



Hornsea Project Four

Volume B2, Annex 8.4: Compensation measures for FFC SPA: Predator Eradication: Roadmap (Tracked)

Deadline 2, Date: 29 March 2022

Document reference: B2.8.4

Revision: 03

Prepared GoBe Consultants Ltd., March, 2022
Checked Sarah Randall, Orsted, March, 2022
Accepted Francesca De Vita, Orsted, March, 2022
Approved Julian Carolan, Orsted, March, 2022

Doc. No: B2.8.4
Ver. [BC](#)

Revision Summary

<i>Rev</i>	<i>Date</i>	<i>Prepared by</i>	<i>Checked by</i>	<i>Approved by</i>
01	28/09/2021	GoBe Consultants Ltd., September 2021	Dr Sarah Randall, Orsted, September 2021	Dr Julian Carolan, Orsted, September 2021
02	08/03/2022	GoBe Consultants Ltd., March 2022	Dr Sarah Randall, Orsted, March 2022	Dr Julian Carolan, Orsted, March 2022
03	29/03/2022	GoBe Consultants Ltd., March 2022	Dr Sarah Randall, Orsted, March 2022	Dr Julian Carolan, Orsted, March 2022

Revision Change Log

<i>Rev</i>	<i>Page</i>	<i>Section</i>	<i>Description</i>
01	-	-	Submitted at Application
02	Amended throughout	Amended throughout	Removal of Gannet from the document for Deadline 1
02	6	1	Position on kittiwake AEol conclusion
02	Amended throughout	Amended throughout	Updates on implementation studies for Deadline 1
03	19 - 25	9	Updates to DCO wording
03	Amended throughout	Amended throughout	Changes to implementation and monitoring plan names

Table of Contents

1	Introduction.....	6
2	Description and Scope	6
3	Indicative timescale for delivery and implementation.....	7
4	Consultation	98
4.2	Post-application.....	98
4.3	Post-consent	109
5	Development and Implementation of the Predator Eradication Programme	1110
5.2	Implementation of the Predator Eradication Programme.....	1413
6	Biosecurity measures, monitoring, and adaptive management	1514
6.1	Biosecurity measures	1514
6.2	Monitoring.....	1514
6.3	Adaptive Management	1615
7	Legal agreement(s)	1615
7.2	Lease Agreements for Monitoring and Biosecurity.....	1716
7.3	Compulsory Purchase.....	1716
8	Securing key consents.....	1817
9	Draft DCO wording.....	2019
10	Funding.....	2625
11	Legislative and Political Issues.....	2625
12	Conclusion.....	2726
13	References	2827
	Appendix B Letter of comfort from the States of Guernsey	3130

Appendices

Appendix	Heading
A	Letter of comfort from Alderney Wildlife Trust
B	Letter of comfort from States of Guernsey

Glossary

Term	Definition
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).
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.
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.
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 known as "Natura 2000".
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, the razorbill and guillemot compensation plan and the gannet 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, the razorbill and guillemot compensation plan and the gannet 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).
Ramsar	Wetlands of international importance designated under the Ramsar Convention.
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.

Term	Definition
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
BRAG	Black, Red, Amber, Green.
CfD	Contracts for Difference
DCO	Development Consent Order
FFC	Flamborough and Filey Coast
FID	Final Investment Decision
GRCIMP	Guillemot and Razorbill Compensation Implementation and Monitoring Plan
GRIMP	Guillemot and Razorbill Compensation Implementation and Monitoring Plan
JNCC SMP	Join Nature Conservation Council Seabird Monitoring Programme
MMO	Marine Management Organisation
MoU	Memorandum of Understanding
NGO	Non-Governmental Organisation
NFFO	National Federation of Fisheries Organisation
OOEG	Offshore Ornithology Engagement Group
PINS	Planning Inspectorate
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SCI	Site of Community Importance
SNCBs	Statutory Nature Conservation Bodies
SoS	Secretary of State
SPA	Special Protection Area
UK	United Kingdom

Formatted

1 Introduction

- 1.1.1.1 This Guillemot and Razorbill Predator Eradication Roadmap document provides an overview of the anticipated next steps for implementation of predator eradication as a 'without prejudice' compensation measure for Hornsea Four, if deemed necessary by the Secretary of State following their Appropriate Assessment. It should be noted that this is a 'live' document and should compensation be required it will be added to or revised as the Development Consent Order (DCO) application for Hornsea Four progresses. This roadmap sets out a clear pathway to demonstrate that the compensation measure can be secured and that the mechanism for delivery of the compensation can be implemented.
- 1.1.1.2 Following the Applicant's submission, the Applicant has revisited its conclusion of no potential for an adverse effect on integrity (AEol) in respect of the kittiwake feature of the Flamborough and Filey Coast Special Protection Area (FFC SPA) from Hornsea Four in combination with other plans and projects. It is important to note however that the Applicant maintains its position of no AEol alone or in combination for all other qualifying species of the FFC SPA and for all other European sites. In light of the Applicant's updated position on kittiwake the Applicant has separated the compensatory measures for gannet and kittiwake into separate Roadmaps, Compensation Plans (and consequently separate Implementation and Monitoring plans). Upon reflection the Applicant has also separated the Roadmaps, Compensation Plans (and consequently the Implementation and Monitoring Plans) for the Auk species (Guillemot and Razorbill) and Gannet. All of the compensation measures remain "without prejudice" but this Roadmap has been updated to focus solely on guillemot and razorbill.

2 Description and Scope

- 2.1.1.1 To compensate for the potential displacement impact on guillemot and razorbill from Hornsea Four, the Applicant proposes to implement a predator eradication programme at selected guillemot and/or razorbill breeding colonies. The selected colony will be chosen based on delivery potential and connectivity to the biogeographic region. This will form part of a suite of compensation measures for these species (see [B2.6 Compensation measures for FFC SPA: Overview \(APP-183\)](#)) with the Applicant committed to delivering both predator eradication and bycatch reduction for guillemot and/ or razorbill. A detailed account of the evidence supporting the measure can be found within the Guillemot and Razorbill Predator Eradication Evidence Report ([B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence \(APP-196\)](#)).
- 2.1.1.2 Predator eradication will be undertaken by island restoration experts using well established methods (i.e., the RSPB Predator Eradication Toolkit) evidenced throughout the wealth of previous predator eradication examples from the UK and further afield. For ground predators, such as rats, this usually involves poison bait stations. The primary species predator eradication will be focussed upon are rat and house mouse, but could extend to include crow or other species (such as American mink) as a supportive measure pending ecological advice and stakeholder discussions, whilst ensuring non-targeted species are not unintentionally harmed. Some of the locations shortlisted for potential eradication projects also harbour invasive plant species (such as sour fig *Carpobrotus edulis*) which can reduce the available habitat to nesting seabirds. Therefore, habitat management measures to remove

and reduce the spread of invasive plants could be included within adaptive management plans.

- 2.1.1.3 Concurrently with the removal of the (invasive) predator species, biosecurity measures will be implemented to prevent re-invasion. Biosecurity measures form a vital role in ensuring the benefits of the predator eradication continue as expected. There are a significant number of biosecurity measures available depending on the location and species being considered, all of which have been tried and tested at previous predator eradication schemes (i.e., Biosecurity for LIFE projects).
- 2.1.1.4 In order to increase the breeding population of adult birds by a sufficient margin to offset the predicted impact of Hornsea Four on an annual basis (see Table 2 of [B2.6: Compensation Measures for FFC SPA Overview \(APP-183\)](#)), predator eradication measures will be used to compensate as part of a suite of measures:
- Predator eradication;
 - Bycatch reduction measures; and
 - Fish habitat enhancement (as a resilience measure).
- 2.1.1.5 The predator eradication measures will collectively, with the other measures, be scaled up to provide a ratio of 1:2. The reduction in mortality through the implementation of the suite of measures collectively are capable of over-compensation of the impact to for the estimated potential impact to guillemot and razorbills from Hornsea Four (see Table 2 of [B2.6: Compensation Measures for FFC SPA Overview \(APP-183\)](#)).
- 2.1.1.6 Based upon a precautionary assessment, the Applicant will consider predator eradication at one to three locations, which will be determined following implementation studies, in addition to the further additional measures as part of the compensation measures package (see [2.1.1.4](#)~~2.1.1.4~~~~2.1.1.4~~). For example, following the bycatch technology selection phase the number of vessels may increase or decrease depending on the level of success of the bycatch reduction technology selection phase and therefore, the planned extent of the predator eradication may also increase or decrease. These compensation measures have the benefit of being flexible and scalable to enable successful delivery of the compensation.
- 2.1.1.7 Hornsea Four is expected to operate for 35 years following construction. If required, the accepted compensation measure will be monitored throughout the operational lifespan of Hornsea Four.

