of the FFC SPA as Hornsea Four. Therefore, in the absence of full 24 months of site-specific survey data being collected for these Round Four projects, it would be premature to say that any guidance provided to Hornsea Four would not be relevant to these Round Four projects also.

2.2.1.2 Natural England during the EP process raised concerns relating to the number of auks recorded during the non-breeding season months of August and September and requested a bespoke approach to apportionment during the non-breeding season (agreement OFF-ORN 6.12 & 6.13 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B.1.1.1: Evidence Plan** (**APP-130**)) although no guidance was provided by Natural England on how they would like this to be specifically considered. The Applicant adhered to this request, whilst accounting for their guidance on seasonality detailed above and came up with a logical solution (the details of the Applicant's bespoke pre-application apportionment approach is provided in **G5.25 Ornithology EIA and HRA Annex** (**REP6-028**)) which for guillemot resulted in nearly three times the number of guillemots being apportioned to the FFC SPA during the seven month non-breeding season in comparison to the standard non-breeding approach.

2.2.1.3 This approach can be considered highly precautionary considering there is no empirical evidence such as GPS tagging data to confirm Natural England's assumption that nearly all the guillemots recorded within Hornsea Four for the months of August and September are from the FFC SPA, especially considering that the Hornsea Four site specific survey data would suggest that the majority of birds from the FFC SPA migrate through the site in attendance with chicks during July (see **A5.5.1 Offshore and Intertidal Ornithology Baseline Characterisation Report** (**APP-074**) and **G5.9 Revised Ornithology Baseline** (**REP5a-009**)).

2.2.1.4 Natural England have suggested that the Applicant's bespoke pre-application apportionment approach departs from SNCB guidance. The Applicant understands this assertion to be incorrect and may be due in part to confusion on Natural England's part between the 'weighted mean peak' approach and the 'weighting approach to the non-breeding season apportionment' the Applicant has adopted (at the request of Natural England; agreement OFF-ORN 6.12 & 6.13 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B.1.1.1: Evidence Plan** (**APP-130**)). The later being the Applicant's bespoke pre-application apportionment approach which provides nearly three times the number of guillemots being apportioned to the FFC SPA during the seven-month non-breeding season in comparison to the standard non-breeding approach. The 'weighting approach to the non-breeding season apportionment' conforms to all SNCB guidance, including that in relation to seasonality, whilst the same cannot be said for Natural England's 'bespoke' approach.

2.2.1.5 In relation to Natural England's request to consider a bespoke approach to apportionment for razorbill, the Applicant reviewed the site-specific survey data for other North Sea projects, the approach taken to apportionment for other projects and the Hornsea Four site-specific survey data, in the absence of any empirical data such as GPS tagging on migratory movements of razorbills from the FFC SPA. The results of this review provided no evidence to suggest that the majority of razorbills within Hornsea Four during the post breeding

migration bio-season would be from the FFC SPA any more so than any other North Sea projects. In the absence of any data providing empirical evidence of razorbills from the FFC SPA specifically migrating through the Hornsea Four array area, then on a precautionary basis only a limited amount of apportionment should apply, hence why the Applicant used the standard approach to apportionment during the post-breeding migration bio-season for razorbill.

2.3 Significance of seasonal peak compared to other North Sea offshore wind projects

2.3.1.1 The Applicant would like to clarify that it's assertion that a similar peak in abundance is seen in the months of August to October across other North Sea OWFs relative to the abundance across other months in those areas (as presented in **G5.7 Indirect Effects of Forage Fish and Ornithology** (**REP5-085**)), not that similar peak abundances are apparent in other North Sea OWFs as Natural England suggests. The Applicant noted that the exception to this is from the consented Moray West, which have higher breeding and non-breeding peaks than Hornsea Four with respect to guillemot. In relation to razorbill, there are multiple consented OWFs (both Scottish and English projects) within the North Sea which have both higher non-breeding bio-season abundances and overall higher annual abundances. However, such projects were not advised to deviate from standard apportionment processes when assessing against connected designated sites.

2.3.1.2 As Natural England have stated, a like for like comparison between OWFs is not straight-forward and yet they have chosen to focus only on one factor which is species abundance within the OWF. As detailed within the Applicant's **G1.47 Auk Displacement and Mortality Evidence Review** (**REP2-085**), there are other variables which need to be considered and given equal weighting when inferring possible impacts on auk species, which include but not limited to:

- Region of sea;
- Number of wind turbine generators;
- Array area size (km2);
- Array density (turbine windswept area/km2);
- turbine size (including air gap and rotor diameter);
- Distance from shore;
- Levels of marine traffic; and
- Importance of the array area in context to the wider region.

2.3.1.3 Natural England's concern that an OWF with a significant abundance of auks correlates to significant risk to such species is not supported by empirical evidence. In fact, the opposite effect is readily observed in the empirical evidence presented by the Applicant (as presented in Figure 2 of **G1.47 Auk Displacement and Mortality Evidence Review** (**REP2-085**)) when considering auk abundance solely as the basis for predicted impacts from OWFs. However, the Applicant acknowledges that focusing solely on abundance alone for inferring likely impacts would neglects other variables (see 2.3.1.2) when concluding likely predicted impacts from Hornsea Four.

2.3.1.4 The Applicant's focus since the pre-application phase has been to develop a project which strikes a balance between minimising potential impacts to seabirds, whilst providing a

project which would substantially contribute towards the UKs net zero goals to combat climate change. This has resulted in the Applicant being innovative and progressing industry firsts on multiple aspects of the Environmental Impact Assessment (EIA) and HRA assessments such as:

- The developable area approach (DAA), which has resulted in a reduction of the overall array size from 846 km^2 to 468 km^2, with a keen focus on reducing the areas with highest auk densities (and associated abundance);
- Commitment to raise the wind turbine air gap by over 15m (from the standard 22m) resulting in significant reductions in predicted collision risk to seabirds, with additional potential for reductions in disturbance too;
- Testing and implementation of MRSea modelling tool in order to improve precision of the projects abundance and density estimates and mapped spatial distribution for key species; and
- Review of all available empirical evidence in relation to disturbance and displacement for auk species and gannet, in order to refine and significantly reduce current levels of uncertainty in displacement assessments. Two separate documents (G1.47 Auk Displacement and Mortality Evidence Review (REP2-085) and G2.9 Gannet Displacement and Mortality Report (REP2-045)) provide Industry improvements to further understand the mechanisms behind disturbance events and bird behaviour in relation to OWFs, what needs to be considered for a project when determining potential displacement levels and how that may lead to specific project level impacts.

2.3.1.5 The accumulation of all of this significant effort undertaken by the Applicant, is incorporated into the Applicant's approach to assessment and is why the Applicant can say with confidence that the displacement range is proven to be a realistic worst case, grounded in suitable precaution and based on the substantial pool of evidence analysed and presented to support the Applicant's conclusion.

2.3.1.6 Natural England state that the presence of immature and sabbatical birds should be considered when apportioning impacts (**REP6-056**), which the Applicant's approach to apportionment takes account of, but Natural England's own 'bespoke approach' and the 'SNCB standard approach' proposed method does not. Natural England state that their reason for not accounting for the presence of immature and sabbatical birds in their own method is because there is no evidence relating to the proportions of immature/ sabbatical birds present within the Hornsea Four area to rely upon. However, there are several sources of evidence known by both the Applicant and Natural England to help inform the number of immature and sabbatical birds, including those advocated by Natural England for other species of interest. Site-specific survey data (which Natural England advocates for determining number of immature gannet and kittiwake (REP5-116), whilst juvenile and immatures auks have also been recorded within the Hornsea Four area. There is also literature evidence (Furness, 2015), which can be relied upon to predict the likely number of immature and sabbatical birds and with each key seabird's stable population estimates as used by the Applicant and in the Round Four Plan Level HRA (NIRAS, 2022) for determining the number of immatures likely within the project areas.

