Bellrock Offshore Wind Farm

Wind Farm Development Area

Shadow Habitats Regulations Appraisal Derogation Case - Volume VI

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Glossary of Terminology

Term	Definition
Air gap	The lowest blade tip point of a wind turbine to sea clearance distance (see individual chapters for the relevant tidal levels).
Applicant	Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for the Bellrock Wind Farm Development Area.
Bellrock Offshore Wind Farm (or the Bellrock Project)	An offshore wind farm capable of supplying up to 1.8 GW of renewable energy to the National Electricity Transmission System. The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the SSEN Transmission proposed Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
Development Area	For consenting purposes, the area for which separate consents and/or Marine Licences will be sought by the Applicant, comprising: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
Floating offshore unit	The combined wind turbine generator and floating substructure
Floating substructure	A floating structure which provides buoyancy and, in conjunction with the station keeping system, supports a superstructure (e.g. wind turbine generator or offshore substation), and maintains its position within the structure's excursion limit.
Inter-array cable	Armoured cable containing electrical and fibre optic cores, which link the wind turbine generators to each other and to the subsea cable hubs and/or the offshore substations and include dynamic inter-array cable and static inter-array cable sections.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore wind farms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
Offshore Transmission Development Area	The boundary within which the Offshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned (and includes the whole of the Wind Farm Development Area).
Offshore transmission infrastructure	Infrastructure located within the Offshore Transmission Development Area including fixed bottom and/or floating offshore substations, offshore reactive compensation station(s) and associated scour protection; interconnector cables and associated cable protection; and offshore export cables and associated cable protection (including activities associated with the Offshore Transmission Infrastructure construction, operation and maintenance, and decommissioning).
Onshore Transmission Development Area	The boundary within which the Onshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned.

Term	Definition
Onshore Transmission Infrastructure	Infrastructure located within the Onshore Transmission Development Area including transition joint bay(s); onshore export cables; onshore substation; temporary construction compounds; temporary working areas; environmental mitigation areas; drainage/irrigation infrastructure; access works; and any other associated infrastructure (including activities associated with the Onshore Transmission Infrastructure construction, operation and maintenance, and decommissioning).
Operational life	The expected operational life of the Wind Farm Infrastructure from the Commercial Operation Date to the first floating offshore unit being decommissioned.
Project design envelope	Includes all relevant technical, spatial and temporal elements of the Wind Farm Infrastructure, and the proposed methodology to be employed for construction, operations and maintenance, and decommissioning.
ScotWind	A Crown Estate Scotland leasing round for offshore wind projects in which the process enabled developers to apply for seabed rights to plan and build wind farms in Scottish waters.
Scour protection	Protective material positioned around anchors and substructures to avoid sediment being eroded as a result of the flow of water.
SSEN Transmission Hurlie substation	The onshore substation to be developed by SSEN Transmission, which will receive renewable electricity from the Bellrock Project onshore substation and allow supply of renewable electricity from the wind farm to the National Electricity Transmission System.
Station keeping system	The system (including mooring lines and anchors) used to hold a floating offshore unit within its excursion limit and maintain the intended orientation of the floating offshore unit.
Subsea cable hub	A subsea device, with a gravel pad foundation, which allows the connection of multiple inter-array cables.
Switchgear	Electrical equipment used to control, protect, and isolate electrical circuits and equipment.
Wind Farm Development Area	The boundary within which the Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned.
Wind Farm Infrastructure	Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning).
Wind turbine generator	A wind turbine generator converts wind energy into electrical energy. The main components include rotor assembly (composed of three blades and a hub); nacelle (containing the generator, shaft and gearbox, power electronic converter and transformer); and a tower (containing lifting equipment and switchgear).

Glossary of Abbreviations

Term	Definition
AA	Appropriate assessment
AEoSI	Adverse effect on site integrity
AR6	Sixth assessment report of the Intergovernmental Panel on Climate Change
BEIS	Department for Business, Energy and Industrial Strategy (now the Department for Energy Security and Net Zero)
BESS	British Energy Security Strategy
CES	Crown Estate Scotland
CfD	Contract for Difference
cSAC	Candidate Special Area of Conservation
Defra	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero *(formally BEIS/DECC)*
EC	European Commission
EEC	European Economic Community
EU	European Union
FOU	Floating offshore unit
FSS	Floating substructures
GCA	Global Centre on Adaptation
GHG	Greenhouse gas
GVA	Gross value added
HECC	Health effects of climate change
HVDC	High-voltage direct current
IAC	Inter-array cables
IPCC	Intergovernmental Panel on Climate Change
IROPI	Imperative reasons of overriding public interest
LNG	Liquefied Natural Gas
LSE	Likely significant effect
MD-LOT	Marine Directorate – Licensing Operations Team
MN	Managing natura

Term	Definition
MPA	Marine Protected Area
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
NSN	National Site Network
O&M	Operation and maintenance
OfTDA	Offshore Transmission Development Area
OnTDA	Onshore Transmission Development Area
OWIC	Offshore Wind Industry Council
pSPA	Proposed Special Protection Area
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
UKHSA	UK Health Security Agency
WFDA	Wind Farm Development Area
WMO	World Meteorological Organisation
WTG	Wind turbine generator

1 Introduction

1. This Report sets out Bellrock Offshore Wind Farm Limited's (the Applicant's) shadow derogation case under Phase Three of the Habitats Regulations Appraisal (HRA), in line with NatureScot's HRA Guidance (NatureScot, 2025). This is in relation to the development of the Wind Farm Infrastructure within the Bellrock Wind Farm Development Area (WFDA).

1.1 Project Overview

2. In 2021, Crown Estate Scotland (CES) launched the ScotWind leasing round, which released areas of seabed in Scottish waters for new commercial scale offshore wind developments to help Scotland achieve its net-zero emissions target by 2045. Opportunities to develop offshore wind generating capacity were offered within Plan Option areas (areas identified as most suitable for development in the Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020a). In January 2022, the Applicant was successfully awarded exclusivity of an area of seabed in the Plan Option E1 area, off the coast of Scotland, to develop the Bellrock WFDA which forms part of the Bellrock Offshore Wind Farm (the Bellrock Project).

3. The Bellrock Project, a floating offshore Wind Farm with an export capacity of 1.8 gigawatts (GW), requires both offshore and onshore infrastructure to generate and transmit electricity to the National Electricity Transmission System. For consenting purposes, the Bellrock Project comprises the following three Development Areas, for which separate consents and/or licences will be sought by the Applicant:

   - The Bellrock WFDA within which the Bellrock Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned;
   - The Bellrock Offshore Transmission Development Area (OfTDA) within which the Bellrock Offshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned; and
   - The Bellrock Onshore Transmission Development Area (OnTDA), within which the Bellrock Onshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned.

4. The Bellrock WFDA is located 120 km east of Stonehaven (116 km southeast of Peterhead), Aberdeenshire, Scotland, and covers an area of 280 $km^{2.}$ The location of the Bellrock WFDA is shown in **Figure 1.1** (**Volume III** of the **Bellrock WFDA Environmental Impact Assessment (EIA) Report**). The Bellrock Wind Farm Infrastructure being consented within the Bellrock WFDA application comprises wind turbine generators (WTGs) and floating substructures (FSS) (together termed as an 'floating offshore unit' (FOU)) together with station keeping systems, inter-array cables (IAC), subsea cable hub(s) and cable/scour protection. Further details on the Wind Farm Infrastructure within the Bellrock WFDA are provided in **Chapter 4: Project Description (Volume II)** of the Bellrock WFDA EIA Report.

5. The Bellrock Project will deliver significant supply chain expenditure within Scotland, has the potential to power the equivalent energy needs of over 1.7 million homes[1] with renewable energy and will help achieve Scotland's net zero targets whilst improving energy security.

6. To meet the legislative requirements associated with EIA Regulations and Habitats Regulations, the Section 36 Consent and Marine Licence applications includes both an EIA Report (**Volume II – V**) (accompanied by a Non-technical Summary (**Volume I**)) and a Report to Inform Appropriate Assessment (RIAA) (**Volume VI**). The Bellrock WFDA EIA Report **(Volume II) Chapter 2: Policy and Legislative Context)** provides a comprehensive overview of the relevant legislative and regulatory frameworks. Specific considerations related to the HRA process are addressed within the **RIAA Part 1: Introductory Chapters** (Section 2.1 Legislative Context), with further detail provided in **Section 2** of this document.

7. Due to the nature of this derogation case, this report is intrinsically linked to and informed by several supporting documents. While not all details from these documents are reiterated within this derogation case, relevant references will be cited throughout. The key supporting documents from the Bellrock WFDA applications pertinent to this case include:

- **Report to Inform the Appropriate Assessment: Parts 1 and 3** (**Volume VI);**
- **EIA Report Chapter 2: Policy and Legislative Context** (**Volume II**);
- **EIA Report Chapter 3: Site Selection and Consideration of Alternatives** (**Volume II**);
- **EIA Report Chapter 4: Project Description** (**Volume II**);
- **EIA Report Chapter 10: Offshore Ornithology** (**Volume II**);
  - Appendix 10.1: Offshore Ornithology Digital Aerial Survey Baseline Report;
  - Appendix 10.2: Collision risk Modelling Technical Report (**Volume IV**);
  - Appendix 10.3: Displacement Assessment Technical Report (**Volume IV**);
  - Appendix 10.4: Offshore Ornithology Population Viability Technical Report (**Volume IV**); and
  - Appendix 10.5: Offshore Ornithology Apportioning Technical Report (**Volume IV**).
- **EIA Report Chapter 16: Socioeconomics, Tourism and Recreation** (**Volume II**); and
- **EIA Report Chapter 18: Climate Change Risk** (**Volume II**).

1.2 The Need for Derogation

8. **Section 2.1.1.1** details the HRA Process. Phases One and Two of the HRA for the Bellrock Wind Farm Infrastructure are presented within the Bellrock WFDA HRA Screening Report (**RIAA Part 1: Appendix B**) and the **RIAA Part 3: Special Protection Area and Ramsar Assessments: Ornithology** respectively.

[1] See **Chapter 1: Introduction (Volume II)** of the EIA Report for further detail

9. The Applicant's RIAA concluded that, of the 33 SPAs (and Ramsar sites) taken forward for Phase Two HRA assessment, an Adverse Effect on Site Integrity (AEoSI) cannot be excluded in relation to seven SPAs. The seven SPAs for which AEoSI cannot be excluded are all breeding seabird colony SPAs. For the seven SPAs for which an AEoSI cannot be excluded, the AEoSI is due solely to the effects of the Bellrock Wind Farm Infrastructure in-combination with other plans and projects.

10. The AEoSI on these seven SPAs is associated with adverse effects on kittiwake in six cases (i.e. all except the Forth Islands SPA), razorbill in one (Fowlsheugh SPA), gannet in one (Forth Islands SPA) and the breeding seabird assemblage in one (Farne Islands SPA). The conclusions in relation to the breeding seabird colony SPAs are summarised in **Table 1.1.**

11. It is recognised that Scottish Ministers could be minded to reach different conclusions regarding the SPAs (and associated qualifying features) for which an AEoSI cannot be excluded. Therefore, the Applicant has also identified in **Table 1.1**:

- SPAs for which no potential for an AEoSI is concluded but for which the determinations for the Berwick Bank, Green Volt, West of Orkney or Salamander projects were unable to exclude an AEoSI; and
- SPAs for which the conclusion of no potential for an AEoSI relies on the fact that the impacts from the Bellrock Wind Farm Infrastructure alone are considered to be so small as to make it biologically implausible for them to make a meaningful contribution to the in-combination effects.

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Table 1.1: Special Protection Areas and Species Identified in the Report to Inform Appropriate Assessment

SPA	Alone / In-combination	AEoSI Cannot be Excluded for Site Overall	AEoSI for Qualifying Features and Named Components of Seabird Assemblage for Which Likely Significant Effect Cannot be Excluded					
			Kittiwake	Razorbill	Puffin	Gannet	Great Black-backed Gull	Seabird Assemblage
Buchan Ness to Collieston Coast	Alone	No	No	N/A	N/A	N/A	N/A	No
	In-combination	Yes	Yes	N/A	N/A	N/A	N/A	No
Fowlsheugh	Alone	No	No	No	N/A	N/A	N/A	No
	In-combination	Yes	Yes	Yes	N/A	N/A	N/A	No
St Abb's Head to Fast Castle	Alone	No	No	N/A	N/A	N/A	N/A	No
	In-combination	No	No[1]	N/A	N/A	N/A	N/A	No
Farne Islands	Alone	No	No	N/A	No	N/A	N/A	No
	In-combination	Yes	Yes	N/A	No	N/A	N/A	Yes
Forth Islands	Alone	No	No	No	No	No	N/A	No
	In-combination	Yes	No[1]	No[1]	No[1]	Yes	N/A	No
Troup, Pennan and Lion's Head	Alone	No	No	No	N/A	N/A	N/A	No
	In-combination	Yes	Yes	No	N/A	N/A	N/A	No
Coquet Island	Alone	No	N/A	N/A	No	N/A	N/A	No
	In-combination	No	N/A	N/A	No	N/A	N/A	No
East Caithness Cliffs	Alone	No	No	No	N/A	N/A	No	No
	In-combination	Yes	Yes	No[1]	N/A	N/A	No	No

SPA	Alone / In-combination	AEoSI Cannot be Excluded for Site Overall	AEoSI for Qualifying Features and Named Components of Seabird Assemblage for Which Likely Significant Effect Cannot be Excluded					
			Kittiwake	Razorbill	Puffin	Gannet	Great Black-backed Gull	Seabird Assemblage
North Caithness Cliffs	Alone	No	No	No	No	N/A	N/A	No
	In-combination	No	No[1]	No	No[1]	N/A	N/A	No
Copinsay	Alone	No	No	N/A	N/A	N/A	No	No
	In-combination	No	No	N/A	N/A	N/A	No	No
Flamborough and Filey Coast	Alone	No	No	No	N/A	No	N/A	No
	In-combination	Yes	Yes	No[1]	N/A	No	N/A	No
Hoy	Alone	No	No	N/A	N/A	N/A	N/A	No
	In-combination	No	No[1]	N/A	N/A	N/A	N/A	No
Fair Isle	Alone	No	No	N/A	N/A	No	N/A	No
	In-combination	No	No[1]	N/A	N/A	No[1]	N/A	No
Calf of Eday	Alone	No	N/A	N/A	N/A	N/A	No	No
	In-combination	No	N/A	N/A	N/A	N/A	No	No
West Westray	Alone	No	No	N/A	N/A	N/A	N/A	No
	In-combination	No	No[1]	N/A	N/A	N/A	N/A	No
Sule Skerry and Sule Stack	Alone	No	N/A	N/A	N/A	No	N/A	No
	In-combination	No	N/A	N/A	N/A	No	N/A	No

SPA	Alone / In-combination	AEoSI Cannot be Excluded for Site Overall	AEoSI for Qualifying Features and Named Components of Seabird Assemblage for Which Likely Significant Effect Cannot be Excluded					
			Kittiwake	Razorbill	Puffin	Gannet	Great Black-backed Gull	Seabird Assemblage
Noss	Alone	No	N/A	N/A	N/A	No	N/A	No
	In-combination	No	N/A	N/A	N/A	No	N/A	No
North Rona and Sula Sgeir	Alone	No	N/A	N/A	N/A	No	N/A	No
	In-combination	No	N/A	N/A	N/A	No	N/A	No
Hermaness, Saxa Vord and Valla Field	Alone	No	N/A	N/A	N/A	No	N/A	No
	In-combination	No	N/A	N/A	N/A	No[1]	N/A	No
St Kilda	Alone	No	N/A	N/A	N/A	No	N/A	No
	In-combination	No	N/A	N/A	N/A	No	N/A	No
Mingulay and Berneray	Alone	No	N/A	No	N/A	N/A	N/A	No
	In-combination	No	N/A	No	N/A	N/A	N/A	No
Rathlin Island	Alone	No	N/A	No	N/A	N/A	N/A	No
	In-combination	No	N/A	No	N/A	N/A	N/A	No

Notes:

[1.] Whilst the Applicant considers AEoSI can be ruled out, it is recognised that Scottish Ministers could be minded to reach different conclusions based on precedent from previous projects.

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1.3 Structure of this Report

12. This report is structured following the guidance for the derogation provisions of the HRA process (set out in **Section 2.1.1.1**). The structure of this report is as follows:

- **Section 1**: Introduction – Providing a background to the Bellrock Project, including where supporting information can be found;
- **Section 2**: Legal Framework and HRA Process – Setting out the legislation underpinning the HRA process, as well as the specific guidance for derogations in Scotland and the HRA Process undertaken for the Bellrock Wind Farm Infrastructure;
- **Section 3**: Consultation – Providing an overview of consultation undertaken;
- **Section 4**: Need for the Bellrock Project – Establishing why the Bellrock Project is required in the context of environmental and socioeconomic factors;
- **Section 5**: Assessment of Alternative Solutions – Demonstrating that there are no feasible alternative solutions to the Bellrock Wind Farm Infrastructure;
- **Section 6**: Imperative Reasons of Overriding Public Interest (IROPI) – Identifying the relevant residual adverse effects of the Bellrock Wind Farm Infrastructure and evidencing the public benefits of the Bellrock Project which are sufficient to override the environmental harm which may be caused;
- **Section 7**: Compensatory Measures – Cross references to the Applicant's proposal for compensatory measure provision;
- **Section 8**: Derogation Case Conclusions – Summarising the Applicant's position relating to the derogation case, which is that the Scottish Ministers have sufficient information before them to grant consent, notwithstanding a conclusion of AEoSI; and
- **Section 9**: References – The full references for all literature/data used throughout the derogation case.

2 Legal Framework and Habitats Regulations Appraisal Process

2.1 Policy

2.1.1 The Habitats Regulations

13. In 1992, the European Union (EU) Directive 92/43/EEC, known as the 'Habitats Directive', was adopted to enable EU member states to meet obligations set out under the Bern Convention. The purpose of the Habitats Directive is to maintain or restore natural habitats and wild species listed in the Annexes (Annex I, II) at Favourable Conservation Status. Protection to meet Favourable Conservation Status is given through designation of European Sites (Special Areas of Conservation (SAC)).

14. In addition, the EU Directive 2009/147/EC, known as the 'Birds Directive', was implemented to provide a framework for conservation and management of wild birds in the EU. Annex I of the Birds Directive provides a list of rare, vulnerable, and migratory species, which are protected through the designation of Special Protection Areas (SPAs).

15. These directives are transposed into Scottish law through various instruments, with those relevant to the Bellrock WFDA being the Conservation of Offshore Marine Habitats and Species Regulations 2017 (which apply to Marine Licences within the Scottish Offshore region, from 12 nm to 200 nm) and the Conservation of Habitats and Species Regulations 2017 (which apply to applications for Section 36 Consent).

16. The relevant Habitats Regulations continue to provide the statutory basis for Habitats Regulations Appraisals (HRA) in Scotland post the United Kingdom's exit from the European Union. The Habitats Regulations require an HRA to be undertaken where a project could affect a designated site (SPAs, SACs, proposed or candidate SPAs and SACs or Ramsar sites), either individually or in combination with other plans or projects, in view of the site's conservation objectives.

17. The Habitats Regulations continue to uphold the fundamental processes for evaluating the effects of plans or projects on European Sites, with only slight changes in terminology. The UK's protected site network is now designated as the National Site Network (NSN), previously part of Natura 2000. Consequently, any mention of the "coherence of Natura 2000" should be interpreted to encompass the "coherence of the UK's National Site Network."

2.1.1.1 The Habitats Regulations Appraisal Process

18. In Scotland, the assessment of potential impacts from plans or projects on designated sites under the Habitats Regulations is referred to as an HRA. This appraisal follows a recognised three-Phase process:

- **Phase 1**: Screening for likely significant effects (LSE) – The process of identifying relevant sites within the UK's National Site Network and if the proposed project has a potential LSE on qualifying features (alone and in-combination);
- **Phase 2**: Appropriate Assessment (AA) – The assessment of the risk of the project (alone or in-combination) causing an AEoSI for each feature screened in during Phase 1 in relation to conservation objectives; and
- **Phase 3**: The Derogation Provisions – If Phase 2 concludes there is a risk of AEoSI, the Bellrock Wind Farm Infrastructure can only proceed if the following strict legal tests are met[2]:
  - Assessment of alternatives;
  - IROPI; and
  - Compensatory measures.

19. If the assessment of alternatives and IROPI tests are met **and** compensatory measures can be secured that will ensure the overall coherence of the UK's National Site Network is maintained to the satisfaction of the Competent Authority, then the Bellrock Wind Farm Infrastructure may proceed.

20. Ongoing reforms to the Habitats Regulations pertaining to strategic compensation are being progressed by both the Scottish Government and the UK Government. However, at the time of preparing the RIAA and this derogation case, these reforms have not yet been finalised or enacted and therefore, the Applicant has set out how compensation can be provided at a project-level in accordance with the Habitats Regulations currently in force.

21. Phases 1 – 3 are detailed further in **Sections 2.1.1.1.1** and **2.1.1.1.2**.

2.1.1.1.1 Phases 1 and 2: Screening and Appropriate Assessment

22. The initial two Phases of the HRA process in Scotland are intended to assess the potential for LSE of a proposal on the UK's National Site Network. The final assessment of these impacts is carried out by the appropriate Competent Authority, which, in the case of Section 36 Consent and Marine Licence applications, is the Scottish Ministers. However, the Applicant is required to provide such information as the Scottish Ministers may reasonably require to undertake an AA.

23. It is stated within The Conservation of Habitats and Species Regulations 2017 (Regulation 63) that:

"63 (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which -

a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of that site,

[2] It should be noted that the Bellrock Project does not overlap with any designated priority habitats or species. Consequently, potential impacts related to priority habitats or species are not relevant to this assessment.

must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives".

Similar provisions are made within The Conservation of Offshore Marine Habitats and Species Regulations 2017 (Regulation 28).

24. If the Phase 2 assessment enables the Competent Authority to determine, beyond reasonable scientific doubt, that no AEoSI will occur on any designated site, consent may be granted. However, if an AEoSI is identified, Phase 3 of the derogation process must be successfully completed before consent can be granted.

2.1.1.1.2 Phase 3: Derogation Provisions

25. This Derogation document addresses Phase 3, which is only undertaken where a derogation under the Habitats Regulations is required. It is important to note that under the Habitats Regulations, the designated sites considered include SACs, candidate SACs (cSACs), SPAs, proposed SPAs (pSPAs), and other sites within the UK's National Site Network. Ramsar sites are not, as a matter of law, afforded the same level of protection as European Sites under the Habitats Regulations. However, Scottish Government policy (Scottish Government, 2025) requires that they are afforded the same level of protection as European Sites in development decisions.

26. Phase 3 of the HRA process entails the Assessment of Alternatives (detailed further in **Section 5**). Essentially, this Phase requires the Applicant to consider if there are alternative solutions to the Bellrock Wind Farm Infrastructure (in terms of location, scale/size, design, methods (e.g. construction), and timing).

27. If there are no suitable alternatives, then the HRA process entails the assessment of IROPI (detailed further in **Section 6**). Primarily this requires the Applicant to evidence that the project:

- Is essential for public interest reasons;
- Is in the public interest and benefits the public, not just private interests; and
- Is overriding and as such the public interest outweighs the harm, or risk of harm, to the integrity of the site(s) of the UK's National Site Network being considered.

2.2 Guidance

28. The following Scottish, UK and EU guidance documents address the HRA derogation provisions and are referred to in this report, where applicable and appropriate.

29. Key Scottish Guidance includes the following:

- CMS Scotland (2021) – HRA Derogations for Offshore Wind Projects in Scotland – Legal Framework for Decisions;
- David Tyldesley Associates (2021a: in draft) – Policy Guidance Document on Demonstrating the Absence of Alternative Solutions and Imperative Reasons for Overriding Public Interest Under the Habitats Regulations for Marine Scotland;

- David Tyldesley Associates (2021b: in draft) – Framework to Evaluate Ornithological Compensatory Measures for Offshore Wind. Process Guidance Note for Developers. Advice to Marine Scotland;
- NatureScot (2022) – European Site Casework Guidance: How to Consider Plans and Projects Affecting SACs and SPAs in Scotland. The Essential Quick Guide;
- NatureScot (2025) – Habitats Regulations Appraisal;
- Scottish Government (2018) – Marine Scotland Consenting and Licensing Guidance: For Offshore Wind, Wave and Tidal Energy Applications;
- Scottish Government (2020b) – Policy Paper "EU Exit: The Habitats Regulations in Scotland"; and
- Scottish Government (2024a) – Marine Licensing and Consenting: Habitats Regulations Appraisal.

30. Key UK Guidance includes the following:

- Department for Environment, Food and Rural Affairs (Defra, 2012) – Habitats Directive: Guidance on the Application of Article 6(4);
- Defra (2021a) – Policy Paper 'Changes to the Habitats Regulations 2017;
- Defra (2021b) – Draft Best Practice Guidance for Developing Compensatory Measures in Relation to Marine Protected Areas (MPAs);
- Defra (2024) – Consultation on Policies to Inform Updated Guidance for MPA Assessments; and
- DTA (2021c) – The Habitats Regulations Assessment Handbook.

31. Key EU Guidance includes the following:

- EC (2019) – Managing Natura 2000 Sites (MN 2000): The Provisions of Article 6 of the Habitats Directive 92/43/EEC;
- EC (2021a) – Guidance Document on Wind Energy Developments and EU Nature Legislation; and
- EC (2021b) – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC and Annex (the EC Methodological Guidance).

3 Consultation

32. Stakeholder engagement is a vital component of the HRA process. As part of ongoing consultation, a range of topics related to ornithological receptors, including assessment methodology, survey techniques, guidance application, modelling approaches, and data handling, were discussed and agreed upon with relevant stakeholders. These discussions informed the development of the Bellrock Wind Farm Infrastructure and supported the delivery of robust conclusions.

33. The assessment methodology and approach adopted in both the HRA Screening and the RIAA reflect agreements made with and advice received from Statutory Nature Conservation Bodies (SNCBs) and Marine Directorate – Licensing Operations Team (MD-LOT). The Applicant has also maintained engagement with SNCBs and other stakeholders to ensure transparency regarding the Bellrock Wind Farm Infrastructure's progress, particularly in relation to the development of the Derogation Case and potential compensation measures.

34. A full record of consultation on ornithological HRA matters is provided in the **Bellrock WFDA RIAA: Part 1 (Chapter 4: Consultation)**, while consultation relevant to ornithological EIA matters is detailed in **Chapter 10: Offshore Ornithology (Volume II)** of the EIA Report. Consultation undertaken specific to derogation and compensation matters is summarised below in **Table 3.1**.

Table 3.1: Key Consultation Undertaken to Date

Consultee	Document/Date	Comment	How/Where Comment is Addressed
NatureScot	Meeting 24 July 2025	The Applicant asked for confirmation that upper predicted mortality estimate of breeding adults per year should be used to inform the scale of compensation. NatureScot confirmed this expectation based on previous experience.	The scale of proposed compensation described in this Derogation Case is based on the upper predicted mortality estimate of breeding adults per year.
MD-LOT	Meeting 24 July 2025	The Applicant asked whether any guidance was available on how to approach HRA objectives to align with Scottish Minister's expectations. MD-LOT stated that there is no current guidance on this, and that objectives are project specific. Objectives should consider the policy framework at the time, as well as Imperative Reasons of Overriding Public Interest (IROPI).	The objectives set out in **Table 5.1** have been prepared following this advice.
MD-LOT	Meeting 24 July 2025	MD-LOT stated that developers must propose project-specific measures until the Marine Recovery Fund (MRF) is operational. If developers are interested in the MRF, this should be stated in the application.	The Applicant has proposed project specific compensation measures (**Appendix A – C** of this Report) and has stated their interest in the MRF in **paragraph 151**.
MD-LOT	Meeting 24 July 2025	MD-LOT asked whether the Applicant is considering collaboration with other projects, and if not, how will additionality be ensured (assuming similar measures are being looked at by other projects)?	The Applicant has considered these issues when developing the proposed compensation measures and will continue to consider opportunities for collaboration and issues associated with additionality as the compensation measures are developed.
MD-LOT and NatureScot	Meeting 24 July 2025	The Applicant asked for guidance on the level of detail to be provided for proposed compensation measures at the application stage. MD-LOT stated that there is no specific requirement, however, the more information provided, the better. The level of detail needs to be sufficient for MD-LOT to be able to assess the proposals and draw a conclusion. NatureScot added that there should be a reasonable level of comfort that the measure is technically and ecologically feasible, and that the plan should identify how and when any gaps will be filled.	The Applicant has considered this advice when developing their proposed compensation measures and considers that they are providing sufficient detail to allow Scottish Ministers to conclude that the proposed measures are technically and ecologically feasible.
MD-LOT	Email from MD-LOT to the Applicant (sent 16 September 2025)	Please see a brief update on the Seabird Site Management Actions list below: Due to overlap with the ongoing Portfolio of Seabird Compensation Measures work this list has now been compiled and provided to the Offshore	Noted.

Consultee	Document/Date	Comment	How/Where Comment is Addressed
		Wind Directorate. The list of measures that were identified by NatureScot, RSPB and National Trust for Scotland (NTS) has been provided to successful tenderers involved in this work. It's our understanding that the lots are due to report late 2025/early 2026 and subsequent to that the Portfolio would then be made available for developers either for selection of measures to be undertaken using the MRF or for individual projects to take forward themselves. Given this, we aren't able to share this list with individual projects at present.	
MD-LOT	Meeting 6 November 2025	The Applicant outlined their approach to identifying measures. MD-LOT asked whether the Applicant will be providing a prioritised and ranked list of sites and specific measures for the sites at the application stage.	Proposed compensation measures are provided alongside a refined list of relevant sites with supporting evidence as to why they have been selected and their validity for delivering the level of compensation required.
MD-LOT	Meeting 6 November 2025	MD-LOT stated that providing further detail on a smaller list of measures and sites at the earliest opportunity is beneficial. Narrowing down details early on and inclusion of specifics and detailed information in the derogation assessment submitted at application helps to streamline the determination process.	The Applicant has followed this approach by providing both a long list of sites and a short list of prioritised sites.
MD-LOT	Meeting 6 November 2025	MD-LOT requested an update from the Applicant regarding approach to potential overlap with other project's compensation measures and how the Applicant is considering this within the application process. MD-LOT enquired about the Applicant's approach to collaboration opportunities and how the Applicant is considering this within the application process.	The Applicant has set their criteria for long and short listing to take these issues into consideration. The Applicant has considered collaboration opportunities as well as the work being undertaken on behalf of the Scottish Government through the Portfolio of Compensatory Measures for Seabirds road-mapping project.
NatureScot	Meeting 6 November 2025	NatureScot requested the Applicant to contact NatureScot once a long list and short list of sites has been identified for further discussions.	A further meeting was held on 4 February 2026.
NatureScot	Meeting 6 November 2025	NatureScot are expecting best practice and a clear evidence base to be implemented by the Applicant, highlighting thermal imaging as a proven method.	Noted, this has been accounted for in the compensation measures roadmap.