3 Indicative timescale for delivery and implementation

The high-level programme presented below (~~Table 1~~~~Table 1~~~~Table 1~~) is applicable to the implementation and delivery of the predator eradication compensation measure. The Applicant has made a commitment to implement bycatch reduction as well as predator eradication and fish habitat enhancement as a suite of compensation measures. The timing of implementation of the predator eradication compensation measure is provisional as the timeframe for Examination, consent award, reaching final investment decision (FID) and Contracts for Difference Allocation Round Five or Six, have not yet been set. The programme has been carefully considered to ensure timely delivery of the compensation measure and the Applicant has committed to the measure being implemented two years prior to

operation.

Table 1: Indicative timescale for delivery and implementation.

Activity	Year	2021	2022	2023	2024	2025	2026	2027	2028
Rat and habitat surveys	2021 - 2022	█	█						
Site Selection	2021	█							
Further site refinement and ground truthing	2021 - 2022	█	█						
Scale and package consideration	2023			█					
Anticipated Hornsea Four DCO Granted	2023			█					
Compensation Implementation ¹	2023/ 2024 - TBC			█	█				
Establishment of Offshore Ornithology Engagement Group (OOEG)	Following consent award			█	█	█	█	█	
Guillemot and Razorbill Compensation Implementation and Monitoring Plan (GRCIMP)	Following consent award			█	█	█	█	█	
GRCIMP submitted to Secretary of State	Following consent award			█	█	█	█	█	
Offshore Construction of Hornsea Four Foundations	2026						█		
Offshore Construction of Hornsea Four Offshore Turbines	2027							█	
First Power (partially operational windfarm)	2028								█

4 Consultation

4.1.1.1 Stakeholder engagement is considered important for predator eradication and stakeholder engagement will be required throughout the project development.

4.2 Post-application

4.2.1.1 The Applicant will continue consultation with stakeholders post-application and prior to close of Examination. The Applicant has undertaken initial site visits and has initiated predator eradication-implementation studies on islands under consideration (full details are provided below on specific locations) and ongoing engagement with stakeholders on the islands and Natural England has informed these studies. Evidence gathered during these site visits and implementation studies will also be provided to stakeholders, if deemed

¹ Due to the uncertainty regarding Allocation Round 5 or 6 of the Contracts for Difference (CfD) scheme the date cannot be confirmed at this time.

necessary. Following the surveys and implementation studies the predator eradication planning will begin. This stage will include consultation and engagement with local stakeholders and advisory bodies.

4.3 Post-consent

- 4.3.1.1 Following consent, a steering group named the Offshore Ornithology Engagement Group (OOEG) will be convened by the Applicant to assist in the delivery of the site selection, implementation, reporting, and other relevant matters of the compensation measure as determined by the Applicant. The OOEG core members will be the relevant Statutory Nature Conservation Bodies (SNCB(s)), local planning authority and the Marine Management Organisation (MMO). The Royal Society for the Protection of Birds (RSPB) and The Wildlife Trust will also be invited in an advisory capacity to form part of the OOEG. The purpose of this group will be to help shape and inform the nature and delivery of the compensation post consent.
- 4.3.1.2 A GRCIMP will be produced (following the content in [B2.8.7 Outline Gannet, Guillemot and Razorbill Compensation Implementation and Monitoring Plan \(APP-200\)](#), [submitted with the DCO application](#)) noting that separate versions will be produced for gannet alone (Gannet Compensation Implementation and Monitoring Plan Bycatch and Gannet Compensation Implementation and Monitoring Plan Artificial Nesting Structure) and will be submitted at Deadline 5, which will result in the removal of gannet from certain guillemot and razorbill documents. The GRCIMP –will document all the proposed compensation measures for guillemot and razorbill (including mechanisms and programme for delivery, monitoring, adaptive management, reporting). The OOEG will be consulted during development of the GRCIMP. The GRCIMP will be submitted to the Secretary of State for approval.
- 4.3.1.3 The Applicant will carry out the predator implementation studies on the potential site(s). This will involve the appointment of an experienced eradication/island restoration specialist to undertake the eradication.
- 4.3.1.4 Biosecurity measures and monitoring for success will be implemented and will be discussed with OOEG members prior to deployment. This will be set out within the GRCIMP for approval by the Secretary of State. Monitoring will also inform any adaptive management required and will be discussed with OOEG members before implementation. This will be continued until Hornsea Four has ceased operation or a determination is made by the Secretary of State following consultation with the relevant statutory nature conservation body, that compensation is no longer required. Further information on biosecurity measures, monitoring and adaptive management can be found in [Section 6](#).
- 4.3.1.5 Reporting of the results of implementation of the compensation measure will be carried out according to timescales discussed with the OOEG and set out in the GRCIMP.

Formatted

5 Development and Implementation of the Predator Eradication Programme

5.1.1.1 The following section summarises the results of the site selection process undertaken to date with the goal of identifying suitable locations for restoration, which is provided in the Predator Eradication Evidence Report ([B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence \(APP-196\)](#)), and the future site refinement approach that will be undertaken to identify candidate locations for an eradication project. The Application proposes to carry out site refinement and island implementation studies following the island site visits.

5.1.2 Location Identification

5.1.2.1 The site selection process highlighted a number of potential locations which support populations of guillemot and/ or razorbill colonies², rats and where a predator eradication programme is potentially feasible. These locations were³:

- Bailiwick of Guernsey:
 - Alderney: A number of islands/ islets around the main island;
 - Herm: Including Herm, The Humps and Jethou; and
 - Sark: A number of islands/ islets around the main island.
- Isles of Scilly: A number of Islands/ islets;
- Rathlin Island; and
- Several islands/ islets along the south coast of England.

5.1.2.2 Further details on how these sites were selected are provided in the Guillemot and Razorbill Predator Eradication Evidence Report ([B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence \(APP-196\)](#)).

5.1.2.3 Following further evidence gathering by the Applicant, including stakeholder engagement, desk-based studies and site visits to some shortlisted islands, a number of the shortlisted islands are now no longer being progressed by the Applicant. An update to sites being progressed is provided in [Section 5.1.3](#).

5.1.3 Further Site Refinement & Ground Truthing

5.1.3.1 The initial location options for predator eradication presented in [Section 5.1.2.1](#) were identified as a result of the initial site selection process. Further site refinement has since been undertaken to refine the locations and further collect evidence in support of a predator eradication project. This process was undertaken by consultation with site/ reserve managers, landowners, government bodies and services, NGOs, the local community, and other relevant stakeholders (for example see [Appendix A](#) and [Appendix B](#) presenting a Letter of Comfort from Alderney Wildlife Trust regarding collaboration on a predator eradication study at Alderney and the response from States of Alderney and from the States of Guernsey in relation to Herm (and surround) islands in [B1.1: Annex 37 Non-Statutory Targeted Compensation Measures Consultation Responses \(APP-166\)](#)).

² Note that all of the following overarching locations contain populations of nesting guillemot and razorbill, however, not all islands and islets around these locations, that may be considered for eradication, have both species present.

³ Note that exact island names for some locations are not disclosed due to confidentiality/ on-going discussions which are commercially sensitive.