2.3.1.7 One limitation with using the Furness (2015) dataset to derive the proportion of immature birds, however, is that it does not take into account the spatial distribution of a project area

in relation to seabird colonies. As suggested by Natural England, the closer you get to a specific colony the increasing likelihood an immature bird is likely to become an associated breeder with that colony in the future. With this in mind it is important to note that the Hornsea Four array area is located outside of the mean max foraging range (the average of the maximum foraging range cited from different colonies) of guillemot (55.5km when excluding the erroneous Fair Ilse foraging range) and is at the limit of razorbill's mean max foraging range (73.8 km when excluding the erroneous Fair Ilse foraging range) cited in Woodward et al. (2019). Therefore, the level of certainty regarding the ability to confidently suggest any immatures within Hornsea Four will eventually go on to breed at the FFC SPA can be considered low. Furthermore, Hornsea Four is significantly outside of the 95% utilisation distribution bands, getis-ord hotspots and maximum curvature areas (Figure 17, 18, 19 and 20 in **B2.2 RP: Report to Inform Appropriate Assessment Part 1** (**REP5-012**)) for both guillemot and razorbill, which are the areas you would expect to find prospecting immatures prior to breeding at a colony. This reinforces the low level of certainty in relation to the ability to confidently suggest any immatures within Hornsea Four will eventually go on to breed at the FFC SPA. It is also an unfortunate truth that for many immature birds there is always a risk of them succumbing to natural mortality for a number of different reasons before reaching breeding age and therefore Natural England's assumption that any immature bird will become breeding adult birds is unrealistic and contributes to adding significant levels of over-precaution into an already suitably precautionary auk displacement assessment.

2.3.1.8 In relation to proportion of sabbatical birds as incorporated into the assessments undertaken for the Round Four Plan level HRA (NIRAS, 2022), the Applicant has relied upon the expertise and guidance of Marine Scotland to apply a suitably precautionary sabbatical rate when apportioning impacts. Not applying a sabbatical rate, as is Natural England's approach to apportionment (the opposite advice to Scottish SNCB's) adds compounding precaution into assessment, which also results in adding additional uncertainty when inferring the predicted impact of a project.

2.4 Degree of mixing of birds from other guillemot and razorbill colonies

2.4.1.1 The key issue (which adds high uncertainty into the assessment) in relation to the mixing of guillemot and razorbill and the proportion of each species connected to different colonies during the post-breeding period is the fact that currently no tagging data exists for either species from the FFC SPA. This has resulted in both the Applicant and Natural England having to rely upon expert opinion only when concluding the possible proportion of guillemots which originate from the FFC SPA during the months of August and September. The Applicant estimated that a value of up to 75% could be likely whilst Natural England suggest 90%.

2.4.1.2 Based on the justification provided by Natural England that 90% originate from FFC SPA, this is because it is the closest colony to Hornsea Four. However, it is likely that both the Applicant's approach and Natural England's approach can be considered highly overly precautionary in comparison to all previous assessments undertaken for consented OWFs. This is because all OWFs can be considered to have a colony that they are closet too and yet the SNCB guidance for apportionment is to use standard non-breeding season

apportionment rates for such periods, which are considerably lower. In relation to the FFC SPA, it is the closest colony to over 20 UK OWFs (including all Hornsea, Doggerbank and East Anglia zone projects) and yet more generic apportionment values were applied and agreed for all these projects.

2.5 Timings and Importance of chick attendance and moult

2.5.1.1 The Applicant agrees with Natural England that due to the absence of site-specific tagging data uncertainty remains in relation to timings and areas of importance for the post-breeding moult period. However simply adding compounding precaution into assessment in the absence of such data only results in adding additional uncertainty when inferring the predicted impact of a project.

2.6 Potential factors influencing the importance of the Hornsea Four array area

2.6.1.1 At the request of Natural England, the Applicant undertook an extensive assessment of indirect effects with a focus of providing understanding on the importance of the Hornsea Four array area in context to the wider region. As clearly presented within **G5.7 Indirect Effects of Forage Fish and Ornithology** (**REP5-085**), the Hornsea Four area can be concluded of lower importance (relatively) in comparison to the wider region of sea.

2.7 Consequences of different approaches for the impact assessment

2.7.1.1 As stated above in Paragraph 2.2.1.4 Natural England appear to have confused the Applicant's bespoke pre-application apportionment approach, which the Applicant has adopted to provide a more reflective peak abundance value for the non-breeding season due to the bias caused by the migratory pulse of birds in August and September, with the weighted mean peak approach.

2.7.1.2 For the reasons the Applicant has previously set out within this report and **G5.34 Applicant's response to Natural England's additional guidance on apportioning of seabirds to FFC SPA for Hornsea Project Four** (**REP5a-018**), **G7.4 Applicants Ornithology Position Paper** (**REP7-085**), the Applicant wholly disagrees with Natural England's bespoke approach to assessment.

3 Natural England's comments on G4.7 Ornithological Assessment Sensitivity Report -Revision: 2 [REP5-065]

3.1 Overview comments

3.1.1.1 The Applicant completely agrees with Natural England (**REP6-059**) that both their 'bespoke approach' and 'SNCB standard approach' to assessment relies on limited to no empirical data and agree with the suggestion that this hinders any inference of potential impacts following the 'bespoke approach' and 'SNCB standard approach'. That is not to say, however, that there is an absence of empirical data which can be utlised, in fact the opposite is true. As presented within the multiple sources of evidence the Applicant has produced and submitted such as; **G1.47 Auk Displacement and Mortality Evidence Review** (**REP2-085**),

G2.9 Gannet Displacement and Mortality Report (REP2-045), G4.7 Ornithological Assessment Sensitivity Report (REP6-026) and G5.7 Indirect Effects of Forage Fish and Ornithology (REP5-085) there are multiple sources of evidence that can be incorporated into the assessment process to reduce levels of uncertainty and improve confidence in predicted impacts.

3.2 Part 1 Sources of Uncertainty

3.2.1 Reference Population

3.2.1.1 Natural England, post-Application, provided the Applicant with a new method to calculate the breeding season population size for relevant species regional BDMPS, which differed significantly to the approach taken for other recently consented OWFs (SPR, 2019; Vattenfall, 2019). As detailed within G4.7 Ornithological Assessment Sensitivity Report (REP6-026), when considering the total amount of impacts from a project annually, an underestimation of the total individuals within a given area to assess against occurs when the breeding season is calculated to be the largest BDMPS value from Furness (2015). This is due to using one BDMPS value only considering birds predicted to be in an area during a specific bio-season and not the total number of individuals that may occur within an area across different bio-seasons.

3.2.1.2 When the non-breeding season is calculated to be the largest BDMPS this is not such an issue as the non-breeding season includes UK individuals and non-UK individuals (See Appendix A of Furness, 2015), therefore encapsulating all individuals of a species which might have connectivity to the regional BDMPS. To rectify this issue the Applicant took a logical approach and added the number of non-UK individuals cited in Furness (2015) with connectivity to the regional BDMPS onto the derived Breeding BDMPS population size but only when considering impacts on an annual basis. Not including non-UK individuals within the regional BDMPS runs the risk of significantly overestimating the potential impacts from UK OWFs on the BDMPS populations.

3.2.2 Collision risk assessment

3.2.2.1 Natural England's response suggests that their current advocated avoidance rate, flight speed and nocturnal activity values are due to change, therefore leaving it open to interpretation that assessments using Natural England's current advocated values (Joint SNCBs, 2014; Alerstam et al. 2007; Garthe and Hüppop 2004) could be either over or under precautionary, although based on the conclusions within G4.7 Ornithological Assessment Sensitivity Report (REP6-026) the likelihood is significant over precaution. In reading this the Applicant is disappointed in Natural England's previous responses in relation to the Applicant advocating the use of different parameters for collision risk assessment such as those cited by Bowgen and Cook (2018), which would have provided a true ranged-based approach to assessment, to which Natural England were in complete disagreement with being presented (agreement OFF-ORN 2.4 & 2.3 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (B.1.1.1: Evidence Plan (APP-130)).

3.2.2.2 In relation to flight speeds Natural England again advocate that their preference is to rely on site-specific values where, collected to inform collision risk assessments. However, the Applicant was advised through the consultation process by Natural England that site-

specific flight height data collected for the wider Hornsea Zone, which the Applicant suggested incorporating into assessments, should not be used. Natural England were strongly against the use of the site-specific survey data (agreement OFF-ORN 2.23 & 2.35 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B.1.1.1: Evidence Plan** (**APP-130**)) and hence the Applicant did not include these data within the assessment of collision risk.