Consultee	Document/Date	Comment	How/Where Comment is Addressed
MD-LOT	Meeting 6 November 2025	MD-LOT highlighted that collaborations between projects need to consider 'banking' of measures, further outlining that if a measure is being taken forward alongside another developer it needs to be explained within the first application submitted how the measure will be divided between the projects. If there is no mention in the original application of another project drawing on the compensation measure, it will not be available to that project. MD-LOT outlined that further information on banking would be provided and recommended that the Applicant should engage with MD-LOT to confirm whether a proposed measure is considered as banking.	The Applicant received an email from MD-LOT with further information on this issue on 18 November 2025 and take account of the advice provided when developing the proposed compensation measures and in the event of collaboration with projects.
NatureScot	Meeting 6 November 2025	NatureScot advised the Applicant to review the response NatureScot has provided to other applications to determine NatureScot advice on geographic locations for fisheries management measures.	Noted, this has been accounted for in Appendix C of this report.
Offshore Wind Directorate	Email from the Applicant to OWD (sent 13 November 2025)	We [the Applicant] understand that a Seabird Site Management Actions list has been compiled by NatureScot, National Trust for Scotland and RSPB to identify potential actions that could be undertaken at their sites (Special Protection Areas or reserves). We have requested this information from NatureScot, who advise that the list has been provided to the OWD in support of the ongoing Portfolio of Seabird Compensation Measures work (i.e. the list provided to successful tenderers involved in this work). Given this, NatureScot are unable to share this Seabird Site Management Actions list with us. Would it be possible for the Seabird Site Management Actions list to be shared via the OWD, for our use in the identification of possible project compensation measures in support of our s.36 Application?	See further correspondence with OWD and Appendix A of this report.
MD-LOT	Email from MD-LOT to the Applicant (sent 18 November 2025)	In respect of the conversations on 'banking', MD-LOT is of the view that 'collaborative compensation' projects are permitted under the habitats regulations i.e. more than one project can fund a measure providing it provides sufficient compensation for them each to the extent that there's no element of 'banking' required (i.e. no reallocation of surplus compensation delivered by one project to another). It is MD-LOT's view that s.291(3) of the Energy Act 2023 only permits the banking of measures by public authorities, and reallocation of compensation	Noted. The Applicant has taken account of the advice provided when developing the proposed measures.

Consultee	Document/Date	Comment	How/Where Comment is Addressed
		measures between one project and other collaboration partner(s) after delivery of compensation is not permitted. Projects will need to demonstrate, prior to compensation measures being undertaken, that the measures will be delivered to meet the distinct compensation requirements for each project and not reliant on reallocation of measures delivered by one project to another at a later date.	
Offshore Wind Directorate	Email from Offshore Wind Directorate (OWD) to the Applicant (sent 2 December 2025	(Relating to the Seabird Site Management Actions list) The OWD confirmed they would reply in due course.	Noted
RSPB Scotland	Meeting 7 January 2026	RSPB Scotland recommended that the Applicant should utilise the Scottish Government's guidance library to assist with the preparation of the proposed ornithology compensation measures.	Noted. The Applicant has taken account of the guidance library.
RSPB Scotland	Meeting 7 January 2026	RSPB Scotland enquired whether the proposed wind turbine generator air gap was calculated due to engineering constraints.	The Applicant confirmed that the Applicant's proposed wind turbine generator air gap was calculated following a combination of collision risk modelling and engineering analysis.
RSPB Scotland	Meeting 7 January 2026	RSPB Scotland confirmed that the Applicant's approach to assessing specific compensation measures (as described during the meeting) is suitable and highlighted that the RSPB encourages collaboration between other offshore wind developers where possible.	Noted.
NatureScot	Meeting 4 February 2026	NatureScot highlighted the importance of setting out the roadmap and outlining definitive roadmap commitments in the application and added that adaptive management considerations should be included in the application.	Noted. The Applicant has provided a roadmap and has included adaptive management considerations.
MD-LOT	Meeting 4 February 2026	The Applicant asked for guidance on the stage of the Project's development phase at which the compensation measures should be implemented. MD-LOT highlighted that the consent conditions require the compensation measures to be implemented before the commencement of the development. The Applicant enquired whether compensation measures can be implemented in accordance with the Project's construction approach (which	Noted. The Applicant's roadmap provides a programme for delivery of the proposed measures.

Consultee	Document/Date	Comment	How/Where Comment is Addressed
		is anticipated to take place seasonally over several years). MD-LOT confirmed that this will be discussed internally, and MD-LOT will advise in writing following the meeting.	
NatureScot	Meeting 4 February 2026	NatureScot stated that they have provided their latest advice on bycatch reduction for gannet in response to the Ossian application.	Noted, The Applicant has taken note of the advice provided to Ossian.
NatureScot	Meeting 4 February 2026	The Applicant requested feedback on the compensation options being considered for gannet (i.e. predator control may provide non like-for-like compensation with a clear roadmap and bycatch reduction may provide like-for-like but be difficult to deliver as a Project-led measure). NatureScot recommended incorporating both compensation options in the application.	Noted. The Applicant has provided both options in the application.
MD-LOT	Meeting 4 February 2026	MD-LOT will provide written advice on compensation options following the meeting and would also clarify whether MD-LOT can provide this advice before the submission of the application.	Noted.
MD-LOT	Meeting 4 February 2026	MD-LOT stated that an Applicant can redact sections of the application documents during the submission process but must provide justification such redaction (e.g. personal data protection or commercial confidentiality). The Applicant should also submit a non-redacted version of the report for consultation purposes.	Noted.
Offshore Wind Directorate	Email exchange on 10 February 2026	The Applicant asked whether any updates were available. The OWD confirmed that they would respond in due course.	Noted.
Offshore Wind Directorate	Email from OWD to the Applicant (sent 16 February 2026)	OWD confirmed that it is possible that they will not take forward all measures that they are currently considering and that any not included in the SMRF would be available for developers to consider.	Noted

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4 Need for the Bellrock Project

35. Several key policy themes underpin the need for the Bellrock Project, all of which align with Scottish and UK energy policy objectives:

- **Climate Change, Net Zero, and Decarbonisation**: Supporting national efforts to meet climate and net zero targets, contributing to the global fight against climate change;
- **Security of Supply**: Enhancing energy independence by reducing reliance on imported energy sources;
- **Affordability of Supply**: Delivering energy at the lowest possible cost to consumers; and
- **Socioeconomic Benefits**: Promoting stable employment and stimulating local economic growth through increased investment.

36. The updated Offshore Wind Policy Statement (Scottish Government, 2026) states:

'*Offshore wind presents an era-defining opportunity to grow our green economy for the benefit of communities across Scotland, while supporting our energy security and journey towards net zero.'.*

37. The key policy themes are detailed further in **Sections 4.1** to **4.4**.

4.1 Climate Change, Net Zero and Decarbonisation

4.1.1 Climate Change

38. The sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) report concludes that without immediate, rapid and large-scale reductions in greenhouse gas (GHG), the ability to limit global warming to 1.5°C, or even 2°C, will be beyond reach (IPCC, 2023). The UNEP Copenhagen Climate Centre, in its 2023 Emissions Gap Report, estimates that under current national policies and pledges, the world is on track for a global temperature rise of approximately 2.5 – 2.9°C by the end of the century (UNEP Copenhagen Climate Centre, 2023). Rising global temperatures are expected to increase the frequency and severity of extreme weather events such as floods, droughts, wildfires, and heatwaves. These events threaten food security, water availability, and public health, particularly in vulnerable communities (Global Centre on Adaptation (GCA), 2025).

39. The World Meteorological Organisation (WMO) reported that between 1970 and 2021, extreme weather and climate events caused 2,087,229 deaths worldwide, and resulted in US$4.3 trillion in economic losses (WMO, 2023).

40. Floods and droughts in the UK continue to pose serious health risks. The 2023 Health Effects of Climate Change (HECC) report (Defra, 2023a) highlights that flooding can lead to direct injuries and deaths, as well as indirect effects such as disruption to electricity, water supplies, and healthcare access (UK Health Security Agency (UKHSA), 2023). Mental health impacts including anxiety, depression, and post-traumatic stress disorder are particularly severe among those displaced or affected by property damage and utility outages (UKHSA, 2023).

41. The UK Met Office confirmed that 2025 was the hottest UK summer on record, with a mean temperature of 16.10°C, surpassing previous records set in 2018 and 2006 (Met Office, 2025). Globally, 2024 was the hottest year on record, according to National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), and the Copernicus Climate Change Service (NASA, 2025; NOAA, 2025; Copernicus Climate Change Service (C3S), 2025). These trends reflect a broader pattern of rising global temperatures and increasing frequency of extreme heat events.

4.1.2 Net Zero

42. In January 2023, the Scottish Government published the Draft Energy Strategy and Just Transition Plan, which sets out the key national ambitions for Scotland's energy future to achieve a Just Transition to Net Zero by 2045 (Scottish Government, 2023b). Further, the Scottish Government have, in the update to the Offshore Wind Policy Statement, committed to deliver up to 40GW of new offshore wind capacity by 2040 (Scottish Government, 2026).

43. The need for the Bellrock Project goes beyond addressing national energy demand – it is integral to meeting legally binding climate commitments. Both the UK and Scottish Governments have established statutory Net Zero targets, with the UK's 2050 target set under the UK Climate Change Act 2008 and Scotland's 2045 target set under the Climate Change (Scotland) Act 2008, requiring the UK to reach Net Zero emissions by 2050 and Scotland by 2045. To support these aims in Scotland, The Climate Change (Emissions Reduction Targets) (Scotland) Act 2024 introduced a system of five-year legally binding carbon budgets covering every year from 2026 to 2045. These budgets set the maximum allowed tonnes of CO_2-equivalent for each period, with Ministers legally required to ensure each budget is met.

44. In addition to fulfilling domestic legal obligations, the Bellrock Project supports international climate goals, including the Paris Agreement's objective to limit global warming to well below 2°C. By displacing fossil fuel-based energy and reducing carbon emissions, the Bellrock Project contributes to achieving the aims of both national legislation and global climate action, reinforcing its strategic role in the transition to a low-carbon future.

4.1.3 Decarbonisation

45. Decarbonisation refers to the process of reducing GHG emissions associated with energy use across Scotland and the UK. Lowering these emissions is essential to mitigating the warming effects of human activity and addressing the global climate crisis. Achieving Net Zero requires a rapid and sustained shift toward renewable energy sources and the elimination of GHG emissions from fossil fuel-based energy systems.

46. The Scottish Energy Strategy sets ambitious targets for 2030 (Scottish Government, 2017), including the delivery of at least 50% of Scotland's current total energy demand from renewable energy sources.

47. The scale and urgency of Scotland's decarbonisation efforts are further outlined in the Draft Energy Strategy and Just Transition Plan (Scottish Government, 2023b). This document provides a strategic roadmap to transform Scotland's energy system by:

- Scaling up renewable energy production, including offshore wind power;
- Reducing overall energy demand while ensuring affordability and resilience; and
- Supporting a just transition that delivers economic opportunities, protects vulnerable communities, and promotes local ownership and participation in energy projects.

48. Floating offshore wind projects, such as the Bellrock Project, support Scotland's decarbonisation efforts by harnessing its deep-water wind resources to generate zero-carbon electricity, enabling emissions reductions while accelerating progress toward the nation's ambitious Net Zero goals. This transition is not only a climate imperative but also a socioeconomic opportunity aiming to create green jobs, strengthen supply chains, and build a fairer, more secure energy future for all of Scotland. Socioeconomic benefits are detailed further in **Section 4.4**.

4.2 Security of Supply

49. Energy security is a critical concern for Scotland and the wider UK, playing a vital role in safeguarding public health and safety, while also supporting economic growth. Scotland significantly contributes to the UK's energy system, particularly through electricity generated from its surrounding waters, which supplies energy to the National Electricity Transmission System. Although Scotland is pursuing ambitious decarbonisation targets, it remains important to address energy security within the wider UK context ensuring adequate capacity to meet peak demand and respond to unexpected events such as outages or plant closures.

50. Recent global events, including the COVID-19 pandemic and Russia's invasion of Ukraine, have led to sharp increases in the cost of imported gas and coal, rising by over 200% and 100% respectively in 2021. Although prices began to ease in 2023, they remained significantly above levels experienced prior to the Russian invasion of Ukraine (Bolton, 2025). This demonstrated the significance of the UK's reliance on imported hydrocarbons. Although UK gas prices fell back to their lowest level seen since the war in Ukraine in 2025, prices remain significantly higher than pre-pandemic and pre-Ukraine war averages and the market remains sensitive to geopolitical events (such as events in the Gulf region in early 2026), Liquefied Natural Gas (LNG) flows and weather-driven demand (Simpson, 2025).

51. Ensuring energy security requires a diverse mix of energy sources, meaning if one source becomes unavailable, others can compensate to maintain supply. Given the UK's current dependence on fossil fuels, expanding alternative energy sources, particularly renewable electricity, is essential to diversifying the energy mix. With abundant natural resources, existing infrastructure, and the

capacity for large-scale deployment, Scotland and the UK are well-positioned to rely primarily on solar and wind power to meet Net Zero targets.

52. As discussed in **Section 4.1.3**, decarbonisation of the UK energy supply chain and increasing electricity demand could result in a significant deficit in UK electricity supply compared with demand and, therefore, there is a clear public benefit inherent in the creation of new electricity supply capacity, which will be provided by the Bellrock Project. With offshore wind already established in Scotland, increasing the amount of offshore wind is considered to be an essential step in reducing Scotland's reliance on imported sources, not only for tackling climate change and achieving decarbonisation, but also for enhancing energy security and reducing reliance on foreign energy supplies.

4.3 Affordability of Supply

53. In addition to its contribution to offsetting carbon emissions, the Bellrock Project has the potential to power the equivalent energy needs of over 1.7 million homes[3] with clean, renewable and low cost electricity. As described in the sections above, in order to meet Scottish and UK renewable energy targets, renewable energy needs to be affordable.

54. The UK has a world leading offshore wind sector and is well placed to benefit from further investment in renewables innovation, to accelerate cost reduction. The UK Government, through Great British Energy and in partnership with The Crown Estate (TCE) and industry, has committed a £1 billion investment into the offshore wind sector to further reduce the cost of renewables (DESNZ, 2025a), including:

- Innovation in offshore wind turbine blade technology, floating platforms and high-voltage direct current (HVDC) cables;
- Upgrades to port infrastructure across key regions such as Teesside, Leith and Port Talbot; and
- Thousands of new jobs in coastal and industrial communities.

55. Great British Energy is collaborating with key public finance bodies including the Scottish National Investment Bank, National Wealth Fund, Development Bank of Wales, and CES, to speed up domestic supply chain investment (DESNZ, 2025a). Scotland has been allocated up to £185 million, helping to unlock as much as £3.5 billion in private sector investment for ports and advanced components essential to constructing both floating and fixed offshore wind farms (DESNZ, 2025a). Through offshore wind developer-led innovation there has been a significant reduction in the levelised cost of energy in recent years. The UK offshore wind industry achieved a 'strike price' (the minimum price developers will be paid for electricity) as low as £37.35/MWh in the Government's Contract for Difference (CfD) auction in 2022 (DESNZ, 2022a). That price was 6% lower than the third CfD auction in 2019 and 30% lower than the lowest strike price seen in the second CfD auction in 2017. However, the CfD auction in September 2023 did not attract any bids by offshore wind farm developers, indicating that the strike price of £44/MWh was set too low for

[3]See **Chapter 1: Introduction (Volume II)** of the Bellrock WFDA EIA Report for further detail

developers to be confident in achieving a return on their investment following the significant cost increases being experienced by developers in late 2022 and throughout 2023.

56. In July 2025, the UK Government announced further increases in the maximum strike prices for the next CfD auction (Allocation Round 7) to reflect ongoing cost pressures and ensure project viability. For floating offshore wind projects, it increased to around £271/MWh (up from £176/MWh in 2023) (DESNZ, 2025b). These adjustments, alongside extending CfD contract lengths from 15 to 20 years, aimed to address rising supply chain costs, inflation, and financing challenges that have impacted the commercial viability of UK offshore wind projects (DESNZ, 2025c).

57. This adjustment reflected the higher capital and operational costs associated with floating technologies, which are essential for unlocking deeper waters and expanding renewable capacity. The Allocation Round 6 marked a turning point, with the first floating offshore wind project (Green Volt) awarded a CfD at £139.93/MWh, targeting delivery by 2029 (DESNZ, 2024a).

58. The results of Allocation Round 7 confirmed the UK Government's renewed commitment to stabilising the offshore wind sector, with the auction securing a record 8.4 GW of offshore wind capacity (DESNZ, 2026). This is enough to power up to 12 million homes and represents the most competitive and successful CfD round to date (DESNZ, 2026). The scale and competitiveness of Allocation Round 7 demonstrate a strong rebound in developer confidence following the challenges of Allocation Round 6, signalling that the UK is back on track toward its 2030 clean-power target, with substantial private-sector investment expected to flow into the sector as a result (DESNZ, 2026).

59. In the Clean Growth Strategy (BEIS, 2017), the UK Government set out a plan to decarbonise all sectors of the UK economy through the 2020s including innovation in the power sector and renewables. Additionally, in March 2019 the UK offshore wind sector committed to an Offshore Wind Sector Deal (BEIS, 2020) which reinforced the aims of the UK for clean growth. The UK has a world leading offshore wind sector and is well placed to benefit from further investment in renewables innovation to accelerate cost reduction.

60. Despite current challenges, the offshore wind industry is continuing to drive cost reductions through technology development. The UK Floating Offshore Wind Task Force, a joint government-industry initiative, is working to support and accelerate the development of the UK floating wind sector and help deliver the Industrial Growth Plan 2024. The work of the Task Force is funded by, amongst others, Crown Estate Scotland, Highlands and Island Enterprise, and Scottish Enterprise. The 2024 Report 'Floating Wind: Anchoring the next generation offshore' states that building out the UK's globally leading pipeline of floating offshore wind projects will enable cost reduction, underpin sufficient volume potential to unlock infrastructure and supply chain investment, enhance competence and secure early mover advantage for British industry. Pilot projects, demonstration and early industrial-scale projects are essential stepping stones towards commercialisation.

61. The Bellrock Project will contribute to this process as it seeks to make use of the most effective new technology and to take advantage of potential cost efficiencies in the development process. The Bellrock Project would be able to provide significant electricity generation capacity within Scotland and the UK to support commitments for offshore wind generation and maximise generation capacity at low cost to the consumer.

4.4 Socioeconomic Benefits

62. According to the Wind Industry Skills Intelligence Report 2025 by the Offshore Wind Industry Council (OWIC) and RenewableUK, the UK offshore wind sector currently supports nearly 40,000 jobs, which has increased from 32,000 in 2023 (OWIC, 2025). This number is projected to rise to between 74,000 and 95,000 jobs by 2030, depending on deployment scenarios and supply chain growth (OWIC, 2025). The sector is also expected to attract over £60 billion in private investment by the end of the decade (OWIC, 2025). Scotland continues to play a leading role, with around 30% of the UK's offshore wind workforce based there. This figure is anticipated to grow to over 20,000 jobs, many of which are located in coastal and rural communities, bringing long-term economic benefits and skilled employment opportunities to areas that have historically faced economic challenges.

63. The Bellrock Project presents a significant opportunity to support Scotland's economy and coastal communities, reinforcing its leadership in the UK offshore wind sector. By driving investment and stimulating economic activity (see **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** of the EIA Report for further detail), the Bellrock Project is expected to deliver long-term benefits to local economies.

64. The Bellrock Project would provide a valuable contribution to employment. During the development and construction phase, the Bellrock Project is expected to support:

- 12,600 years of employment and generate £845 million Gross Value Added (GVA) in Scotland[4]; and
- 20,510 years of employment and generate £1,439 million GVA across the UK[4].

65. Peak employment is expected to be in 2032, with around 4,560 jobs supported across the UK by the Bellrock Project (i.e. the WFDA, OfTDA and OnTDA) (see **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** and **Appendix 16.2: Economic Impact of the Bellrock Project (Volume IV)** of the **Bellrock WFDA EIA Report** for further detail).

66. The operational phase of the Bellrock Project will provide long-term economic benefits. In an average year, it is expected to support:

- 170 jobs and £12 million GVA in Scotland[4]; and
- 320 jobs and £24 million GVA in the UK[4].

67. Including induced impacts, the total expected effects during the development and construction phase rise to:

- 15,080 years of employment and £1.031 billion in GVA in Scotland[4]; and
- 29,570 years of employment and £2.074 billion in GVA across the UK[4].

[4] Based on projected contract allocations by geography. The quoted values should be interpreted as indicative estimates.

68. During the operational phase, annual impacts including induced effects are expected to reach:

- 180 jobs and £15 million in GVA in Scotland[4]; and
- 330 jobs and £34 million in GVA across the UK[4].

69. The Bellrock Project offers socioeconomic benefits that extend beyond coastal communities, with the potential to drive growth at both regional and national levels. The Bellrock Project, alongside other offshore wind farms in the region will help attract investment, support workforce training, and enable the development of operation and maintenance (O&M) hubs and supply chains, fostering economic resilience and innovation across Scotland. These benefits will contribute directly to national objectives for a Just Transition, energy resilience and inclusive growth.

4.5 Summary of the Need for the Bellrock Project

70. Following the details set out in **Sections 4.1** to **Section 4.4** above, it is considered that there is an established need for the Bellrock Project. The primary reasons are:

- The Bellrock Project has the potential to supply up to 1.8 GW of renewable energy, making a significant contribution toward Scotland's decarbonisation efforts and Net Zero targets;
- With the urgency of climate action, maximising renewable energy generation is essential. The Bellrock Project will help meet government targets and offset millions of tonnes of CO_2 annually, directly supporting climate mitigation;
- If the Bellrock Project does not proceed, the lost generation capacity would need to be replaced by other renewable sources. Given the scale of the climate challenge, all available renewable options must be utilised;
- Energy security is increasingly critical, and a diverse energy mix is vital to reduce dependence on imported fossil fuels;
- The Bellrock Project supports a Just Transition away from fossil fuels, particularly benefiting communities in Northeast Scotland that have historically relied on the oil and gas sector; and
- By using floating wind turbine technology, the Bellrock Project can access deeper, more productive offshore areas which will drive innovation, support supply chain development, and align with Scotland's ambition to lead in advanced renewable technologies.

71. For the above reasons, the Bellrock Project is considered crucial to Scotland's energy supply throughout the 2030s and beyond. Without its development, Scotland may face significant challenges in meeting its decarbonisation targets and progress toward the statutory targets set by the Climate Change (Scotland) Act 2009, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, and the amended UK Climate Change Act 2008 could be hindered.

5 Assessment of Alternative Solutions

5.1 Approach

72. This section identifies and assesses whether there are any alternative solutions to the Bellrock Wind Farm Infrastructure. Alternative solutions range from 'do nothing' to assessing alternative sites, designs, scales and methods of bringing forward the Bellrock Wind Farm Infrastructure. There is no prescribed process within the Habitats Regulations for reviewing potential alternative solutions, and no guidance from the Scottish Government. Therefore, the methodology and approach to demonstrating the absence of alternative solutions is guided by the appropriate UK and European guidance, and from precedent set by previous offshore wind farm projects that have submitted derogation cases in both Scotland and the UK. The relevant guidance documents for the alternatives test are:

- CMS (2021) - Habitats Regulations Appraisal (HRA) Derogations for Offshore Wind Projects in Scotland - Legal Framework for Decisions;
- Managing Natura 2000 Sites (MN2000) – The provisions of Article 6(3) of the 'Habitats' Directive 92/43/EEC (2000) published by the EC in 2000 but updated in November 2019 (European Commission (EC), 2019);
- EC Methodological Guidance – Assessment of plans and projects significantly affecting Natura 2000 sites (the Methodological Guidance), (EC, 2021b);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (Article 6(4) Guidance) (EC, 2007);
- DTA (2021a, in draft) – Policy guidance document on demonstrating the absence of alternative solutions and imperative reasons for overriding public interest under the Habitats Regulations for Marine Scotland;
- NatureScot (2024) – 'HRA';
- Defra (2012) 'Habitats Directive: guidance on the application of article 6(4);
- Defra (2023b) – Habitats Regulations Assessments: protecting a European Site; and
- Defra (2021b) – Draft best practice guidance for developing compensatory measures in relation to MPAs.

73. The assessment of alternative solutions is supported by several chapters of the **Bellrock WFDA EIA Report**, including:

- **Chapter 3: Site Selection and Consideration of Alternatives (Volume II)**; and
- **Chapter 4: Project Description (Volume II).**

74. Based on the guidance documents above, the assessment of alternatives is presented using the following process:

- **Step 1: Identification and characterisation of the Bellrock Project's objectives** – This step is essential for guiding the evaluation of alternative solutions and includes understanding both environmental and technical goals. It also requires consideration of site-specific constraints, environmental sensitivities, and technical feasibility (**Section 5.2**);
- **Step 2: Consideration of the 'do nothing' scenario** – This step establishes a baseline for comparison. This step helps highlight the consequences of not proceeding with the Bellrock Project (**Section 5.3**);
- **Step 3: Identification of any feasible alternative solutions** – This step involves identifying viable alternatives to the Bellrock Wind Farm Infrastructure. This includes exploring a different project design, location, or technology that could meet the Bellrock Project's objectives while minimising environmental impacts (**Section 5.4**); and
- **Step 4: Assess Feasible Alternative Solutions** – The final step involves assessing the potential impacts of each feasible alternative on European Sites, in line with the Habitats Regulations. This includes evaluating whether alternatives can avoid or reduce adverse effects on protected areas, considering factors such as impact magnitude, timing, mitigation options, and broader implications for project timelines, compliance, and long-term sustainability (**Section 5.5**).

75. Scottish Ministers have set out their considerations for alternative solutions in several Derogation Cases for consented Scottish offshore wind projects (Green Volt, Salamander, West of Orkney and Berwick Bank). These are:

- That they (the Scottish Ministers) do not consider alternative forms of renewable technologies or onshore wind farms to be "alternatives" to offshore wind;
- That identification of reasonable alternative solutions will consist of either a 'do nothing' approach, or consideration of an alternative project location, scale or design;
- That any alternative identified must be capable of meeting the identified policy objectives, be legally, technically and financially feasible, and have a lower impact on the designated sites;
- That they do not consider expediting the construction and operation of already consented wind farm projects as an alternative; and
- That consideration is given to the policy on alternatives contained in NPS EN-1 (in particular, para 4.2.21).

5.2 Step 1: The Objectives

76. To determine whether an alternative solution is feasible, it must be capable of achieving the same objectives as the Bellrock Project. Therefore, clearly defining the aims of the original development is a critical first step in the assessment process. These objectives help establish whether alternative approaches could deliver equivalent outcomes with reduced environmental impact.

77. Under the derogation provisions, a feasible alternative is one that meets the same goals while causing less harm to the UK's National Site Network than the original proposal.

78. This interpretation is supported by legal precedent, including the English High Court's ruling in Spurrier[5], which clarified that an "alternative solution" must be directed toward the same identified objectives or purposes. The court stated:

"Even by itself, the noun 'alternative' carries the ordinary, Oxford English Dictionary meaning of 'a thing available in place of another', which begs the question what are the relevant objectives or purposes which an alternative would need to serve. However, article 6(4) does not refer simply to the absence of an 'alternative' but to an 'alternative solution', 'alternative' appearing as an adjective, which makes this meaning plain beyond any doubt. In our view, 'an alternative' must necessarily be directed at identified objectives or purposes; but it is beyond doubt that 'an alternative solution' must be so aimed."

79. According to Defra (2012), alternative solutions must be limited to those that can achieve the same overall objective as the original proposal. This principle ensures that alternatives are genuinely comparable in purpose and scope.

"For example, in considering alternative solutions to an offshore wind renewable energy development the competent authority need only consider alternative offshore wind renewable energy developments. Alternative forms of energy generation are not alternative solutions to this project as they are beyond the scope of its objective. Similarly, alternative solutions to a port development will be limited to other ways of delivering port capacity, and not other options for importing freight".

80. The Bellrock Project's objectives are presented in **Table 5.1**.

Table 5.1: Bellrock Project Objectives

ID	Objective	Basis for the Objective
1	**Drive offshore wind growth in Scottish waters** To contribute to the delivery of a significant volume of operational offshore wind in Scottish waters in the 2030s which will generate low carbon electricity in support of the decarbonisation of the Scottish electricity supply as part of Scottish and UK climate change targets and the Scottish Government's ambition of developing up to 40 GW of new offshore wind in Scottish waters by 2040.	The Scottish Government declared a global Climate Emergency in 2019 and set a target for achieving net zero by 2045. The UK has several binding commitments to address climate change, which will require the adoption of renewable technologies as a significant proportion of its energy generation mix. Delivery of renewable power in the 2030s will enable the Bellrock Project to make a meaningful and timely contribution to the decarbonisation and security of energy supply in both Scotland and the rest of the UK, addressing important aspects of existing and emerging Scottish Government and UK Government policy.
2	**Improve energy security** To improve energy security and stability in Scotland and the UK and by	The Bellrock Project will increase Scottish and UK renewable generated electricity. The Bellrock WFDA as part of the Project will support a secure national supply of renewable electricity to the National Electricity Transmission System and benefit Scottish and UK

[5] R (Spurrier) v Secretary of State for Transport [2019] EWHC 1070 (Admin)

ID	Objective	Basis for the Objective
	providing significant renewable energy generation within Scottish waters.	consumers by reducing reliance on fossil fuel and foreign imports. Once operational, the Project will significantly contribute to Scotland and the UK's energy security, system resilience and stability.
3	**Optimise renewable energy within infrastructure limits** To optimise renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure.	The Bellrock Project will optimise generation and export capacity by developing a floating offshore wind project within a deeper area of seabed that has not previously been considered suitable for fixed foundation development. Sites have been identified within strategic spatial planning as suitable for deeper water floating wind technologies, offering access to stronger and more consistent wind speeds than shallower sites. By situating the development further offshore, taking full advantage of designated locations and identified planning constraints, the project maximises clean, renewable energy output while minimising visual impacts on coastal communities. This strategic location balances technical feasibility with environmental and planning considerations, supporting the objective to optimise renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure.
4	**Unlock deep-water offshore wind potential** To generate renewable power on the Scottish seabed at greater depths by deploying floating wind technology at scale.	The Bellrock Project will contribute to maturing floating offshore wind technology at scale. The Bellrock Project will demonstrate technology, supply chain partnerships, and export readiness initiatives, creating pathways for global supply chain export potential from Scotland and the UK. The Bellrock Project will contribute to the rapid maturity of the GW scale floating offshore wind supply chain, which is currently in its infancy and significantly less established than fixed bottom supply chains, demonstrating Scotland as a global leader in floating wind.
5	**Maximising socioeconomic benefits for Scotland** To deliver significant socioeconomic benefits and investment within the Scottish supply chain and realise the associated economic development, skills and employment benefits for Scotland.	Maximising socioeconomic benefit and supply chain investment is a key ambition of Scottish and UK renewable energy strategies, which the Bellrock Project will support. In addition to its strategic importance, the Bellrock Project is expected to deliver significant economic value – creating jobs, stimulating local industries, and supporting the wider supply chain in manufacturing, engineering, and infrastructure. During the development and construction phase, the Bellrock Project is expected to generate £845 million GVA in Scotland, and £1,439 million GVA across the UK. During construction, peak employment is expected in 2032 with around 4,560 jobs supported in that year across the UK, of which 2,900 jobs are within Scotland. These include both direct employment by the Bellrock Project and its contractors, as well as indirect employment within the wider supply chain. Additionally, induced impacts arise from employee spending within the wider economy.

5.3 Step 2: Do Nothing Option

81. The 'do-nothing' scenario assesses the potential impacts of not progressing the Bellrock Project.

82. While the Defra (2021b) compensatory measures guidance advised that the "do nothing" option should be considered, it acknowledges this would rarely be a true alternative:

"It is unlikely in most cases that the 'do nothing' option (i.e. no proposed activity) would be an acceptable alternative, as it would not deliver the same overall objective as 'the activity'. However, it is useful to provide a comparison for other alternatives and to act as a baseline against which public benefits can be assessed. Where it is most likely to be an option is where no or limited tangible public benefit can be demonstrated."

83. Not proceeding with the Bellrock Project would mean the loss of up to 1.8 GW of offshore wind generation capacity. Furthermore, if the Bellrock Project does not go ahead, a large area (280 km^2) of seabed in Scottish waters well-suited for large-scale floating offshore wind would remain unused. As a result, the opportunity to contribute significantly to Scotland's and the UK's Net Zero and decarbonisation targets would be lost which would weaken short-term energy security. Given the critical importance of achieving climate goals, ensuring energy security, and maintaining affordability, all viable offshore wind projects must be considered. In the context of the climate emergency, inaction is not a sustainable option.