- 5.1.3.2 The Isles of Scilly were visited during preliminary site visits by ornithologists on behalf of the Applicant in August 2021. A lack of evidence on rat presence on islands with guillemot and razorbill was found and therefore the location is not being progressed further by the Applicant at this stage. The shortlisted islands/ islets along the south coast of England were deemed to be unsuitable for a predator eradication programme based on information gleaned from a desk-based study and consultation with local stakeholders (including Devon Wildlife Trust). Furthermore, since the Applicant's DCO submission, it has been publicly announced that Rathlin Island has secured funding for a predator eradication programme. Therefore, Rathlin Island will no longer be considered as part of the shortlist by the Applicant at this stage.
- 5.1.3.3 The Bailiwick of Guernsey, including Herm and Sark (along with the relevant islands/ islets around the main islands) were visited by ornithologists on behalf of the Applicant in August 2021. Evidence in support of a predator eradication programme was determined for each location. Furthermore, evidence of rats accessing known guillemot and razorbill nesting locations on islands in Alderney was provided by the Alderney Wildlife Trust (who are working with the Applicant to gather further evidence). As a result, the locations being progressed by the Applicant through the island implementation stage where further ground truthing and collection of evidence will be collected are located within the Bailiwick of Guernsey.
- 5.1.3.4 In summary, the following islands have been refined for the predator eradication implementation stage:
- Bailiwick of Guernsey:
 - Alderney: A number of islands/ islets around the main island;
 - Herm: Including Herm, The Humps and Jethou; and
 - Sark: A number of islands/ islets around the main island.
- 5.1.3.5 Conversely, the following islands will no longer be pursued by the Applicant:
- Isles of Scilly
 - Rathlin Island; and
 - Torquay, Devon islands.
- 5.1.3.6 The report G1.50 Compensation measures for FFC SPA: Derogation and Compensation Update Position Statement sets out the refinement and maps for the islands being pursued following refinement for the implantation stage.
- 5.1.3.7 The island implementation studies were initiated by the Applicant in February 2022 to gather further evidence to maximise the chances of success of the eradication programme and feed into the decision-making process of which island(s)/islet(s) to take forward. It is planned that implementation studies will be completed before the DCO is granted. If following these studies it is considered that further sites should be explored, the Applicant will return to the short-listed potential sites for further ground truthing and site refinement. Preliminary results are promising and the Applicant expects to be able to secure all required compensation on a number of islands/ islets around the main island of Alderney, and is considering Guernsey and Sark for adaptive management.

5.1.3.8 The following sections present an overview of the factors considered by the island implementation studies and the evidence will be submitted in the Predator Eradication Implementation Studies Update at Deadline 5.

Logistical considerations for undertaking an eradication scheme

5.1.3.9 This will consider whether or not a predator eradication project could be technically feasible at the location, including factors such as access and other logistical requirements, such as support from the local community for the eradication and future biosecurity measures. This will be undertaken in conjunction with landowners, site managers and island restoration experts to provide a site specific and informed opinion.

Presence of target predator species

5.1.3.10 This section will determine the species and degree of predator presence at island locations and the level of overlap between the predator occurrence and guillemot and/ or razorbill nesting locations. This process is being conducted by eradication specialists and ecologists to allow realistic abundance estimates to be made and a prediction of the effort required to achieve their eradication or the most effective methods (Roy *et al.* 2015).

5.1.3.11 The studies will use cage traps, camera traps and ink tunnels to determine the species and distribution of invasive predator. The surveys of locations will be undertaken during the non-breeding season to avoid disturbance to breeding seabirds. Flexibility will be maintained within the planning of the studies with regard to the timing as periods of severe weather could limit access to islands. Predator surveys will be undertaken during and after the eradication project to monitor the abundance/presence of invasive predators, using appropriate methods that will be defined in due course.

Additional site-specific evidence of predation pressure

5.1.3.12 Surveys of the islands are being undertaken to document further site-specific evidence of predation of guillemot and razorbill eggs, nestlings, or adults. Surveys are collecting data such as egg caches, gnawed seabird carcasses, photographic evidence from cameras, and other methods determined as appropriate and this evidence will be submitted in the Predator Eradication Implementation Studies Update at Deadline 5.

Potential nesting habitat assessment

5.1.3.13 A preliminary estimate of nesting space for guillemot and razorbill has been undertaken by the Applicant using imagery gathered during site visits to certain locations in August 2021 and information provided by the Alderney Wildlife Trust (see [G1.33 Predator Eradication Island Suitability Assessment Bailiwick of Guernsey](#) to be submitted at Deadline 1). A more detailed assessment of colony habitat will be undertaken during implementation study visits to determine the amount of potential nesting habitat available to guillemot and razorbill following the removal of the predator. Islands where guillemot and razorbill populations have historically been larger are considered to have proven capacity for increased productivity.

Colony Census

5.1.3.14 A complete island seabird census for Alderney, Herm and Sark (including the associated satellite islands and islets for each island) is planned for the 2022 breeding season and will be undertaken following methods presented in Walsh *et al.*, (1995). If possible, this census will include collection of productivity estimates. However, this will be dependent on access to monitor as guillemot and razorbill are notoriously hard to monitor due to nesting preferences in certain habitats (i.e. under boulders and within crevices). This would form the baseline for future population and productivity assessment if the island is included in the eradication project. Long-term seabird monitoring is described in the sections below. Information may also be collected on other flora and fauna and general island restoration following the removal of the invasive species.

5.1.4 Additional considerations

5.1.4.1 There are also a number of other considerations which will be incorporated into the decision-making process in a qualitative manner. For example, guillemot and razorbill are known to be at risk of potential displacement from offshore wind farms (Bradbury *et al.*, 2014). There is additional biosecurity risk from human populations on islands (the larger the population the greater the risk of invasive species arriving), and therefore preference is given to uninhabited islands or islands with a low human population.

5.1.4.2 The FFC SPA is designated for a number of breeding seabird species including (in addition to guillemot and razorbill): kittiwake, gannet and a breeding seabird assemblage consisting of fulmar, puffin, herring gull, shag and cormorant. Those species nesting in burrows (such as puffin) or on the ground/in accessible areas (such as razorbill, shag, and cormorant) have increased vulnerability to predation from predators when compared to cliff nesting species. Burrow nesting species are known to benefit from predator eradication projects, with multiple reports of increased breeding success following the removal of key predators. It is, therefore, likely that numerous species will benefit from eradication projects, in addition to the reduced predation pressure on just a single target seabird species (Ratcliffe *et al.* 2009). In order to ascertain the assemblage of other seabird species breeding at each island, the JNCC SMP will also be used to explore other breeding seabird species.

5.1.4.3 Unassisted re-invasion of islands by predators is a potential threat to islands previously eradicated which are within swimming distance of infested islands or the mainland (Tabak *et al.* 2015). Protocols to limit potential re-invasions will be instated at islands during and following the eradication programme and are further detailed in the biosecurity measure section below.

5.1.4.4 There is therefore a high degree of confidence that this measure will be achievable and deliverable at the scale required. The work proposed by the Applicant will focus on refinement and implementation of the measure in order to ensure long-term success.

5.2 Implementation of the Predator Eradication Programme

5.2.1.1 Following grant of the DCO and approval of the Guillemot and Razorbill Compensation Implementation and Monitoring Plan (GRCIMP), the eradication process will be undertaken. Predator eradication will be undertaken by professional predator eradication experts using

well established methods evidenced throughout the wealth of previous island restoration examples from the UK and further afield.

6 Biosecurity measures, monitoring, and adaptive management

6.1 Biosecurity measures

- 6.1.1.1 At the initiation of the predator eradication program from the chosen locations, biosecurity measures will be put in place to prevent re-infestation by the target predator, or the arrival of other non-native mammalian predator species. For example, previous projects have implemented vector control including vessel control and bait traps at arrival points to minimise chance of reinvasion and surveillance procedures including using sniffer dogs and/or chew sticks at points around islands to identify early signs of reinvasion. Previous successful biosecurity measures have been implemented on islands in the UK that have undergone predator eradication such as at Canna and Sanday, measures consisting of continuous monitoring (wax blocks and kill traps), quarantine and contingency plans have prevented the reinvasion of rats since being declared rat free in 2008 (Luxmoore *et al.*, 2019).
- 6.1.1.2 Biosecurity measures will be in-line with the current RSPB Biosecurity for LIFE⁴ project which was initiated to safeguard the UK's internationally important seabird islands. The RSPB project aims to improve biosecurity measures across all of the UK's 41 seabird island SPAs and establish response plans when invasive species are reported at island SPAs (RSPB, 2019). The biosecurity measures will aim to replicate the RSPB Biosecurity for LIFE project in conjunction with the OOEG, including the RSPB who have significant experience in island biosecurity.
- 6.1.1.3 The Applicant has already undertaken site visits to locations where predator eradication schemes have been undertaken to understand the potential level of biosecurity controls (for example, St. Agnes and Cugh on the Isles of Scilly). Such information will complement and inform biosecurity planning at a site-specific level of detail for the compensatory measure.