3.2.2.3 It is apparent that Natural England currently rely on data sources for a number of key parameters that are very outdated and have now been superceded by more modern datasets for more appropriate use to determine collision risk to seabirds. It is unfortunate that advances in Natural England's advice on the use of more appropriate input parameters have still not been published, as the values being predicted for both Hornsea Four alone and for all other UK OWFs are likely to be significantly reduced for all species as a result.

3.2.3 Displacement

3.2.3.1 The Applicant welcomes Natural England's agreement that the current crude method of displacement assessments needs to change to a more thorough and systematic meta-analysis approach to deriving displacement rates weighing the merits of each study to provide greater confidence in the compatibility of datasets and interpretation of outcomes. The Applicant is unsure why Natural England states that such a review does not exist as this is what the Applicant undertook in **G1.47 Auk Displacement and Mortality Evidence Review** (**REP2-085**), **G2.9 Gannet Displacement and Mortality Report** (**REP2-045**) following guidance and discussion with Natural England and the RPSB through the evidence plan process.

3.2.3.2 In relation to attraction and habituation, the Applicant broadly agrees with Natural England that based on the current amount of post-consent monitoring data available, it is difficult to incorporate an empirical rate of habituation or attraction into current assessments. However, that is not to say that it shouldn't be acknowledged, as even based on the absence of long-term monitoring data (5+ years) evidence is already emerging suggesting that seabird species quickly adapt to the presence of OWFs **(REP6-026**; **REP2-085**; **REP2-045)**.

3.2.3.3 The Applicant would like to confirm that our position has never been that 'latest is best', although as Natural England have previously stated this is generally the case as new technologies and techniques are created to improve the robustness of data collected. When considering any piece of evidence for assessment the Applicant has critically appraised the information before advocating for its use (for example the data presented in **G1.47 Auk Displacement and Mortality Evidence Review** (**REP2-085**), **G2.9 Gannet Displacement and Mortality Report** (**REP2-045**), **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**)). However, our own review provided clear evidence that the same advice was not followed within Natural England's approach of 30-70% displacement, which has been compiled regardless of the quality of the study or confidence in the derived rate, as well as the mortality range of 1-10% which is based on no empirical evidence and was derived from a suggestion during a workshop only and considered displacement impacts on coastal wading birds displaced from roosting and feeding areas and not so much seabirds at sea from offshore wind farms that have considerable wider areas to move into.

3.2.4 Apportioning

3.2.4.1 The Applicant is still of the firm position that the use of site-specific data for calculating adult/immature proportions leads to over estimation of impacts apportioned to the FFC SPA, for the reasons detailed in **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**). The Applicant stands by the use of the stable age structure, which has also been used to derive the proportion of adults/immatures for the Round Four Plan Level HRA (NIRAS, 2022).

3.2.4.2 The Applicant is still of the firm position that Natural England's approach to apportionment of guillemot and razorbill significantly over-estimates the predicted impact apportioned to the FFC SPA from the project for auks for the reasons detailed in this document, **G5.34 Applicant's response to Natural England's additional guidance on apportioning of seabirds to FFC SPA for Hornsea Project Four** (**REP5a-018**) and **G7.4 Applicants Ornithology Position Paper** (**REP7-085**).

3.2.5 PVA

3.2.5.1 The Applicant was made aware of the potential error in the PVA and reran any potentially effected runs, the revised results were found to be of no change to those presented in **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**).

3.2.5.2 The Applicant has stated within **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**) a justified rationale as to why the Counterfactual of Final Population Size is currently unsuitable for informing assessments, to which Natural England have provided limited response to and therefore the Applicant's position on this metric and it's exclusion from assessment remains the same due to considering it inappropriate.

3.3 Part 2: Results and discussion

3.3.1.1 Natural England state that they advocate a range-based approach as a solution to deal with the levels of uncertainty within assessments. The Applicant would disagree with the statement as Natural England only suggest a range of Natural England's values, which as detailed within **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**) contain multiple examples of data sources that can be considered of low confidence. When the Applicant has suggested the inclusion of parameters outside of which Natural England's own values range, they have refused to accept their inclusion for impact assessment (agreement OFF-ORN 2.4 & 2.3 as set out in the Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B.1.1.1: Evidence Plan** (**APP-130**)), therefore a true range-based approach has not been possible for project.

3.3.1.2 The Applicant welcomes Natural England indicating that workstreams are currently underway to resolve some of the issues highlighted in **G4.7 Ornithological Assessment Sensitivity Report** (**REP6-026**), in regard to current data quality of SNCB advocated assessment parameters.

3.4 Annex I. Sources of uncertainty regarding quantifying the impacts of offshore windfarms of seabirds

3.4.1.1 The Applicant is in agreement with many areas of uncertainty highlighted by Natural England which need to be considered within EIA and HRA assessments for Hornsea Four. However, this is not extended to the incorporation of wider potential issues such as the

influence of longer-term global climate change issues or potential avian influenza issues. In the case of both climate change and avian influenza, both are external factors that have the potential to reduce seabird populations over the lifespan of the project, however in doing so these external factors would also equally reduce the number of seabirds included within the ornithological baseline environment for not only Hornsea Four, but all other OWF developments whose baseline characterisation data was collected prior to such external factors taking effect. This would result in a proportionate reduction in the level of predicted impact from OWFs and therefore should not be included or considered when drawing conclusions from EIA and HRA assessments for specific projects. It is also worth noting that the development of OWFs such as the size of Hornsea Four, would provide significant contribution to the UK's net-zero goal for reducing greenhouse gas emissions which are in place to actively tackle the issue of climate change, which ultimately can be considered one of the biggest threats to both seabirds and other marine fauna populations globally into the future.

4 Applicant's comments to the Written Representation for the Royal Society for the Protection of Birds Comments on any submissions received at Deadline 5 (REP5a-032)

Reference	Stakeholder's Written Representation	Applicant's Response
Annex A Offshore Ornithology (REP6-068)		
Section 2	Update on RSPB position	The Applicant welcomes RSPB's agreement on the baseline data being suitable for characterisation. In relation to the inconsistencies cited by the RSPB these have all been addressed in the Applicant's latest submissions presented at Deadline 6 to which in RSPB's Deadline 7 submission (REP7-098) they are now in agreement with also.
Section 3	A note on Precaution	The Applicant would like to clarify that it's position is not that of a single value but that a range of displacement up to 50% is plausible for auks based on our review undertaken as presented in G1.47 Auk Displacement and Mortality Evidence Review (REP2-085). In taking a precautionary approach to assessment the Applicant has then assessed on the upper limit of the considered plausible range only.
Section 4	Highly Pathogenic Avian Influenza	The Applicant's commends the significant effort RSPB staff have committed to trying to reduce the spread of avian influenza over this year's breeding season and the difficult situations it's staff have had to deal.
Section 5	Counterfactual metrics	The Counterfactual of population size (CPS) presented by RSPB within their Deadline 6 submission highlights the exact issues the Applicant has with the measure. As presented by the RSPB the CPS provides the percentage difference in the predicted population size after 35 years between the baseline (unimpacted scenario) and the impacted scenario. Although these values in some cases may seem significant, both populations could still be predicted to have a positive population growth trend (although this information is not provided by RSPB), since in all PVA scenarios modelled have the potential to grow exponentially in the absence of density dependence which is wholly unrealistic as presented in Section 3.4 of G4.7 Ornithological Assessment Sensitivity Report (REP6-026). Furthermore, except for kittiwake, the qualifying features of the FFC SPA assessed have a maintenance objective with respect to their population level and therefore need to be assessed as to whether the population will continue to be maintained or grow under the level of predicted impacts modelled. This information cannot be inferred from the level of detail provided by the RSPB, therefore rendering the metric redundant when inferring conclusions on whether an AEoI has been reached in regard to maintaining a population level above a set target size.
Summary of the RSPB's view of the state of play with the Applicant's species' compensation proposals		
Paragraph 3.15 to 3.19	Stated that there are significant uncertainties in the compensation proposals.	The responses to these uncertainties are explored in detail in the sections below for guillemot, razorbill and kittiwake compensation measures. The various assertions made by the RSBP fail to acknowledge