84. Therefore, the 'do nothing' option is discounted as an alternative solution to the Bellrock Project as it would not meet any of the Bellrock Project objectives (1-5), as summarised in **Table 5.2**.

Table 5.2: Assessment of the 'Do Nothing' Alternative Against the Bellrock Project Objectives

Objective	Impact of 'Do Nothing' Alternative
Objective 1: To contribute to the delivery of a significant volume of operational offshore wind in Scottish waters in the 2030s which will generate low carbon electricity in support of the decarbonisation of the Scottish electricity supply as part of Scottish and UK climate change targets and the Scottish Government's ambition of developing up to 40 GW of new offshore wind in Scottish waters by 2040.	Doing nothing would mean that Objective 1 would not be met, resulting in a missed opportunity to provide 1.8 GW of operational offshore wind in Scottish waters in the 2030s and beyond. This would undermine the UK's binding commitments to address climate change, making the UK's 2050 Net Zero target and Scotland's 2045 target harder to achieve.
Objective 2: To improve energy security and stability in Scotland and the UK and by providing significant renewable energy generation within Scottish waters.	Doing nothing would fail to improve energy diversification or resilience in Scotland and the UK. Continued dependence on imported fossil fuels would leave Scotland and the UK exposed to volatile global energy markets, price instability, and geopolitical risks. This would undermine the security and independence of our energy supply.
Objective 3: To optimise renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure.	Doing nothing would leave the E1 Plan Option underdeveloped, contradicting the spatial planning intentions of the Sectoral Marine Plan (Scottish Government, 2020a). This would forfeit the opportunity to optimise offshore wind generation in this designated area, which benefits from deeper waters and stronger, more consistent winds accessible by floating wind technology.

Objective	Impact of 'Do Nothing' Alternative
Objective 4: To generate renewable power on the Scottish seabed at greater depths by deploying floating wind technology at scale.	Doing nothing would delay or impede the at-scale deployment and maturation of floating offshore wind technology in Scotland. This would hinder unlocking the full offshore wind potential available in deeper waters.
Objective 5: To deliver significant socioeconomic benefits and investment within the Scottish supply chain and realise the associated economic development, skills and employment benefits for Scotland.	Doing nothing would reduce Scotland's opportunity to demonstrate global leadership in floating wind innovation and supply chain development, slowing the growth of a strategically important and emerging industry with significant export potential. It would substantially reduce long-term economic benefits, including jobs, skills development, and investment across Scottish and UK renewable energy supply chains, hindering the growth of the Scottish supply chain.

5.4 Step 3: Identify Feasible Alternative Solutions

85. In line with established guidance and precedents from previous offshore wind farm derogation cases, the scope for evaluating potential alternative solutions is defined as follows:

- Alternative WFDA locations (**Section 5.4.1**), including:
  - Locations outside the UK;
  - Locations within the UK, excluding Scottish waters; and
  - Locations within Scottish waters.
- Alternative project designs (**Section 5.4.2**). Given that the identified AEoSI would result from collision and/or displacement risks associated with WTG operation, the key project design parameters likely to influence impact pathways during the operational phase are considered to be:
  - The size of the WFDA;
  - The overall number of WTGs;
  - Increased air gap; and
  - The diameter of the rotor.

86. Each of these options is considered in turn below, in the context of the Bellrock Project's objectives and with regards to their technical, financial and legal feasibility.

5.4.1 Alternative WFDA Locations

5.4.1.1 Locations Outside the UK

87. Seabed rights for offshore wind development in Scotland and the UK are managed by CES and TCE respectively. An overview of the Sectoral Marine Plan for Offshore Wind and the ScotWind Leasing Round is provided in **Chapter 3: Site Selection and Consideration of Alternatives (Volume II)** of the **Bellrock WFDA EIA Report**.

88. In the West of Orkney offshore wind farm derogation case assessment (Scottish Government, 2025a), Scottish Ministers clarified that locations outside Scottish waters are not considered alternatives for projects within Scotland's jurisdiction:

"The Scottish Ministers consider that offshore wind farm projects located either outside Scottish waters, i.e. within UK waters or in other countries, are not an alternative to the Project since this would not meet the identified objectives which are specific to Scottish waters with a view to achieving Scotland's offshore wind ambitions and net zero targets."

89. Similarly, Scottish Ministers reached the same conclusion regarding locations outside the UK in the Berwick Bank Offshore Wind Farm derogation case assessment (Scottish Government, 2025b) in July 2025.

90. The Secretary of State noted in the HRA for the East Anglia ONE North offshore wind farm that areas outwith the leasing process are not legally available to the Applicant:

"The site selection for all offshore wind proposals in the UK is controlled by The Crown Estate leasing process. Sites not within the areas identified by The Crown Estate leasing process or outside of that which the Applicant has secured (the southern East Anglia Zone) are not legally available and therefore do not represent alternative locations."

91. Applying this principle to the Bellrock WFDA, it follows that locations outside the Crown Estate Scotland leasing process, including the ScotWind, and INTOG seabed leasing areas, and outside the UK which are not legally available to the Applicant, do not constitute feasible alternative solutions.

92. Furthermore, any location outside the UK would fail to meet Objective 1 of the Bellrock Project, as it would not contribute to Scotland's or the UK's Net Zero targets. Similarly, because areas outwith the existing leasing rounds are not technically feasible for development, such locations would also fail to meet Objective 3, which requires optimising renewable energy generation and large-scale supply capacity "*within the constraints of available Scottish seabed*". It would also fail to meet Objectives 2, 4 and 5, which relate to contributing to national security, supporting the deployment of floating offshore wind and supporting economic development.

93. The Bellrock Project also cannot wait for alternative locations offered under future CES leasing rounds, as doing so would introduce significant delays to deployment, undermine timely contribution to Scotland's Net Zero trajectory, and fall outside the currently available and strategically assessed seabed required for delivering generation at scale.

94. Therefore, locations outside of the UK are discounted as a feasible solution.

5.4.1.2 Locations Within the UK, Excluding Scottish Waters

95. As outlined above, locations outside the ScotWind and INTOG seabed leasing areas, which are not legally available to the Applicant, do not constitute feasible alternative solutions.

96. Locations in other devolved nations within the UK do not deliver on any of the Scottish-specific project objectives, targets or policy in relation to carbon emission reductions, renewable energy generation, offshore wind generation, climate change or national policy in respect of which the Bellrock Project objectives seek to contribute to.

97. Any location outside of Scottish waters would fail to meet Objective 1 of the Bellrock Project, as it would not contribute to Scotland's Net Zero targets. It would also fail to meet Objectives 3, 4 and 5, which relate to optimising the use of the seabed, supporting the deployment of floating offshore wind and supporting economic development.

5.4.1.3 Locations Within Scottish Waters

98. Other locations within Scottish waters as an alternative to the Bellrock WFDA would fail to meet Objective 1 'Drive offshore wind growth in Scottish waters' and Objective 4 'Unlock deep-water offshore wind potential'. As described in **Chapter 3: Site Selection and Consideration of Alternatives (Volume II)** of the **Bellrock WFDA EIA Report**, the Applicant considered other ScotWind Plan Option Areas and concluded that they were not reasonable alternatives for the Bellrock WFDA because they lack the specific combination of technical, environmental, planning, and grid-related conditions necessary to support a large-scale floating offshore wind development. The E1 Option Area benefits from stronger, more consistent wind speeds and deeper-water conditions specifically recognised as suitable for floating turbines.

99. As outlined in the Need for the Bellrock Project (**Section 4**), and the 'Do Nothing' scenario (**Section 5.3**), there is an urgent requirement to rapidly scale up offshore renewable energy generation in both UK and Scottish waters. Losing any potential capacity would undermine these efforts and is therefore not considered acceptable.

5.4.2 Alternative Project Designs

100. This section considers whether modifications to the design of the Bellrock Wind Farm Infrastructure could represent feasible alternative solutions that meet the Bellrock Project objectives while avoiding or materially reducing adverse effects on European Sites. An alternative design solution must be technically, legally and financially feasible and capable of delivering the Bellrock Project objectives.

101. Design changes have been considered where there is a potential to reduce effects through seabird collision risk and/or displacement.

5.4.2.1 Size of Developable Area/Overall Number of Wind Turbine Generators

102. The size of the Bellrock WFDA has been driven by a several key factors, initially by the ScotWind seabed leasing process where the E1 Plan Option Area was formally identified within the Sectoral Marine Plan (Scottish Government, 2020a).

103. Attempting to deliver the full 1.8 GW capacity within a smaller, more densely arranged area would lead to notable energy yield reductions due to increased wake effects between WTGs, which would reduce efficiency and limit the overall electrical output of the Bellrock Project. Additionally, a more compact layout could restrict the layout flexibility needed to ensure safe navigation and search and rescue operations.

104. This approach is technically inefficient, would raise project costs, and does not offer any meaningful advantages in reducing ornithological impacts. As such, it does not represent a viable alternative to achieving Objective 4, which focuses on generating renewable power on the Scottish seabed at greater depths by deploying floating wind technology at scale.

105. The maximum number of WTGs proposed for the Bellrock Project is 132. This number of WTGs was selected to achieve the 1.8 GW export capacity and is considered optimal for maximising the Bellrock Project's export capacity. Reducing this number would reduce design flexibility, lower ability to deliver an efficient project and compromise the Bellrock Project's ability to meet Objectives 1, 2 and 5 (**Table 5.1**) and result in a significant loss of renewable energy output. A substantial reduction in the maximum number of WTGs is not viewed as technically or financially viable at this stage of the project development.

5.4.2.2 Increased Air Gap

106. In line with guidance from MGN 654, which mandates a minimum air gap of 22 m above MHWS for safe navigation, in consideration of ornithological impact and considering increasing delivery challenges with an increasing air gap, the Applicant has adopted a minimum 22 m air gap above sea surface. This height reflects a balance between reducing bird collision risk and addressing engineering constraints.

107. Increasing the minimum air gap would require raising the hub height of the WTGs, which in turn would result in an increase in the overall tower height. This change affects the structural stability of the turbines by moving their centre of gravity. To maintain the necessary stiffness and integrity, taller towers would require thicker walls, resulting in a heavier structure. Accommodating this additional weight and altered balance would necessitate a larger floating foundation design, increasing costs, increasing design risk and increasing delivery risk.

108. An increase in air gap would also narrow the range of installation vessels able to tow the FOUs to the WFDA. At the current 22 m air gap, the Bellrock Project is reliant on a very limited number of vessels (used globally) with an increased air gap further limiting the pool of suitable vessels. This limitation may prevent securing an appropriate vessel within the required installation window, potentially delaying the Bellrock Project. A larger air gap would also necessitate the use of a larger ring crane, a type of heavy construction crane, which, given increasingly limited availability of such equipment with increased ring crane height, represents a significant constraint in the supply chain and risk to the Bellrock Project.

109. This would impact the Project's ability to meet Objective 1 (**Table 5.1**). These design changes would introduce significant additional engineering, fabrication, installation, and operational requirements, leading to disproportionate increases in capital and lifecycle expenditure. The combined increase in costs associated with design changes such as taller WTGs and larger FSS would undermine the overall viability of the Bellrock Project. As such, increasing the air gap beyond

the proposed 22 m (which is considered by the Applicant to adequately mitigate ornithological impact) does not represent a feasible alternative solution.

110. In summary, an increase in air gap unnecessarily beyond 22 m increases risks relating to deliverability of the Bellrock Project. The proposed air gap of 22 m is considered to be achievable while maintaining the ability to maintain Bellrock Project time frames and meet Project Objectives, namely contributing to the delivery of a significant volume of operational offshore wind in Scottish waters in the 2030s (Objective 1), optimising renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure (Objective 3), and delivering on the broader aims of the Bellrock Project (Objectives 2, 4 and 5) (**Table 5.1**).

5.4.2.3 Rotor Diameter

111. Using WTGs with a smaller rotor diameter than considered within the Project Design Envelope would require a greater number of WTGs to achieve the same 1.8 GW export capacity and increase cost and the construction period. This would also increase the total swept area within the Bellrock WFDA, leading to a higher risk of bird collisions.

112. This approach would fail to maximise the generation potential within the Bellrock WFDA and would limit the Bellrock Project's contribution to key objectives, namely contributing to the delivery of a significant volume of operational offshore wind in Scottish waters in the 2030s (Objective 1), optimising renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure (Objective 3), and delivering on the broader aims of the Bellrock Project (Objectives 2, 4 and 5). Additionally, it would not make effective use of the most advanced floating WTG technology expected to be available to the Applicant.

113. For these reasons, the use of smaller rotors or a reduced swept area (outside of the design envelope) is not considered a feasible alternative solution.

5.5 Step 4: Assess Feasible Alternative Solutions

114. Steps 1 – 3 outlined in **Section 5.2** – **5.4** above have not identified any feasible alternative solutions to the Bellrock Project. Therefore, it is concluded that there are no feasible alternative solutions for the Bellrock Project and no assessment for Step 4 is required.

5.6 Summary

115. The evidence provided in **Section 5.2** – **5.4** clearly demonstrates that there are no feasible alternative solutions to the Bellrock Wind Farm Infrastructure. A thorough and iterative design process has been undertaken, which has resulted in the final design envelope presented within this Section 36 Consent and Marine Licence application. A summary of the conclusions is as follows:

- **Do nothing:**
  - This option does not meet the need of the Bellrock Project or align with its Objectives and is therefore not considered a viable alternative solution.
- **Alternative WFDA locations**:
  - Alternative WFDA locations would not support the Bellrock Project's Objectives (namely contributing to the delivery of a significant volume of operational offshore wind in Scottish waters in the 2030s (Objective 1), optimising renewable energy generation and supply capacity at scale within the constraints of available Scottish seabed and onshore transmission infrastructure (Objective 3), and delivering on the broader aims of the Bellrock Project (Objectives 2, 4 and 5)) or the Need for the Bellrock Project.
- **Alternative project designs**:
  - None of the alternative project designs are considered feasible alternatives because the design envelope put forward in this application reflects the optimum design envelope to balance environmental, economic and technical constraints, and allow the necessary flexibility for the post-consent detailed design to be undertaken. Alternative designs which are outwith this design envelope would either fail to achieve the Bellrock Project's Objectives, the Need for the Project, or are not considered technically or financially feasible.

6 Imperative Reasons of Overriding Public Interest

6.1 Approach to the Assessment of IROPI

6.1.1 Overview

116. This section presents a robust case for the Bellrock Wind Farm Infrastructure to proceed under IROPI, given its significant environmental, social, and economic benefits that support Scottish, UK and global, climate targets. This justification aligns with Regulation 64 of the Conservation of Habitats and Species Regulations 2017 and Regulation 29 of The Conservation of Offshore Marine Habitats and Species Regulations 2017, which allows projects to proceed where IROPI can be demonstrated:

'64.—(1) If the Competent Authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be).

(2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—

(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or

(b) any other reasons which the Competent Authority, having due regard to the opinion of the appropriate authority, considers to be imperative reasons of overriding public interest.'

117. The consideration of IROPI requires a balance between preserving the conservation objectives of European Sites and the UK's National Site Network based on the predicted adverse effects from the Bellrock Wind Farm Infrastructure, and the benefits provided by the Bellrock Project. To approve the Bellrock Wind Farm Infrastructure, the Competent Authority must be satisfied that its public benefits outweigh any remaining adverse effects on the UK's National Site Network. It should be noted that the Bellrock Project does not overlap with any designated priority habitats or species. Consequently, potential impacts related to priority habitats or species are not relevant to this assessment.

6.1.2 Content and Structure

118. The key principles defining IROPI include (DTA, 2021a):

- **Step 1: Imperative Reasons** – demonstrating how the plan or project is 'required' and that it is important that the plan or project proceeds (detailed in **Section 6.2**);

- **Step 2: Public Interest** – illustrating the public benefit served by the plan or project in addition to the private interest (detailed in **Section 6.3**);
- **Step 3: Overriding** – weighing the public interest against the potential impacts of the Bellrock Wind Farm Infrastructure to ensure that they must demonstrably outweigh the potential harm to the site (detailed in **Section 6.4**); and
- **Step 4: Long-term interest** – establishing the long-term nature of the plan or projects benefits (detailed in **Section 6.5**).

6.2 IROPI Case Step 1: Imperative Reasons

119. The Imperative Reasons that justify the Bellrock Wind Farm Infrastructure are considered under the following headings:

- Human health, public safety and beneficial consequences of primary importance to the environment (**Section 6.2.1**); and
- Socioeconomic benefits (**Section 6.2.2**).

6.2.1 Human Health, Public Safety and Beneficial Consequences of Primary Importance to the Environment

6.2.1.1 Human Health

120. As detailed in **Section 4.1**, the ongoing impacts of climate change pose serious risks to global health. According to the IPCC's Sixth Assessment Report (IPCC, 2021), without significant reductions in GHG emissions, it will be impossible to limit global warming to the critical 1.5°C threshold. Rising global temperatures are already increasing the frequency and severity of extreme weather events such as heatwaves, floods, and storms which directly threaten human health by exacerbating the spread of disease and reducing access to essential resources like clean water and food.

121. Although several renewable energy projects are currently underway across Scotland and the UK, they are not sufficient on their own to meet key climate objectives. These include Scotland's Net Zero goal for 2045, the offshore wind capacity targets set out in the Scottish Government's Climate Projections for 2030 and 2035 and the UK's 2030 emissions reduction target. Meeting these targets requires urgent action and the rapid deployment of additional renewable energy capacity.

122. The Bellrock Project would play a vital role in addressing this shortfall. By delivering up to 1.8 GW of clean, renewable energy, it will make a direct and meaningful contribution to national and international climate commitments and is essential to achieving the offshore wind capacity required across Scotland and the UK by 2045.

6.2.1.2 Public Safety

123. As detailed in **Section 4.2**, recent geopolitical events such as COVID-19, Russia's invasion of Ukraine and conflicts in the Gulf Region have demonstrated the significance of the UK's reliance on imported hydrocarbons.

124. The Draft Energy Strategy and Just Transition Plan (Scottish Government, 2023b) states:

"The imperative is clear: in this decisive decade, we must deliver an energy system that meets the challenge of becoming a net zero nation by 2045, supplies safe and secure energy for all, generates economic opportunities, and builds a just transition. The current uncertainty in our energy sector, with global market volatility and high energy prices, is impacting Scotland's people, communities and businesses. This energy crisis has demonstrated how vulnerable our energy system is to international price shocks, as well as laying bare the need for structural reform of our energy system to ensure affordability for consumers. … It is also clear that as part of our response to the climate crisis we must reduce our dependence on oil and gas, and that Scotland is well positioned to do so in a way that ensures we have sufficient, secure and affordable energy to meet our needs, to support economic growth and to capture sustainable export opportunities."

125. The British Energy Security Strategy (BESS) states*:*

"The cleanest and most secure way to do this [reduce imports while ensuring we have enough energy] is to source more of it domestically with a second lease of life for our North Sea."

126. Similarly, the UK Government's Clean Power 2030 report (DESNZ, 2024b) emphasises:

"In an era of heightened geopolitical risk, switching fossil fuelled generation for homegrown clean energy from renewables and other clean technologies offers us a security that fossil fuels simply cannot provide."

127. These statements highlight the urgent need for UK-based, renewable electricity sources that are not subject to the volatility of global fossil fuel markets. Expanding domestic renewable capacity will help shield consumers from unpredictable price spikes, improve supply stability, and enhance national energy resilience. The Bellrock Project would make a significant contribution to renewable energy generation in both Scotland and the wider UK. On the basis of energy security alone, which directly supports public safety, it is considered that there is an IROPI in favour of the Bellrock Project.

6.2.1.3 Beneficial Consequences of Primary Importance to the Environment

128. Exceeding the 1.5°C global warming threshold, as identified by the IPCC, would result in widespread ecological damage. This includes significant impacts on terrestrial species and habitats, soil health, natural carbon stores (which, if destabilised, could release additional GHG and accelerate climate change), as well as agricultural and forestry productivity. Marine environments are also at risk, with rising temperatures and changing ocean conditions threatening marine species, habitats, fisheries, and seabird populations. The Scottish Seabird Vulnerability Report (Scottish Government, 2024b) highlights these growing threats in detail, noting:

'Climate change as a major driver of global biodiversity loss (IPBES, 2019) and poses a significant threat to seabirds. While there has been considerable research on its impacts, the effects of climate

change are complex and often indirect and operate at the ecosystem level making them hard to distinguish from other pressures (Burton et al., 2023, Johnston et al. 2021, Mitchell et al. 2020)'.

129. The Bellrock Project would play a vital role in addressing the impacts of climate change by facilitating the transition to renewable energy. By reducing reliance on fossil fuels, it supports sustained reductions in GHG emissions, aligning with Scotland's Net Zero target (Scottish Government, 2020d; IPCC, 2022). This transition not only contributes to global climate mitigation efforts but also enhances the resilience of marine ecosystems. By reducing environmental pressures, it supports the long-term health and stability of vulnerable marine species and habitats, including seabirds. As such, the Bellrock Project is expected to deliver meaningful benefits for both climate action and the conservation of Scotland's marine biodiversity. It is considered that there is IROPI in the form of beneficial consequences of primary importance to the environment alone.

6.2.2 Economic and Social Benefits

130. The socioeconomic effects of the Bellrock Project are considered to be beneficial, as concluded in **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** of the **Bellrock WFDA EIA Report**. While socioeconomic benefits are not a primary factor in the derogation case for the Bellrock Wind Farm Infrastructure, it is still an important factor to consider within the overall balance of the Bellrock Project. As detailed in **Section 4.4**, during the development and construction phase alone, it is estimated a peak of around 2,520 jobs in Scotland and 3,830 jobs across the UK would contribute more than £845 million GVA in Scotland, and £1,439 million GVA in the UK. During the O&M phase it is expected that the Bellrock Project could support 170 jobs in Scotland (and up to 180 jobs including induced effects) and 320 (up to 330 jobs including induced effects) jobs across the UK. The operational beneficial impacts are expected to take place across the 35-year lifetime of the Bellrock Project (see **Appendix 16.2: Economic Impact of the Bellrock Project (Volume IV)** of the **Bellrock WFDA EIA Report** for further details).

131. The development of the Bellrock Project is expected to make an important contribution to delivering on the statutory duties set out in Climate Change (Scotland) Act 2009 and the Climate Change Act 2008 as well as a substantial contribution to both Scotland and the wider UK economy through significant investment in the renewable energy supply chain.

6.3 IROPI Case Step 2: Public Interest

132. The identification and development of offshore wind sites, including those within the Sectoral Marine Plan for Offshore Wind Energy Plan Option areas such as the Bellrock WFDA, is a key component of national policy. This framework is designed to safeguard both the environment and human health from the risks associated with energy supply shortages and climate change, while promoting public safety.

133. A primary public benefit of the Bellrock Project lies in its contribution to climate change mitigation. As detailed in **Chapter 17: Greenhouse Gas Assessment** (**Volume II**), approximately 3,499,727 tonnes CO_2e would be avoided with the Bellrock Project in operation. As outlined in **Section 6.2.1**, climate change poses a significant global threat. By displacing GHG emissions associated with fossil fuel energy production, the Bellrock Project supports Scotland's and the UK's

decarbonisation goals. Additionally, enhancing energy security is a critical public benefit, ensuring a more stable and reliable energy supply while helping to reduce energy costs.

134. In the absence of the Bellrock Project, the urgent need to address climate change would be reduced, and several legislative and policy commitments at both Scottish and UK levels would be at risk. These policies are designed to deliver public benefits, and the contribution of the Bellrock Project to achieving them represents a clear and tangible public good.

135. In summary, the Bellrock Project offers multiple public benefits: it supports climate change mitigation, advances the decarbonisation of the energy system, strengthens energy security, improves affordability, and helps meet national energy policy targets. This clearly demonstrates a clear public need for the Bellrock Wind Farm Infrastructure to proceed.

6.4 IROPI Case Step 3: Long-term Interest

136. The nature of offshore wind farm developments, combined with the urgent need for decarbonisation and climate action, means that the IROPI outlined above are inherently long-term in scope. For instance, the Bellrock Project has an expected operational life of 35 years, ensuring that the renewable energy it generates will continue to support emissions reductions well beyond Scotland's 2045 Net Zero target.

137. Achieving the scale of decarbonisation required across Scotland and the UK is a long-term endeavour. While the 2045 Net Zero target remains two decades away, it represents a permanent shift in energy systems, one that eliminates reliance on imported energy sources, and delivers sustained environmental protection.

138. Energy security is also a long-term national priority. With demand for electricity continuing to rise, it is not sufficient to meet current needs alone. Future energy systems must be resilient and capable of supporting projected growth, while ensuring independence from foreign energy sources. This long-term approach is essential to safeguarding Scotland and the UK's energy future.

139. In addition, the economic benefits of the Bellrock Project will extend well beyond its construction and operational phases. Investment in local supply chains will generate lasting impacts for Scotland, including job creation, infrastructure development, and skills training. These benefits will support future offshore wind initiatives and attract further investment to the region. The resulting growth in employment and infrastructure is also expected to encourage population movement to the northeast of Scotland.

6.5 IROPI Case Step 4: Overriding

140. As detailed throughout **Section 6.2 – 6.4** above, the Applicant is content that the benefits delivered by the Bellrock Wind Farm Infrastructure are imperative, of public interest and are long-term in nature. The Applicant considers these benefits to override the AEoSI identified within **Table 1.1**. Although the identified impacts relate to designated sites and protected species, it is considered that these effects can be appropriately compensated, as outlined in **Section 7**. This ensures the continued protection and ecological coherence of the UK's National Site Network.

141. The public interest served by the Bellrock Project is of the highest urgency, rooted in both national and international policy frameworks and directly linked to the global welfare of human populations. The most pressing benefit is the mitigation of climate change through the decarbonisation of Scotland's energy supply, which contributes significantly to reducing GHG emissions. Equally critical is the enhancement of energy security and the reduction of energy costs, improving affordability and stability of supply. These outcomes are directly associated with public health, safety, and environmental protection.

142. In addition, the Bellrock Project supports broader public interests by delivering substantial economic, social, and community benefits. It also plays a key role in advancing a Just Transition away from fossil fuels in Northeast Scotland. Taken together, these factors provide a compelling case for the project to be considered as overriding under Regulation 64(2). The combined justifications clearly meet the criteria for IROPI, resulting in a strong and unequivocal determination in favour of the Bellrock Wind Farm Infrastructure.

143. Furthermore, relevant guidance (DTA, 2021a) indicates that offshore wind developments are highly likely to meet the threshold for overriding impacts on the UK's National Site Network areas:

"Given the urgency of the climate change crisis, and having demonstrated the absence of alternative solutions, Scottish Ministers anticipate that it is highly unlikely that the public interest served by delivery of offshore wind proposals will not override the conservation interests."

144. This guidance aligns with the decisions made with respect to other offshore wind projects throughout the UK and Scotland.

145. The Applicant considers that under the tests described in the Habitats Regulations, the Bellrock Wind Farm Infrastructure satisfies the planning balance with respect to overriding the identified potential AEoSI. The Applicant does note however that this determination ultimately rests with the Scottish Ministers.

6.6 Summary

146. The environmental and social benefits to Scotland and the UK from increasing the generation of low carbon energy are clear, with the Bellrock Wind Farm Infrastructure providing an important contribution. Drawing on robust evidence and aligned with Scottish energy policy, the Applicant considers the Bellrock Wind Farm Infrastructure to be vital in serving the public interest. It will play a central role in advancing energy transition objectives, addressing climate change, and driving regional economic growth within the green economy.

147. The Bellrock Wind Farm Infrastructure contributes to the UK's legally binding climate change targets by helping to decarbonise the UK's energy supply, whilst contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers, in line with the UK Government's national policies.

148. The Applicant considers the evidence provided within this report to conclusively demonstrate the importance of the Bellrock Wind Farm Infrastructure and that there are IROPI for the Bellrock Wind Farm Infrastructure to proceed.

7 Compensatory Measures

149. The Applicant has demonstrated that there are no alternative solutions to the Bellrock Wind Farm Infrastructure and that there are IROPI for the development of the Wind Farm Infrastructure within the Bellrock WFDA. This section of the Derogation Case demonstrates to Scottish Ministers that compensatory measures can be put in place to ensure the overall coherence of the UK's National Site Network.

150. A range of compensation measures have been considered by the Applicant, beginning with an initial longlist of measures which have been assessed and consulted on, resulting in several measures being considered as feasible compensation for the potential impacts of the Bellrock WFDA. These compensation measures are set out in the following appendices:

- Derogation Case: Appendix A – Ornithology Compensation Plan;
- Derogation Case: Appendix B – Predator Control, Biosecurity Evidence and Roadmap; and
- Derogation Case: Appendix C – Bycatch Evidence and Roadmap.

151. Subject to confirmation of suitability to the Bellrock Wind Farm Infrastructure and the financial viability of any proposed tariff, the Applicant expresses an interest in addressing the Bellrock Wind Farm Infrastructure compensation requirements through the SMRF when it becomes available. The Applicant considers that the range of compensatory measures presented provide adequate compensation for the potential impacts associated with the Bellrock Wind Farm Infrastructure.

8 Derogation Case Conclusions

152. The evidence presented in this report clearly demonstrates that there are no alternative solutions (**Section 5**) which could deliver the Bellrock Project objectives (**Table 5.1**), in accordance with the need for the Bellrock Project (**Section 4**).

153. In addition, there is a clear case for IROPI, underpinned by international and national policy and legislation, as outlined in **Section 6.**

154. **Appendices A - C**, which are listed in **Section 7**, describe the proposed compensatory measures which would be deliverable and could be secured for the relevant species (kittiwake, gannet, razorbill and puffin) detailed in **Table 8.1**.

Table 8.1: Summary of Predicted Effects on Relevant Special Protection Area (SPA) Qualifying Features and Compensation Position

Species	SPA	RIAA AEoSI Conclusion (In-combination) Yes/No	Applicant's Position on Compensation Requirement
Kittiwake	Buchan Ness to Collieston Coast	Yes	Required in principle
	Fowlsheugh	Yes	Required in principle
	Flamborough and Filey Coast	Yes	Required in principle
	Troup, Pennan & Lion's Heads	Yes	Required in principle
	East Caithness Cliffs	Yes	Required in principle
	St Abb's Head to Fast Castle	No	Without prejudice
	Farne Islands	Yes	Required in principle
	Forth Islands	No	Without prejudice
	North Caithness Cliffs	No	Without prejudice
	Hoy	No	Without prejudice
	West Westray	No	Without prejudice
	Copinsay	No	Not required
	Fair Isle	No	Without prejudice
Razorbill	Fowlsheugh	Yes	Required in principle
	Forth Islands	No	Without prejudice
	Troup, Pennan & Lion's Heads	No	Without prejudice
	East Caithness Cliffs	No	Without prejudice

Species	SPA	RIAA AEoSI Conclusion (In-combination) Yes/No	Applicant's Position on Compensation Requirement
	Flamborough & Filey Coast	No	Without prejudice
	North Caithness Cliffs	No	Not required
	Mingulay & Berneray	No	Not required
	Rathlin Island	No	Not required
Puffin	Farne Islands	No	Not required
	Forth Islands	No	Without prejudice
	Coquet Island	No	Not required
	North Caithness Cliffs	No	Without prejudice
Gannet	Fair Isle	No	Without prejudice
	Forth Islands	Yes	Required in principle
	Hermaness / Saxa Vord / Valla Field	No	Without prejudice
	North Rona / Sula Sgeir	No	Not required
	Noss	No	Not required
	St Kilda	No	Not required
	Sule Skerry / Sule Stack	No	Not required
	Flamborough and Filey Coast	No	Not required

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Appendix A: Ornithology Compensation Plan

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Bellrock Offshore Wind Farm

Wind Farm Development Area

Shadow Habitats Regulations Appraisal Derogation Case - Volume VI

Appendix A: Ornithology Compensation Plan

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Glossary of Terminology

Term	Definition
Applicant	Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for the Bellrock Wind Farm Development Area.
Bellrock Offshore Wind Farm (or the Bellrock Project)	An offshore wind farm capable of exporting up to 1.8 GW of renewable energy to the National Electricity Transmission System. The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the proposed SSEN Transmission proposed Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
Development Area	For consenting purposes, the area for which separate consents and/or Marine Licences will be sought by the Applicant, comprising: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore wind farms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
SSEN Transmission Hurlie substation	The onshore substation to be developed by SSEN Transmission, which will receive renewable electricity from the Bellrock Project onshore substation and allow supply of renewable electricity from the wind farm to the National Electricity Transmission System.
Wind Farm Development Area	The boundary within which the Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned.
Wind Farm Infrastructure	Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning).