6.2 Monitoring

- 6.2.1.1 Monitoring will be an important component at all stages of the proposed eradication programme (pre-, during and post-eradication) in order to assess the success of a scheme including native species population and productivity changes, invasive species survival and any associated impacts of the eradication.
- 6.2.1.2 The detail of the monitoring proposals will be discussed with the OOEG and detailed in the GR^CIMP for agreement with the Secretary of State. The monitoring plan will be developed in line with the evidence base presented in [Section 7](#) of the [B.2.8.3. Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence \(APP-196\)](#).
- 6.2.1.3 A monitoring package including the frequency, duration and nature of the monitoring methodology will be designed with the delivery partner and in consultation with the OOEG. Monitoring will focus on the progress and confirmation of eradication, and guillemot and razorbill productivity at the island colony. The objective of the monitoring is to record the

⁴ <https://biosecurityforlife.org.uk/>

population response at the chosen locations.

- 6.2.1.4 Predator monitoring will commence following the baiting or trapping campaign and will follow the established methods outlined by the eradication contractor. It is anticipated that this monitoring will last at least two years to record the removal of target species from the location.
- 6.2.1.5 Monitoring for potential re-infestation on the location will continue for the operational phase of the project, at a frequency to be approved with the relevant approval authority. This will be included with the biosecurity compensatory measures.
- 6.2.1.6 In order to monitor guillemot and razorbill and explore the response of other species of seabird on the locations to the removal of predators, a breeding seabird census project will be initiated to collect population data. Details of seabird monitoring will be determined after islands implementation studies have been completed. To show the changes as a result of the predator eradication project, population increases will be provided in the context of local, regional and national trends. This will involve undertaking seabird censuses at other local/ regional guillemot and razorbill colonies (the number of which will be determined at a later stage in consultation with the OOEG), while comparing the national trend to JNCC seabird population analysis publications will be assessed. This will show population changes at the colony where an eradication has been undertaken relative to a regional level change. As an example, this was explored within the Lundy Island case study presented within the Guillemot and Razorbill Predator Eradication Evidence Report ([B2.8.3 Compensation measures for FFC SPA: Predator Eradication: Ecological Evidence \(APP-196\)](#)) where the Lundy Island guillemot and razorbill population had increased above the percentage change experienced by local razorbill and guillemot colonies within the region. This suggests predation pressure from rats was likely to have had an impact beyond what other external influences had.
- 6.2.1.7 Monitoring will continue for the operational phase of the Hornsea Four project, at a frequency to be detailed in the GR^CIMP. It is envisaged that the delivery partner will lead the monitoring component of this measure.

6.3 Adaptive Management

- 6.3.1.1 If monitoring indicates that eradication attempts prove less successful than originally expected, the reasons for the lack of success will be investigated and options identified for improving the eradication programme. If the long-term biosecurity risk proves too high at the initial islands such as those at Alderney, another location may be chosen such as Guernsey and Sark where the Applicant is currently undertaking implementation studies (or such as those considered in the long-list of sites) for eradication in consultation with the OOEG.

7 Legal agreement(s)

- 7.1.1.1 The Applicant's primary approach to securing any locations shortlisted as part of the site refinement process will be to enter into voluntary access agreements with landowners and occupiers in order to gain access to their land both for implementing the compensation measure and for ongoing monitoring through the lifetime of Hornsea Four. The detailed

terms of such agreements will be determined by the outcome of the commercial negotiations between the parties in question. The number of agreements that may be required will be dependent upon the population and land ownership status of the proposed site. A land referencing exercise has been undertaken for each location to determine the number of landowners and this will be updated during the site refinement process.

7.1.1.2 Generally the Applicant will be seeking:

- Licence agreements from landowners to enable equipment to be installed and maintained on third party land for the duration of Hornsea Four.
- The agreements will also contain rights of access to any equipment left in situ, allowing for maintenance and monitoring visits.

7.2 Lease Agreements for Monitoring and Biosecurity.

7.2.1.1 It may be necessary to put in place biosecurity measures in which case the Applicant's approach will be (if necessary) to secure any long-term monitoring station pursuant to a leasing arrangement with the landowner for the duration of the operation of Hornsea Four. These may be required for monitoring and for checking of vessels located at boat launch/mooring locations. The detailed terms of such agreements will be determined by the outcome of commercial negotiations between the parties in question. Generally, the Applicant will be seeking:

- An initial option agreement that grants the Applicant exclusivity over a specified area of land for a set period with the ability to call on the landowner to permit a monitoring station to be installed.
- The grant of a long leasehold interest; and
- Rights of access and if needed the installation of service media.

7.2.1.2 In addition, commercial arrangements may be needed with vessel and/or flight operators to ensure suitable biosecurity measures can be implemented.

7.3 Compulsory Purchase

7.3.1.1 The Applicant has obtained legal advice confirming that, if necessary, compulsory acquisition powers can be obtained for the acquisition of the monitoring station sites based in England and Wales. In order to be successful in applying for these powers, the Applicant will need to satisfy the compulsory acquisition tests i.e., there must be a compelling case in the public interest and the rights sought must be necessary and proportionate. It will also be necessary to demonstrate the alternatives to compulsory acquisition have been considered and reasonable attempts to secure the necessary land rights by way of voluntary agreement have been exhausted.

7.3.1.2 The Applicant holds a Generation License pursuant to section 6 of the Electricity Act 1989 (the "1989 Act") and can therefore promote a compulsory purchase order under the 1989 Act. If that were pursued it would be necessary to demonstrate that the delivery of compensatory measures is a purpose connected with activities related to electricity generation. This is the case as the delivery of the compensation measure will be required by the DCO as a compensation measure for the impact of Hornsea Four on the FFC SPA.

7.3.2 Memorandum of Understanding (“MoU”)

7.3.2.1 The Applicant has received letters of comfort from the Alderney Wildlife Trust and the States of Guernsey ([Appendix A](#) and [Appendix B](#)). The Applicant also intends to enter into MoU’s (subject to contract) with the relevant delivery partners to document the parties’ collaboration and further scope out the compensation measure with a view to entering into the necessary contracts once the site has been selected. Each MoU includes work to be undertaken pre and post consent award. They set out the main aims of the initial scope e.g., establishment/confirmation of target predator species presence and calculation of available nesting habitat. The methodology for undertaking the initial implementation studies is also included. Any initial funding arrangements on the part of the Applicant has been included within the MoU together with any additional information gathering, the technical requirements, long term security of the compensation measure and the formalising of the arrangement between the Applicant and the relevant bodies. The draft MoU’s are currently under discussion with the relevant parties and this section will be updated once the MoU’s are finalised. The Applicant is confident that the MoU’s will be in place before the end of the Examination.

8 Securing key consents

8.1.1.1 In parallel with securing the requisite land rights the Applicant will assess what site specific consents are needed.

8.1.1.2 Designation of land as a Special Area of Conservation (SAC), a Special Protection Area (SPA) or a Ramsar site are important considerations in the implementation of predator eradication. It is important to consider the implications of designated sites at the earliest possible stage to ensure that there will be no adverse effect.