Reference	Stakeholder's Written Representation	Applicant's Response
		the significant work that has been undertaken by the Applicant to date. The Applicant has developed compensation measures supported by evidence and has sought to point the RSPB to the relevant documentation submitted into the Examination in this regard,
Guillemot and razorbill compensation measures		
Table 1	RSPB listed key issues to resolve: - Lack of coherent strategy for identifying islands/island groups for predator eradication and associated detailed documents; • Requested documents including: Project selection; Feasibility Study, Implementation Plan, Biosecurity and Emergency Response Plan. - Inadequate evidence to demonstrate benefit to breeding guillemot and razorbill of proposed eradication strategy; • Requested full breeding bird and INNS survey and monitoring results • Requested detailed rationale and evidence, based on chosen eradication strategy and selected locations, to demonstrate benefit to breeding guillemot and razorbill through increases in productivity and survival over and above existing levels experienced at the selected locations. - Lack of evidence of connectivity of guillemots and razorbills from Channel Islands to respective UK National Site Networks. • Requested additional evidence to demonstrate level of connectivity	In response to the RSPBs assertion that there is lack of a coherent strategy for identifying islands/island groups for predator eradication and associated detailed documents: • The Applicant undertook a long-listing exercise which was followed by a subsequent short-listing (in the pre-application stage to which the RSPB were a stakeholder), which has subsequently been updated to include site visits to the relevant islands and has been informed by the studies undertake by predator eradication experts. The site-selection process and decision-making regarding the identification of islands selected for predator eradication/ control and adaptive management have been extensively discussed with stakeholders, including RSPB, at relevant workshops throughout the progression of the compensation measures. For instance, the refined locations were discussed in detail during the workshop held on 14th February 2022 (as detailed within responses to RSPB in **G1.9: Applicant's comments on Relevant Representations (REP1-038)**, submitted at Deadline 1). • During Issue Specific Hearing 12, the Applicant confirmed that its preference would be to focus on the Herm Island complex (Herm, Jethou, including Grand Fauconnière and the Humps (islands and islets within the Ramsar site)), with locations in Alderney providing an adaptive management option. The final components of information (as set out in (**G5.4 Predator Eradication Implementation Update (REP5-082)**) will allow fine tuning of details such as biosecurity measures, resistance to rodenticide and final breeding seabird numbers. It is the Applicant's view that these final, less substantive although equally important details, do not limit the decision on whether compensation can be implemented at the shortlisted locations. Rather they will aid the Offshore Ornithology Engagement Group discussions on exact execution. • The evidence for identifying islands/island groups is presented within numerous documents, including but not limited to, the following: ○ **B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence (APP-196)**; ○ **G1.33 Predator Eradication Island Suitability Assessment Bailiwick of Guernsey (REP5-057)**, submitted at Deadline 5;

Reference	Stakeholder's Written Representation	Applicant's Response
		○ B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-032), ○ B2.8 Guillemot and Razorbill Compensation Plan (REP7-027); and ○ G1.9: Applicant's comments on Relevant Representations (REP1-038), submitted at Deadline 1. • RSPB requested the feasibility study be published. As detailed in the Applicant's submissions at Deadline 5, The Applicant is working with Alderney Wildlife Trust and international eradication and island restoration experts to undertake a detailed implementation study (as described within the latest revision of B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-032)). A summary of the information available to date was submitted within G5.4 Predator Eradication Implementation Study Update (REP5-082), submitted at Deadline 5. • The implementation plan for all compensation measures will be submitted within the GRCIMP, as stated within the outline GRCIMP B2.8.7 based on the B2.8.7 Outline Guillemot and Razorbill Compensation Implementation and Monitoring Plan (REP7-035). The full implementation plan will also detail information on Biosecurity and Emergency Response Plans, which will be informed by the implementation study and discussed with the Offshore Ornithology Engagement Group (OOEG). In response to the RSPBs assertion that there is inadequate evidence to demonstrate benefit to breeding guillemot and razorbill of the proposed eradication strategy • Evidence of the effectiveness and benefits of rodent eradications, including evidence in the context of the chosen eradication strategy and locations, has been discussed in detail in: ○ B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence (APP-196); ○ G5.35 Predator Eradication and control opportunities within the Bailiwick of Guernsey (REP5A-019), submitted at Deadline 5a. • Moreover, evidence of auk predation at the shortlisted sites has been presented in G5.4 Predator Eradication Implementation Study Update (REP5-082), submitted at Deadline 5, thus giving direct evidence of predator pressures and associated benefits predator removal for guillemot and razorbill at the discussed sites.

Reference	Stakeholder's Written Representation	Applicant's Response
		• Additionally, a recent publication by Hiscock and Earl (2022) "South-West Marine Ecosystems in 2021 (The State of South-West Seas) Report for 2021", has further evidenced the benefit to guillemot and razorbill from predator eradication in the UK, with a study at Lundy Island showing the following increases in population number from 2000 to 2021: o Guillemot: 2,348 to 9,880; and o Razorbill: 950 to 3,522. • The Applicant's position is that extensive and sufficient evidence has been provided on the benefit to guillemot and razorbill populations from predator eradication. • The RSPB also requested full seabird survey and monitoring results. This work is being finalised for all seabird species, however guillemot and razorbill data were shared within the Implementation Update document. Further information on the implementation study, including the full breeding bird surveys will be presented, and subsequently discussed with the OOEG to ensure the compensation measure is successful. It is the Applicant's view that these final, less substantive although equally important details, do not limit the decision on whether compensation can be implemented at the shortlisted locations. Rather they will aid the OOEG's discussions on exact execution. In response to the RSPBs assertion that there is a lack of evidence of connectivity of guillemots and razorbills from Channel Islands to respective UK National Site Networks: • Evidence of guillemot and razorbill connectivity with the UK National Site Network was presented in detail in **G3.4.1 Compensation measures for FFC SPA: Ecological Connectivity (REP3-034)**, submitted at Deadline 3. This document provides evidence of connectivity between the Channel Islands and the UK National Site Network. • Natural England confirm in **Natural England's End of Examination Position on the Applicant's Proposed Compensatory Measures (REP7-102)** that evidence for connectivity with the network has been provided as well as in their response Comments on **G3.4 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA) Compensation Connectivity Note (REP4-056)**.
Table 2	RSPB stated key issues to resolve revolve around the inadequate evidence base. - Expert (peer) review;	In response to the RSPBs assertion that the evidence base is inadequate, the Applicant has undertaken an extensive study, including testing bycatch reduction techniques at a scale not previously undertaken.

Reference	Stakeholder's Written Representation	Applicant's Response
	• Requested detail on the fisheries, ornithologist and statistical experts that conducted the data collection and statistical analysis • Requested confidential review by an independent expert in seabird bycatch data analysis and for the Applicant the opportunity to share their data confidentially with the RSPB's bycatch experts including Yann Rouxel, Bycatch Project Manager, developer of the LEB, and Steffen Oppel, Senior Scientist and experienced analyst of seabird bycatch data - Absence of scientifically robust statistical analysis (bycatch rates) • Calculate and share the bycatch rates for all birds and specific species • Describe data analysis - Lack of detail on variables; • Requested information on fishing effort, sample size, gillnet type, location and times - Dataset not comprehensive; • Requested multi- year trials - Missing data collection details; • Requested: o location of cameras on boats. o proportion of bycatch events that were identifiable o proportion of bycatch self-reported by fishermen versus from cameras	To date, this is the largest bycatch reduction study on using LEBs as above-water deterrents to reduce seabird bycatch. In response to comments regarding Expert (peer) review: • The companies/personnel involved with the bycatch reduction selection phase have been presented previously in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5, as well within responses to RSPBs relevant representations in **G1.9: Applicant's comments on Relevant Representations (REP1-038), submitted at Deadline 1**. • As presented in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5: "*The Applicant has involved the authors of Rouxel et al., (2021) during the study planning process to ensure best practice and approach to undertaking the bycatch reduction technology selection phase. The Applicant has hosted workshops to set out its approach, received feedback, and engaged with key players in bycatch (including BirdLife International, RSPB, Natural England, Defra, SeaScope, FishTek Marine and the National Federation of Fishermen's Organisations (NFFO)). The Applicant has received positive engagement and feedback from all parties to date and has used this to undertake an industry and scientific first in a bycatch reduction technology selection phase for compensation measures to reduce the direct mortality of sensitive seabirds as a result of bycatch in UK fisheries.*" • Additionally, The Applicant has consulted with the BirdLife International bycatch expert Yann Rouxel throughout the progression of the bycatch reduction compensation measure. In response to comments regarding Absence of scientifically robust statistical analysis (bycatch rates): • As discussed previously, the Applicant cannot disclose the full data or bycatch rates due to confidentiality agreements with the fishers. However, findings from the trials, including a detailed description of the data collection methods and statistical analysis have been presented within **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5. The Applicant has managed to agree data sharing with a number of fishers during the Bycatch Implementation Study which will be undertaken during the 2022/2023 season. • Cameras were located to allow identification of bycaught birds.