Glossary of Abbreviations

Term	Definition
AA	Appropriate Assessment
AEoSI	Adverse Effect on Site Integrity
AON	Apparently Occupied Nests
AOS	Apparently Occupied Sites
CO	Conservation Objectives
EC	European Commission
HPAI	Highly Pathogenic Avian Influenza
HRA	Habitats Regulations Appraisal
IROPI	Imperative Reasons of Overriding Public Interest
MD-LOT	Marine Directorate - Licensing Operations Team
MPA	Marine Protected Area
SMRF	Scottish Marine Recovery Fund
NSN	National Site Network
OWF	Offshore Wind Farm
RAG	Red, Amber, Green
RIAA	Report to Inform Appropriate Assessment
SPA	Special Protection Area
UK	United Kingdom
WFDA	Wind Farm Development Area

1 Introduction

1.1 Document Purpose

1. This Ornithology Compensation Plan (hereafter referred to as 'the Plan') provides information of the proposed ornithology compensation measures for the Bellrock Wind Farm Infrastructure which is located within the Bellrock Wind Farm Development Area (WFDA). It outlines the actions taken in the development of the Plan. Further details on the proposed project-led measures, including how they can be implemented and monitored if deemed necessary by the Scottish Ministers further to a derogation for the Bellrock Wind Farm Infrastructure under the Habitat Regulations are provided in **Appendix B: Predator Control and Biosecurity Evidence and Roadmap** and **Appendix C: Bycatch Reduction Evidence Review Roadmap** of the **Bellrock WFDA Shadow Habitats Regulations Appraisal (HRA) Derogation Case**.

2. An Appropriate Assessment (AA) is required for projects or plans which may affect European Sites. If, during the HRA process an Adverse Effect on Site Integrity (AEoSI) of a particular site cannot be excluded, a derogations process is undertaken during which any potential alternative solutions are assessed. Should no appropriate alternative solutions exist, and provided there are Imperative Reasons of Overriding Public Interest (IROPI) in the project proceeding, the final stage of the derogations process is to provide compensation measures to ensure that overall coherence of the United Kingdom's (UK's) National Site Network (NSN) is protected.

3. Pending the Scottish Ministers' AA conclusions, this derogation case is presented for the NSN sites and species where the Applicant's **Bellrock WFDA Report to Inform Appropriate Assessment (RIAA): Part 3: Special Protection Area and Ramsar Assessments: Ornithology** concludes that either:

   - An AEoSI cannot be ruled out; or,
   - No AEoSI is concluded but it is considered that Scottish Ministers may disagree with these conclusions, in which case the derogation case is presented "without prejudice" to the Applicant's conclusions.

4. This Plan has been presented for the species and special protection areas (SPAs) set out in **Section 2.3** (**Table 2.1** and **Table 2.2)**. These set out the predicted adult mortality of the relevant qualifying species of the SPAs, and whether or not the Applicant considers that compensation would be required, either on a required or without prejudice basis. Species and SPAs where the Applicant considers that compensation is not required are also presented.

2 Guidance and Conservation Objectives

2.1 Guidance

5. At the time of writing there is no formal guidance from the Scottish Government in relation to the identification of potential ornithology compensation measures at an individual project level. The following documents have therefore been used to guide the identification of project-led compensation measures (note that some documents are from the English planning process but are considered relevant given the similarity in approach to project-level compensation):

- Draft Best Practice Guidance for Developing Compensatory Measures in relation to Marine Protected Areas (MPAs) (Defra, 2021);
- Consultation on Policies to Inform Updated Guidance for Marine Protected Area (MPA) Assessments (Defra, 2024);
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (European Commission, 2007);
- European Commission (EC) 2018 "Managing Natura 2000 Sites" (European Commission, 2018);
- Report to Crown Estate Scotland and the Scottish Offshore Wind Energy Council: HRA Derogation Scope B – Review of Seabird Strategic Compensation Options (MacArthur Green 2021);
- Assessment of Compensatory Measures for Impacts of Offshore Windfarms on Seabirds (McGregor et al. 2022);
- Scottish Marine Recovery Fund: Interim Guidance (Scottish Government, 2025a);
- Strategic Compensation Policy for Offshore Wind: Consultation (Scottish Government, 2025b);
- Principles for Identifying and Selecting Compensatory (MPAs) (Defra, 2025) (applicable to England only);
- Strategic Compensation Measures for Offshore Wind Activities: Marine Recovery Fund Interim Guidance (DESNZ, 2025);
- Natural England Checklist for Compensatory Measure Submissions (undated);
- Scottish Government's Framework to Evaluate Ornithological Compensatory Measures for Offshore Wind – Process Guidance Note for Developers (DTA Ecology, 2021);
- Scottish Guidance on the Principles Underpinning the Assessment of Compensatory Measures in Relation to Ecology, Monitoring and Socio-economics (Butler et al undated); and
- Compensatory Measures Advice Notes – (1) Enhancing Breeding Success Through the Use of Artificial Nesting Platforms; and (2) Predator Removal (Searle et al undated).

2.2 Conservation Objectives

6. The Conservation Objectives (COs) for SPAs with connectivity to the Bellrock WFDA were consulted and considered in the development of this ornithology compensation plan. COs are designed to safeguard site integrity for the qualifying features (i.e., individual species and/or species assemblages) for which the SPA was designated and to ensure that the site contributes to achieving the aims of the Birds Directive (transposed into Scottish law through various instruments, with those relevant to the Bellrock WFDA being the Conservation of Offshore Marine Habitats and Species Regulations 2017 and the Conservation of Habitats and Species Regulations 2017). COs may be affected by AEoSI and as such, it is important to consider them when developing compensation measures, as the measures should address specific impacts on the site.

7. The COs for the Scottish SPAs identified are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site;
  - Distribution of the species within site;
  - Distribution and extent of habitats supporting the species;
  - Structure, function and supporting processes of habitats supporting the species; and
  - No significant disturbance of the species.

8. These COs primarily offer site-based protection, and not all are applicable to mobile interests, such as seabirds, when they are outside the site boundaries. It is therefore the CO relating to maintaining the population of the species as a viable component of the site which is key to the consideration of potential impacts from offshore wind farms (OWFs) to seabirds at sea.

9. This CO addresses the population-level consequence of potential seabird mortalities arising from collision risk and/or distributional response impact pathways to determine whether there could be any effect on population viability arising from project-alone or cumulative impacts, and thus an AEoSI.

10. Collision risk and distributional responses are the key impact pathways to consider under AA for SPA breeding seabird interests, as these are the only ones where mortality is quantifiable and where a population-level consequence may be possible.

2.3 Predicted Effects

11. **Table 2.1** summarises the predicted effects of the Bellrock Wind Farm Infrastructure on the qualifying features of relevant SPAs, as set out in the **Bellrock WFDA RIAA: Part 3: Special Protection Area and Ramsar Assessments: Ornithology**. The effects are presented as

predicted Bellrock Wind Farm Infrastructure-alone annual mortality of adult birds apportioned to the SPA across the year (i.e. for the breeding and non-breeding periods combined). The table also presents the conclusions to the assessment (i.e. the potential for an adverse effect has been identified, and in principle compensation is proposed). In addition, it is recognised that Scottish Ministers could be minded to reach different conclusions regarding the SPAs (and associated qualifying features) for which an AEoSI cannot be excluded. Therefore, the in principle compensation makes allowance, without prejudice, for additional compensation requirements for:

- SPAs for which no potential for an AEoSI is concluded but for which the determinations for the Berwick Bank, Green Volt, West of Orkney or Salamander projects were unable to exclude an Adverse Effect on Site Integrity; and
- SPAs for which the conclusion of no potential for an AEoSI relies on the fact that the impacts from the Bellrock Wind Farm Infrastructure alone are considered to be so small as to make it biologically implausible for them to make a meaningful contribution to the in-combination effects.

Table 2.1: Summary of Predicted Effects on Relevant Special Protection Area (SPA) Qualifying Features (Annual Mortality of Breeding Adults Apportioned to the SPA) and Compensation Position

Species	SPA	Predicted Annual Mortality	RIAA AEoSI Conclusion (In-combination) Yes/No	Applicant's Position on Compensation Requirement
Kittiwake	Buchan Ness to Collieston Coast	1.77 - 2.03	Yes	Required in principle
	Fowlsheugh	2.10 - 2.42	Yes	Required in principle
	Flamborough and Filey Coast	2.02 - 2.32	Yes	Required in principle
	Troup, Pennan & Lion's Heads	1.04 - 1.19	Yes	Required in principle
	East Caithness Cliffs	1.36 - 1.55	Yes	Required in principle
	St Abb's Head to Fast Castle	0.55 - 0.63	No	Without prejudice
	Farne Islands	0.47 - 0.54	Yes	Required in principle
	Forth Islands	0.40 - 0.46	No	Without prejudice
	North Caithness Cliffs	0.27 - 0.31	No	Without prejudice
	Hoy	0.02 - 0.02	No	Without prejudice
	West Westray	0.15 - 0.17	No	Without prejudice
	Copinsay	0.03 - 0.03	No	Not required
	Fair Isle	0.02 - 0.02	No	Without prejudice

Species	SPA	Predicted Annual Mortality	RIAA AEoSI Conclusion (In-combination) Yes/No	Applicant's Position on Compensation Requirement
Razorbill	Fowlsheugh	7.60 - 12.67	Yes	Required in principle
	Forth Islands	0.01 - 0.02	No	Without prejudice
	Troup, Pennan & Lion's Heads	0.00 - 0.01	No	Without prejudice
	East Caithness Cliffs	0.03 - 0.08	No	Without prejudice
	Flamborough & Filey Coast	0.02 - 0.06	No	Without prejudice
	North Caithness Cliffs	0.00 - 0.01	No	Not required
	Mingulay & Berneray	0.00 - 0.00	No	Not required
	Rathlin Island	0.00 - 0.00	No	Not required
Puffin	Farne Islands	1.44 - 2.39	No	Not required
	Forth Islands	0.98 - 1.63	No	Without prejudice
	Coquet Island	0.64 - 1.06	No	Not required
	North Caithness Cliffs	0.01 - 0.02	No	Without prejudice
Gannet	Fair Isle	0.31 - 0.45	No	Without prejudice
	Forth Islands	12.01 - 15.73	Yes	Required in principle
	Hermaness/Saxa Vord/Valla Field	1.12 - 1.80	No	Without prejudice
	North Rona/Sula Sgeir	0.25 - 0.31	No	Not required
	Noss	0.65 - 0.97	No	Not required
	St Kilda	0.73 - 0.95	No	Not required
	Sule Skerry/Sule Stack	0.28 - 0.35	No	Not required
	Flamborough and Filey Coast	1.20 - 1.69	No	Not required

12. Based on the above, the total mortality for species where the Applicant's position is that compensation requirements is required, or is presented on a without prejudice basis is presented in **Table 2.2**.

Table 2.2: Summary of Predicted Combined Annual Mortality (Breeding Adults Apportioned to the SPA) Where Compensation is Required in Principle or Presented Without Prejudice

Species	Kittiwake		Razorbill		Puffin		Gannet	
Predicted Annual Mortality	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Required In Principle	8.76	10.05	7.60	12.67	0.00	0.00	12.01	15.73
Without Prejudice	1.41	1.61	0.05	0.17	0.99	1.64	1.43	2.25
Combined	**10.17**	**11.66**	**7.65**	**12.84**	**0.99**	**1.64**	**13.44**	**17.98**

3 Species

3.1 Introduction

13. The following sections outline the species of interest for potential compensation measures. Each section provides a brief overview of species ecology, conservation status, and threats and pressures at SPAs with connectivity to the Bellrock WFDA. This section is an introduction to the qualifying species brought forward by the **Bellrock WFDA RIAA: Part 3** and is not specific to the sites selected for compensation.

3.2 Kittiwake

14. Kittiwake (or black-legged kittiwake) is a small pelagic gull species. Kittiwakes nest primarily on steep cliffs, but in some locations will also use man-made structures. The species breeds throughout the UK, with highest densities along the east coast. The breeding season is defined by Furness (2015) as between March and August, with a typical clutch size of two (1 - 3) eggs (BTO, 2026). The species is classified as Vulnerable by the IUCN, listed as a Vulnerable Species of European Conservation Concern, and is Red-listed under the UK Birds of Conservation Concern (BTO, 2026).

15. UK population trends for kittiwake documented by Burnell et al. (2023) indicate that this species has declined, with a 42% reduction in population since 2000. Effects in more northerly latitudes have been particularly marked, with declines of 80% and 89% reported from Shetland and Orkney respectively. Colonies on the east coast of Scotland have also shown substantial decline, with, for example, Caithness and Kincardine & Deeside showing declines of 42% and 47% respectively. However, it is not considered that OWFs are a significant factor in this decline, rather it is mainly attributed to factors such as prey availability, local predation pressure and extreme weather events (Burnell et al 2023), (Furness and Tasker, 2000), (Frederiksen et al 2008) and (Carroll et al 2017).

16. Thirteen SPA colonies where kittiwake is a qualifying feature and with potential connectivity to the WFDA have been identified (**Table 2.1**). Of these, 12 are considered potentially relevant to the compensation proposals, comprising:

- Buchan Ness to Collieston Coast;
- Fowlsheugh;
- Flamborough and Filey Coast;
- Troup, Pennan & Lion's Heads;
- East Caithness Cliffs;
- St Abb's Head to Fast Castle;
- Farne Islands;
- North Caithness Cliffs;

- West Westray;
- Fair Isle;
- Hoy; and
- Forth Islands SPAs.

17. Population data from Seabirds 2000 (1998 – 2002) and Seabirds Count (2015 – 2021) for the relevant SPAs are presented in **Table 3.1** (Burnell et al 2023) and **Plate 3.1** (Burnell et al 2023). Across all sites considered in the **Bellrock WFDA RIAA: Part 3**, the kittiwake population has declined by an average of 44% between these two survey periods (Burnell et al 2023), with only one SPA (Flamborough and Filey Coast) showing a small increase. Data published by Tremlett et al. (2024) indicate that overall, the UK kittiwake population has not been significantly impacted by Highly Pathogenic Avian Influenza (HPAI), with an overall increase in 10% Apparently Occupied Nests (AONs) across UK SPAs comparing the Seabirds Count data and 2023 counts. However, population decreases were noted at some SPA colonies, including Forth Islands SPA.

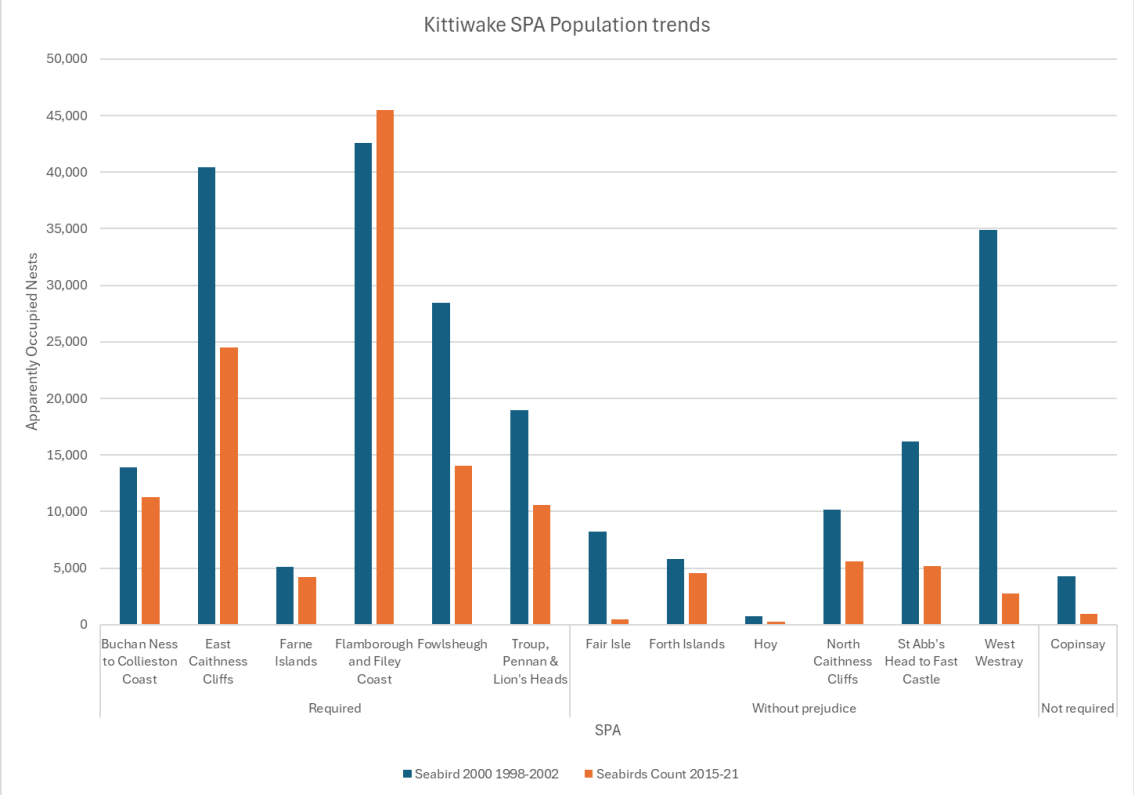
Table 3.1: Kittiwake Population Trends at Relevant Special Protection Areas (SPAs) Considered within the Bellrock WFDA RIAA: Part 3

SPA[1]	Seabird 2000 1998 - 2002	Seabirds Count 2015 - 2021	% Change	Mean Annual % Change
Buchan Ness to Collieston Coast	13,922	11,295	-19	-1.2
Fowlsheugh	28,447	14,039	-51	-3.6
Flamborough and Filey Coast	42,582	45,504	7	0.4
Troup, Pennan & Lion's Heads	18,991	10,616	-44	-3.6
East Caithness Cliffs	40,450	24,479	-39	-3.1
St Abb's Head to Fast Castle	16,222	5,150	-68	-6.5
Farne Islands	5,125	4,202	-14	-0.8
Forth Islands	5,797	4,542	-22	-1.2
North Caithness Cliffs	10,147	5,571	-45	-3.7
Hoy	781	266	-66	-6.1
West Westray	34,864	2,755	-92	-13.2
Copinsay	4,256	955	-78	-8.9
Fair Isle	8,204	448	-95	-13.5
Total	**229,788**	**129,822**	**-44**	**-5.0**

Notes:

[1] SPA name in: **Bold** where the Applicant's RIAA concludes that compensation is required
Bold and italic where compensation is presented on a without prejudice basis
Plain text where the Applicant considers compensation is not required

Plate 3.1: Kittiwake Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3



3.3 Razorbill

18. Razorbill is a pelagic auk species that nests on rocky cliffs and islands. The species breeds throughout the UK where suitable habitat occurs, with particular concentrations in the north and west. Nesting birds are typically associated with guillemot colonies, but are far less numerous than this species. The breeding season is defined by Furness (2015) as between April and July, with a typical clutch size of a single egg (BTO, 2026). The species is classified as Near Threatened by the IUCN, listed as a Least Concern Species of European Conservation Concern, and is Amber-listed under the UK Birds of Conservation Concern (BTO, 2026).

19. UK population trends for razorbill documented by Burnell et al. (2023) indicate that this species has increased by 18% since 2000, continuing increases recorded during the latter half of the 20th Century. The post-2000 changes are not consistent between colonies, with increases most frequent in the south, with some declines in more northern colonies. On the east coast of Scotland populations have largely increased, with, for example, Banff & Buchan and Caithness increasing by 29% and 66% respectively. The Shetland population, however, has declined by 66%, while Orkney is effectively unchanged. Overall, Scotland has shown a small decline (2%) since 2000 (Burnell et al 2023). It is likely that razorbills are vulnerable to the same pressures as other seabird species, such as prey availability, climate effects (including extreme weather events) and anthropogenic factors, such as oil spills and fishery impacts (Burnell et al 2023), and such impacts may explain declines, where these have occurred. It seems unlikely that OWFs are currently a significant pressure on razorbill populations, and while there is some uncertainty about the

cumulative effects of offshore wind development on razorbills, it is considered unlikely that this would have a measurable impact on the overall population trend for this species.

20. Eight SPA colonies where razorbill is a qualifying feature and with potential connectivity to the WFDA have been identified (**Table 2.1**). Of these, five are considered potentially relevant to the compensation proposals, comprising:

- Fowlsheugh;
- Forth Islands;
- East Caithness Cliffs;
- Troup, Pennan & Lion's Heads; and
- Flamborough & Filey Coast SPAs.

21. Population data from Seabirds 2000 (1998 – 2002) and Seabirds Count (2015 – 2021) for the relevant SPAs are presented in **Table 3.2** (Burnell et al 2023) and **Plate 3.2** (Burnell et al 2023). Across all sites considered in the **Bellrock WFDA RIAA: Part 3**, the razorbill population has increased by an average of 43% between these two survey periods (Burnell et al 2023). Two SPAs (Troup, Pennan & Lion's Heads SPA and Mingulay & Berneray SPA) suffered moderate population declines during this period. No razorbill HPAI mortality data were published by Tremlett et al. (2024), who stated that this species experienced 'low mortality' in the post Seabirds Count period to 2023.

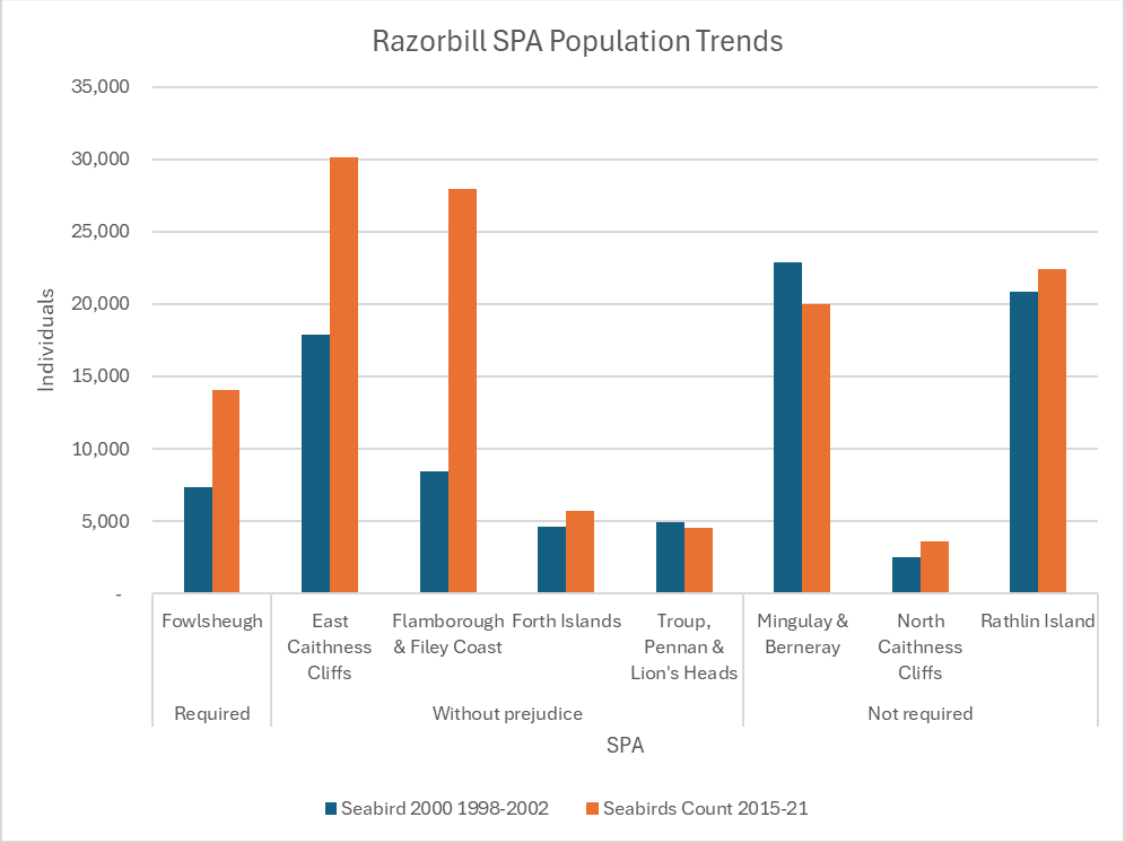
Table 3.2: Razorbill Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3

SPA[1]	Seabird 2000 1998 - 2002	Seabirds Count 2015 - 2021	% Change	Mean Annual % Change
Fowlsheugh	7,334	14,063	92	3.5
Forth Islands	4,623	5,695	23	1.1
Troup, Pennan & Lion's Heads	4,958	4,518	-9	-0.6
East Caithness Cliffs	17,857	30,129	69	3.3
Flamborough & Filey Coast	8,463	27,967	230	7.3
North Caithness Cliffs	2,534	3,579	41	2.2
Mingulay & Berneray	22,904	19,990	-13	-0.7
Rathlin Island	20,860	22,421	7	0.3
Total	**89,533**	**128,362**	**43**	**2.1**

Notes:

[1] SPA name in: **Bold** where the Applicant's RIAA concludes that compensation is required
Bold and italic where compensation is presented on a without prejudice basis
Plain text where the Applicant considers compensation is not required

Plate 3.2: Razorbill Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3



3.4 Puffin

22. Puffin (or Atlantic puffin) is a small pelagic auk species that nests in burrows within short grassy swards, often located on sloping ground above cliffs. The species is most abundant in the north of the UK and southwest Wales. The breeding season is defined by Furness (2015) as between April and early August, with a typical clutch size of a single egg (BTO, 2026). The species is classified as Vulnerable by the IUCN, listed as an Endangered Species of European Conservation Concern, and is Red-listed under the UK Birds of Conservation Concern (BTO, 2026).

23. UK population trends for puffin documented by Burnell et al. (2023) indicate that this species has declined by 15% since 2000. The post-2000 changes are not consistent between colonies, with notable increases recorded for Welsh colonies (197%), and substantial reductions in Northern Ireland (-64%). In Scotland, an overall decline of 21% has been recorded, but again this shows significant regional variation, with, for example, an increase of 52% in Caithness, but a 63% decline in Shetland. The species is considered to be particularly vulnerable to mammalian predators (rats) within breeding colonies; a rat eradication on Lundy Island in Devon resulted in an increase in over 6,000% post-2000 (Burnell et al 2023). It is likely that puffins are vulnerable to the same pressures as other seabird species, such as prey availability and anthropogenic factors, such as oil spills and fishery impacts (Burnell et al 2023).

24. Given that the species winters far out in the western Atlantic, it may be particularly vulnerable to any increase in the frequency and severity of winter storms as a result of climate change. Burnell et al. (2023) suggest that offshore wind development may result in loss of sandbank feeding areas, which support sandeel nurseries of importance to foraging puffins during the breeding season. However, given the inter-colony variability in population trends for this species, despite increased offshore wind development, it seems unlikely that OWFs are currently a significant pressure on puffin populations. While there is some uncertainty about the cumulative effects of offshore wind development on puffins, it is considered unlikely that this would have a measurable impact on the overall population trend for this species.

25. Four SPA colonies where puffin is a qualifying feature and with potential connectivity to the Bellrock WFDA have been identified (**Table 2.1**). Of these, two are considered potentially relevant to the compensation proposals:

- Forth Islands; and
- North Caithness Cliffs SPA.

26. Population data from Seabirds 2000 (1998 – 2002) and Seabirds Count (2015 – 2021) for the relevant SPAs are presented in **Table 3.3** (Burnell et al 2023) and **Plate 3.3** (Burnell et al 2023). Across all sites considered in the **Bellrock WFDA RIAA: Part 3**, the puffin population has decreased by an average of 24% between these two survey periods (Burnell et al 2023), although for one SPA (Coquet Island) a substantial population increase was recorded. No puffin HPAI mortality data were published by Tremlett et al. (2024), who stated that this species experienced 'low mortality' in the post Seabirds Count period to 2023.

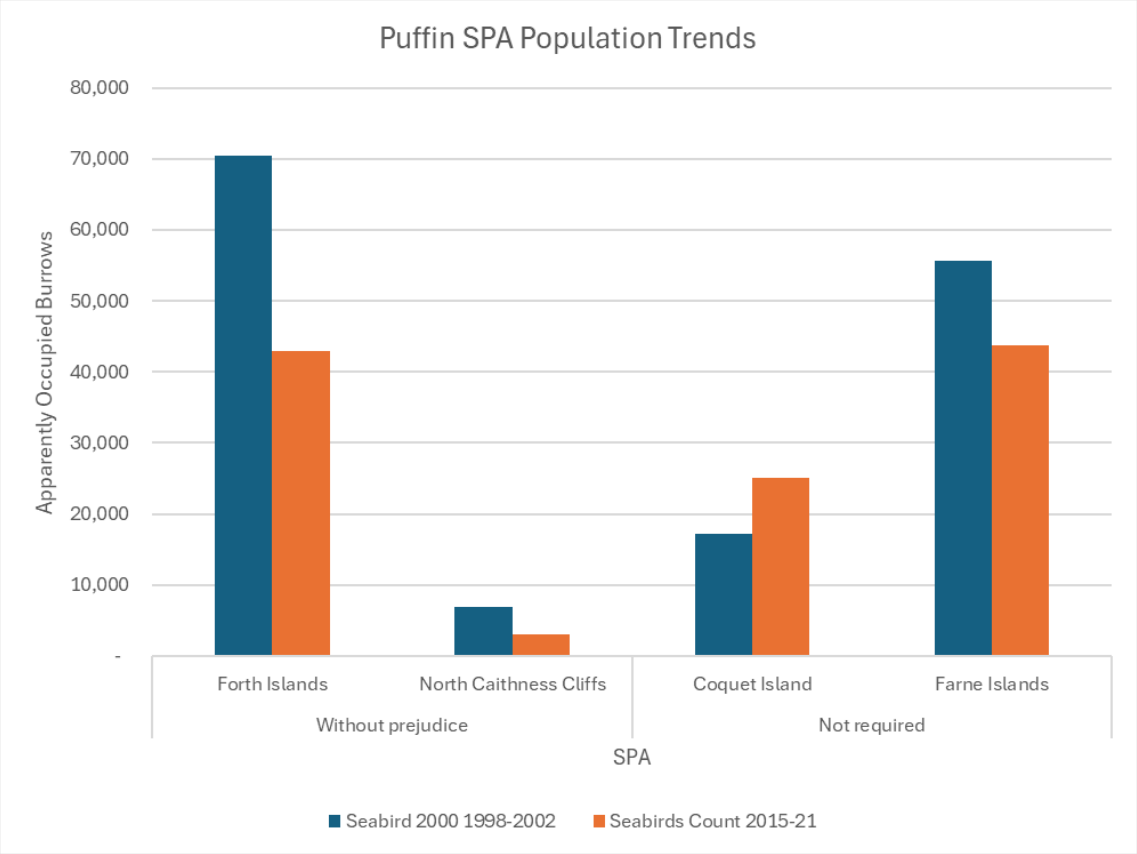
Table 3.3: Puffin Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3

SPA[1]	Seabird 2000 1998 - 2002	Seabirds Count 2015 - 2021	% Change	Mean Annual % Change
Farne Islands	55,674	43,752	-21	n/a
Forth Islands	70,434	42,923	-39	n/a
Coquet Island	17,208	25,029	45	n/a
North Caithness Cliffs	6,956	3,039	-56	n/a
Total	**150,272**	**114,743**	**-24**	**n/a**

Notes:

[1] SPA name in: **Bold** where the Applicant's RIAA concludes that compensation is required
Bold and italic where compensation is presented on a without prejudice basis
Plain text where the Applicant considers compensation is not required

Plate 3.3: Puffin Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3



3.5 Gannet

27. Gannet (or northern gannet) is the largest breeding seabird species to occur in the UK. It nests at a small number of large colonies on rocky cliffs and islands. The breeding season is defined by Furness (2015) as between March and September, with a typical clutch size of a single egg (BTO, 2026). The species is classified as Least Concern by the IUCN, listed as a Least Concern Species of European Conservation Concern, and is Amber-listed under the UK Birds of Conservation Concern (BTO, 2026).