8.1.1.3 Where a project is to be consented as a result of the application of Reg 64 of the Conservation of Habitats and Species Regulations 2017 (the “Habitats Regulations”) it is not open to the Secretary of State to consider measures as a compensation measure that may have a negative effect on the same or on another SAC or SPA. When considering the additional consents needed therefore to implement the compensation measure the Applicant should be confident that the measure will either be exempt or excluded from the Habitats Regulations or that the measure will not have an adverse effect on site integrity. All measures considered as compensation will not have an adverse effect on site integrity, see the [B2.2.2 RP Volume B2 Annex 2.2 Habitat Regulations Assessment Compensation Measures \(APP-180\)](#) for further information. The benefit of the measure to the SAC or SPA can be considered by the competent authority at the Appropriate Assessment stage.

8.1.1.4 A Site of Special Scientific Interest (SSSI) notification (if required) will include a list of operations likely to damage the features for which the site is regarded as special. Section 28G of the Wildlife and Countryside Act 1981 (the 1981 Act) confers duties on “section 28G authorities”. The Applicant holds a Generation Licence pursuant to s6 of the Electricity Act 1989 which means the Applicant is a statutory undertaker and falls within section 28G. The 1981 Act requires the Applicant to take certain steps to notify the relevant statutory nature conservation body of the works.

8.1.1.5 It may also be necessary to obtain consents from either the Health and Safety Executive or

the Department for the Environment, Food and Rural Affairs depending upon the bait type and delivery method used.

- 8.1.1.6 For sites designated as a Ramsar site⁵, necessary permissions will be required (such as from States of Alderney Estates Environment and Infrastructure or The States of Guernsey Agriculture, Countryside and Land Management Service and Veterinary Officer). Permission to undertake predator eradication has already been granted to Alderney Wildlife Trust to undertake eradication to protect seabirds.
- 8.1.1.7 The States of Guernsey and States of Alderney are crown dependencies and therefore owned by the UK Crown, but the land including the islets and islands is administered by the States. The Applicant has been liaising with the States of Guernsey and with local tenants to undertake the implementation study. Permission has been granted to undertake the implementation study by States of Guernsey and tenants, including permission from the States of Guernsey Veterinary Officer required due to the Ramsar site designation protection. The Applicant is confident the necessary permissions and consents can be secured.

⁵ Wetlands of international importance, designated under the Convention on Wetlands 1971, called the Ramsar Convention.

9 Draft DCO wording

Commentary:

Article 40 of the draft DCO currently gives effect to Schedule ~~H~~16 of the draft DCO:

Ornithology Compensation Measures provisions

40. Schedule 16 (compensation to protect the coherence of the national site network) has effect.

Part 1 of Schedule 16 makes provision for compensatory measures for kittiwake.

Part 2 of Schedule 16 makes provision for fish habitat enhancement.

If necessary, the Secretary of State could amend Schedule 16 to secure compensatory measures for gannet, guillemot and razorbill, in accordance with the draft provisions set out below. These adopt the drafting for kittiwake compensation specified in the draft DCO submitted at Deadline 2, with necessary amendments to apply to gannet, guillemot and razorbill compensation.

For the avoidance of doubt, no amendment would be required to article 40, which as noted above already gives effect to the entirety of Schedule 16.

SCHEDULE 16

COMPENSATION TO PROTECT THE COHERENCE OF THE NATIONAL SITE NETWORK

Part 1

OFFSHORE ORNITHOLOGY ENGAGEMENT GROUP

PART 1**The Hornsea Four Offshore Ornithological Engagement Group**

1. In this ~~Schedule:~~Schedule—

~~“The the~~ FFC” means the site designated as the Flamborough and Filey Coast Special ~~Protection~~ protection Area;

~~“GCIMP” means the gannet compensation implementation and monitoring plan for the delivery of measures to compensate for the predicted loss of adult gannet from the FFC as a result of the authorised development;~~

~~“GRCIMP” means guillemot and razorbill compensation implementation and monitoring plan for the delivery of measures to compensate for the predicted loss of adult guillemot and razorbill from the FFC as a result of the authorised development;~~

~~“KCIMP” means the kittiwake compensation implementation and monitoring plan for the delivery of measures to compensate for the predicted loss of adult kittiwakes from the FFC as a result of the authorised development;~~

~~“the gannet and kittiwake compensation plan” means the document certified as the gannet and kittiwake compensation plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents-etc., etc);~~

~~“the gannet guillemot and razorbill compensation plan” means the document certified as the gannet guillemot and razorbill and guillemot compensation plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents-etc., etc);~~

“the Hornsea Four Offshore Ornithology Engagement Group” or “H4 OOEG” means the group that will assist, through consultation, the undertaker in the delivery of the compensation measures identified in the ~~gannet and kittiwake compensation plan and~~ the gannet compensation plan and the quillmot and razorbill and quillmot compensation plan;

“the kittiwake compensation plan” means the document certified as the kittiwake compensation plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents, etc.);

“the offshore compensation measures” means, as the context requires, bycatch reduction and/or the offshore nesting structure(s); and

“the onshore compensation ~~measures~~ measure” means, as the context requires, predator eradication and/or ~~predator control measures and/or~~ the onshore nesting structure(s).

2. Work Nos. 1, 2, 3, 4 and 5 together with any associated development offshore may not be commenced until a plan for the work of the “H4 OOEG” has been submitted to and approved by the Secretary of State. ~~Such, such~~ plan to ~~include~~ include—

- (a) ~~a)~~ terms of reference of the H4 OOEG;
- (b) ~~b)~~ details of the membership of the H4 OOEG which must ~~include~~ include—
 - (i) ~~i)~~ the MMO and the relevant statutory nature conservation body as core members for the offshore compensation measures ~~and~~;
 - (ii) ~~ii)~~ the relevant local planning authority and statutory nature conservation body as core members for the onshore compensation measures;
 - (iii) ~~iii)~~ the RSPB and The Wildlife Trust ~~and the National Federation of Fishermens Organisations~~ as advisory members, for both the onshore compensation measures and/or the offshore compensation measures subject to their area of expertise;
- (c) ~~c)~~ details of the proposed schedule of meetings, timetable for preparation of the ~~gannet and kittiwake implementation and monitoring plan (“the KGIMP”) and the gannet, quillmot and razorbill implementation and monitoring plan (“GGRIMP”)~~ KCIMP, the GCIMP and the GRCIMP and reporting and review periods;
- (d) ~~d)~~ the dispute resolution mechanism and confidentiality provisions; and
- (e) ~~e)~~ the scope of ~~the H4 OOEG work~~ to be limited to the topics for discussion as identified by the ~~Applicant as appointed chair of the H4 OOEG~~ to include in relation to ~~each the~~ compensation ~~measure, site selection, project/study design, methodology for implementing the~~ measure, monitoring and adaptive management ~~options~~.

PART 2

KITTIWAKE COMPENSATION

~~Gannet and Kittiwake Compensation Measures~~

~~3.1 The GKIMP~~ Following consultation with the H4 OOEG, the KCIMP must be submitted to the Secretary of State for approval in consultation with the MMO and relevant statutory nature conservation body for the offshore compensation ~~measures~~ measure (if required), and with ~~Natural England and~~ the relevant local planning authority ~~for and relevant statutory nature conservation body for the~~ onshore compensation ~~measures~~ measure (if required). The ~~KGIMP~~ KCIMP must be based on the strategy for ~~gannet and kittiwake compensation set out in the gannet and kittiwake compensation plan and include~~ set out in the kittiwake compensation plan and include—

- (a) details of the location where the compensation measure will be delivered, and in the event an onshore structure is required, details of landowner agreement(s) and in the event an offshore structure is required, details of any relevant seabed agreement(s);

~~a) details of locations where compensation measures will be deployed, and in the event onshore structures are required, details of landowner agreements and in the event new~~

~~offshore structures are required, details of the seabed agreements with the relevant owner of the foreshore;~~