Reference	Stakeholder's Written Representation	Applicant's Response
	○ method to verify self-reported bycatch (e.g with camera footage) ○ confirmation that the control nets were identical to the experimental nets - Insufficient modelling of variables; • Requested statistical models to account for variables - Pseudo replication/ Error distribution. • Requested data to be analysed with a Poisson distribution (numerical response), or some other approach to overcome the pseudo replication issue for binary data. • Stated if the trials are paired then a paired t-test would be sufficient.	In response to comments regarding Lack of detail on variables: • The variables requested by RSPB cannot be shared due to the confidentiality agreement with the fishers, as previously discussed. Providing information on fishing effort and sample sizes means that bycatch numbers could be calculated. • Sharing the locations would allow fishers to be identified and therefore they would not remain anonymous, breaching the confidentiality provisions. In response to comments regarding the considerations of 'Dataset not comprehensive' and 'Requested multi-year trials': • Multi-year trials, including the bycatch reduction technology selection phase and continued use of the LEBs combine to fulfil the request by the RSPB: The Applicant has committed to use the LEB on vessels during the non-breeding season 2022/2023 and collect further data from September 2022 to March 2023. This was outlined in **B2.8.2 Compensation measures for FFC SPA: Guillemot and Razorbill Bycatch Reduction: Roadmap (REP7-029)**. • In addition, The Applicant has increased the number of fishers involved, thereby enabling even greater data collection within the 2022/2023 non-breeding season. In response to comments regarding Missing data collection details: • The Applicant can confirm that 100% of the bycatch was identified to species level. • The proportion of bycatch self-reported by fishermen versus from cameras was not part of the scope of the bycatch reduction selection phase, the Applicant ensured that every species was accurately identified. We are aware that FishTek Marine are undertaking a study to assess these differences during 2022/2023. • As stated in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5, all bycatch events were verified through the camera system and experienced ornithologists. "*Screenshots of bycatch events were processed manually by an observer to identify the bycaught bird species and sent to experienced ornithologists to verify*". Presented in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5. None of the bycatch data relied solely on information self-reported by fishermen, all bycatch was recorded to camera and subsequently verified, as outlined above.

Reference	Stakeholder's Written Representation	Applicant's Response
		• As stated in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5, the Applicant can confirm that the control nets were identical to the experimental nets. *"The control nets were identical to the experimental LEB net in terms net length, mesh size, and net rigging, with soak times being similar durations".* In response to comments regarding Insufficient modelling of variables: • As stated in **G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)**, submitted at Deadline 5, statistical analysis on variables was undertaken: "*a Generalised Linear Model (GLM) was used to test whether bycatch occurrence (i.e. the response variable in the model) changes in relation to a number of parameters such as wind speed and sea state (the explanatory variables in the model).*" It should be noted that to increase statistical power, the Applicant has already committed to use the LEB on vessels during the non-breeding season 2022/2023 and collect further data from September 2022 to March 2023. The Applicant has a greater number of fishers involved, thereby enabling greater data collection within the 2022/2023 non-breeding season, which will increase the statistical power of the dataset. In response to comments regarding Pseudo replication/ Error distribution: • Various statistical analyses were undertaken, testing different models for best fit. The three GLMM models tested were: (i) a negative binomial distribution, (ii) a Poisson distribution, and (iii) a binomial distribution, in which hauls with and without guillemot bycatch were recorded as 1 and 0 respectively. The Poisson model was selected because it showed the best fit to the data and conformed to the model assumptions. • The Applicant notes that a t-test is a parametric test, and thus not suitable to analyse a dataset that does not conform to a normal (i.e. parametric) distribution, such as the bycatch dataset. A paired t-test was explored within the statistical analysis, but deemed unsuitable for that reason. A Poisson model was identified to be best fit, as stated above.
Kittiwake compensation measures		
Table 3	Detailed concerns set out in previous submissions remain: - Lack of agreement on magnitude of impact to be compensated for (see section 2, Annex A);	• As presented within the Applicant's **B2.7.1 Compensation measures for FFC SPA: Offshore Artificial Nesting: Ecological Evidence (APP187)**, there is a large body of evidence which exists to support the measure. The Applicant would like to direct the RSPB to the updated Roadmaps regarding further updates on site selection for the compensation measures:

Reference	Stakeholder's Written Representation	Applicant's Response
	- Lack of agreement on the methodology to convert those impacts to compensation objectives; - Whether nesting habitat is a limiting factor for breeding kittiwakes in the southern North Sea and whether any new structure will be used by additional breeding adults as opposed to existing adults choosing to redistribute; - Whether and over what timescale any new colony will achieve the target population and also recruit breeding adults to the UK National Site Network for kittiwakes, including FFC SPA; - Lack of a meta-population analysis to clarify the dynamics between any proposed artificial nesting structure and SPA/other colony populations: elucidating the feasibility of establishing the proposed colonies and the consequences of such colony establishment on the populations of other colonies, in particular FFC SPA; - The lead-in time for the proposed compensation in relation to the point at which impact will occur and the lifetime of the compensation measure in relation to damage.	○ **B2.7.2 Compensation measures for FFC SPA: Kittiwake Offshore Artificial Nesting Roadmap (REP7-021)**; ○ **B2.7.4 Compensation measures for FFC SPA: Kittiwake Onshore Artificial Nesting Roadmap (REP7-023)**; ○ **B2.8.2 Compensation measures for FFC SPA: Guillemot and Razorbill Bycatch Reduction: Roadmap (REP7-029)**; ○ **B2.8.4 Compensation measures for FFC SPA Predator Eradication Roadmap (REP7-031)**; and ○ **B2.8.6 Compensation measures for FFC SPA Fish Habitat Enhancement Roadmap (REP7-033)**. • As stated within the Applicant's Comments on submissions received at Deadline 2 (**G3.3 Applicant's comments on other submissions received at Deadline 2 (REP3-031)**), the Applicant is confident that the required compensation population can be readily delivered at both a new or repurposed offshore structure with the use of optimal kittiwake nesting habitat design and measures (such as decoys and play back of kittiwake calls) to encourage colonisation and recruitment, if required. The Applicant has proposed the provision of additional artificial nesting opportunities for kittiwakes within the specified search zones to enhance productivity and therefore be effective as a compensatory measure to meet Habitats Regulations requirements. The establishment of breeding colonies at the structure would produce young that would become part of the wider biogeographic population of kittiwake as part of the east Atlantic breeding population of the species. This population includes individuals from the Flamborough and Filey Coast SPA (Stroud et al., 2016), with the proposed compensation measures to be undertaken within this populations breeding and migratory range. This approach was agreed by the SoS for the recent decision for Hornsea Three, East Anglia One North and East Anglia Two, where the implementation of artificial nest structures in each case were found to ensure the overall coherence of the national site network (i.e. at a wider biogeographic scale). • The suggested meta-population analysis relies on Bayesian statespace models fitted to population time series. The work of Miller (2020) & Miller et al. (2019) may present a theoretical approach to assess meta-population dynamics, however, these rely on fitting models to existing data (e.g. long term mark-recapture datasets).