28. UK population trends for gannet documented by Burnell et al. (2023) indicate that this species has showed a sustained population increase over the last 50 years, with 38% growth since the gannet Census in 2003-05. Increases have occurred in all regions and all colonies, with growth seemingly limited only once colonies have reached capacity of nesting space. It appears that the cessation of human exploitation (harvesting of eggs, adults and chicks) at the majority of colonies during the 20th Century is the key driver for this recovery. However, there remains the potential that factors such as pollution, fisheries (including bycatch) and climate impacts could affect this species in the future. It is noted that some gannet colonies were particularly affected by HPAI, although there is also evidence indicating potential recovery (see below).

29. Eight SPA colonies where gannet is a qualifying feature and with potential connectivity to the Bellrock WFDA have been identified (**Table 2.1**). Of these, three are considered potentially relevant to the compensation proposals:

- Fair Isle;
- Forth Islands; and
- Hermaness / Saxa Vord / Valla Field SPAs.

30. Population data from the Gannet Census (2003-05) and Seabirds Count (2015–2021) for the relevant SPAs are presented in **Table 3.4** (Burnell et al 2023) and **Plate 3.4** (Burnell et al 2023). Across all sites considered in the **Bellrock WFDA RIAA: Part 3**, the gannet population has increased by an average of 44% between these two survey periods (Burnell et al 2023), with all SPA populations having increased during this period. Data published by Tremlett et al. (2024) indicate that overall, the UK gannet population suffered a significant decline as a result of HPAI, with an overall reduction of 25% AON/Apparently Occupied Sites (AOS) across UK SPAs comparing the Seabirds Count data and 2023 counts. The decline was not consistent across all SPAs, with, for example, a 27% decline recorded at Forth Islands SPA but a 14% increase at Flamborough and Filey Coast. Some recovery of the Forth Islands colony at Bass Rock appears to have occurred since that time (Tyndall et al 2024).

Table 3.4: Gannet Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3

SPA[1]	Gannet Census 2003 - 2005	Seabirds Count 2015 - 2021	% Change	Mean Annual % Change
Fair Isle	1,875	4,971	165	5.9
Forth Islands	48,065	75,259	57	4.6
Hermaness/Saxa Vord/Valla Field	15,633	29,562	89	3.6
North Rona/Sula Sgeir	9,225	12,271	33	2.2
Noss	8,652	13,765	59	2.9
St Kilda	59,622	60,290	1	0.1
Sule Skerry/Sule Stack	4,675	9,065	94	6.2
Flamborough and Filey Coast	3,940	13,392	240	9.9
Total	**151,687**	**218,575**	**44**	**4.4**

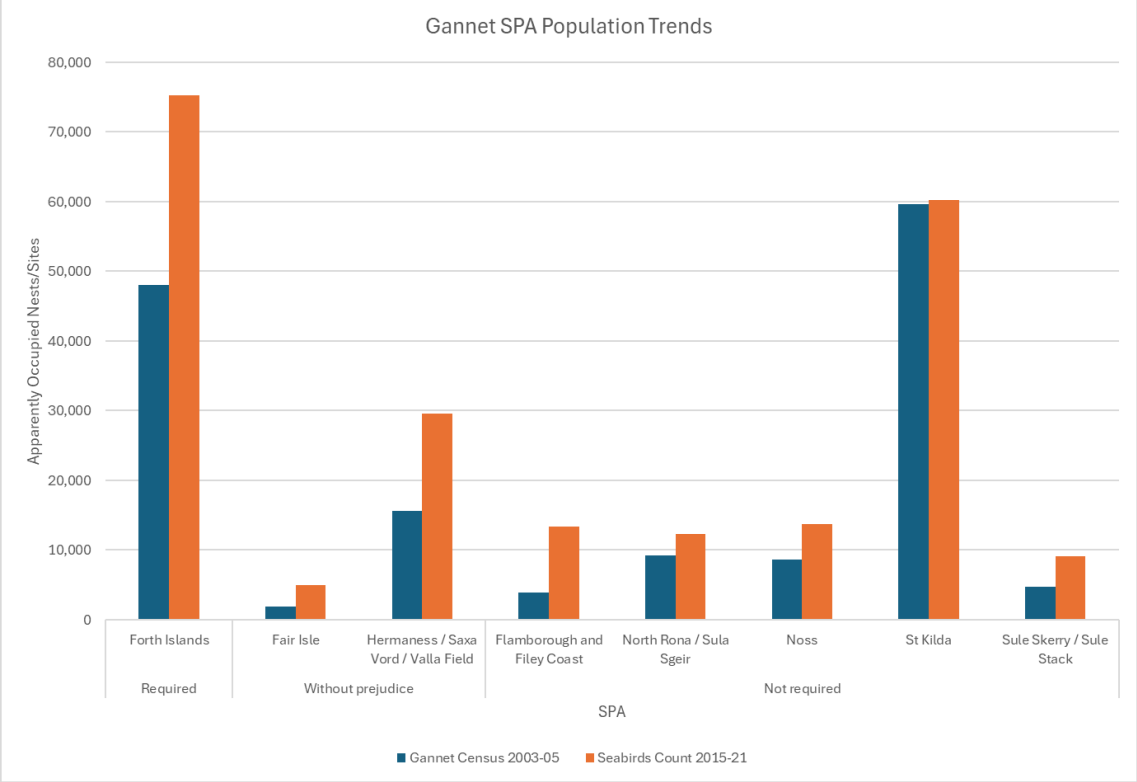
Notes:

[1] SPA name in: **Bold** where the Applicant's RIAA concludes that compensation is required

Bold and italic where compensation is presented on a without prejudice basis

Plain text where the Applicant considers compensation is not required

Plate 3.4: Gannet Population Trends at Relevant Special Protection Areas Considered within the Bellrock WFDA RIAA: Part 3



3.6 Scale of Compensation

31. A simple calculation has been undertaken to calculate the likely scale of compensation required to offset the effects of the Bellrock Wind Farm Infrastructure, in terms of number of additional nest sites. The calculation has used species-specific demographic rates from Horswill and Robinson (2015) and is set out in **Table 3.5**.

Table 3.5: Calculation of Additional Nests (Breeding Pairs) Required to Compensate for Predicted Seabird Mortality as a Result of the Bellrock Wind Farm Infrastructure

Species		Kittiwake	Razorbill	Puffin	Gannet
Age of recruitment[1]		4	5	5	5
Survival rate[1]	0 - 1	0.790	0.630	0.709	0.424
	1 - 2	0.854	0.630	0.709	0.829
	2 - 3	0.854	0.895	0.709	0.891
	3 - 4	0.854	0.895	0.760	0.895
	4 - 5	-	0.895	0.805	0.919

Species	Kittiwake	Razorbill	Puffin	Gannet
Productivity[1]	0.690	0.570	0.617	0.700
Number of nest sites required per breeding age adult[2]	2.95	6.17	7.43	5.55
Maximum mortality due to Bellrock Wind Farm Infrastructure (breeding adults)[3]	11.66	12.84	1.64	17.98
Total required number of nest sites[4]	**34.35**	**79.16**	**12.23**	**99.72**

Notes:

[1] Demographic rates derived from Horswill and Robinson (2015), using national average rates where applicable.

[2] Calculated as 1 divided by the product of annual survival rates, divided by productivity, e.g. for kittiwake 1/(0.790 x 0.854 x 0.854 x 0.854)/0.690 = 2.95.

[3] Based on upper values in **Table 2.2**.

[4] Product of number of nest sites per adult and predicted mortality.

32. In summary, approximately 35, 79, 12 and 100 additional breeding pairs of kittiwake, razorbill, puffin and gannet respectively would be required to compensate for the predicted mortality as a result of the Bellrock Wind Farm Infrastructure. These values are provided on an indicative basis only, and will be refined to confirm the overall scale of required compensation, once the Scottish Ministers have completed their AA of the Bellrock Wind Farm Infrastructure, and the preferred measure(s) are agreed.

33. Once the measure(s) are agreed with Scottish Ministers, the Applicant will work with Scottish Ministers, Marine Directorate - Licensing Operations Team (MD-LOT) and NatureScot to agree the final estimate of compensation requirements. This could include, for example, an estimate of the total area of nesting habitat at the compensation site that would be required to provide the increase in nest sites and/or productivity to achieve the required scale of compensation. This would be based on the best available information at that time, which may include information on productivity and mortality at the site, availability of unused nest sites, and extent of existing negative factors, such as predation. In any event, the Applicant is confident that the proposed short list measures set out in **Section 4.3** would provide capacity well above any requirement for the Bellrock Wind Farm Infrastructure. If compensation was delivered through a contribution towards strategic measures (see **Section 4.1**), the scale would be provided in accordance with the specific requirements of that project to meet the Bellrock Wind Farm Infrastructure compensation requirements.

4 Selection of Compensation Measures

4.1 Strategic Compensation

34. The Scottish Government is proposing to introduce a mechanism to enable developers to contribute to compensation measures that are being developed at a strategic level. This would be delivered through a Scottish Marine Recovery Fund (SMRF), towards which developers would contribute, with the SMRF implementing (or overseeing the delivery of) the required compensation.

35. The Scottish Government has published interim guidance on the SMRF (2025a) and a summary of consultation feedback to Scotland's Strategic Compensation Policy for Offshore Wind (2025b). Based on the information published to date, the Applicant considers that the SMRF could provide an appropriate mechanism for the Bellrock Wind Farm Infrastructure to meet its compensation requirements.

36. Notably, the published information indicates that a 'compensation hierarchy' approach would be included within the SMRF, to enable, in some circumstances, non like-for-like compensation (or 'wider measures') to be delivered for an identified effect. The (provisional) hierarchy is structured as follows:

- Tier 1 - Benefit to the Impacted Feature: compensatory measures that provide ecological benefit(s) for the impacted feature in a measurable way, i.e., where there is clear evidence that the intervention will be effective in benefiting the impacted feature;
- Tier 2 - Benefit to a Similar Feature: compensatory measures that provide sufficient evidence of ecological benefit(s) to features, or groups of features which are ecologically similar to the impacted feature; and
- Tier 3 - Benefit to Protected Site Network: compensatory measures that provide sufficient evidence of ecological benefit(s) to the protected site network more widely.

37. The Scottish Government has indicated that there would be flexibility in the compensation hierarchy;

'Specifically, it would be permissible to use Tier 2 measures even if there are Tier 1 measures available or Tier 3 measures even if there are Tier 1 or 2 measures available, if there is evidence that a wider measure would have a greater ecological benefit on the protected site network than a measure above it in the Compensation Hierarchy' (Scottish Government, 2025b).

38. The Applicant considers that the principle of the compensation hierarchy is relevant not just at the strategic level but may also be important in the delivery of project-led measures, as set out in the following sections, should these be required.

39. At this stage the timeframe or arrangements for the implementation of the SMRF is not known, although it is understood that this could be in place prior to any compensation delivery requirement for the Bellrock Wind Farm Infrastructure. Therefore, subject to confirmation of suitability to the Bellrock Wind Farm Infrastructure and the financial viability of any proposed tariff, the Applicant expresses an interest in addressing the Bellrock Wind Farm Infrastructure compensation requirements through the SMRF when it becomes available. Notwithstanding this position, the Applicant is also progressing measures that could be delivered at a project level, further information for which is provided below.

40. The Applicant is part of the North East and East Ornithology Group (NEEOG) which commissioned a report considering potential regional compensation measures for predicted impacts on SPA seabird populations (Pizzolla et al 2024). The Applicant has used this report to create a long list of proposed project-led compensation measures.

4.2 Long List

41. The identification of suitable project-led compensation measures followed a stepwise process, utilising a range of sources and guidance to initially develop a long list of potential options before being refined into a short list of compensation measures.

42. The long list has been derived primarily from the review of strategic compensation options (Pizzolla et al 2024), together with options from previous and current OWF proposals (including but not limited to Green Volt, West of Orkney, Salamander, Ossian, Muir Mhòr, Buchan, and Ayre).

43. **Table 4.1** presents a review of the potential compensation measures considered in the long list and confirms those that have been taken forward to the short list. The evaluation is based on professional judgment, taking into account compensatory measures proposed for other offshore wind projects, and published guidance, including EC (2018) and Defra (2021). Key criteria include:

- The extent to which the measure could deliver ‘like-for-like’ for the affected feature;
- Whether the required scale of compensation could be delivered;
- Whether evidence indicates a high likelihood of success;
- Whether the measure could be delivered in the required timeframe for the Project;
- Whether the measure could be delivered from a technical, financial and legal perspective;
- Whether the measure could provide wider conservation benefits; and
- Whether the measure could be effectively monitored.

Of the measures considered, four have been taken forward to the short list (highlighted in green), and are considered further in **Section 4.3**.

Table 4.1: Evaluation of Long List Measures Considered for Compensation (Project Led Delivery for the Bellrock Wind Farm Infrastructure)

Broad Measure	Specific Measure	Description	Applicable Species	Evaluation	In Short List?
Site management	Mammalian predator control/management	Management of mammalian predators (including rats, feral cats and American mink) through lethal or non-lethal (e.g. in relation to feral cats using fencing or translocation) methods.	▪ Razorbill; ▪ Puffin; ▪ Kittiwake; and ▪ Gannet.	Evidence demonstrates mammalian predator management can provide an effective compensation measure for seabird species, particularly auks, shearwaters, petrels and terns. Population responses in seabirds can occur rapidly following eradication and control of mammalian predators and increased breeding productivity likely to occur at colonies where the management is successful. This measure has therefore been taken forward to short list.	Yes
	Avian predator control/management	Management of avian predators (e.g. large gull species, corvids, skuas, peregrine, red kite) through lethal or non-lethal methods, (such as diversionary feeding).	▪ Kittiwake; and ▪ Puffin	The extent and effects of avian predation at a population scale are not well understood. There may be some specific instances where such an effect may be significant (such as large gull/ great skua predation on puffin), but it is considered there would be limited scope to manage such interactions, and the benefits would be difficult to quantify. Potentially management of avian predation could be beneficial as a secondary measure (e.g. alongside mammalian predator management), but overall, it is considered unlikely that such measures would be viable at a project-led level.	No
	Biosecurity	Measures to prevent invasive species establishing within a breeding colony, such as mammalian predators or non-native plant species.	▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet	Although such measures are likely to be effective in protecting seabird colonies, existing measures are in place for island SPAs (through the LIFE project), and quantification of any benefits as a compensation measure would be very challenging.	No
	Reduce anthropogenic disturbance (colony or at sea)	Disturbance to seabird colonies may occur, for example, through inappropriate visitor activity or unregulated use of Unmanned Aerial Vehicles (UAVs; drones).	▪ Kittiwake; and ▪ Gannet.	There is little evidence that the target species are vulnerable to vessel traffic. There is some evidence that kittiwake and gannet may be vulnerable to colony disturbance, but such effects are likely to be limited to a small number of sites, with any effect (and hence potential benefit) hard to prove and quantify. It is expected that disturbance reduction measures	Yes (colony)

Broad Measure	Specific Measure	Description	Applicable Species	Evaluation	In Short List?
		Disturbance at sea could occur as a result of commercial or recreational vessel activity.		will be included in the Seabird Site Management Actions list, which it is understood is being compiled by NatureScot, National Trust for Scotland (NTS) and RSPB. It is therefore possible that suitable measures could come forward, and so the measure has been included in the short list.	
	Management of breeding habitats	Dense vegetation growth (specifically non-native tree mallow) has been shown to affect access to nesting burrows.	▪ Puffin.	There are a limited number of locations where such measures could be implemented (within the Forth Islands SPA). For some management has already been undertaken, and within SPA sites it is likely that control would be required as part of SPA management, and may not be considered 'additional' if delivered as compensation. It is expected that habitat management measures will be included in the Seabird Site Management Actions list. It is therefore possible that suitable measures could come forward, and so the measure has been included in the short list.	Yes
Fisheries	Sandeel fishery closure	Reduction in fishing pressure on sandeels could increase prey availability to foraging seabirds, and hence improve productivity and survival.	▪ Kittiwake; ▪ Razorbill; and ▪ Puffin.	Although there is good evidence that such a measure could be effective, it could not be delivered at a project level, and recent closure of sandeel fisheries by UK and Scottish Governments means that this is not available as a compensation measure.	No
	Bycatch reduction	Introduction of measures to reduce accidental bycatch of seabirds during fishing activities.	▪ Gannet; and ▪ Razorbill.	There is some evidence of bycatch of seabirds in UK and elsewhere, and compensation measures for gannet are being progressed for Scottish projects (Ossian and Salamander) and for auks in England (Sheringham and Dudgeon Extension Projects). Although more likely deliverable at a strategic level or through developer collaboration, this measure has been included in the short list.	Yes

Broad Measure	Specific Measure	Description	Applicable Species	Evaluation	In Short List?
Nest provision	Artificial nest sites (ANS)	Provision of artificial features that can be utilised as nest sites for seabird species.	▪ Kittiwake.	This measure is being implemented by a number of English offshore wind projects to compensate for kittiwake mortality. While it is proven to be an effective measure to increase available nesting habitat, there is some uncertainty around effectiveness in the Scottish context, given that declining populations suggest that availability of nest sites is not a limiting factor rather it is availability of prey. It is possible that this measure could be progressed as part of strategic compensation, but it is unlikely that it could be effectively delivered at a project level.	No
	Establish new colonies	Creation of new colonies through management of locations outside of existing colonies, for example through use of visual or acoustic attractants.	▪ None.	There is little evidence that such measures are likely to be effective for the target species.	No
	Supplementary feeding	Supplementary feeding of chicks to enhance survival/fledging success.	▪ Kittiwake; and ▪ Puffin.	There is limited evidence of likely success of such measures and likely significant implementation challenges.	No
Habitat creation	Seagrass restoration	Restoration/expansion of seagrass beds to increase availability of nursey habitat for some seabird prey species.	▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet.	Currently insufficient evidence to demonstrate a clear/measurable linkage between seagrass restoration and benefits to seabird populations.	No
	Oyster reef restoration	Restoration/creation of oyster reefs, leading to increase availability of nursey habitat for some seabird prey species.	▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet.	Currently insufficient evidence to demonstrate a clear/measurable linkage between oyster reef restoration and benefits to seabird populations.	No

Broad Measure	Specific Measure	Description	Applicable Species	Evaluation	In Short List?
	Kelp bed extension	Extension of protected areas for kelp beds, which provide habitat for a range of seabird prey species.	▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet.	It is very unlikely that such a measure could be developed at a project level, and quantification of benefit would be challenging.	No
Harvest	Reduction of legal/illegal bird harvesting	Reduction or cessation in harvesting of gannet eggs, chicks or adult birds at breeding colonies.	▪ Gannet.	Although providing a clear, measurable benefit, it is very unlikely that such a measure could be developed at a project level. Restrictions on existing/traditional harvest (either in the UK, or elsewhere; e.g. the Faeroes) would need to be undertaken at a governmental level. It is doubtful that restrictions on illegal harvest, which would most likely be delivered outside of the UK, could be achieved at a project level.	No
Pollution control	Management of runoff	Reduction in harmful runoff of agricultural waste or waste treatment discharge where these affect seabird colonies. This could reduce bioaccumulation of algal toxins and enhance fitness/reproductive success.	▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet.	The benefits of such a measure are uncertain and would be difficult to quantify.	No
	Marine litter removal (plastic)	Removal of marine plastic litter to reduce risk of entanglement, both of fully grown birds at sea and chicks, where litter is incorporated into nests.	▪ Gannet.	The scale of litter removal required to achieve any measurable benefit to seabird species would be prohibitive at a project level. Benefits are also uncertain and challenging to quantify.	No

4.3 Short List

44. The following section sets out further detail of short-listed measures including information on the route to delivery (roadmap) where relevant.

4.3.1 Mammalian Predator Control and Management

45. The Applicant has appointed Habitat Assessment and Restoration Limited (HAR) to develop a scheme of mammalian predator eradication and control to meet anticipated compensation requirements arising from the Bellrock Wind Farm Infrastructure, as set out in **Section 2.3**. The outputs from this work, which set out the proposed measures, are considered sufficient to confirm that effective compensation for anticipated effects of the Bellrock Wind Farm Infrastructure could be delivered. Full detail of these measures is set out in confidential **Appendix B: Predator Control, Biosecurity Evidence and Roadmap**, and a summary is provided below:

- A long list of potentially suitable island/headland sites in Scotland was developed, based on a range of criteria including the presence of the target seabird species and likely presence of mammalian predators. In total, 55 sites were identified for the long list;
- The 55 sites were subject to a RAG (red, amber, green) analysis, with any site that failed any screening criteria (i.e. were 'red') removed from the list for further consideration. Of the long list, 27 sites failed the RAG screening, with the remaining 28 taken forward to possible inclusion in the short list;
- Ranking of the 28 sites was undertaken, using scoring of key criteria (risk of reinvasion by predators, island size, human population, predator complexity, and number of target seabird species present);
- The top six ranked sites were taken forward to the short list, together with three additional sites supporting gannet colonies (given the relative scarcity of gannet nesting sites) and two further sites known to be under consideration by another developer, but considered a potential opportunity for collaboration;
- Landowners for the 11 shortlisted sites have been contacted. This has resulted in some sites dropping down the ranking (e.g. because they have agreed a lease or are in discussions with another developer, or the landowner does not wish to engage over possible predator eradication measures). Discussions on the other sites are on-going; and
- A roadmap has been set out, outlining the further steps that would be required to deliver compensation.

46. The Applicant considers that the proposals are well developed and can provide Scottish Ministers, MD-LOT and NatureScot with a high level of confidence that effective compensation could be delivered for the Bellrock Wind Farm Infrastructure. It is noted that the proposed measures are expected to provide effective compensation on a like-for-like basis for razorbill and puffin, but there is less certainty for kittiwake and gannet. However, the Applicant proposes that for the latter species the benefit would be delivered on a non like-for-like basis, i.e., in line with Tier 2 and/or Tier 3 of the compensation hierarchy set out in **Section 4.1**.

4.3.2 Fisheries Management – Bycatch Reduction

47. A review of options for bycatch reduction has been undertaken, the results of which are presented in **Appendix C Bycatch Reduction Evidence Review** of this **Bellrock WFDA Shadow HRA Derogation Case Report**. This includes a literature review and consideration of other offshore wind applications where bycatch reduction has been considered.

48. Generally, it is thought that levels of bycatch in the UK are relatively low for the target species. For gannet, there is good evidence that bycatch reduction measures could be effective. Evidence in the public domain suggests that measures are being actively pursued (for the Salamander and Ossian offshore wind projects) in Portuguese fisheries. For razorbill, there is currently limited evidence of the effectiveness of bycatch reduction, but there is good evidence that measures may be effective for guillemot, with such measures being implemented for the Sheringham and Dudgeon Extension projects. Given the ecological similarity between guillemot and razorbill, it is reasonable to assume that such measures could also benefit this species. For kittiwake and puffin there is very limited evidence that bycatch is a significant concern, and therefore unlikely that reduction measures would provide tangible benefit to these species.

49. The Applicant considers that delivery of bycatch reduction at a project level is unlikely to be feasible. However, it is considered that effective bycatch reduction measures in commercial fisheries could be achieved through collaboration with other developers. Accordingly, the Applicant has retained this measure as an option for compensation delivery and will continue discussions with other developers over potential collaborative initiatives.

4.3.3 Reduction of Anthropogenic Disturbance at Breeding Colony

50. There is substantial evidence that human disturbance can result in reduced breeding success at seabird colonies (e.g. Carney and Sydeman, 1999, Beale and Monaghan, 2004, Mitchell et al 2004, Furness, 2021). Accordingly, there is the potential to provide measurable benefit to impacted species where such impacts are reduced.

51. As set out in **Table 4.1**, the Applicant understands that disturbance reduction measures has been included in a Seabird Site Management Actions list, which was compiled by NatureScot, NTS and RSPB and provided to the Offshore Wind Directorate due to overlap with the ongoing Portfolio of Seabird Compensation Measures work. These actions or measures are intended to be developed through the SMRF (subject to their selection). Therefore, the further detail on this measure has not been presented at this stage, noting that there would be little value in attempting to progress proposals ahead of the publication of the list and further details on the implementation of the measures. However, the Applicant remains open to use of this approach to deliver compensation, either through a contribution to the SMRF or working directly with site managers once the Seabird Site Management Actions list has been published.

4.3.4 Management of Breeding Habitats

52. In the majority of cases, no active management of seabird breeding habitats is required or appropriate, particularly for cliff nesting species. However, in specific circumstances, particularly where anthropogenic activities have resulted in direct or indirect damage to nesting habitats, active intervention may be warranted. As set out in **Table 4.1**, this has been the case for some puffin colonies, where the presence of the non-native plant species tree mallow has resulted in a

reduction in the number of occupied burrows (Van der Wal, 2006). Other activities for which management may be appropriate include removal of fly-tipping/waste and management of water run-off.

53. As for reduction of anthropogenic disturbance above, it is understood that potential habitat management actions will be included in the Portfolio of Seabird Compensation Measures. These measures are intended to be developed through the SMRF (subject to selection), although actions may be identified that may be available as project specific compensation measures. Therefore, the further detail on this measure has not been presented at this stage, noting that there would be little value in attempting to progress proposals ahead of the publication of the list. However, the Applicant remains open to use of this approach to deliver compensation, either through a contribution to the SMRF or working directly with site managers once the Seabird Site Management Actions list (see **Section 4.3.3** for more details) has been published.

4.3.5 Conclusion

54. The Applicant has demonstrated that effective measures are available to deliver compensation for the potential effects of the Bellrock Wind Farm Infrastructure.

55. Subject to confirmation of suitability to the Bellrock Wind Farm Infrastructure and the financial viability of any proposed tariff, the Applicant expresses an interest in addressing the Bellrock Wind Farm Infrastructure compensation requirements through the SMRF when it becomes available.

56. However, well developed, deliverable and effective measures for predator eradication and management have also been presented, which could be progressed at a project level or in collaboration with other developers, should these be required (**Appendix B: Predator Control and Biosecurity Evidence and Roadmap**).

57. Alternative compensation measures would also be available through reduction of anthropogenic disturbance and/or management of breeding habitat. Should such measures be required for the Bellrock Wind Farm Infrastructure, the detail would be set out once the Portfolio of Seabird Compensation Measures and the underlying Seabird Site Management Actions list has been published. It is possible that these could be delivered at a strategic level (i.e. through the SMRF) or at a project level (depending on their selection for the SMRF).

58. The Applicant also considers that fisheries bycatch reduction could be an effective compensatory measure, but that it would best be delivered at a collaborative or strategic level. The Applicant has retained this measure as an option for compensation delivery and will continue discussions with other developers over potential collaborative initiatives.

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Appendix B: Predator Control, Biosecurity Evidence Plan and Roadmap

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Bellrock Offshore Wind Farm

Wind Farm Development Area

Shadow Habitats Regulations Appraisal Derogation Case - Volume VI

Appendix B: Predator Control, Biosecurity Evidence Plan and Roadmap

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Bellrock Offshore Wind Farm:

Predator Control, Biosecurity Evidence and Roadmap

Bellrock OFFSHORE WIND

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1 Introduction

Bellrock Offshore Wind Farm Limited (the Applicant) is proposing a mammalian predator eradication and control scheme as compensation for the predicted impacts on key seabird species from the operation and maintenance of the Wind Farm Infrastructure associated with the Bellrock Offshore Wind Farm (the Project).

Habitat Assessment & Restoration Limited (HAR) has been appointed to review the potential for mammalian predator eradication measures as a project-led compensation scheme. The key species for compensation are razorbill (*Alca torda*), Atlantic puffin (*Fratercula arctica*, hereafter referred to as puffin), black-legged kittiwake (*Rissa tridactyla*, hereafter kittiwake) and northern gannet (*Morus bassanus*, hereafter gannet). HAR has produced a shortlist of candidate site options in Scotland that meet the following criteria:

a. Preferably located within an SPA, or close to one (i.e., less than 25 km (Buxton et al., 2014)), with the ability to contribute to the national population.

b. Possess coastal habitat—cliff ledge, cliff crevice, boulder field, grassy slopes, and rock platforms—suited to colonies of the key seabird species.

c. Likely to have invasive non-native mammalian predators, including one or more of the following species:

   - Brown rat (*Rattus norvegicus*);
   - Black rat (*Rattus rattus*);
   - Feral domestic cat (*Felis catus*); and
   - American mink (*Neovison vison*).

d. Likely to have a pre-existing and/or local recruitment population of the key seabird species.

The shortlist of mammalian predator eradication measures:

- Includes options for an isolated island and/or a fenced peninsula, excluding mainland sites for challenges in mainland biosecurity;
- Presents, to the best knowledge of the Applicant and HAR, no conflict with project-led options being considered by other offshore wind developers; and
- Includes invasive mammalian predator eradication measures that may offer potential for collaboration with other developers.

2 Scope of work

The scope of work was to shortlist a minimum of five candidate sites where the eradication of an invasive mammalian predator would enable the recovery of key seabird species to meet the corresponding compensation requirements of the Project and comprised of three tasks:

- Task 1. Provide a long list of sites (nominally up to 50), at which predator eradication could potentially be undertaken to provide compensation;
- Task 2. Coarse screening to produce a prioritised and ranked shortlist of sites (nominally up to 5); and
- Task 3. Initial engagement with landowners of shortlisted candidate sites to assess cooperation for a compensation project on their land.

3 Methods

3.1 Task 1: Long listing process

Potential candidate sites were identified by considering all islands in Scotland as a GIS vector data layer. Analysis used a combination of seabird counts for key priority species, invasive mammalian predator species presence-absence points, topography raster, satellite true colour image raster, publicly available photography and HAR's experience of island sites. The data sources are summarised in **Table 1**.