- (b) ~~b)~~ details of ~~designs of artificial~~ the design of the artificial nesting structure ~~(s);~~; including the projected number of nests that will be accommodated on the structure, and how risks from avian or mammalian predation and for an onshore nesting ~~structures-structure~~ how unauthorised human access will be mitigated;
- (c) ~~e)~~ an implementation timetable for delivery of the artificial nesting structure, such timetable to ensure that ~~in the event of the implementation of:~~ the structure is in place to allow for at least three full kittiwake breeding seasons prior to operation of any turbine forming part of the authorised development. For the purposes of this paragraph each breeding season is assumed to have commenced on 1st April in each year and ended on 31st August;
- (d) details of the maintenance schedule for the artificial nesting structure:
- ~~i. a new or repurposed onshore or offshore structure that does not host an existing colony, the structure is in place to allow for two kittiwake and gannet breeding seasons prior to operation of any turbine forming part of the authorised development; or~~
 - ~~ii. a repurposed onshore or offshore structure that hosts an existing colony the structure is in place to allow for one kittiwake and gannet breeding season prior to operation of any turbine forming part of the authorised development;~~
- ~~For the purposes of this paragraph each breeding season is assumed to have commenced on 1 April in each year and ended on 31st August.~~
- (e) ~~details of details for~~ the proposed ongoing monitoring of the ~~measures including: survey methods; survey programmes and measure including—~~
- (i) survey methods;
 - (ii) ~~e)~~ survey programmes; and
 - (iii) colony and productivity counts;
- (f) ~~e)~~ recording of H4 OOEG consultations;
- (g) ~~f)~~ details of any adaptive management measures, with details of the factors used to trigger any such measures; and
- (h) ~~g)~~ provision for reporting to the Secretary of State, to include details of the use of ~~each site the structure~~ by breeding kittiwake ~~and gannet~~ to identify barriers to success and target any adaptive management measures; ;
- ~~h)—details of the artificial nesting site maintenance schedule for the artificial nesting structure; and~~
 - ~~i)—in the event that the undertaker must implement bycatch reduction measures for gannet the information listed in paragraph 9(b)~~

~~4.2.~~ The undertaker must construct the ~~compensation measures~~ artificial nesting structure as set out in the ~~GKIMP-KCIMP~~ approved by the Secretary of State.

~~5.3.~~ The undertaker must notify the Secretary of State of completion of ~~implementation of the measures~~ construction of the artificial nesting structure as set out in the ~~GKIMP-KCIMP~~.

~~6.4.~~ The artificial ~~nest~~ nesting structure must not be decommissioned without prior written approval of the Secretary of State in consultation with relevant statutory nature conservation body.

~~7.5.~~ The ~~GKIMP-KCIMP~~ approved under this Schedule includes any amendments that may subsequently be approved in writing by the Secretary of State. Any amendments to or variations of the approved ~~KGIMP-KCIMP~~ must be in accordance with the principles set out in the ~~gannet and~~ kittiwake compensation plan and may only be approved where it has been ~~demonstrated~~ demonstrated to the ~~satisfaction~~ satisfaction of the Secretary of State that it is unlikely to give rise to any materially new or

~~materially~~ materially different environmental effects from those considered in the ~~gannet and~~ kittiwake compensation plan.

PART 3

~~Gannet Guillemot and Razorbill Compensation Measures~~

FISH HABITAT ENHANCEMENT

1. No turbine forming part of the authorised development may begin operation until arrangements for the implementation of fish habitat enhancement measures have been put in place in accordance with the principles set out in the KCIMP, the GCIMP and the GRCIMP.

PART 4

GANNET COMPENSATION

1. ~~The GGRIMP~~ Following consultation with the H4 OoEG, the GCIMP must be submitted to the Secretary of State for approval in consultation with the MMO and ~~8. the relevant statutory nature conservation body for offshore compensation measures, and with the~~ relevant statutory nature conservation body and for the offshore compensation measure(s) (if required), and with the relevant local planning authority and relevant statutory nature conservation ~~trusts body~~ for the onshore compensation measures ~~measure~~ (if required). The ~~GGRIMP~~ GCIMP must be based on the strategy for gannet, ~~guillemot and razorbill~~ compensation set out in the gannet ~~guillemot and razorbill~~ compensation plan and ~~include:~~ must include:

a) for the artificial nesting structure measure:

- i. details of the location where compensation measure will be delivered, and in the event an onshore structure is required, details of landowner agreement(s) and in the event an offshore structure is required, details of any relevant seabed agreement(s);
- ii. details of the design of the artificial nesting structure: including the projected number of nests that will be accommodated on the structure, and how risks from avian or mammalian predation and for an onshore nesting structure how unauthorised human access will be mitigated;
- iii. an implementation timetable for delivery of the artificial nesting structure, such timetable to ensure that the structure is in place to allow for at least three full gannet breeding seasons prior to operation of any turbine forming part of the authorised development. For the purposes of this paragraph each breeding season is assumed to have commenced on 1st April in each year and ended on 31st August
- iv. details of the maintenance schedule for the artificial nesting structure;
- v. details for the proposed ongoing monitoring of the measure including-
 1. survey methods;
 2. survey programmes; and
 3. colony and productivity counts;

~~a) in the event that the undertaker must implement predator eradication and/or predator control measures~~

- ~~i. details of locations where compensation measures will be deployed;~~
- ~~ii. details of how any necessary access rights, licences and approvals have or will be obtained and any biosecurity measures will or have been secured;~~

- iii. ~~an implementation timetable for delivery of the predator eradication and/or predator control measure that ensures that the measure has been implemented two years prior to operation of any turbine forming part of the authorised development;~~
 - iv. ~~proposals for monitoring and reporting on the effectiveness of the measures, including productivity rates; breeding population and distribution of breeding birds;~~
 - vi. ~~v.~~ recording of H4 OOEG consultations;
 - vii. ~~vi.~~ details of any adaptive management measures, with details of the factors used to trigger any such measures; and
 - viii. ~~vii.~~ provision for reporting to the Secretary of State, to include details of the use of ~~each site~~ the structure by breeding ~~guillemot and razorbill~~ gannet to identify barriers to success and target ~~the adaptive~~ any adaptive management measures.;
- b) ~~in the event that the undertaker must implement for the~~ bycatch reduction ~~measures~~ measure:
- i. details of relevant technology supply agreements and arrangements with fishers to ~~uptake~~ use the bycatch reduction technology that will ~~or has be or have~~ been secured by the undertaker;
 - ii. an implementation timetable for provision of the bycatch reduction ~~measures that ensures that the measures are in place~~ measure, such timetable to ensure that contract(s) are entered into with fishers for the provision and use of bycatch reduction technology no later than one year prior to the operation of any turbine forming part of the authorised development;
 - iii. ~~proposals~~ details for the proposed ongoing monitoring ~~and reporting on the effectiveness~~ of the ~~measures,~~ measure including ~~the~~ collection of data from participating fishers;
 - iv. recording of H4 OOEG consultations;
 - v. details of any adaptive management measures and details of the factors used to trigger ~~adaptive management~~ any such measures ~~for each species~~; and
 - vi. provision for annual reporting to the Secretary of State, to identify barriers to success and target ~~the~~ any adaptive management measures.
2. ~~9.~~ The undertaker must ~~implement the compensation measures as set out in the GGRIMP~~ construct the artificial nesting structure and enter into contract(s) with fishers for the provision and use of bycatch reduction technology as set out in the GCIMP approved by the Secretary of State.
3. ~~10.~~ The undertaker must notify the Secretary of State of completion of ~~implementation of the measures set out in the GGRIMP~~ construction of the artificial nesting structure and the entering into contract(s) with fishers for the provision and use of bycatch reduction technology as set out in the GCIMP.
4. The artificial nesting structure must not be decommissioned without prior written approval of the Secretary of State in consultation with relevant statutory nature conservation body.
5. ~~11.~~ ~~The GGRIMP~~ The GCIMP approved under this Schedule includes any amendments that may subsequently be approved in writing by the Secretary of State. Any amendments to or variations of the approved ~~GGRIMP~~ GCIMP must be in accordance with the principles set out in the ~~gannet, guillemot and razorbill~~ gannet compensation plan and may only be approved where it has been ~~demonstrated~~ demonstrated to the ~~satisfaction~~ satisfaction of the Secretary of State that it is unlikely to give rise

to any materially new or ~~materially~~-materially different environmental effects from those considered in the ~~kittiwake-gannet~~ compensation plan.