Reference	Stakeholder's Written Representation	Applicant's Response
		• As stated within **G3.3 Applicant's comments on other submissions received at Deadline 2 (REP3-031)**, various parameters need to be accurately known for the target population and a number of assumptions need to be made to run these models. Miller et al. (2019) admit that there is a large uncertainty in these models and that "in the absence of empirical rates of connectivity, precaution remains with the assumption of a closed-system". Considering these uncertainties in the connectivity rates between SPA colonies and new artificial nesting structures, the Applicant considers it unfeasible to undertake such work in relation to the request posed by RSPB. The Applicant believes that the uncertainties mentioned (e.g. whether nesting habitat is a limiting factor for the breeding population; whether artificial nesting structures will be colonised and over what timescale any new colony will achieve the target population) cannot be robustly analysed using the methods stated above. The Applicant has already provided a response to a number of the uncertainties mentioned above in their responses in their Relevant Representations **(G1.9 Applicant's comments on Relevant Representations (REP1-038)** at Deadline 1 (including RR-029-APDX:C-B, RR-029-APDX:C-P). • The Applicant's updated position on lead-in times (remaining cognisant of recent decisions (e.g. Norfolk Vanguard) to allow compensation with the acceptance of mortality debt) have been provided with the most recent compensation Roadmaps.

5 Applicant's comments to Written Representation for the Royal Society for the Protection of Birds Annex B Compensation proposals (REP6-069)

5.1.1.1 Some comments within this response overlap with comments within Written Representation for the Royal Society for the Protection of Birds Comments on any submissions received at Deadline 5 (**REP5a-032**). To reduce duplication in responses, these have been addressed within Section 1 above.

Reference	Stakeholder's Written Representation	Applicant's Response
Guillemot and razorbill compensation – Predator eradication		

Reference	Stakeholder's Written Representation	Applicant's Response

Paragraphs 5.1 to 5.13	RSPB outlined the elements it considers essential to be submitted and stated their expectation that this information would be submitted at deadline 5.
	
	The RSPB comments that the applicant has amended its roadmap such that only preliminary information has been submitted up to and including to Deadline 5a, and that the change is evident in the edits in paragraph 5.1.1.2 in Revision 02 of the "Predator Eradication island suitability assessment: Bailiwick of Guernsey (tracked)" (REP5-058)
	
	The RPSB states that the Applicant has failed to set out precisely what it intends to do and where it intends to do it, and how it will meet the compensation objectives.
		• The Applicant notes the RSPB's expectation that the outlined information would be submitted by Deadline 5 but clarifies that an agreement was not made to submit by Deadline 5 or any other examination deadline nor provide a full-scale feasibility study, or the other information outlined in the Written Responses by the RSPB. The Applicant has been very clear within the Roadmaps on the timeframes for the compensation measure implementation studies and reporting following the survey seasons.
		• The updated document referred to by the RSPB is not a Roadmap. The Applicant notes that minor amendments, for clarification purposes, were made to paragraph 5.1.1.2 in the **G1.33 Predator Eradication island suitability assessment: Bailiwick of Guernsey (tracked) (REP5-058)** report, but that the updated text still clearly commits to reporting on the criteria based on the Manual of the UK Rodent Eradication Best Practice Toolkit, which is the manual followed by our predator eradication experts and is recommended by the RSPB in their written representation.
		• The Applicant has undertaken extensive work to provide evidence of effectiveness, site selection and develop Compensation Plans. Local stakeholders at the proposed eradication locations are supportive of the work, and the extent and depth of information delivered by the Applicant has been clearly set out in Examination. To re-iterate, the comprehensive information has been set out in numerous documents, including but not limited to:
		  ○ **B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence (APP-196);**
		  ○ **G1.33 Predator Eradication Island Suitability Assessment Bailiwick of Guernsey (REP5-057)**;
		  ○ **G5.35 Predator Eradication and control opportunities within the Bailiwick of Guernsey (REP5A-019)**;
		  ○ **B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-031)**; and

Reference	Stakeholder's Written Representation	Applicant's Response
		○ G1.9: Applicant's comments on Relevant Representations (REP1-038), submitted at Deadline 1. • As detailed in the Applicant's submissions at Deadline 7, The Applicant is working with Alderney Wildlife Trust and international eradication and island restoration experts to undertake a detailed implementation study (as described within B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-031)). The Applicant is working local experts and with the world-leading professionals in the eradication business, including professionals who have undertaken work on behalf of the RSPB for the Isles of Scilly eradication. • The Applicant's position is that extensive and sufficient evidence has been provided on the benefit to guillemot and razorbill populations from predator eradication. • The RSPB also requested full seabird survey and monitoring results. This work is being finalised for all seabird species as the surveys were undertaken this breeding season, however guillemot and razorbill data were shared within the Implementation Update document. Further information on the implementation study, including the full breeding bird surveys will be presented, and subsequently discussed with the OOEG to ensure the compensation measure is successful. It is the Applicant's view that these final, less substantive although equally important details, do not limit the decision on whether compensation can be implemented at the shortlisted locations. Rather they will aid the OOEG's discussions on exact execution. • During Issue Specific Hearing 12, the Applicant confirmed that their preference would be to focus on the Herm Island complex (Herm, Jethou, including Grand Fauconnière and the Humps (islands and islets within the Ramsar site)), with locations in Alderney providing an adaptive management option. The final components of information (as set out in (G5.4 Predator Eradication Implementation Update (REP5-082)) will allow fine tuning of details such as biosecurity measures, resistance to rodenticide and final breeding seabird numbers.

Reference	Stakeholder's Written Representation	Applicant's Response
		• A summary of the information available was submitted within G5.4 Predator Eradication Implementation Study Update (REP5-082), submitted at Deadline 5.
Paragraph 5.13	The RSPB notes that many sites will be reinvaded and the Applicant indicates reinvasion will be managed (and hence supposed compensation delivered) via nontoxic lethal control devices. The RPSB states that The Applicant should describe how these control devices will significantly reduce the rat abundance index below its already very low level, otherwise those devices will provide no benefit and hence no contribution to the compensation measure.	• Managing re-invasion after predator control is a crucial part of successful long-term predator reduction success. The RSPB incorrectly suggests that the compensation is delivered through the management of re-invasion and it is unreasonable for the RSPB to suggest many sites will be re-invaded. The RSPB have undertaken rat eradications within swimming distance of known rat infested islands with high visitor pressure showing that such projects can be hugely successful (with regard to lack of re-invasion and benefit to seabirds). The Applicant will undertake the eradication of rats at all relevant locations. If natural re-invasion occurs, the Applicant will re-eradicate before initiating a control mechanism if re-invasion was to subsequently occur. Biosecurity measures will be employed from the initial eradication attempts to significantly reduce the chances of re-invasion. The measure is not delivered only through management of re-invasion, but rather through a reduction in predators, followed by long-term re-invasion management. • The use on nontoxic lethal control devices are a well-established technique in the predator eradication industry, and are well-evidenced to be effective and have been used by the RSPB on a number of islands. • See comments above for further information on documents in which the Applicant has evidenced the benefits of the proposed compensation measure.
Table 1		• Some comments within this table overlap with comments within Written Representation for the Royal Society for the Protection of Birds Response to the Examining Authority's Second Written Questions (Comments on any submissions received at Deadline 5 (REP5a-032)). To