Table 1. Summary of data, their use and sources used in seabird compensation longlisting analysis

Data	Data type	Use	Source(s)
Land boundaries	Polygon vector	To extract islands from the mainland and major islands (such as mainland Orkney).	GOV.UK (2024)
Stanbury site[1]	Point vector	Whether the island site is on the Stanbury List.	Stanbury et al. (2017)
Ownership	External database	Publicly available information on the identity of the landowner.	Haswell-Smith (2015); Wightman (2025); Google Search
Designation	Polygon vector	Whether islands fall within protected areas.	NatureScot (2023)
Area	Polygon vector	The area of the candidate site (based on land boundaries).	GIS analysis
Predator presence	Point vector	Presence of predators based on aggregate public database.	Global Biodiversity Information Facility (GBIF) (2025)
Predator presence-absence	Point vector	Presence or absence of predators.	Stanbury et al. (2017)
Shipwrecks	Point vector	Location, date and name of historical shipwrecks as a potential source of rat invasion.	UKHO (2025)
Human habitation	Point	Current (2017) number of island residents.	Stanbury et al. (2017)
History of human habitation	External database	Geolocated archival data of archaeological evidence.	Historic Environment Scotland (2025)
Distance to nearest source of invasive	Line vector	The distance to the nearest source of invasive mammalian predators.	GIS analysis

Data	Data type	Use	Source(s)
mammalian predators			
Stepping stones	Polygon vector	Whether there is a stepping stone island between the candidate site and nearest source of predators that would reduce distance to < 500m.	GIS analysis
Seabird census	CSV	Latest count for seabird species.	JNCC (2023)
Seabird metapopulation trend	Table	The trend for all seabirds of the same species within a 50 km radius from candidate site.	GIS analysis
Seabird monitoring programme	Table	Historical presence of key recovery seabird species.	BTO (2025)
Topography	Raster	Sloped habitat suitability of coastal areas.	Ordnance Survey (2025); Geograph (2025)
Site connectivity	Table	The distance to the nearest colony within an SPA.	GIS analysis
Existing compensation	Table	Whether the candidate site considered as part of an existing compensation scheme.	Google search
Non-target species	Point vector	The potential non-target species within the candidate site area.	GBIF (2025)

[1] *Sites listed by Stanbury et al. (2017) as a priority for predator eradication for the recovery of sixty-six species of bird, reptile, amphibian and mammal.*

Only islands with colonies of at least two of the key seabird species (razorbill, puffin, kittiwake and gannet) for which the Applicant may have to provide compensation were considered.

The criteria for presenting results with recommended data attributes is shown in **Table 2**.

Table 2. Criteria for presenting shortlisted island information

Criteria	Role in shortlisting process
Location (incl. mapping)	Site details
If the site is identified in the Stanbury / RSPB priority island list.	Likelihood of suitability for invasive mammalian predator eradication
Ownership (Private vs Public and Title Deeds for shortlisted sites)	Landownership complexity
Management (incl. contact details for NGOs and charities)	Stakeholder complexity
Designation (incl. SPA, SSSI, None)	Stakeholder complexity and access considerations
Area (Ha)	Eradication feasibility
Invasive mammalian predators present (if known and source)	Suitability for invasive mammalian predator eradication

Criteria	Role in shortlisting process
Native mammalian and/or avian predators present (if known and source)	Eradication feasibility and non-target risk
Resident human population	Stakeholder complexity and eradication complexity
Distance to the mainland	Risk of invasive mammalian predator reinvasion and biosecurity considerations
Part of a wider island group that provides island connectivity	Eradication complexity
Are 'stepping stone islets ' present and complicating the ability to sustain measures over the long term	Risk of invasive mammalian predator reinvasion and biosecurity risk
Topography (incl. height, cliff, boulder/ crevice, soil, sand description with stock and survey images). Match to needs of priority seabird species:	Habitat suitability for key seabird species
o Razorbill	
o Puffin	
o Black-legged kittiwake	
o Northern Gannet	
Is there an existing population of priority species known to be present. Population size, trend, date and source	Suitability as a site for key seabird species restoration
o Razorbill	
o Puffin	
o Black-legged kittiwake	
o Northern Gannet	
Distance to nearest recruitment population of priority seabird species (incl. designated sites)	Recovery potential for key seabird species post-eradication
Is the site included in a project-led compensation measure (based on publicly available information)	To avoid conflict of interest and identify areas of collaboration
Are seabird restoration programmes or other ecological restoration programmes underway or scheduled – note synergies and/or conflicts	To avoid conflict of interest and identify areas of collaboration
Significant populations of non-target sensitive species (e.g. other mammals, owls, raptors, invertebrates etc)	Identify risks to eradication process

3.2 Task 2: Shortlisting process to produce a manageable list of candidate sites

The shortlisting process considered the compensation requirements for the key recovery seabird species and key selection criteria, including identifying any 'red line' no-go criteria. The key criteria for prioritising sites for the short list included whether the site was:

a. Likely to have invasive non-native predators;
b. Likely to have a local recruitment population of key seabird species;
c. Possessed coastal habitat—cliff ledge, cliff crevice, boulder field, grassy slopes, and rock platforms—suited to colonies of the key seabird species;
d. Privately owned by a single or a small number of individuals for reduced landownership complexity; and
e. No known conflict with project-led compensation options being progressed by other offshore wind developers.

Additionally, shortlisted sites were prioritised for inclusion that:

- Complement an existing compensation scheme, where collaboration could be sought to split a large site into parts, or to coordinate to conduct a joint eradication on different parts of the same island;
- Offer good biosecurity potential, i.e. medium to low risk of reinvasion post-eradication;
- Are appropriate in size due to the relatively small compensation numbers required for the Project; and
- Are likely to have habitat for some or all of the following: razorbill, kittiwake, puffin and gannet.

Each of the long-listed sites was assessed and Red-Amber-Green (RAG) rated against each of the agreed key selection criteria. The criterion rating is as follows:

- Red: Does not meet screening criteria and will fail the shortlisting process;
- Amber: Is unknown at this stage and will indicate where further field study will be required; and
- Green: Passes the screening criteria for shortlisting (verification via field study may still be required).

Only sites receiving all Green and/or Amber ratings for the key selection criteria were advanced for consideration as shortlisted candidate sites.

The sites that advanced through the RAG screening were then ranked by the number of green RAG ratings for the screening criteria, combined with additional ranking criteria comprising: risk of reinvasion, island size, number of human residents, predator complexity, and number of key recovery seabird species.

Risk of reinvasion follows the example set by Stanbury *et al.* (2017) of 1km, half the maximum known swimming distance of the brown rat. Island size and predator complexity affect the eradication cost. Human population impacts complexity. The number of seabird species present

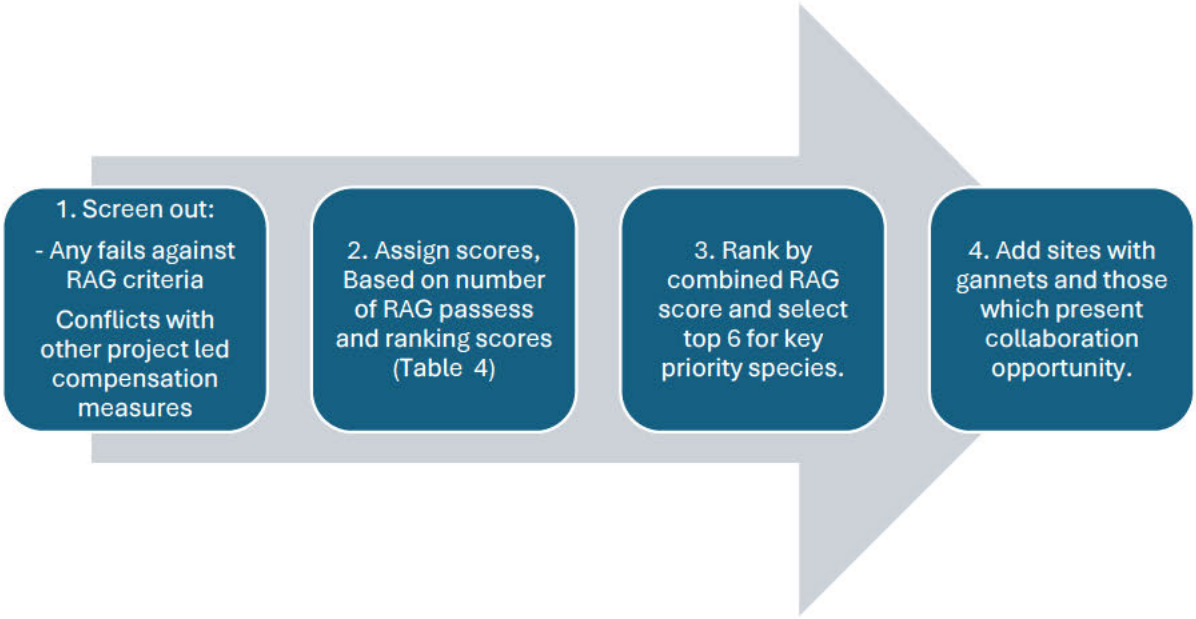
increases the compensation opportunity for the Project. These ranking criteria are defined in **Table 3**.

Table 3. Ranking criteria used in assigning scores to prioritise the shortlist after RAG screening

Ranking criteria	Score	Value	Definition
Risk of reinvasion	1	High	Island more than 1 km from mainland / source island
	0.5	Medium	Island within 1 km of mainland / source island
	0	Low	Mainland / 0 km to source island population
Island size	1	Small	<100 hectares
	0.5	Medium	100-500 hectares
	0	Large	>500 hectares
Human population	1	None	Uninhabited
	0.5	Few	<50 residents
	0	Many	>50 residents
Predator complexity	1	Simple	Single predators of brown rat, mink, stoat, weasel, and ferret
	0.5	Medium	Single predator of feral cat, or unknown predator presence
	0	Complex	More than one predator is present, requiring eradication
Seabird species	0 - 1	Scale	The number of species present divided by the total number of species (4)

The top 6 ranked sites were selected for the shortlist. Due to the low number of gannet colonies present across Scotland (n=12), those that made it onto the longlist (n=5), and those that were not screened out (n=3), were added to the shortlist. Similarly, any sites known to be part of a compensation scheme with another developer and to offer an opportunity for collaboration were added to the shortlist. A summary of the screening and subsequent ranking process can be found below in **Figure 1**.

Figure 1. Flow diagram of steps taken in the screening then ranking of the longlist to produce the shortlist.



4 Results

A total of 55 sites present with at least two of the key seabird species were added to the longlist. The screening process (presented in section 3.2) eliminated 27 sites that failed the RAG screening criteria, leaving 28 sites in consideration for further ranking (shown in **Table 4**).

Table 4. Summary of RAG screening questions results for all the longlisted sites

RAG criteria	No. of sites					
	Is it privately owned?	Are there invasive mammalian predators present?	Are the key seabird species present?	Is there likely further habitat available?	Is there partnership potential, or is it reserved by another developer?	Overall RAG status
Pass	10	24	51	46	1	3
Tentative pass	15	7	0	1	0	11
Further research	17	14	0	8	0	14
Tentative fail	0	0	4	0	6	9
Fail	13	10	0	0	0	18
N/A	0	0	0	0	48	0
Total						**55**

[redacted]

1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]

5. [redacted]
6. [redacted]

[redacted]

[redacted]

Figure 2. Location of the candidate compensation sites relative to the Bellrock Wind Farm Development Area.

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4.1 Landownership

[redacted]

Table 5. Landownership status, details and RAG screening assessment for the shortlisted candidate sites

ID	Site name	Region	Type	Ownership	Area (Ha)	Landowner RAG status
[redacted]						

4.2 Invasive mammalian predators

Ten candidate sites are likely to have invasive mammalian predators present based on desk research. [redacted]

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Table 6. Invasive mammalian predator presence, factors that may contribute to mammalian incursion, and RAG screening assessment for the shortlisted candidate sites

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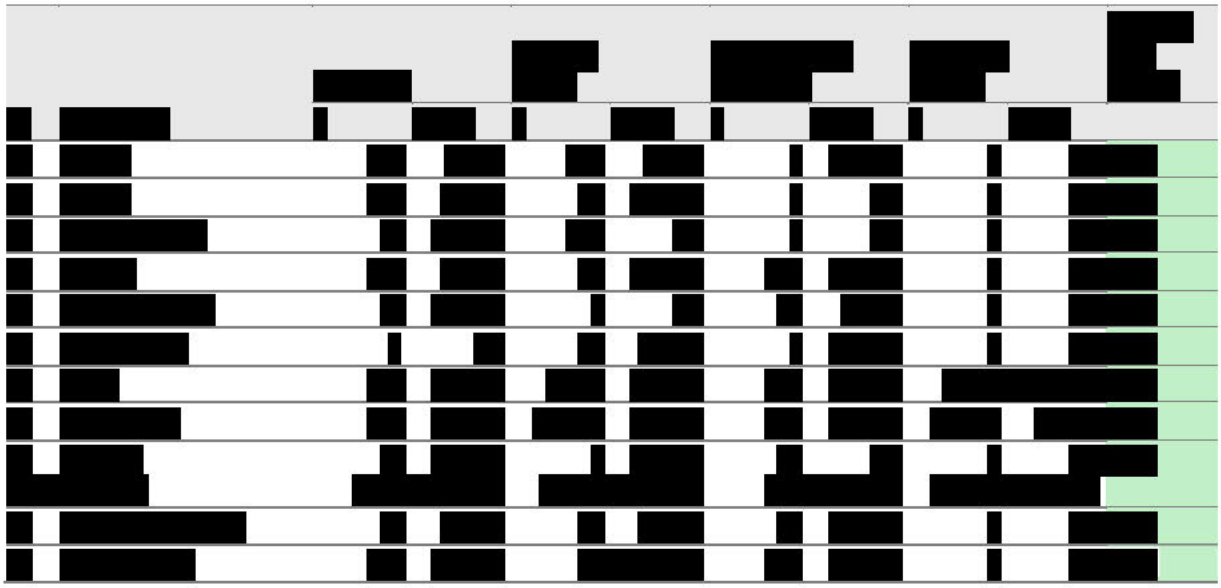
4.3 Population of priority seabird species

Candidate sites were added to the longlist based on priority seabird species presence, so all sites have presence of at least two species. [redacted] were added to the list despite a lower score, as they were the only sites with gannets present on the longlist after screening criteria were added. These findings are summarised in **Table 7**.

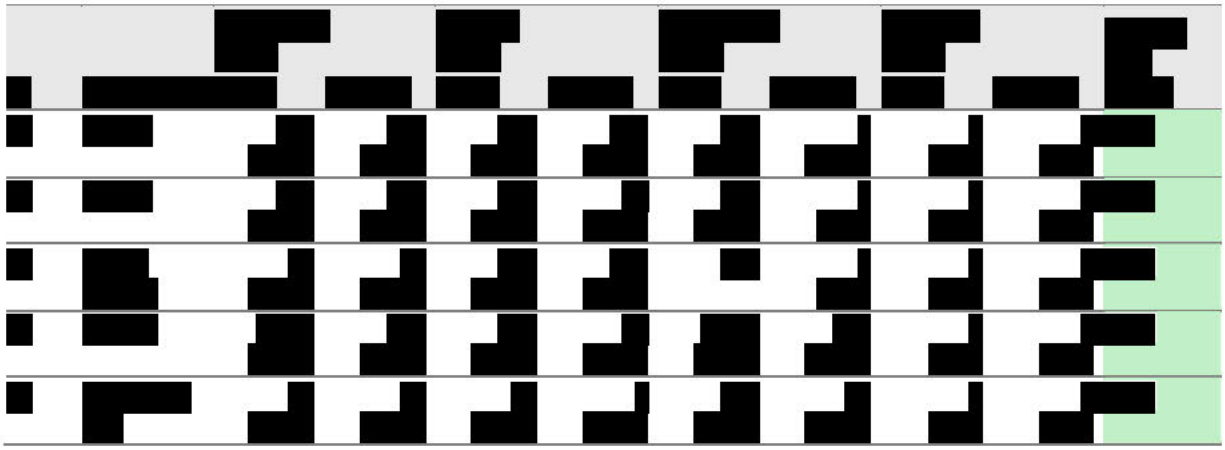
Table 7. Key recovery seabird species population, population trend based on seabird counts in 2000 and 2020, and RAG screening assessment for the shortlisted candidate sites.

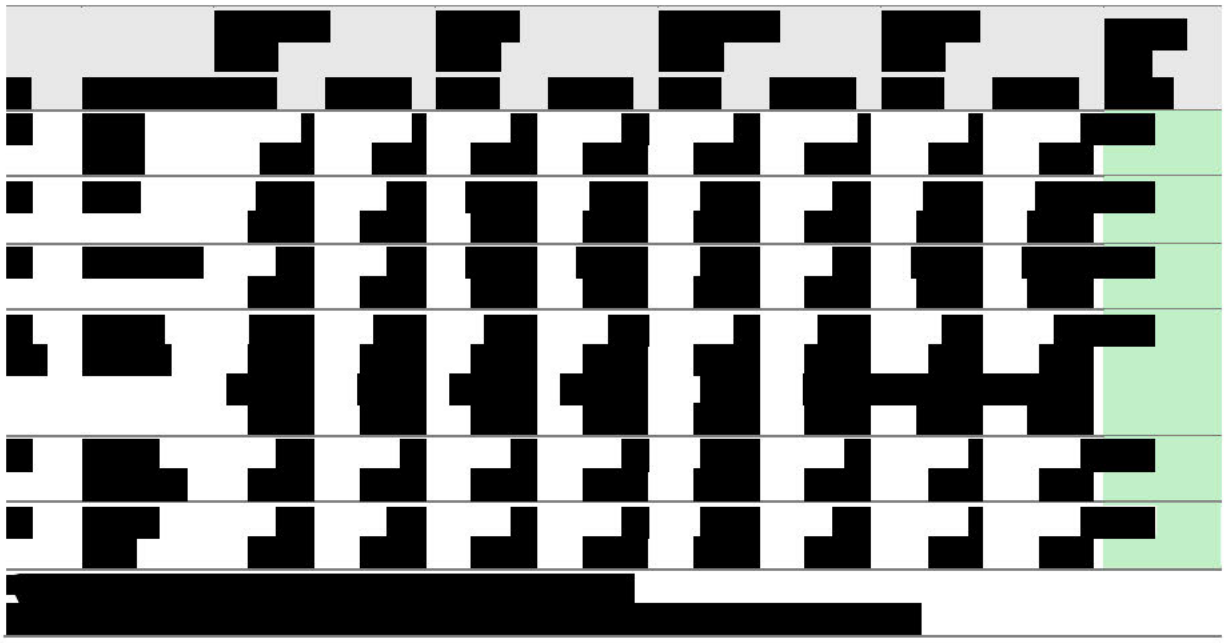


4.4 Habitat potential

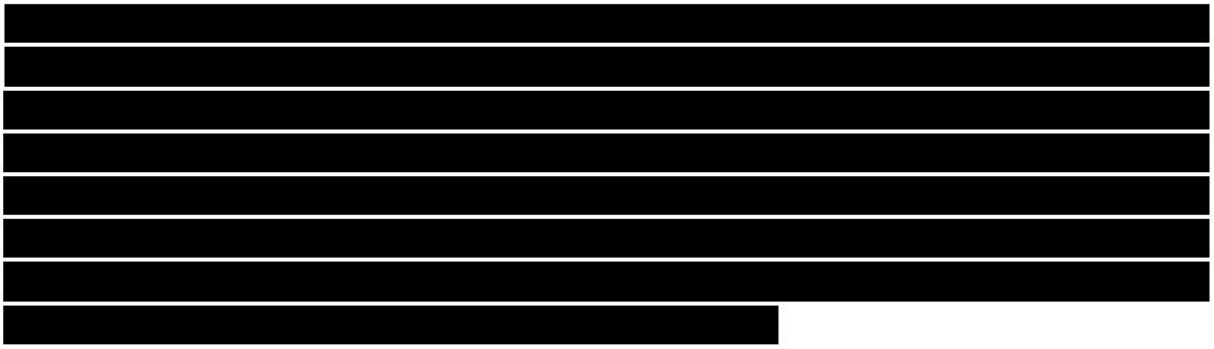
All seabird species across all shortlisted candidate sites had higher historic population levels than are currently present, except kittiwakes on [redacted] – however this is within a margin of error. This mostly correlates with the visual assessment of coastal habitat based on publicly available images. The findings are summarised in **Table 8**.

Table 8. Maximum historic population and year, colour coded by whether the historic population is higher than the current population (green), lower (red) or no change/NA (grey); the most recent population count; and RAG screening for the shortlisted candidate sites





4.5 Partnerships / conflicts with other developers



4.6 Ranking criteria

Ranking the candidate sites which passed the screening criteria provides the shortlist of the top six scoring sites plus sites containing gannets and collaboration opportunities.

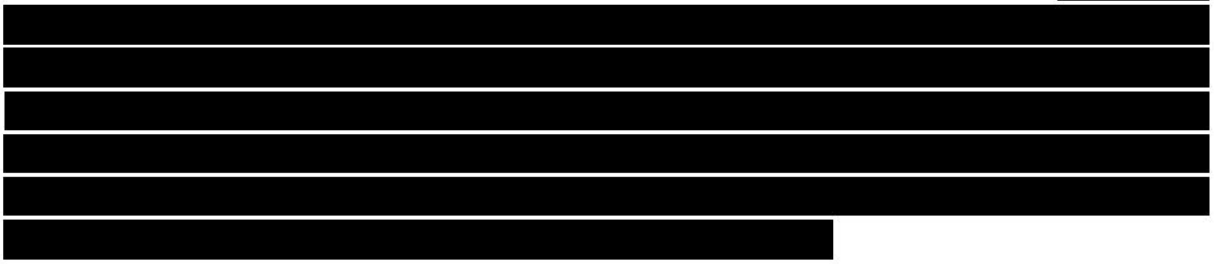
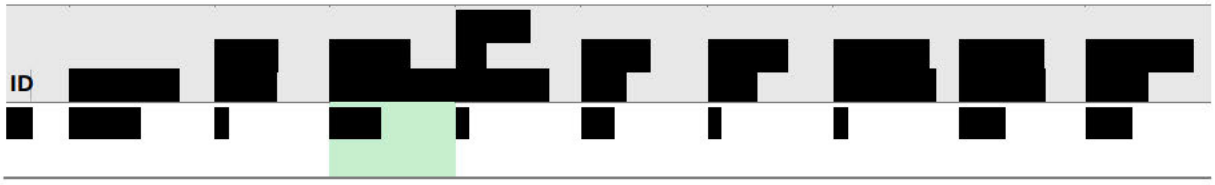
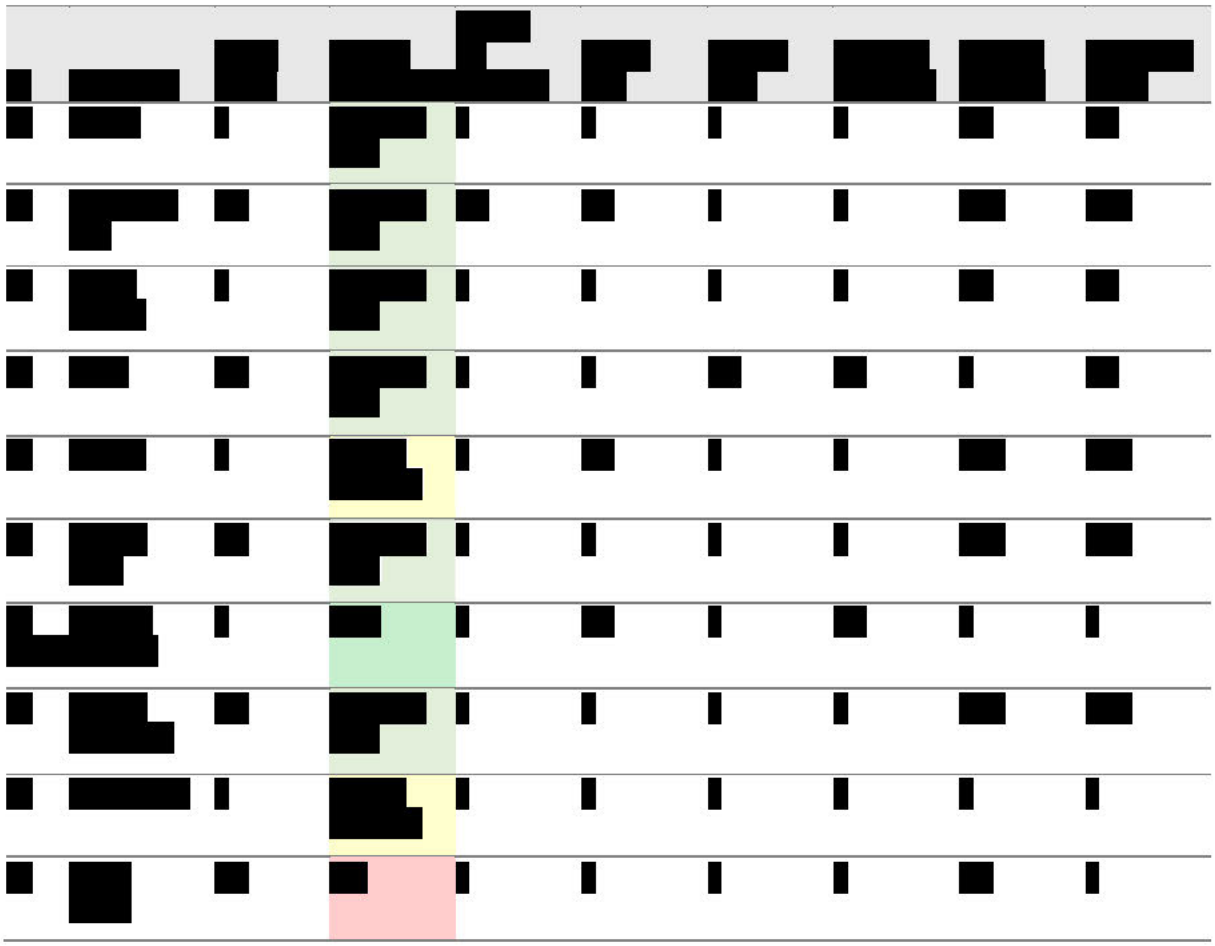


Table 9. Summary of screening score, ranking criteria results and the final ranking score for each shortlisted candidate site





5 Roadmap

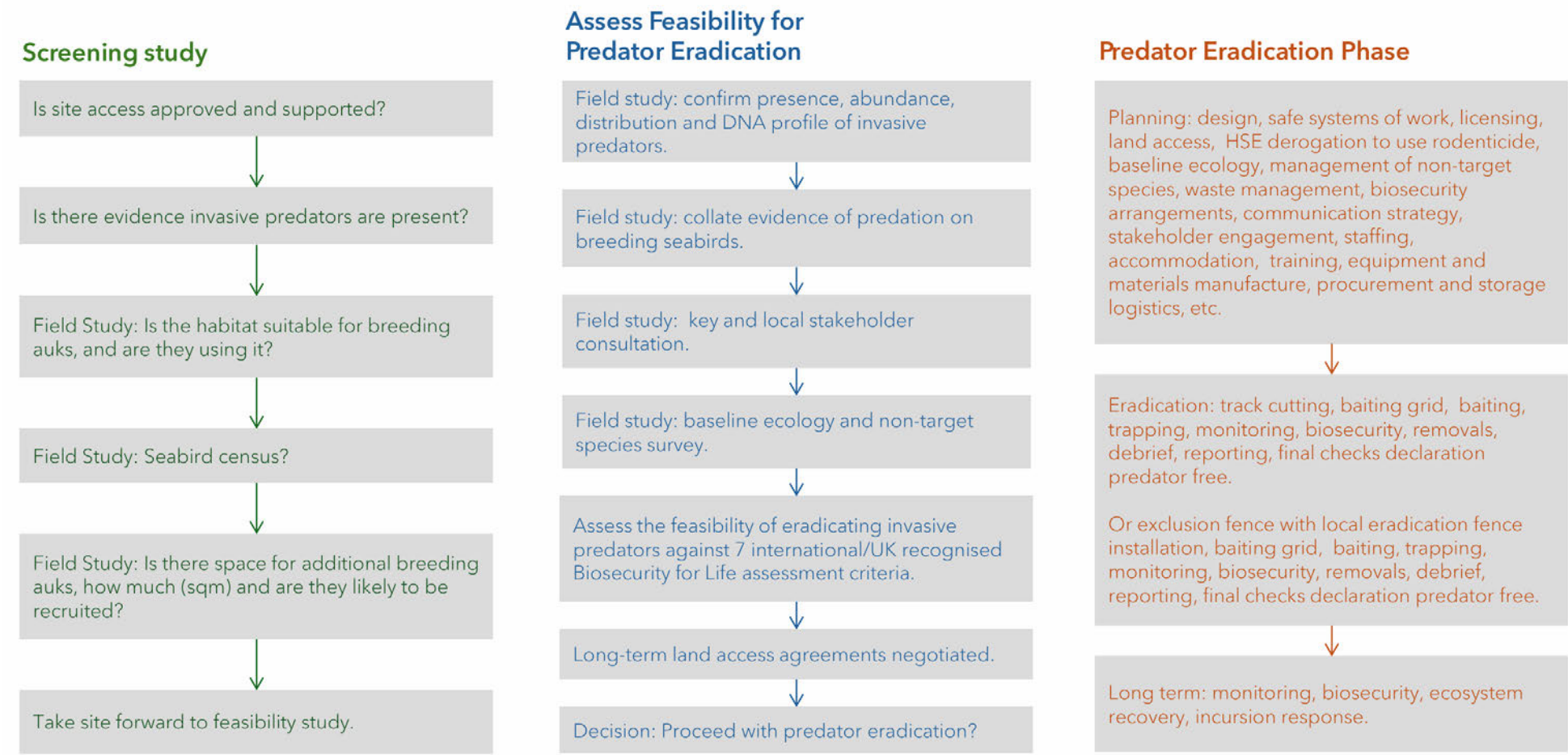
5.1 Introduction

The following roadmap outlines the phases to be undertaken following submission of the Bellrock WFDA consent applications, which are necessary for final candidate site selection, feasibility, and planning and implementing an effective and safe predator eradication project (**Figure 3**). These phases can be summarised as:

- Screening study — Screening surveys informing the selection of the preferred site(s) for the predator eradication compensation measure;
- Assess feasibility for predator eradication — Focused investigation into up to two candidate sites to define the predator control method based on the characteristics of the candidate site, identify risks and uncertainties, with the necessity to pass/fail based on red line risks against seven international/UK recognised Biosecurity for Life Assessment criteria;
- Predator eradication phase:
    - Eradication planning — detailed planning of a complete eradication programme with a focus on safe systems of work, efficiency and risk mitigation;

- Eradication implementation — following the eradication programme with contingency of a second year (where possible) if the site is not found predator-free; and
- Long-term monitoring and biosecurity — bespoke biosecurity programme designed to the specific site requirements to prevent reinvasion, to monitor for reinvasion, and ensure a quick response team is ready should a reinvasion be suspected.