PART 45

GUILLEMOT AND RAZORBILL COMPENSATION

~~6.1.~~ Following consultation with the H4 OOEG, the GRCIMP must be submitted to the Secretary of State for approval in consultation with the MMO and relevant statutory nature conservation body for the offshore compensation measure, and with the relevant statutory nature conservation body and the relevant local planning authority and relevant conservation trusts for the onshore compensation measure. The GRCIMP must be based on the strategy for guillemot and razorbill compensation set out in the guillemot and razorbill compensation plan and include:

a) for the predator eradication measure:

- ~~ii.~~ i. details of the location(s) where the compensation measure will be delivered;
- ~~iii.i.~~ ii. details of how any necessary access rights, licences and approvals have or will be obtained and any biosecurity measures will be or have been secured;
- ~~iii.ii.~~ iii. an implementation timetable for delivery of the predator eradication measure, such timetable to ensure that the predator eradication method has commenced no later than two years prior to operation of any turbine forming part of the authorised development;
- ~~iv.iii.~~ iv. details for the proposed ongoing monitoring of the measure including:
 - ~~1.~~ 1. survey methods;
 - ~~2.1.~~ 2.1. survey programmes;
 - ~~3.2.~~ 3.2. productivity rates;
 - ~~4.3.~~ 4.3. breeding population; and
 - ~~5.4.~~ 5.4. distribution of breeding birds;
- ~~v.iv.~~ v. recording of H4 OOEG consultations;
- ~~vi.v.~~ vi. details of any adaptive management measures, with details of the factors used to trigger any such measures; and
- ~~vii.vi.~~ vii. provision for reporting to the Secretary of State, to include details of the use of the location(s) by breeding guillemot and razorbill to identify barriers to success and target any adaptive management measures.

b) for the bycatch reduction measure:

- ~~i.ii.~~ i. details of relevant technology supply agreements and arrangements with fishers to use the bycatch reduction technology that will be or have been secured by the undertaker;
- ~~ii.i.~~ ii. an implementation timetable for provision of the bycatch reduction measure, such timetable to ensure that contract(s) are entered into with fishers for the provision and use of bycatch reduction technology no later than one year prior to the operation of any turbine forming part of the authorised development;
- ~~iii.ii.~~ iii. details for the proposed ongoing monitoring of the measure including collection of data from participating fishers;
- ~~iv.iii.~~ iv. recording of H4 OOEG consultations;
- ~~v.iv.~~ v. details of any adaptive management measures and details of the factors used to trigger any such measures; and

vi.v. provision for annual reporting to the Secretary of State, to identify barriers to success and target the adaptive management measures.

7.2. The undertaker must carry out the predator eradication method and enter into contract(s) with fishers for the provision and use of bycatch reduction technology as set out in the GRCIMP approved by the Secretary of State.

8.3. The undertaker must notify the Secretary of State of completion of the predator eradication method and entering into contract(s) with fishers for the provision and use of bycatch reduction technology set out in the GRCIMP.

9.4. The GRCIMP approved under this Schedule includes any amendments that may subsequently be approved in writing by the Secretary of State. Any amendments to or variations of the approved GRCIMP must be in accordance with the principles set out in the quillemot and razorbill compensation plan and may only be approved where it has been demonstrated to the satisfaction of the Secretary of State that it is unlikely to give rise to any materially new or materially different environmental effects from those considered in the quillemot and razorbill compensation plan.

Formatted
Numbered
at: 1 + All
1.27 cm

Formatted
Numbered
at: 1 + All
1.27 cm

Formatted
Numbered
at: 1 + All
1.27 cm

Fish Habitat Enhancement

~~No turbine forming part of the authorised development may begin operation until the fish habitat enhancement measures have been implemented in accordance with the principles as set out in the GKIMP and the GGRIMP (as relevant).~~

10 Funding

10.1.1.1 The Applicant has identified the costs associated with the development, implementation, and ongoing monitoring of the proposed compensation measure. These costs have been included within a detailed Derogation Funding Statement (**B2.10 RP Volume B2 Chapter 10 Without Prejudice Derogation Funding Statement (APP-202)**). This statement is supplemental to the Funding Statement (**E1.1 CA Volume E1.1 Funding Statement (APP-224)**) submitted as part of the suite of Application documents. The Funding Statement(s) outline the overall project cost based on the capital expenditure and operational expenditure assumptions in the "Review of Renewable Electricity Generation Cost and Technical Assumptions" (Arup 2016). The Funding Statement(s) also detail the corporate structure and a robust explanation to allow the Secretary of State to conclude that the necessary funding to deliver the compensation measure can be secured.

11 Legislative and Political Issues

11.1.1.1 Questions have been raised as to whether it is possible for a Generator to secure compensation measures outside England and the UK Continental Shelf. The latest draft DEFRA Guidance dated July 2021 does not preclude the implementation of compensation measures outside of the affected area, but states that in the case of mobile species, connectivity between populations should be considered (see **Appendix A of B2.8.1 Compensation measures for FFC SPA: Bycatch Reduction: Ecological Evidence (APP-194)** for evidence of how quillemot and razorbill originating from North Sea colonies (i.e. in

proximity to FFC SPA) are likely to migrate through or disperse to the waters in the English Channel). Depending on how mobile a species is, this may need to be considered in discussions with the Devolved Administrations. The Applicant has engaged with key stakeholders including the Natural England, the States of Guernsey and received a letter of support for an eradication programme from States of Alderney in response to the consultation in August 2021. The Applicant considers their continued support to be key to the delivery of the compensation measures.

11.1.1.2 Sites at Alderney and Herm are protected under the Convention on Wetlands of International Importance ("the Ramsar Convention"). These sites are located outside of the national site network. Nonetheless these sites are afforded the protection of Ramsar status. The National Planning Policy Framework in England affords Ramsar Sites and Proposed Ramsar Sites the same protection as European Sites. This is a policy position in England that cannot be reflected in the Bailiwick of Guernsey as they are a Crown Dependency and have never been subject to EU Law. The relevant applicable Ramsar policy is the 2020 Strategy for Nature. The Applicant has engaged with the States of Guernsey and has confidence that despite formal designation as an SPA not being possible, the 2020 Strategy for Nature envisages a proportionate level of protection. Further engagement with the States of Guernsey will continue to ensure the measure can be successfully implemented and monitored for the operational lifetime of Hornsea Four.

12 Conclusion

12.1.1.1 The Applicant is confident that the compensation measure is viable, will be effective and can be delivered. The Applicant will continue stakeholder engagement to demonstrate the suitability of the site refinement and development of the implementation of the predator eradication programme and ensure the compensation measures can be readily achieved and secured.