Reference	Stakeholder's Written Representation	Applicant's Response
		reduce duplication in responses, these have been addressed within Section 1.
Table 1	The RSPB outlined a lack of evidence in relation to several aspects of the proposed compensation measure.	• Due to duplication in comments between the main text and tables in the Written Responses, not all comments from the table are addressed here. Please see responses above.
Table 1	The RSPB notes that the methodology for habitat suitability is unclear.	• Island and habitat suitability was assessed in detail in **G1.33 Predator Eradication Island Suitability Assessment Bailiwick of Guernsey (REP5-057),** submitted at Deadline 5. The best available evidence was used to assess suitability, and rationale and methodology for the assessment and photographic evidence for each island outlined in a detailed methodology section. The Applicant used a more precautionary metric to determine the potentially available nesting habitat than proposed by the RSPB.
Table 1	The RSPB notes that only one productivity dataset is intended to be provided, and that this will not account for natural fluctuation, and that benefits are therefore unproven and not site-specific at this stage.	• As outlined in **B2.8 FFC SPA: Gannet, Guillemot and Razorbill Compensation Plan (REP7-027)**, "*Productivity monitoring for guillemot and/ or razorbill would be evaluated over a number of breeding seasons and will be detailed in the GGRIMP.*" As outlined **in G5.4 Predator Eradication Implementation Study Update (REP5-082)**, "*Information on productivity is also being assessed where possible following best practice methods presented by Walsh et al., (1995)*".
Table 1	The RSPB comments there is no assessment of other risk factors or biosecurity plan.	• The Applicant directs the RSPB to **B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-031)** and **G5.4 Predator Eradication Implementation Study Update (REP5-082)**, where the planned assessment of other risk factors, and biosecurity planning, is described.
Table 1	RSPB comments on a lack of clarity over level of protection to be afforded selected locations	• Whilst the sites are located outside the UK National Site Network, the sites have Ramsar status and the Applicant has demonstrated

Reference	Stakeholder's Written Representation	Applicant's Response
		connectivity (confirmed by Natural England in **Natural England's End of Examination Position on the Applicant's Proposed Compensatory Measures (REP7-102)**). The Applicant has also engaged with the States of Guernsey (dated 10th June 2022) providing a framework to ensure support and long term security of the predator eradication compensation measure, to ensure the measure can be successfully secured and implemented. The fact that the predator eradication measure may be carried out in a location outside of the UK (but with connectivity to the UK National Site Network) has no bearing on the ability of the Secretary of State to enforce this provision against the Applicant. It is not necessary for the Secretary of State (or the MMO) to also be responsible for permitting or property rights over the area in which the compensation measures are located. A parallel can be drawn with artificial nest structures for kittiwake (accepted on five DCOs to date). The Secretary of State is not responsible for permitting the structures (this will be the local planning authority onshore or the MMO offshore). Property rights are granted by private landowners or The Crown Estate. Responsibility for permitting or granting land rights has no bearing on the ability of the Secretary of State to secure the compensatory measures, and if it were ever necessary, to enforce the provisions of the DCO against the relevant undertaker.
5.15-5.21	The RPSB comments on the quality of the community support survey	• The Applicant notes that the survey was checked and accepted by a social scientist, and was curated specifically not to lead people to answers.
Table 3	In Table 3, the RSPB sets out the actions that the RSPB feels the applicant should take	• The Applicant notes that the recommendations in the table have either already been addressed by the Applicant (in the documents outlined previously in the Applicant's responses (see above), or are planned as part of the implementation study (see to **B2.8.4 Compensation measures for FFC SPA: Predator Eradication: Roadmap (REP7-031)** and **G5.4 Predator Eradication Implementation Study Update (REP5-082)**).

Reference	Stakeholder's Written Representation	Applicant's Response
		• In regards to providing evidence of the level of connectivity, the Applicants notes that the best available evidence has been used to evidence connectivity between the proposed delivery sites and the UK National Site Network. The evidence can be viewed in **G3.4.1 Compensation measures for FFC SPA: Ecological Connectivity (REP3-034),** submitted at Deadline 3 and has been confirmed by Natural England in **Natural England's End of Examination Position on the Applicant's Proposed Compensatory Measures (REP7-102)**. Whilst there is very limited currently available technology or data to prove a bird from one location recruits into another, as stated by the Applicant's responses to the Examining Authority's questions, this does not mean that there is no direct evidence for connectivity. Whilst direct evidence of connectivity with the FFC SPA could not feasibly be established, as correctly stated by the RSPB, this is due to a lack of data and research from within FFC SPA. However, The Applicant has provided substantial evidence, from numerous studies and used the best-available data, of connectivity between the English Channel/Channel Islands and the UK, including regions of the UK in which FFC SPA and other National Site Network Sites are located. The evidence was presented in detail in G3.4.1 Compensation measures for FFC SPA: Ecological Connectivity (REP3-034), submitted at Deadline 3. We refer the RSPB to that report for the full evidence, which included: • Direct evidence of winter dispersal between the North-East of the UK and the Channel Islands/English Channel; • Geolocator data providing direct evidence of connectivity between a National Site Network site in the North East of England and the English Channel; • Evidence that guillemot and razorbill disperse at distances greater than those between the Channel Islands/English Channel and the National Site Network; • Genetic evidence of gene flow between colonies; • Evidence that individuals can breed as far as 780km (guillemot) and 1,737km (razorbill) away from their natal site, thus showing their

Reference	Stakeholder's Written Representation	Applicant's Response
		breeding dispersal distances fall well within the range of the distance between the Channel Islands and the National Site Network; and • Ringing data of Guillemot ringed in the North East of England being recovered in the Channel Islands. To summarise, the evidence provided by the applicant in G3.4.1 Compensation measures for FFC SPA: Ecological Connectivity (REP3-034), submitted at Deadline 3, has established connectivity between the Channel Islands/English Channel and colonies around the coast of England, which connectivity has been confirmed by Natural England in **End of Examination Position on the Applicant's Proposed Compensatory Measures (REP7-102)**, and thus the Applicant remains of the position that their proposed compensation measures would support these colonies.
Guillemot and razorbill compensation – Bycatch reduction		
Paragraph 6.1	RSPB stated that fisheries authorities have an existing obligation to minimise and where possible eliminate sensitive species bycatch, therefore the proposals would interplay with regulators' statutory duties. The RSPB considered that bycatch should not be addressed through compensation.	• Consultation with RSPB, Natural England, the MMO and JNCC to discuss the proposed compensatory measures has been undertaken throughout the development of the compensation measures, bycatch reduction and predator eradication were identified as the most appropriate measures for the Applicant to deliver.
Paragraph 6.2	RSPB stated that proposed bycatch reduction should align with ACAP best practice.	• The Applicant has already provided a response in their responses in their Relevant Representations at Deadline 2 (reference 6.21) **G1.9: Applicant's comments on Relevant Representations (REP1-038**). • A number of the ACAP best practice criteria have already been met by the Applicant at this stage. For example, the Applicant has followed the correct design approach for the selection phase (such as comparing the performance of candidate mitigation technologies to a control of no deterrent, where possible, or to status quo in the fishery, yields definitive results) which provide a robust foundation for data collection. It is important to note that bycatch experts employed the by the RSPBs sister

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		organisation BirdLife International and Natural England have been supportive of the proposed approach to the technology selection phase and in recent discussions supportive by the study design (such as location, fisher acceptance and inclusion, monitoring and paired net approach) undertaken by the Applicant. Furthermore, the RSPB is also currently trialling the same technology (LEB) within an active commercial fishery in the SW of England and has plans to use the technology in a further project in Iceland. In summary, the Applicant has followed and exceeded previous attempts by other organisations of best practice in order to provide stakeholder confidence to the technology selected. More importantly, the Applicant is ensuring as best as is possible that the technology selection phase will deliver a reduction technology which will meet the ACAP criteria.
Table 4		• Some comments within this table overlap with comments within Written Representation for the Royal Society for the Protection of Birds (**Comments on any submissions received at Deadline 5** (**REP5a-032**)). To reduce duplication in responses, these have been addressed within Section 1.
Table 4	RSPB noted the absence of razorbill from the bycatch reduction selection phase, therefore do not address the impact to razorbill.	• The Applicant notes that only guillemot bycatch was reported. However, only a proportion of fishing effort has been surveyed. During the 2022/2023 non-breeding season, further vessels are being fitted with cameras and LEBs thereby increasing the fishing effort that will be surveyed. The Applicant notes that in the literature, the bycatch rate is higher for guillemot than razorbill, thereby it is likely to require further fishing effort to monitor razorbill than guillemot, to which the Applicant has committed. It should be noted that the number of individuals required for razorbill compensation are far lower than those for guillemot (1.94 vs 39.50 individuals – Applicant values). Therefore even with a lower bycatch rate, less vessels would be required for razorbill compensation than for guillemot.