Figure 3. Roadmap outlining key steps for selecting and implementing a successful predator eradication compensation measure (copyright HAR 2026)



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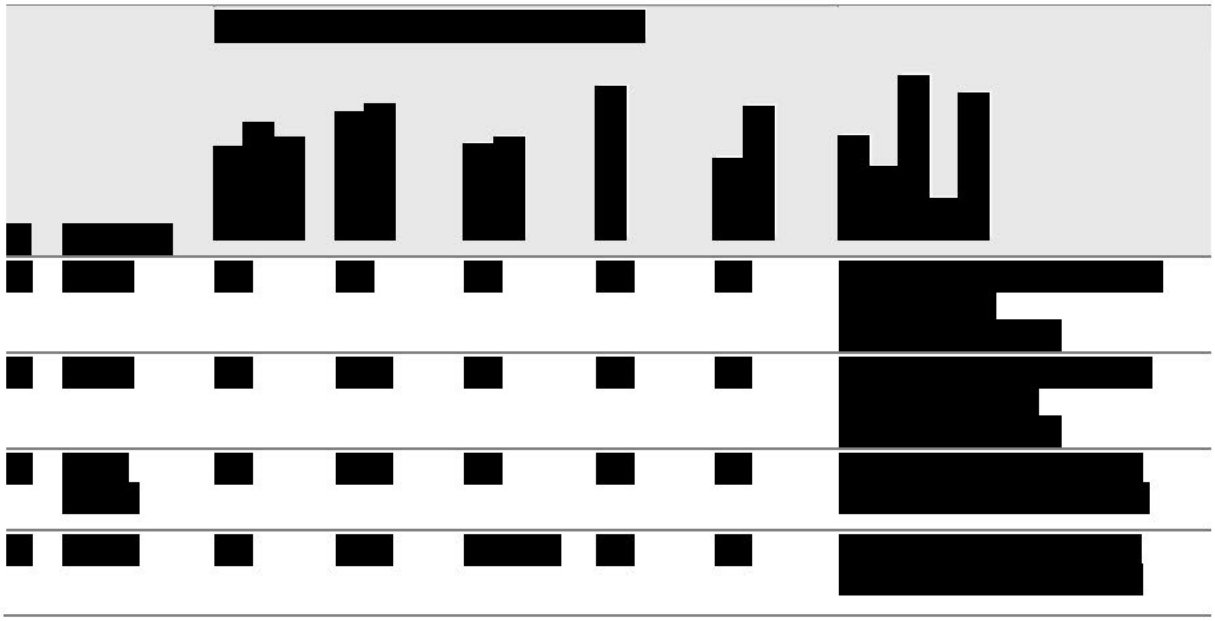
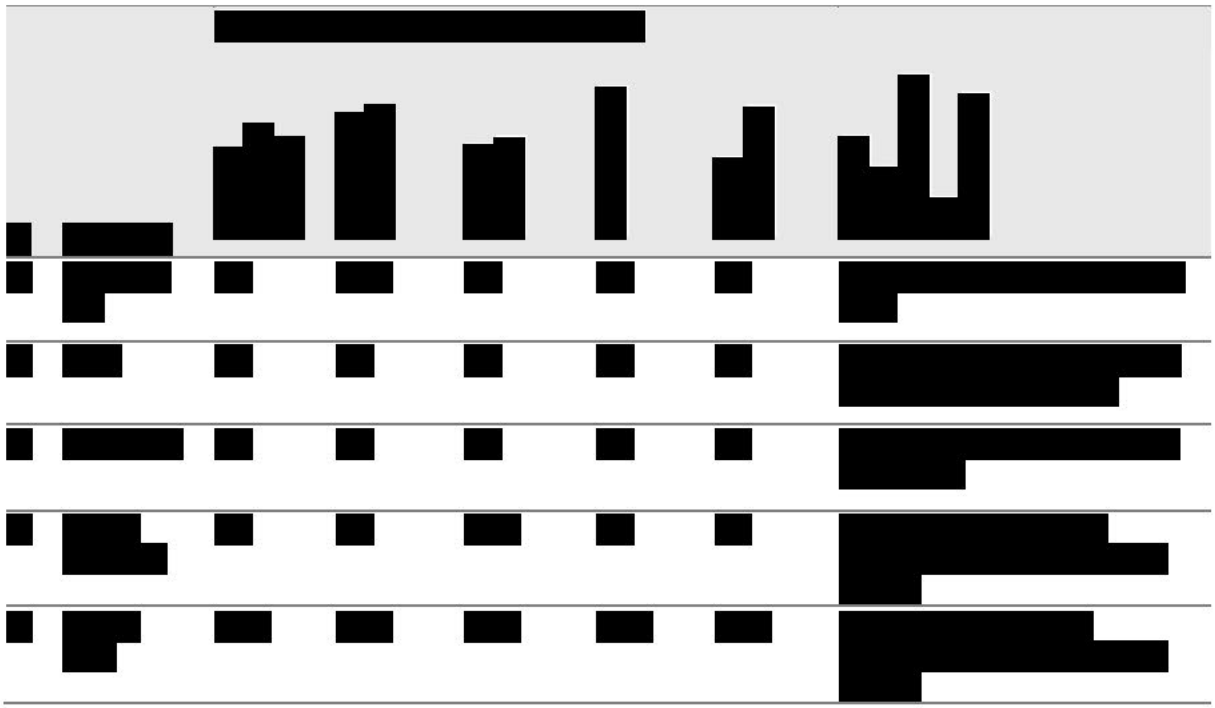
5.2 Surveys and activities

Pass assessments for the shortlisting screening criteria require verification through field surveys and further information gathering (e.g. **Table 10**). These surveys are required to address gaps and uncertainties in the data collected during the desk study. These priority follow-on studies include, amongst others:

- Predator presence screening survey — The source data for the desk research assessment (including Stanbury and GBIF) may be out of date, rely upon unclear assumptions, and in some cases provide confirmation of presence only, with no confirmation of absence. A field-based predator screening survey, using the method most suitable to the site, including but not limited to thermal drones and/or conservation dogs, to confirm presence or absence;
- Seabird count — An updated baseline seabird count, if no recent counts are publicly available. of the priority seabird species is necessary to help inform the opportunity for seabird colonies to expand into unoccupied suitable nesting habitat, and as a measure against which future expansion can be assessed;
- Habitat assessment — Mapping and quantification of the available unoccupied habitat for priority seabird species to expand into following predator eradication (i.e. the 'predator-free' nesting space);
- Detailed landowner enquiries — Where a site is suitable, progress towards a land access agreement, or similar, that secures the site for the Project; and
- Community engagement — Where there is a community interest in the site, they will be added to the Project stakeholder map and engagement, and consultation will be planned and carried out at appropriate stages.

Table 10. Summary of types of surveys required for each shortlisted candidate site to answer the key screening criteria, and any key considerations and uncertainties known at this stage





5.3 Permissions

For each candidate site, landowner approval, designation, planning permission and other external stakeholder requirements will be identified to prevent delays and mitigate significant risks. Protected designations, such as Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) require a lead time to obtain the necessary consents to survey.

The key activities required to understand the permissions required to survey and carry out eradication and biosecurity are the following:

- Identify any designations assigned to a site and what the protected features are;
- Identify the operations requiring consent for each protected feature;
- Identify which features and operations requiring consent conflict with survey or eradication activities;
- Identify any survey activities that may require planning permission;
- Identify interested parties, stakeholders, or landowners from whom permissions and/or consent is required; and
- Identify the anticipated timeframe to obtain consent to inform survey and eradication planning accordingly.

5.4 Programme of work

An indicative outline programme of work is presented in **Figure 4**, listing and setting projected timelines for the key phases and tasks of work that will be required to deliver a successful predator eradication compensation measure. This will be developed and submitted as part of a

Detailed Seabird Compensation Plan post consent. The outline programme assumes that the first wind turbine generator will be towed and connected to its station-keeping systems at the Bellrock WFDA in 2032.

Pre-Eradication Assessment

The pre-eradication feasibility assessment shall define eradication project goals and scope, assess the risks of failure and reinvasion risks, and identify key challenges. Consultation with relevant stakeholders, including MD-LOT and NatureScot, will be carried out. Site surveys shall be undertaken to inform the feasibility assessment, including predator abundance, rodenticide resistance, population isolation, predator dietary analysis, and health and safety planning needs, amongst other key planning criteria.

The findings shall be compiled into a pre-eradication feasibility report, which will serve as the basis for a formal decision point on whether to proceed with eradication at the chosen site(s).

Eradication and Biosecurity Planning

Following a decision being taken to proceed with the predator eradication measure, thorough preparation shall take place, including, amongst other activities:

- Developing the programme of work, organisational structures, training, and competency standards;
- Developing the operational, communication, health, safety and environmental plans;
- Engaging with stakeholders and local communities;
- Procuring materials and equipment; and
- Applying for and obtaining all required consents, permissions, and regulatory consents, including approval to use the preferred rodenticide formulation if the measure comprises a rat eradication (the so-called Critical Situation Permit issued by the UK HSE). Building on data gathered during the pre-eradication assessment, this activity will include a comprehensive process to identify and mitigate risks to non-target species. Biosecurity protocols shall be developed in parallel to minimise the risk of a predator incursion event during the eradication phase.

Operational delivery shall be planned for a winter season (September through March), coinciding with periods when natural food sources for the invasive predators and the range and numbers of non-target species are at their lowest.

A proactive engagement strategy will be maintained throughout the project to build and maintain public support. Land access agreements will be negotiated and signed before operations commence. Where eradication may affect livestock, their owners or others with land-use rights on or adjacent to the site, a compensation scheme or livestock management protocol may need to be developed and agreed in advance.

Eradication

The eradication will be carried out in one winter season (between September and March), with a second winter season as a contingency if monitoring shows residual predator activity persists.

All materials, equipment and logistical arrangements will be prepared in advance in accordance with the operational tasks summarised below:

- Establish a project operational base, including secure storage for equipment and materials, together with suitable accommodation and welfare facilities for the field team.
- Establish a biosecurity network and incursion response hubs to support rapid detection and management of any rat incursions during and after the eradication programme.
- Ensure that all safe access systems, infrastructure and working procedures required for field operations are installed, tested and implemented prior to commencement of eradication activities.
- Install a bait station grid across the project area, designed in accordance with recognised best practice to ensure full spatial coverage of rat territories.
- Deploy a non-toxic pre-feed within bait stations to encourage rat interaction, confirm bait uptake behaviour and identify any potential non-target species interactions before toxic bait deployment.
- Following confirmation of uptake, introduce rodenticide bait to all bait stations and inspect stations at an agreed monitoring and replenishment schedule.
- Establish a monitoring grid operating alongside the baiting programme to track rat activity levels and assess eradication progress.
- Refine and strengthen the biosecurity surveillance network to enable long-term operation following eradication, ensuring rapid detection and response capability for any future incursions.

Post-eradication monitoring of predator species will be conducted for at least 2 years to confirm eradication success and that the site can be formally declared ‘predator free’.

Post Eradication

Biosecurity measures to prevent predator reinvasion shall be established during the planning phase and maintained for the eradication and post-eradication phases. Ongoing surveillance is necessary to enable early detection of any incursion, and a designated incursion response team will be in place and ready to respond rapidly if a reinvasion occurs. This team could include local community members, with support from external partners.

A long-term seabird monitoring programme will be established prior to the eradication. Monitoring will be designed to detect measurable responses in seabird populations to track the outcomes of the eradication against identified success criteria.

Figure 4. Preliminary programme of work (consenting and construction timelines TBC)

Phase	Task	Year 1 (2026)				Year 2 (2027)				Year 3 (2028)				Year 4 (2029)				Year 5 (2030)				Year 6 (2031)				Year 7 (2032)			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Shortlist refinement	Landowner inquiries and permissions to survey																												
	Agency (e.g. SSSI, MoD etc) inquiries and licences to survey (if required)																												
	Confirm predator presence: minimum drone survey																												
	Seabird census/ habitat assessment/ nesting space projections.																												
	Produce Short-short list of candidate sites																												
Pre-eradication Assessment	Detailed field studies: Predator abundance, behaviours, rodenticide resistance testing, dietary indicators.																												
	Refined habitat assessment (if required)																												
	Develop external stakeholder map																												
	Predator eradication feasibility report																												
	Final candidate site (s) selection																												
Eradication Planning	Project Programme																												
	Operational planning																												
	Agency approvals																												
	Identify biosecurity zone																												
	Develop landowner/tenant agreements																												
	Health and safety planning																												
	Target and non-target species surveys																												
	Stakeholder/Community engagement																												
Eradication	Eradication preparation																												
	Eradication baiting/trapping																												
	Eradication monitoring																												
	Declaration of predator-free status																												
Post Eradication	Long-term monitoring and biosecurity																												
Bellrock WFDA	Section 36 Consent and Marine Licence Consent																												
	Earliest Wind Turbine Generator Tow and Hook Up																												
N/A	Breeding seasons																												

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Annex 1: Table summary of shortlisted candidate sites

Table 1. Site details and mammalian predator invasiveness of shortlisted candidate sites.

		Site details						Invasiveness					
ID	Site name (and link to location)	Region	Type	On Stanbury List	Ownership	Designation(s)	Area (Ha)	Invasive predators	History of shipwrecks	Resident human population	History of human habitation	Distance to nearest source (km)	Stepping stones (<500m)
[redacted]													

Table 2. Population size and trends for key seabird species at each shortlisted candidate site.

		Seabird census															
		Razorbill				Atlantic puffin				Black-legged kittiwake				Northern gannet			
ID	Site name	Population	Trend [1]	Meta-population Trend [2]	Year of most recent count	Population	Trend [1]	Meta-population trend [2]	Year of most recent count	Population	Trend [1]	Meta-population trend [2]	Year of most recent count	Population	Trend [1]	Meta-population trend [2]	Year of most recent count
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

Table 3. Historic population and topography as an indicator of habitat availability for recovery of key seabird species across the shortlisted candidate sites.

		Historic population												Topography suitable to habitat [2]			
		Razorbill			Atlantic Puffin			Black-Legged Kittiwake			Northern Gannet						
ID	Site name	Historic peak population	Difference to present [1]	Year of peak	Historic peak population	Difference to present [1]	Year of peak	Historic peak population	Difference to present [1]	Year of peak	Historic peak population	Difference to present [1]	Year of peak	Razorbill	Atlantic Puffin	Black-legged Kittiwake	Northern Gannet
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]

Table 4. The ability of each shortlisted candidate site to contribute to the SPA network, alongside indicative non-target species present.

ID	Site name	Site connectivity [1]						Other	
		Razorbill			Atlantic Puffin			Site part of an existing compensation scheme [2]	Non-target species [3]
		Nearest SPA colony	Distance (km)	Population trend	Nearest SPA colony	Distance (km)	Population trend		
[redacted]									

Table 5. Screening and ranking criteria with final scores for each shortlisted candidate site.

		Screening criteria							Ranking criteria					
ID	Site name	Is it privately owned?	Are invasive mammalian predators present?	Does it have a population of key seabird species?	Is there suitable key seabird species' habitat?	Is there interest from another developer?	Screening score	Overall screening	Risk of reinvasion	Island size	Human population	Predator complexity	Number of key seabird species	Final score
[redacted]														

Appendix C: Bycatch Evidence and Roadmap

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Bellrock Offshore Wind Farm

Wind Farm Development Area

Shadow Habitats Regulations Appraisal Derogation Case - Volume VI

Appendix C: Bycatch Evidence and Roadmap

Date: April 2026

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1	Haskoning	SA	BMcG	01/04/2026

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Glossary of Terminology

Term	Definition
Applicant	Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for the Bellrock Wind Farm Development Area.
Bellrock Offshore Wind Farm (or the Bellrock Project)	An offshore wind farm capable of exporting up to 1.8 GW of renewable energy to the National Electricity Transmission System. The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the SSEN Transmission proposed Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
Development Area	For consenting purposes, the area for which separate consents and/or Marine Licences will be sought by the Applicant, comprising: ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore wind farms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
SSEN Transmission Hurlie substation	The onshore substation to be developed by SSEN Transmission, which will receive renewable electricity from the Bellrock Project onshore substation and allow supply of renewable electricity from the wind farm to the National Electricity Transmission System.
Wind Farm Development Area	The boundary within which the Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned.
Wind Farm Infrastructure	Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning).

Glossary of Abbreviations

Term	Definition
ACAP	Agreement on the Conservation of Albatrosses and Petrels
AEoSI	Adverse Effect on Site Integrity
BMP	Bycatch Monitoring Plan
BTO	British Trust for Ornithology
DCO	Development Consent Order
DEP	Dudgeon Offshore Wind Farm Extension Project
EEZ	Exclusive Economic Zone
FFC	Flamborough and Filey Coast
JNCC	Joint Nature Conservation Committee
LEB	Looming Eyes Buoy
NSN	National Site Network
OWF	Offshore Wind Farm
OWFL	Offshore Wind Farm Limited
REM	Remote Electronic Monitoring
SEP	Sheringham Shoal Offshore Wind Farm Extension Project
SMRF	Scottish Marine Recovery Fund
SNCB	Statutory Nature Conservation Bodies
SOI	Scottish Oceans Institute
SPA	Special Protection Area
SPEA	Sociedade Portuguesa para o Estudo das Ave
SSEN	Scottish and Southern Electricity Network
UK	United Kingdom
WFDA	Wind Farm Development Area

1 Introduction

1.1 Document Purpose

1. This Appendix provides a review of existing offshore wind farm (OWF) projects in Scotland and England where the reduction of bycatch (where birds are accidently caught and often injured or killed by commercial fisheries) has been proposed as a compensation measure for potential effects on seabird features of Special Protection Areas (SPAs), and to consider whether such a measure could provide suitable compensation for the potential effects of the Bellrock Wind Farm Infrastructure.

2. The primary focus of this review is to consider the feasibility of providing compensation for species relevant to the Bellrock Wind Farm Infrastructure through bycatch reduction. Based on currently available information, the Bellrock Wind Farm Infrastructure may have the potential to cause adverse effect on site integrity (AEoSI) in relation to the gannet, kittiwake, razorbill and puffin features of a number of SPAs.

3. A review of scientific proceedings and official guidance documents has been undertaken, together with a review of derogation case and compensation plan documents for relevant OWFs (either consented or in planning). Since bycatch mitigation is an active field of research, it has been long- and short-listed as a potentially feasible mitigation measure by a number of developers as a compensation measure for the potential seabird mortality from their projects.

1.2 Introduction to Bycatch

4. Bycatch, or incidental capture of non-target species can impact seabirds where the utilisation of specific fishing gear types overlaps with the at-sea distribution of sensitive species. Fisheries bycatch represents one of the greatest threats to seabirds globally (Dias et al. 2019).

5. The majority of bycatch evidence in United Kingdom (UK) waters is recorded for fulmar, gannet and guillemot, while little evidence is available for kittiwake, razorbill and puffin (Northridge et al. 2020, Ramirez et al. 2024). Therefore, while a risk of AEoSI has not been identified in respect of the Bellrock Wind Farm Infrastructure on fulmar and guillemot, the review includes consideration of these species as it may provide an evidence bridge for the other relevant species.

6. Bycatch can be reduced by minimising the likelihood of seabird interactions with fishing gear. This includes the use of deterrents, such as bird-scaring lines, to keep birds away from specific gear types, and the promotion of mitigation devices like hookpods, which prevent birds (particularly tubenoses) from becoming hooked on longlines. While some of these measures may not reduce interactions entirely, they can significantly lower the risk of bird capture and mortality. Other measures around changing fishing practices are also available to reduce seabird bycatch, such as time and area closures, night setting, and safe handling of caught birds (Anderson et al. 2022).

2 Literature Review

2.1 Context

7. Key literature included in the review of seabird bycatch with focus on the UK Exclusive Economic Zone (EEZ) waters is:

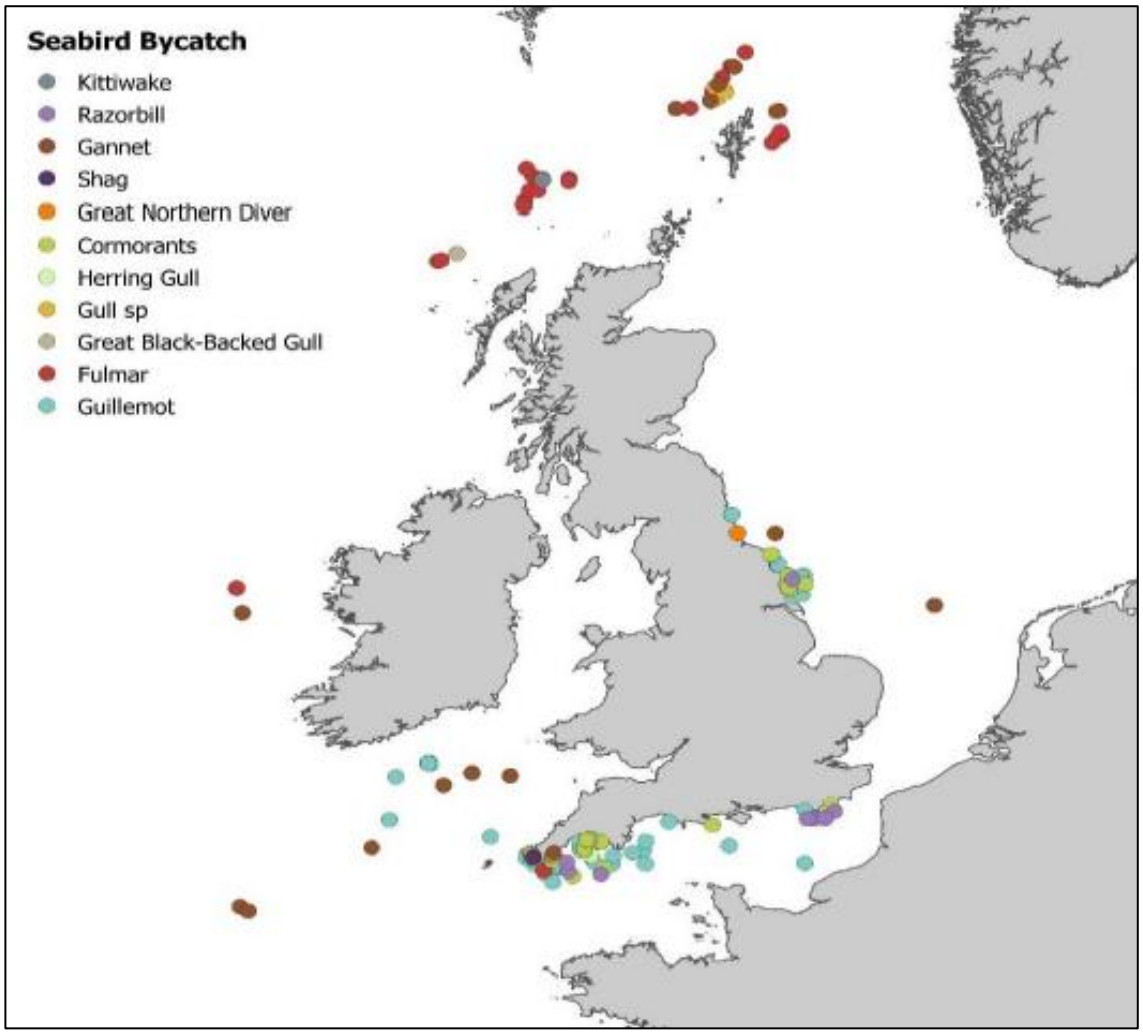
- Bradbury, G. Shackshaft, M. Scott-Hayward, S. Rexstad, E. Miller, D. and Edwards. D. (2017) 'Risk Assessment of Seabird Bycatch in UK waters'. WWT Consulting Report to Defra;
- Davoren, G.K. 2007. Effects of Gill-Net Fishing on Marine Birds in a Biological Hotspot in the Northwest Atlantic. Conservation Biology. 21 (4):1032-1045;
- Furness, R.W. Goodship, N. Raveh, S. and Philip, E. (2024). Potential Actions to Support Recovery of Seabird Populations in Scotland. NatureScot Research Report 1370;
- Grémillet, D. Péron, C. Lescroël, A. Fort, J. Patrick, S. C. Aurélien Besnard, ·, & Provost, P. (2020). No Way Home: Collapse in Northern Gannet Survival Rates Point to Critical Marine Ecosystem Perturbation. 167, 189. https://doi.org/10.1007/s00227-020-03801-y;
- Kingston, A. Northridge, S. Paxton, C. G. and Buratti, J. P. F. (2023), 'Improving Understanding of Seabird Bycatch in Scottish Longline Fisheries and Exploring Potential Solutions', Scottish Government;
- Miles, J. Parsons, M. & O'Brien, S. (2020). Preliminary Assessment of Seabird Population Response to Potential Bycatch Mitigation in the UK-registered Fishing Fleet. Report prepared for the Department for Environment Food and Rural Affairs (Project Code ME6024);.
- Northridge S. Kingston, A. and Coram, A. (2020) 'Preliminary Estimates of Seabird Bycatch by UK Vessels in UK and Adjacent Waters'. Joint Nature Conservation Committee (JNCC), Peterborough;
- Northridge, S.P. Kingston, A.R. & Coram, A.J. 2023. Regional Seabird Bycatch Hotspot Analysis. JNCC Report No. 726. JNCC, Peterborough, ISSN 0963-8091; Ørsted (2021) B2.8.1 Compensation Measures for FFC SPA: Bycatch Reduction: Ecological Evidence (APP-194); and
- Ramírez, I. Mitchell, D. Vulcano, A. Rouxel, Y. Marchowski, D. Almeida, A. Arcos, J.M. Cortes, V. Lange, G. Morkūnas, J. and Oliveira, N. (2024) 'Seabird Bycatch in European waters. Animal Conservation. Early View.

8. The regional context for seabird bycatch is based on studies conducted within the UK Bycatch Monitoring Programme (BMP). The BMP has monitored over 21,000 fishing operations since 1997 and has recorded the bycatch of 587 individual birds (Northridge et al. 2020). The BMP has focused on longlining (North and West of Scotland), gillnetting (mainly in the English North Sea and in the Celtic Sea), and midwater trawls (mainly in the Channel).

9. Among observed midwater trawling operations, most bycatch has been observed in the western Channel and affects guillemots. Some seabird bycatch has been recorded in demersal trawls, mostly affecting northern gannets (Kingston et al. 2023, Northridge et al. 2023).

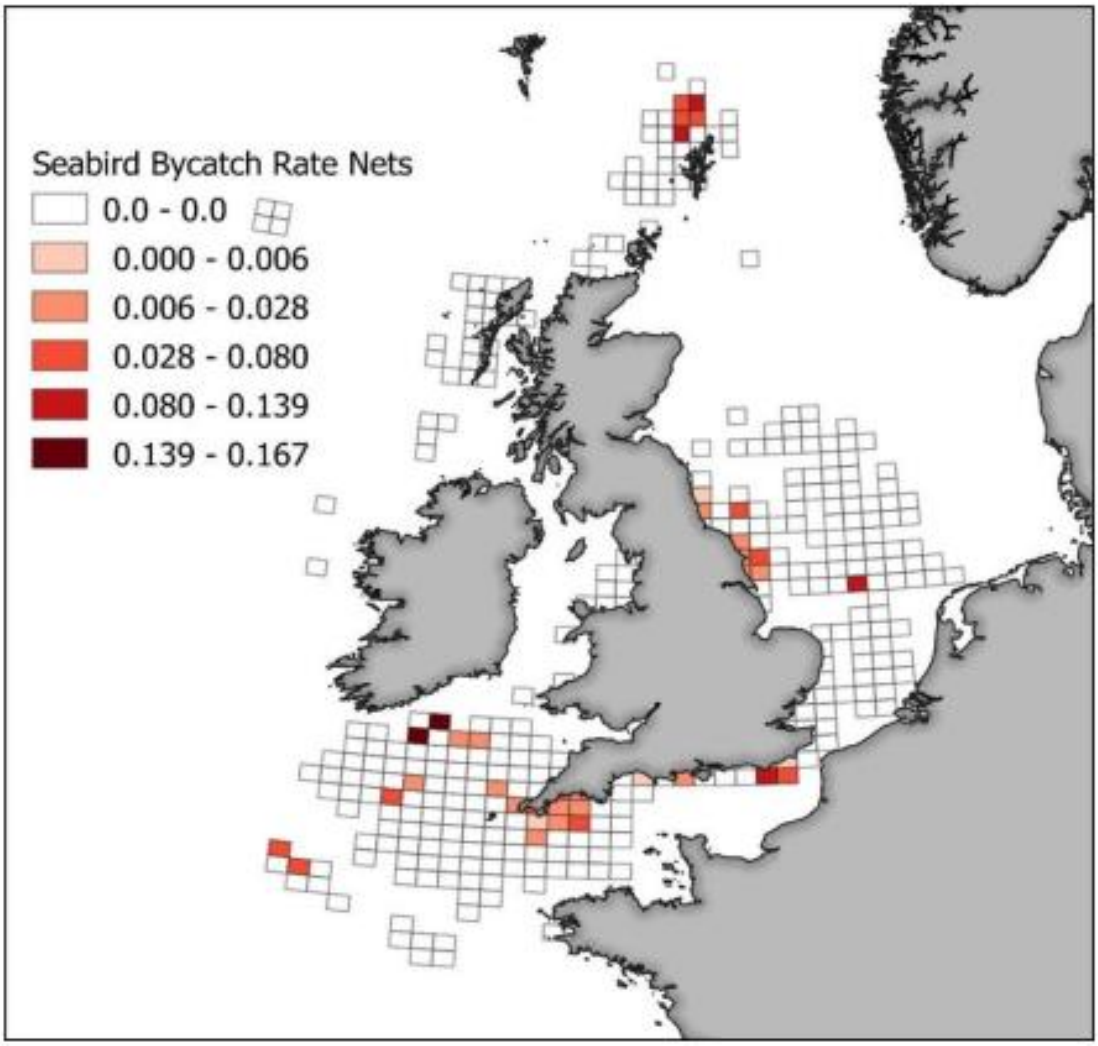
10. Among longline fisheries, bycatch rates of seabirds are highest along the shelf edge to the North and West of Scotland and mainly involves fulmars and gannets (Plate 2.1) (source: Northridge et al, 2023, Ramirez et al. 2024).

Plate 2.1: Observed Bycatch by Species 1996 to 2018 – All Gears



11. Among observed gillnet hauls, the highest bycatch rates appear off the northeast of England, off southeast Ireland, along parts of the south coast of England and off Shetland; the main species involved are guillemots, cormorants and razorbills (**Plate 2.2**, source: Northridge et al, 2023).

Plate 2.2: Observed Bycatch Rates of Seabirds in Static Nets: Birds Per Haul



12. It should be noted that actual bycatch rates in UK waters have the potential to be considerably higher than those discussed above, given that less than 5% of commercial fishing activity is monitored (Clean Catch, 2026). Current UK-wide bycatch estimates hold considerable uncertainty as monitoring has only covered a small proportion of the whole fleet. Within Scottish waters, bycatch monitoring is ongoing via the BMP, though sampling effort is low, equating to ~0.5% of the annual UK fishing effort (Furness et al. 2024). Though the literature review provides evidence of bycatch for sometimes large numbers of individuals of some species, especially guillemots, it is suggested these are under-recorded, while for other species there are few or no data, and the impacts on populations are even more uncertain (Bradbury et al. 2017).

2.2 Gannet

13. Evidence of gannet bycatch is well documented, with an estimated annual bycatch rate of over 18,000 individuals per annum in Europe (Ramirez et al. 2024). This is also evidenced across

several jurisdictions, with studies showing unsustainable levels of gannet bycatch in Portuguese waters (predominantly through longlines and static nets) (Araujo et al. 2022), and bycatch being linked to gannet population declines in France (Gremillet et al. 2020).

14. In UK waters, gannet bycatch is also well documented. Northridge et al. (2020) estimated that several hundred gannets are caught each year, primarily in static net and demersal longline fisheries. Longline sampling in this study focused mainly on the greater North Sea, where a demersal longline fishery operates targeting hake, ling, tusk, haddock, and cod. This fishery alone is estimated to result in around 200 gannet deaths annually (Miles et al. 2020). More recent analysis by Kingston et al. (2023) places the estimate at between 50 and 150 gannets bycaught annually in UK longline fisheries targeting hake.

15. Gannet bycatch is also evident in static net fisheries. Between 1996 and 2018, Northridge et al. (2020) estimated a bycatch rate of 1.83 gannet per 1,000 hauls in gillnet vessels over 10 m, and 0.17 gannet per the total number of hauls in gillnet vessels under 10 m. Bycatch was predominantly observed in English waters, though a hotspot of gannet bycatch around Shetland has also been identified (Northridge et al. 2020).

16. Evidence is also available off the coast of Cornwall, with monitoring of 333 hauls (gillnets, trammel nets, wreck nets and tangle nets) recording 28 bycaught gannet (Ørsted, 2021).

17. Some bycatch is also observed within the aquaculture industry, with small numbers of gannets (tens of individuals) becoming entangled in nets covering Scottish salmon farms (NatureScot, 2020).

2.3 Razorbill

18. According to Ramirez et al. (2024) annual bycatch of razorbill in Europe exceeds 1,500 individuals, almost equally divided between the northeast Atlantic and the Baltic Sea region.

19. Razorbills were recorded from coastal static net fisheries and English Channel midwater trawl fisheries. The majority of mortality can be attributed to net fisheries. Estimated mortality in static net and midwater trawls is approximately 100 - 200 birds per annum.

20. Locations with high razorbill bycatch along the south coast of England, particularly southeast and southwest were identified by Ørsted via risk mapping process (source: Ørsted, 2021).

2.4 Puffin

21. In a study off the northeast coast of Newfoundland, it was reported that puffins constituted 7% of the total gillnet bycatch (Davoren, 2007).