13 References

- Arup (2016). Review of Renewable Electricity Generation Cost and Technical Assumptions. Available at: <https://www.gov.uk/government/publications/arup-2016-review-of-renewable-electricity-generation-cost-and-technical-assumptions> [Accessed August 2021].
- Bradbury, G., Trinder, M. Furness, B., Banks, A. N., Caldow, R. W. G. and Hume, D. (2014). Mapping Seabird Sensitivity to Offshore Wind Farms. *PLOS One* 9/9: e106366.
- Luxmoore, R., Swann, R. & Bell, E. (2019). Canna seabird recovery project: 10 years on. In: C.R. Veitch, M.N. Clout, A.R. Martin, J.C. Russell and C.J. West (eds.) *Island invasives: scaling up to meet the challenge*, pp. 138-146. Occasional Paper SSC no. 62. Gland, Switzerland: IUCN.
- Ratcliffe, N., Mitchell, I., Varnham, K., Verboven, N. and Higson, P. (2009). 'How to prioritise islands for the benefit of petrels: A case study of the UK, Channel Islands and Isle of Man'. *Ibis* 151: 699–708.
- Roy, H.E., Adriaens, T., Aldridge, D.C., Bacher, S., Bishop, J.D.D., Blackburn, T.M., Branquart, E., Brodie, J., Carboneras, C., Cook, E.J., Copp, G.H., Dean, H.J., Eilenberg, J., Essl, F., Gallardo, B., Garcia, M., García-Berthou, E., Genovesi, P., Hulme, P.E., Kenis, M., Kerckhof, F., Kettunen, M., Minchin, D., Nentwig, W., Nieto, A., Pergl, J., Pescott, O., Peyton, J., Preda, C., Rabitsch, W., Roques, A., Rorke, S., Scalera, R., Schindler, S., Schönrogge, K., Sewell, J., Solarz, W., Stewart, A., Tricarico, E., Vanderhoeven, S., van der Velde, G., Vilà, M., Wood, C.A., Zenetos, A. (2015). Invasive Alien Species - Prioritising prevention efforts through horizon scanning ENV.B.2/ETU/2014/0016. European Commission. Available at: <https://ec.europa.eu/environment/nature/invasivealien/docs/Prioritising%20prevention%20efforts%20through%20horizon%20scanning.pdf> [Accessed August 2021].
- RSPB (2019). Annual Review 2018-2019. Available at: <https://www.rspb.org.uk/globalassets/downloads/documents/abouttherspb/annual-review-archive/annual-review-2018-2019.pdf> [Accessed August 2021].
- Tabak, M., Poncet, S., Passfield, K., Goheen, J. and Martinez del Rio, C., (2014). Rat eradication and the resistance and resilience of passerine bird assemblages in the Falkland Islands. *Journal of Animal Ecology*, 84/3: 755-764.
- Walsh, P.M., Halley, D.J., Harris, M.P., del Nevo, A., Sim, I.M.W. & Tasker, M.L. (1995). *Monitoring Handbook for Britain and Ireland*. JNCC/RSPB/ITE/Seabird Group, Peterborough.
- Zonfrillo, B. (2001). Ailsa Craig before and after the eradication of rats in 1991. Available at: http://www.ayrshirebirding.org.uk/2001/01/ailsa_craig_before_and_after_the_eradication_of_rats_in_1991 [Accessed August 2021].

Appendix A Letter of comfort from Alderney Wildlife Trust

Dr. Sarah Randall

Environment Manager & Derogation Lead
UK Consents, Development
Orsted,
5 Howick Place,
Westminster London,
SW1P 1WG

23rd September, 2021

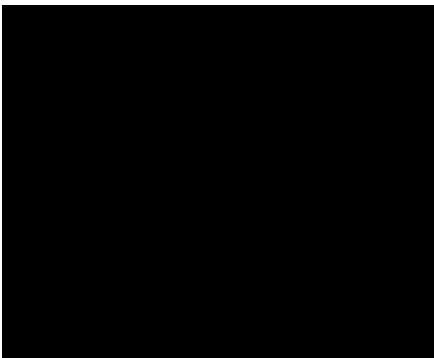
Dear Dr. Randall,

Alderney Wildlife Trust (AWT) is impressed by Ørsted's green vision, its commitment to renewables and its credentials as a sustainable energy company. AWT are pleased that Ørsted proactively seek to understand the environmental impacts of their projects and where necessary implement means to mitigate those impacts wherever possible.

For the Hornsea Four offshore windfarm project, located adjacent to the Lincolnshire coast, AWT, through its wholly owned subsidiary Alderney Wildlife Trust Enterprises Limited (AWTE), hope to collaborate with Ørsted on a feasibility study to help boost the numbers of Guillemots and Razorbills. Should this research take place we hope to examine the impact of rat presence on the local populations of Guillemot and Razorbill that nest on Alderney's near shore and tidal islets and, where need be, explore the use of rat control to protect and potentially enhance those populations in the Bailiwick of Guernsey. AWT is also grateful to see Ørsted's willingness to ensure that data coming out of such research would be available to Alderney's Government (States of Alderney).

AWT believes this work would be of mutual benefit for both organisations. It would enable AWTE to identify where rats and auks coexist, ascertain any negative impacts on the birds and explore means to effectively mitigate them. These actions might not only improve the bird's productivity but could also open up previously unused nesting habitat, enabling the local population to increase in numbers but also expand its distribution. In so doing, AWT hopes to help Ørsted to meet some of its environmental obligations for the Hornsea Four offshore windfarm project.

Furthermore, it is hoped that should this feasibility study go forwards it will provide the States of Alderney and AWT valuable information to help implement a biosecurity plan for Alderney and its outer islands, where rodent eradication or control can be applied effectively to protect and potentially enhance its seabird populations for future generations in the years to come.



Roland Gauvain
CEO, Alderney Wildlife Trust

Appendix B Letter of comfort from the States of Guernsey



States of Guernsey
Agriculture, Countryside and
Land Management Services

acims@gov.gg
www.gov.gg

Our Ref: Ramsar-Seabird
Your Ref: HOW04 States of
Guernsey

Dr S Randall
Environment Manager & Derogation Lead
UK Consents, Development
Ørsted
UK

23rd September 2021

Dear Dr Randall

**Hornsea Project Four Letter of Support – States of Guernsey re: Predator
Eradication in the Herm Ramsar site**

This letter provides confirmation that the States of Guernsey is in support of the Herm, Jethou & The Humps Ramsar site (“Herm Ramsar site”) being included as a candidate compensation site for the proposed Hornsea Project Four. We support the proposal by Ørsted to progress with a collaborative approach to carrying out a feasibility study to explore whether the site would be suitable to deliver a benefit to target seabird species (guillemot and/or razorbill) by freeing up suitable habitat by carrying out a Predator Eradication Programme, including ongoing monitoring and biosecurity, for the lifetime of the Hornsea Four windfarm (in the region of 35 years).

By way of background, the States of Guernsey has an existing commitment - under the Strategy for Nature for Guernsey - to implement a Ramsar Management Plan for the Herm site. The management plan has identified the need to support threatened seabird populations through a rodent extermination programme, but no eradication work has started. The only work carried out to date has been a research study which identified that the Ramsar site was important for seabird populations and that a rat eradication programme would be beneficial to those populations. The study included an outline scope of proposed eradication and ongoing biosecurity & monitoring.

The value that any Predator Eradication Programme could potentially bring is recognised, not just in supporting the potential recovery of seabird populations but also the potential opportunities afforded to both Herm and Guernsey in terms of ecotourism and helping to meet our obligations to the Convention on Wetlands (Ramsar) through the implementation of a Ramsar Management Plan.

ACLMS is pleased to note the importance Ørsted attaches to extensive stakeholder and community engagement as part of any programme of works.

ACLMS raises no objection in principle to a collaborative approach with Ørsted to research, do feasibility studies or to implement a Predator Eradication Programme (PEP) subject to the following conditions:

That consultation is carried out and appropriate stakeholder engagement continues over the life of the PEP. Further that no work - including planning, preparation and delivery of works in connection with, or having relevance to, Guernsey, Herm or Jethou - in respect of any part of the PEP, commences without the prior consent of ACLMS.

As the designated Ramsar Management Authority for the Herm Ramsar site, ACLMS retains full control to review Ørsted's proposed operational plan and retains the authority to veto or amend works and specifications for works which do not meet relevant standards and best practice.

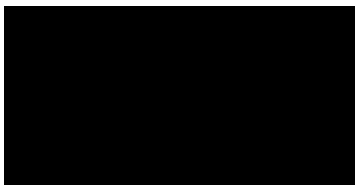
In the event that Ørsted is unable to complete the full PEP, for any reason, ACLMS reserves the right to make use of any operational plan and methodologies developed during Ørsted's involvement in the PEP.

ACLMS further reserves the right to consult with and take advice from other third parties as part of any PEP.

It is acknowledged that this letter shall accompany the full Development Consent Order application for the Hornsea Project Four, for examination by the Planning Inspectorate; and as part of this application shall be placed on public record.

In stating the above conditions for collaboration with Ørsted, ACLMS is acting on behalf of the States of Guernsey in its role as manager and monitor of risks and opportunities to the natural environment to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations. Note that the scope of ACLMS's role extends only to the islands of Guernsey, Herm & Jethou and does not include the islands of Sark or Alderney.

Yours sincerely



Andy McCutcheon
Principal Environment Services Officer
Agriculture, Countryside and Land Management Services
(ACLMS)