Reference	Stakeholder's Written Representation	Applicant's Response
		• Additionally, as stated throughout the responses in the Relevant Representations at Deadline 1 (**G1.9: Applicant's comments on Relevant Representations (REP1-038)**), the Applicant will deliver all relevant measures as a suite of compensation for all relevant species (i.e. predator eradication, bycatch reduction and fish habitat enhancement for guillemot and razorbill). Thereby ensuring compensation is delivered to all species if required. The Applicant is also confident that there will be an option to implement strategic compensation or pay into the Marine Recovery Fund or an equivalent fund. The Applicant however, does not place reliance upon these options, they are simply included for completeness.
Table 4	RSPB stated that the Applicant has not provided any rationale for why they have used bycatch proportions as a metric rather than aggregated numbers and an associated bycatch rate in both control and experimental nets.	• The Applicant has already provided a response in their responses in their Relevant Representations at Deadline 1 **G1.9: Applicant's comments on Relevant Representations (REP1-038**) (response RR-033-GG). Due to contractual restrictions, the results of the bycatch reduction selection phase can only be disclosed as percentage reductions in bycatch i.e. not specific numbers of birds, without consent from the participating fishers.
Table 4	RSPB commented on the level of connectivity between the south of England and FFC SPA.	• Evidence of guillemot and razorbill connectivity with the UK National Site Network was presented in detail in **G3.4.1 Compensation measures for FFC SPA: Ecological Connectivity (REP3-034)**, submitted at Deadline 3. This document provides clear evidence of connectivity between the English Channel and the UK National Site Network, including FFC SPA.
Table 4	RSPB have provided comments and recommendations regarding the statistical analysis.	• For the comments regarding statistical analysis, the recommendations will be considered and discussed when analysing the second non-breeding season LEB data collection. This will be discussed within the OOEG with stakeholders as required.

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Table 4	RSPB stated long term risk of using an unproven measure. RSPB stated the economic risk to fishers need to be considered.	• As stated throughout the application documents, the ecological efficacy of the measure has been demonstrated in the **B2.8.1 Compensation measures for FFC SPA: Bycatch Reduction: Ecological Evidence (APP-194)**, the bycatch reduction technology selection phase demonstrating the viability and deliverability of the measure and in addition the monitoring and adaptive management form part of the compensation programme as set out in the Roadmap **B2.8.2 Compensation measures for FFC SPA: Guillemot and Razorbill Bycatch Reduction: Roadmap (REP7-029)** and Compensation Plan **B2.8 FFC SPA Guillemot and Razorbill Compensation Plan (REP7-027)**. • The Applicant has consistently been aware of the economic risk of bycatch reduction technology to fishers. The Applicant would like to direct RSPB to **B2.8.1 Compensation measures for FFC SPA: Bycatch Reduction: Ecological Evidence (APP-194)**, specifically Appendix C where all bycatch reduction techniques were considered. Any techniques that would negatively impact fisher efforts or were not economically viable were not short-listed (as per bycatch reduction technique criteria (O'Keefe et al., 2012)).
Paragraph 6.6	The RSPB stated that by the Applicant not providing robust data and analysis the Secretary of State will not be able to evaluate the findings of the trials and thus the effectiveness of bycatch as a compensation measure.	• **Robust evidence on the efficacy of the compensation measure is provided within G5.13 Bycatch Reduction Technology Selection Phase Summary (REP5-068)** and as stated with the **B2.8 FFC SPA Guillemot and Razorbill Compensation Plan (REP7-027)**, "The bycatch technology selection phase will be discussed with OOEG members and presented within the GRCIMP for approval by the Secretary of State". As RSPB are invited as an advisory member of the OOEG, RSPB will have the opportunity to discuss and provide recommendations for further analysis of the 2022/2023 non-breeding season data collection. It should be noted that this evidence is supplementary in any event and demonstrates the Applicants continued efforts notwithstanding the fact

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		that the Applicant is progressing these measures on a without prejudice basis.
Kittiwake compensation		
Paragraph 7.9	It remains the case that there is no secured location for the Applicant's proposed offshore ANS. It therefore remains high risk and wholly uncertain as to whether such a structure will be secured at this stage. This lack of security is of particular concern given the associated uncertainty relating to the regulatory regime in respect of repurposing an offshore structure (see below).	The Applicant has already provided a response to a number of the uncertainties mentioned in their responses in their Relevant Representations at Deadline 1 **G1.9: Applicant's comments on Relevant Representations (REP1-038)** (including RR-029-APDX:C-B, RR029-APDX:C-P). The Applicant notes that not all other developers have secured locations for their compensation measures. However, the Applicant has so far provided the most detailed approach to securing a location for a structure (the Applicant has signed a MoU with Alpha Petroleum Resources Limited and Energean UK Limited with a view to the potential repurposing of the Wenlock Platform). This information is presented within the **A4.6.1 Compensation Project Description (REP7-007)**, **B2.7 FFC SPA Kittiwake Compensation Plan (REP7-019)** and the **B2.7.2 Compensation measures for FFC SPA: Kittiwake Offshore Artificial Nesting Roadmap (REP7-021)**.
Paragraph 7.19	It is also our understanding that in other nations of the UK, ANS for kittiwake are not being actively pursued as a strategic or project level compensation measure, because the effectiveness of the measure has not been proven and it is food supply rather than nesting sites which is believed to be limiting the species' population	The RSPBs understanding of this is incorrect. Strategic work currently underway (which the Applicant is heavily involved in) is prioritising compensation in the form of artificial nesting structures for multiple species. The evidence of kittiwake nesting on offshore structures has been presented by the Applicant and is undisputed between ornithology experts. While the Applicant has fully acknowledged prey availability (and is delivering compensation to support), it is also acknowledged that there is a lack of suitable nesting sites for the species within certain locations of the UK. Providing optimally design offshore nesting platforms, kittiwake which use them are likely to have higher productivity than natural kittiwake colonies (as shown in Christensen-Dalsgaard et al., 2019) due to increased access to prey resource.
Paragraph 7.20	The RSPB's concerns with both offshore and onshore artificial nesting structures for kittiwake remain, as per our comments in previous submissions. The key concerns raised in this	The Applicant has responded to the offshore location concern in the response above. With regard to the onshore nesting structure location security, the Applicant has built upon the lessons learned and effort made by Hornsea Three by progressing locations and talking with landowners. Significant progress has been made and has been presented by the Applicant in **A4.6.1 Compensation Project**

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	submission underline our concerns: failure to secure a location...	**Description (REP7-007)**, **B2.7 FFC SPA Kittiwake Compensation Plan (REP7-019)** and the **B2.7.4 Compensation measures for FFC SPA: Kittiwake Onshore Artificial Nesting Roadmap (REP7-023)**.
Paragraph 7.21	Therefore, the RSPB concludes that the Applicant has not yet put forward a specific compensation measure for kittiwake that can or will be secured and which has a reasonable guarantee of success in protecting the coherence of the UK National Site Network for kittiwake.	The Applicant considers this statement from the RSPB to be unfounded. The Applicant has clearly set out a specific compensation measure for kittiwake within their **B2.7 FFC SPA Kittiwake Compensation Plan (REP7-019)** submission. Furthermore, the Applicant has clearly set out that the measure can be secured, and has agreed an MOU with Alpha Petroleum Resources Limited and Energean UK Limited with a view to the potential repurposing of the Wenlock Platform securing the platform for compensation, set out within their most recent Compensation Plan **(REP7-019)** and Roadmap (**REP7-025**). The parties have clear obligations to progress a formal option agreement to be completed should the SoS conclude an AEoI in relation to kittiwake. There is a high degree of confidence in providing artificial nesting structures as compensation for kittiwake. The Secretary of State has consented multiple projects on the premise of onshore nesting structures. The offshore preference by the Applicant carries even greater confidence (as shown in Christensen-Dalsgaard et al., 2019) and therefore there is 'a reasonable guarantee of success in protecting the coherence of the UK National Site Network for kittiwake'. The colony on the Wenlock Platform is growing demonstrated by our surveys in 2021 and 2022 and the addition of an ANS would provide additional suitable nesting space to increase productivity.

6 References

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Vattenfall (2019). Norfolk Boreas Offshore Wind Farm Chapter 13 Offshore Ornithology. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000399-6.1.13%20Environmental%20Statement%20Chapter%2013%20Offshore%20Ornithology.pdf [Accessed August 2022].

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