22. According to seabird relative sensitivity to bycatch scoring, which is based largely on scores of entrapment risk, puffins are considered among the most sensitive species to surface fishing gears (Bradbury et al. 2017), however, during surveys carried out under the BMP between 1996 and 2018 puffin bycatch was not recorded (Northridge et al. 2020).

2.5 Kittiwake

23. According to Ramirez et al. (2024) global annual bycatch of kittiwakes exceeds 500. The vast majority of the bycatch is recorded in the northeast Atlantic.

24. Surveys undertaken under the BMP programme in 2016 and 2017 recorded a single kittiwake bycatch in longline gear (Northridge et al. 2020), with the authors estimating that total annual bycatch may amount to a few tens of birds. However, the available evidence remains limited, and therefore no further consideration is given to bycatch mitigation measures for kittiwake.

2.6 Evidence Available for Species Not Requiring Compensation Measures for Bellrock Wind Farm Infrastructure

2.6.1 Guillemot

25. According to Ramirez et al. (2024) annual bycatch of guillemots in Europe exceeds 31,000, with almost 86% of the birds being bycaught in the northeast Atlantic with the remaining bycaught in the Baltic Sea region.

26. Within the UK, guillemots have been identified as particularly vulnerable to bycatch. According to the risk assessment model used in Bradbury et al. (2017) this species is within the top ten (out of 53) of the most sensitive species to bycatch by surface, pelagic, and benthic fishing gear in Europe.

27. According to Northridge et al. (2020) approximately 1,600 to 2,500 guillemots are bycaught each year in UK waters, primarily within coastal net fisheries (Northridge et al. 2020). Guillemots made 75% of bycaught birds in static net fisheries, and 85% in midwater trawl.

2.6.2 Fulmar

28. Estimates indicate that there may be 2,200 – 9,100 fulmars killed incidentally each year by UK-registered demersal longline fleets in the UK and adjacent waters (Northridge et al. 2020). Therefore, fulmar represents the largest component of bycatch in the UK-registered fleet, for which mitigation measures could have the potential to result in substantial population gains relative to the likely trajectory with no mitigation (Miles et al. 2020).

29. Fulmar is a feature in 25 SPAs across the UK with 88% of UK population breeding in Scotland experiencing declines in monitored colonies. As fulmar is generally considered to have low vulnerability to OWFs, it is not usually screened in for detailed assessment of potential impacts of OWFs.

3 Bycatch Mitigation Approaches and Feasibility

30. Recent studies have provided evidence that identifies the UK offshore demersal longline and <10 m static net fleets as the highest priority fleets with which to target further seabird bycatch mitigation measures due to observed seabird bycatch (Northridge et al. 2020).

31. The preliminary bycatch estimates developed from the BMP are based on relatively small sample sizes and some biases but nonetheless give an indication of the possible level of bycatch (Northridge et al. 2020).

3.1 Gannet

32. NatureScot note within their report on potential actions to support recovery of seabird populations in Scotland, that there is scope to reduce bycatch of gannet in longline fisheries in Scottish waters (Furness et al. 2024).

3.1.1 Available Mitigation Measures

33. Within longline fisheries, bycatch is predominantly linked to birds scavenging on bait as lines are being set (Furness et al. 2024). Several mitigation measures are available and well evidenced to reduce mortality. Mitigation measures predominantly focus on deterring birds from fishing gear (e.g. visual deterrents), or from minimising access to fishing gear (e.g. using weighted lines to increase sink speed, reducing the time hooks are accessible to gannets). Furness et al. (2024) identified the following measures as potential bycatch reduction actions for longline fisheries:

- Deployment of bird-scaring plastic streamer lines over the longline;
- Setting lines through an underwater tube so that hooks are deployed too deep for most scavenging seabirds to reach;
- Use of a line shooter;
- Use of water cannon to deter seabirds from approaching;
- Setting lines only at night to avoid attention from diurnally active seabirds;
- Avoiding discharge of offal so that scavenging seabirds are not attracted in the first place;
- Adding weights to lines to increase sinking speed;
- Use of hook designs that reduce risk of snagging seabirds; and
- Deployment of baited hooks in a capsule that only opens once the line has reached a specific depth.

34. Of these, line weighting and bird-scaring lines (alongside brickle curtains which function similarly by creating a visible barrier to deter birds) have been identified as proven measures for demersal longline fisheries, though a combination of measures is considered best practice (Anderson et al. 2022).

3.1.1.1 Line Weighting

35. Line weighting works to move baited hooks out of the range of feeding seabirds as fast as possible during line setting, with experiments suggesting that 3 kg of weights every 100 m is optimal for the hake longline fishery (Anderson et al. 2022). The Agreement on the Conservation of Albatrosses and Petrels (ACAP) considers that the longline sink rate should be minimum 0.3 m/s as best practice to reduce seabird bycatch. Specific to Scottish waters, Rouxel et al. (2022) have undertaken monitoring on the demersal longline hake fishery, and found that currently the fishery sink rate is, on average, two to nine times slower than this recommendation in non-weighted parts of the gear down to 10 m depth, representing a clear bycatch risk.

3.1.1.2 Bird-scaring Lines

36. Both bird-scaring lines and brickle curtains are designed to act as a physical deterrent, with bird-scaring lines deterring birds from the area where baited hooks are sinking, while brickle curtains cover the hauling bay of the vessel to deter birds from becoming hooked as gear is retrieved. Night setting is also considered highly effective by avoiding key gannet foraging times. Previously, the use of bird scaring measures, night setting, and weighted lines has been defined as best practice in the southern hemisphere, reducing bird mortalities to zero in a tuna fishery in the South African EEZ (Melvin et al. 2014). This is also mirrored by a review by the Marine Directorate, highlighting bird-scaring lines, offal management, and line weighting as well evidenced measures (Marine Directorate, 2023).

37. Similar measures outlined above for longlines are also considered relevant for trawls, with key measures aimed around scaring birds away from at risk areas, reducing time nets are at the surface, and reducing attraction for seabirds to the area (Parker, 2017).

3.2 Auks (Razorbill, Puffin and Guillemot)

38. The focus of research, and in turn bycatch reduction, has largely been on longline fishery bycatch, although there is evidence to suggest that gillnet fisheries likely pose a greater risk to global seabird populations (Žydelis et al. 2013; Pott and Weidenfeld, 2017; Dias et al. 2019). For auk species reduction of bycatch efforts should be focused on static nets and midwater trawl.

3.2.1 Available Mitigation Measures

39. Mitigation measures for static nets are evidenced, with key measures generally focusing on deterring birds (e.g. through visual or acoustic deterrents). Available evidence suggests that measures such as high visibility panels on static nets, and acoustic pingers are effective at reducing bycatch of diving birds (Anderson et al. 2022).

40. Despite this, on-board observer monitoring coverage is low relative to the scale of commercial fishing, therefore bycatch monitoring and reporting is limited (Pott and Wiedenfeld, 2017). There

are established methods for monitoring, using both on-board observers and electronic monitoring methods.

41. Several studies and trials on bycatch mitigation for guillemot have been carried out. Given the scale of the bycatch issue in guillemot, the availability of potential bycatch mitigation technologies, and the need for further monitoring and research, the trialling or implementation of bycatch reduction measures is considered to be a feasible compensation measure. Monitoring of guillemot bycatch, in combination with mitigation trials where feasible, is thus technologically highly feasible.

42. Hornsea Four conducted a review of available evidence of bycatch reduction methods for guillemot and razorbill in coastal static gillnet fisheries as part of the submission document B2.8.1 Compensation measures for FFC SPA: Bycatch Reduction: Ecological Evidence (Ørsted 2021).

43. Mitigation measures most applicable for managing guillemot (and potentially applicable to razorbill and puffin as well) bycatch were identified as:

- Illumination;
- Visual net modification;
- Acoustic deterrents; and
- Above water deterrents.

44. The above water deterrent, the Looming Eyes Buoy (LEB), was identified for trial. Designed to use visual stimuli to prevent seabirds from diving near gillnets and entering high risk bycatch zones—while also aiming to minimise habituation—the device was tested in Icelandic lumpfish fisheries. However, the trial showed no difference in bycatch rates between control nets and those fitted with LEBs (Rouxel et al. 2023).

45. According to Anderson et al. (2022), there is currently no bycatch reduction technique suitable for all UK static net fisheries. Although most UK static net fisheries deploy monofilament nets, the gear used can vary between fisheries and vessels. Consequently, it is unlikely that one bycatch reduction method would be effective across all UK static net fisheries. Anderson et al. (2022) recommends conducting additional trials of bycatch reduction techniques within UK gillnet fisheries, while also suggesting the interim use of non-technical methods (e.g. time and area closures, deck lighting, offal management, night and twilight setting). For a comprehensive list of non-technical bycatch reduction methods, refer to Anderson et al. (2022).

3.3 Additional Benefits

46. The proposed measures would be highly beneficial to other seabird species reported in bycatch monitoring (gannets, auks, seaducks, divers, tubenoses). Within longline fisheries considered within Northridge et al. (2020), fulmar made up 90% of the observations of bycaught species, with a rough estimate of between 2,200 and 9,100 individuals being bycaught per annum. Those numbers were further refined in the newest study to 1,000 - 2,000 individuals per year (Northridge et al. 2023), therefore, there is certainly a potential to reduce fulmar bycatch whilst mitigating bycatch of species relevant to the Bellrock Wind Farm Infrastructure.

4 Project Review

47. Out of ten reviewed offshore wind projects that have submitting derogation case documents and compensation plans (as at end January 2026), six (Ayre, Aspen, Ossian, Caledonia, Salamander, and Sheringham Shoal and Dudgeon Extension Projects (SEP&DEP)) chose bycatch for further development as a compensation measure. MarramWind, Green Volt and Muir Mhor OWFs did not shortlist bycatch as a preferred compensation measure. Hornsea Four was suspended in May 2025, and at that time bycatch proposals had not been agreed as part of its Development Consent Order (DCO). Salamander and Ossian focus on reduction of gannet bycatch in Portuguese waters, Caledonia has not specified the sites for implementation (as at end January 2026), and Aspen has investigated collaboration with Scottish fisheries. A summary of the review is presented in **Table 4.1**.

48. Actions outlined in compensation plans and derogation cases of the projects are set out below.

4.1 Salamander and Ossian Joint Bycatch Reduction

49. The Salamander project proposes to decrease the mortality of gannet and razorbill from commercial fishing bycatch through implementing bycatch reduction techniques in Portuguese waters. The measure is proposed to be undertaken in partnership with Sociedade Portuguesa para o Estudo das Aves ("SPEA", translated in English to Portuguese Society for the Study of Birds). The proposed compensatory measure is in collaboration with the Ossian project, but the Salamander project has stated that it can also be delivered independently, if required.

50. While this measure will be implemented outside of Scotland, both Salamander and Ossian state that it will deliver benefits to Scottish breeding gannet and razorbill populations due to their *'likely presence'* within bycatch hotspots in Portuguese waters. This suggestion is based on the results of various tracking studies, but both Salamander and Ossian also intend to adjust the scale of delivery according to the proportion of birds in the region apportioned back to the UK National Site Network (NSN) and/or Scottish SPAs.

51. It is not proposed that Portuguese bycatch would be allocated to specific SPAs, but instead focussed on reducing mortality to birds originating from SPAs in Scotland and the wider UK NSN. Compensation ratios have been proposed to account for the distance of the compensation from the site of impact. Based on preliminary data of bycatch rates, minimum proposed compensation ratios are (required compensation numbers: aimed bycatch reduction numbers): razorbill: 1:6 gannet: 1:5 (RPS, 2024).

52. The incidental bycatch of seabirds, including gannet, is well documented both globally and in Portuguese waters, with the Salamander project presenting numerous references in their bycatch evidence section within the 'Report 4: HRA Derogation Case, Ecological Evidence Report' document (e.g. Ramírez et al. 2024, Calado et al. 2021, Oliveira et al. 2015, Oliveira et al. 2020,

Araújo et al. 2022, Pott and Wiedenfeld 2017, and Bradbury et al. 2017). Similar references are provided in the Ossian documentation.

53. The projects also provide several references which demonstrate that some gannets do travel from colonies in northern Europe to wintering grounds in Western Africa via Portugal (e.g. Fagundes, 2021, Elmberg et al. 2020, Araújo et al. 2022).

54. The projects provide examples of connectivity between the Bass Rock gannet population and Portuguese waters (e.g. Deakin et al. 2019, Kubetzki et al. 2009, Lane et al. 2021, Furness et al. 2018 and Fort et al. 2012). For example, tracking data from Bass Rock supports the proposition that adult and juvenile gannets from the Forth Islands SPA use Portuguese waters during their migration (Lane et al. 2021), and that adults use Portuguese waters as an over-wintering site (Deakin et al. 2019).

55. Additionally, the British Trust for Ornithology's (BTO) ringing report shows UK-breeding razorbills were recovered all along the coast of western Europe, with heavy overlap in Portuguese waters (RPS, 2024).

56. Salamander was granted Section 36 Consent in July 2025, with Scottish Ministers stating: "*The Scottish Ministers consider that the Company has provided evidence to conclude that reducing gannet bycatch in Portuguese waters has the potential to deliver the required level of benefit to gannets from Scottish SPAs to compensate for the impact of the Project identified in the AA.*" (Marine Directorate, July 2025, Derogation Case Assessment, section 12.7.1).

4.2 Caledonia

57. Caledonia undertook a pilot study in collaboration with fishing vessels in the greater Moray Firth area between April and October 2024, to assess the feasibility of data collection on bycatch in the area, as well as to collect information on the types of interaction observed between vessels and seabird species. Vessels using a range of methods (e.g. static, scallops, trawl/nephrops) were included within the pilot study. The findings of the study will be used to assist in the planning of extended monitoring in future years. The project considers itself well placed to undertake collaborative work with the fishing industry due to its longstanding relationships with the industry in the Moray Firth region.

4.3 Aspen

58. Aspen is consulting with specific fisheries working in the longline hake fishery operating in Scottish waters, with the goal of better understanding levels of current bycatch, and the feasibility of implementing bycatch mitigation measures.

59. Monitoring will be undertaken to determine the success of the measure and estimate any reductions in gannet bycatch. The success of the measure will be estimated through a comparison with non-mitigated fisheries which will be determined through either pre-implementation monitoring, or through a treatment vs control study.

60. The specific mitigation measures to be implemented will be dependent on discussions with skippers, though it is expected this is likely to include a combination of bird-scaring lines, weighted lines, night setting and/or offal management based on existing evidence and stakeholder feedback as outlined within the literature review.

61. The Developer will create a steering committee (post-consent) to discuss and advise on the details of fishing vessel identification, implementation, monitoring, reporting, and any other measures deemed necessary for the successful implementation of the gannet bycatch mitigation compensation measure. Core members are predicted to include SNCBs, fishing vessels/fisheries groups and local council(s). These discussions will inform Aspen's detailed Compensation Implementation and Management Plan and support the implementation of the measure.

4.3.1 Scottish Fisheries Perspective on Hake Longline Fishery Mitigation Approaches

62. The Aspen project (Aspen Derogation Case, 2025) engaged with Scottish fisheries through the Marine Directorate. Respondents provided the following responses with respect to potential measures in the hake longline fishery. This is considered relevant to the evaluation, as it provides an indication of the measures that may be acceptable within the fishing industry:

- Reducing deck lighting during line setting – all respondents agree this is a suitable approach;
- Bird scaring line during line setting – all respondents agree this is a suitable approach;
- Increase sink rates – some concerns over health and safety if sink rates are increased and feasibility;
- Change where discards and offal exit the vessel – predominantly agreed suitable by respondents; and
- Keep birds away from the line hauling area – all respondents agree this is a suitable approach.

4.4 Hornsea Four

63. In order to determine the most effective bycatch reduction method, the Developer commenced a bycatch reduction technology selection phase in 2021, focusing on the use of LEBs and Remote Electronic Monitoring (REMs) (Bycatch Reduction Technology Selection Phase Summary Ørsted, 2022).

64. The technology selection phase focused on the non-breeding season when high densities of guillemot and razorbill occur along the south coast of the UK and overlap with high levels of gillnetting activity.

65. Based on trials undertaken by Hornsea Four, it was estimated that implementation by these fisheries of LEBs could reduce bycatch of auks by up to approximately 25% (based on data from nine fishing boats).

66. Further LEB trials were conducted by Hornsea Four within an active UK fishery in the southwest of England, as well as by the Royal Society for the Protection of Birds in a location similar to that of Hornsea Four; the results of these trials have not yet been published. Additional trials were undertaken in Iceland's Húnaflói Bay (Rouxel et al. 2023), where seabird bycatch occurred in 214 out of 875 control nets and in 36 out of 61 LEB-equipped nets. The recorded bycatch included 48 common guillemots and 29 black guillemots. Rouxel et al. (2023) concluded that there is no evidence that LEBs accounted for any variation in seabird bycatch rates.

67. In contrast, trials carried out in the Baltic Sea found the method to be effective in deterring long-tailed ducks (Rouxel et al. 2021). A more recent study also confirmed a deterrent effect of LEBs; however, it noted that this effect diminished after approximately one month, suggesting that seaducks gradually habituate to the devices (Glemarec et al. 2024).

68. Overall, the evidence indicates that while LEBs may provide short-term deterrence in some contexts, they are unlikely to offer a reliable long-term solution for reducing seabird bycatch in static nets.

69. In addition, Hornsea Four conducted fisherman consultations in various locations in the UK to gather data on the level of bycatch of guillemot and razorbill within the UK fishing industry. In summary, the consultations concluded:

- Bycatch rate increases closer to shore;
- The bycatch rate from the UK BMP dataset is underestimated; and
- Sensitivity among fishermen regarding the disclosure of bycatch may reduce the number of recorded incidents. There is no legal requirement for fishermen to report seabird bycatch, and such events are often perceived negatively, further discouraging accurate reporting. In areas where Inshore Fisheries and Conservation Authority byelaws are in place and may be triggered by specific levels of seabird bycatch, there may also be a disincentive to report events accurately—for example, the closure of the Filey Bay gillnet fishery (Quale, 2015). Consequently, under-reporting is likely to contribute to uncertainty and potential underestimation in bycatch assessments.

70. The use of bycatch compensation was not supported in the Hornsea Four DCO determination and was not taken forward by Hornsea Four.

4.5 Sheringham Shoal and Dudgeon Extension Projects

71. SEP&DEP referred to the Hornsea Four Bycatch Reduction Technology Selection Phase trials conducted by Ørsted in 2021 and adopted solutions and recommendations from the document summarising the trial phase. An Auk bycatch reduction feasibility statement demonstrated that the latent set-net fishery capacity in southwest England could enable SEP and/or DEP to deliver on its without prejudice compensation requirements for guillemot and razorbill. If required, the necessary number of vessels could be signed up within a relatively short period (approximately one month)

for involvement in baseline data collection and the onwards implementation of the REM systems and LEBs. SEP&DEP estimated that up to five vessels would be required to deliver the necessary quantum of compensation; with the estimated number of vessels within southwest ports of the UK to be between 476 to 496 vessels, SEP&DEP was confident the necessary scale of compensation could be delivered.

72. In his decision (April 2024), the Secretary of State confirmed that compensation for guillemot (but not razorbill) was required, and that bycatch reduction would be a suitable method to deliver this compensation. It is understood that SEP&DEP is currently undertaking further research to inform implementation of this measure.

4.6 Ayre

73. The Ayre derogation case provides a desk-based review and analysis of evidence relating to gannet bycatch in UK waters, along with an assessment of available bycatch-reduction techniques matched to fishery type and geographic location. A specific bycatch-reduction method, tailored to a defined location and targeted fishery, will be identified at a later stage within the detailed compensation plan post-application.

74. The importance of collaborative working relationships with fishers for the successful development and implementation of the compensation plan is acknowledged in the Ayre derogation case. As such, the Ayre project has stated that it intends to work closely with delivery partners to prioritise engagement with fishers involved in the selected compensation measures.

75. Efficacy rates for the chosen bycatch-reduction techniques, which are required to determine the scale of delivery, will be established following a trial period during which selected methods will be tested on vessels. The number of gannets saved will be further adjusted to account for the age structure of bycaught birds, ensuring that success metrics reflect benefits specifically to the breeding population (i.e. adult birds aged five years or older).

76. The document does not rule out the implementation of measures outside the UK NSN and remains deliberately flexible in all aspects of measure design, enabling adaptation to the final outcomes of the Scottish Minister's Appropriate Assessment.

4.7 Projects Not Progressing Reduction of Bycatch

77. Projects that recently considered bycatch within their compensation plans—but ultimately did not shortlist it as a feasible measure—include Green Volt, Muir Mhor, and MarramWind (**Table 4.1**). Uncertainty around the realistic, quantifiable benefits of bycatch reduction and challenges in delivering compensation for impacted features were cited as key reasons why alternative measures were deemed more suitable for these projects' derogation cases.

78. Green Volt and MarramWind also expressed concern that establishing a robust baseline for bycatch rates in Scottish waters would require substantial, long-term effort, as current data are

limited. Developers further identified collaboration with local fishermen as a potential risk, noting a lack of confidence in securing effective and reliable working relationships to support such measures.

79. MarramWind's preferred compensation pathway to deliver ornithological compensation is through strategic mechanisms with a preference on contributing to the SMRF. However, in case this preferred route is not feasible or suitable, predator eradication/biosecurity and conservation management funding are presented in the Derogation Case as alternative delivery pathways, including detailing proposed plans for the progression of each and the potential for collaboration with other developers.

80. Compensation measures shortlisted for Green Volt include strategic funding (incorporating targeted research, pilot projects to test techniques, full-scale projects, as well as ongoing monitoring and surveillance), reduced anthropogenic impacts (disturbance reduction at SPAs), and habitat modification (reinstatement of habitat, management of invasives, scrub clearance or similar).

81. Muir Mhor's shortlisted compensation measures included artificial nesting structures (kittiwakes), mammalian predator control (kittiwake, guillemot), and disturbance reduction (all target species), although it is noted that following receipt of consultee responses the developer decided not to carry the artificial nesting structures measure forward (Muir Mhor Offshore Wind Farm Additional Information Report Chapter 4: Offshore and Intertidal Ornithology Compensation, September 2025).

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Table 4.1: Summary of Offshore Wind Farm's Existing Bycatch Reduction Proposals

Project	Document	AEoSI Features	Bycatch Mitigation Approach (Predicted Annual Mortality for Project Alone)	Other Comments	Applicability to Bellrock WFDA
Salamander	Scottish Ministers' Consideration Of The Case For A Derogation Under The Conservation RP.A.3.2 HRA Derogation Case, Compensation Plan Roadmap Salamander Offshore Wind Farm Compensation Roadmap	▪ Gannet; ▪ Kittiwake; and ▪ Seabird assemblage.	Shortlisted and taken forward to Compensation Package for gannet (2.2 - 5.2[1])	Bycatch reduction in Portuguese waters. The proposed compensatory measure is in collaboration with Ossian. Bycatch reduction will be delivered as a primary measure in Portuguese waters due to the level of evidence supporting the measure, scale of potential delivery and working relationships between NIRAS, the Salamander project, SPEA and Portuguese fishermen. If required, Scottish bycatch reduction will be pursued as adaptive management. More details are presented in **Section 4.1**.	Potentially. It is assumed that additional capacity is likely to be available. However, Bellrock would not pursue this separately, rather it would be delivered in collaboration with Salamander and Ossian if the developer is agreeable to collaboration.
Ossian	Derogation Case Appendix 2: Compensation Plan	▪ Razorbill; ▪ Kittiwake; and ▪ Gannet.	Razorbill (28.4), gannet (62.4)	The Ossian project has established a working relationship with researchers at the Scottish Oceans Institute (SOI) at the University of St Andrews. The proposed compensatory measure is in collaboration with Salamander. More details are presented in **Section 4.1**.	See above.
Caledonia	Representations Appendix 15-3 Caledonia North Compensation Plan and Site Selection Appendix 15-2 Caledonia North Compensation Long List and Short List	▪ Kittiwake; ▪ Gannet; ▪ Guillemot; and ▪ Puffin.	Shortlisted for gannet (4.48 -8.12[1]) and guillemot (124.19 - 222.16[1]).	Locations have not been defined yet. More details are presented in **Section 4.2**.	There may be opportunities to collaborate with this project, should more detailed proposals be progressed and the developer is agreeable to collaboration.

Project	Document	AEoSI Features	Bycatch Mitigation Approach (Predicted Annual Mortality for Project Alone)	Other Comments	Applicability to Bellrock WFDA
Aspen	Compensation Plan	▪ Gannet; ▪ Puffin; ▪ Kittiwake; and ▪ Guillemot.	Gannet (10.98)	The Aspen project has reached out to specific fisheries working in the longline hake fishery operating in Scottish waters, with the goal of better understanding levels of current bycatch, and the feasibility of implementing bycatch mitigation measures. The Aspen project will also continue to research trawls and static gear alongside this as a potential further or alternative measure. More details are presented in **Section 4.3**.	There may be opportunities to collaborate with this project, should more detailed proposals be progressed and the developer is agreeable to collaboration.
Hornsea Four	Hornsea Four Offshore Wind Farm Habitats Regulations Assessment Volume B2, Annex 8.2: Compensation measures for FFC SPA: Guillemot and Razorbill Bycatch Reduction: Roadmap Bycatch Mitigation Project Description Bycatch Reduction Technology Selection Phase Summary	▪ Kittiwake; ▪ Guillemot; ▪ Razorbill; and ▪ Puffin.	Guillemot (39.5) and razorbill (5)	Orsted made a decision to discontinue the Hornsea Four project in its current form, in May 2025. More details are presented in **Section 4.4**.	N/A as these measures were not progressed but see SEP&DEP below.
SEP&DEP	Annex 4 - Auk Bycatch Reduction Feasibility Statement	▪ Gannet; ▪ Guillemot; and ▪ Razorbill.	Guillemot (6) and razorbill (3)	Bycatch reduction measures to be implemented by SEP&DEP on a project-led basis in the southwest of England including REM system and LEBs. More details are presented in **Section 4.5**.	SEP&DEP is the only English project identified where bycatch measures are being progressed. These are proposed in southwest waters, so would have limited or no connectivity with the Bellrock

Project	Document	AEoSI Features	Bycatch Mitigation Approach (Predicted Annual Mortality for Project Alone)	Other Comments	Applicability to Bellrock WFDA
					Wind Farm Development Area (WFDA). However, measures may be applicable to Scottish waters or could derive benefit to the wider UK NSN and therefore may be suitable (although lower down the Defra compensation hierarchy).
Ayre	Ayre Offshore Wind Farm Derogation Case Compensation Roadmap.	▪ Gannet.	Gannet (1.47 - 2.15[1])	The specific design of the measure, including the target locations, fisheries and the specific mechanisms of delivery, will be provided post-Application.	No estimates of the potential number of gannets that could be saved from bycatch have been provided, nor have any efficacy rates for candidate bycatch-reduction techniques been presented.
Green Volt	Offshore Ornithology Compensation Report Without-Prejudice HRA Derogation Case	▪ Kittiwake; ▪ Gannet; ▪ Guillemot; and ▪ Puffin.	Bycatch was not shortlisted	Uncertain if measure would directly benefit the sites potentially impacted by the Green Volt project. There is uncertainty with respect to the intensity of high risk bycatch fishing practices being implemented within the Scottish Waters and the exact quantification of potential benefits achievable if implemented. If the measure is to be considered further by Green Volt, the next step would be to review commercial fishing practices and locations within Scottish waters to better understand the level of current bycatch.	N/A

Project	Document	AEoSI Features	Bycatch Mitigation Approach (Predicted Annual Mortality for Project Alone)	Other Comments	Applicability to Bellrock WFDA
Muir Mhor	Derogation Case Appendix A: Ornithological Compensation Plan Additional Information Report Chapter 4: Offshore and Intertidal Ornithology Compensation	▪ Puffin; ▪ Kittiwake; ▪ Guillemot; and ▪ Gannet.	Bycatch was not shortlisted	A possible collaboration to support Ligue pour la protection des oiseaux (French partner of BirdLife International) in reducing bycatch in French waters was discussed but not taken forward by Muir Mhor.	N/A
MarramWind	Derogation Case MarramWind Offshore Wind Farm	▪ Guillemot. Species included on a "without prejudice" basis: ▪ Kittiwake; ▪ Razorbill; ▪ Puffin; and ▪ Gannet.	Bycatch was not shortlisted.	The compensation measure suitability ranking presented in the MarramWind document, places bycatch reduction in the mid-range of all assessed options, with a score of 21 out of a possible maximum of 30. The measure scored relatively poorly due to data gaps relating to gannet bycatch within Scottish waters; uncertainty regarding the likelihood of securing effective collaboration with commercial fishing vessels; and the requirement for intensive baseline monitoring (which is associated with high implementation costs).	N/A
Notes: [1] Minimum and maximum values of predicted adult annual mortality derived between the relevant project and SNCB approach.					

5 Discussion and Conclusions

82. Of the species potentially requiring compensation for the Bellrock Wind Farm Infrastructure, gannet and razorbill have bycatch reduction proposals that are being actively progressed by several ScotWind leasing projects (Caledonia, Ossian, Ayre) considered in this review.

83. Measures are also well progressed for guillemot, and while compensation for this species would not be required for the Bellrock Wind Farm Infrastructure, it is considered likely that such measures could be applied to razorbill (and potentially also puffin) given the broad ecological similarity between these species. A summary of the current position in relation to the four species for which compensation may be required is provided below.

5.1 Gannet

84. In UK waters, gannet bycatch is well documented. Northridge et al. (2020) estimated that several hundred gannets are caught each year, primarily in static net and demersal longline fisheries. More recent analysis by Kingston et al. (2023) places the estimate at between 50 and 150 gannets bycaught annually in UK longline fisheries targeting hake.

85. Longlines are currently considered the highest priority for bycatch reduction, considering absolute numbers of birds likely to be bycaught and possible population-scale impacts. Long-line bycatch is well studied worldwide, and well-designed solutions are in place reporting reducing bycatch up to 98% (tori lines, hook-shielding, line weighting), therefore there are existing effective solutions available for addressing bycatch in Scotland. Within their report on potential actions to support recovery of seabird populations in Scotland, NatureScot note that there is scope to reduce bycatch of gannet in longline fisheries in Scottish waters (Furness et al. 2024).

86. The Salamander and Ossian projects have well progressed compensation proposals developed for gannet, based on management of Portuguese fisheries. Aspen and Ayre appear to be developing measures based in Scottish waters, but limited detail is available at present. Overall, there is good evidence that bycatch management for gannet would be effective.

5.2 Kittiwake

87. During surveys conducted under the BMP in 2016 and 2017, a single kittiwake bycatch incident was recorded in longline gear (Northridge et al. 2020). The authors estimated that annual bycatch could amount to several tens of individuals. Based on the available evidence, kittiwake bycatch appears to be largely incidental. Even with increased monitoring coverage, it would likely remain challenging to identify specific fisheries for targeted mitigation or to determine the most effective measures for reducing kittiwake bycatch. There is no available evidence to indicate that bycatch is significantly affecting kittiwake populations, and therefore it is unlikely that bycatch reduction would be an effective compensation measure. It is therefore considered unlikely that kittiwake bycatch reduction could be effectively delivered as a compensatory measure.

5.3 Razorbill

88. There is currently limited development of bycatch mitigation targeted specifically at razorbill. However, it is recognised that this species is vulnerable to bycatch and given the broad ecological similarity to guillemot (which is a more numerous breeding species in the UK, outnumbering razorbills by approximately 6:1) it is likely that measures for guillemot would also be effective for razorbill.

89. Trials conducted by Ørsted demonstrated a 25% reduction in guillemot bycatch in gillnet fisheries. Given the ecological and behavioural similarities between guillemots and razorbills, a comparable benefit in bycatch reduction for razorbills is anticipated, although it has not yet been quantified. However, there is uncertainty whether this method will be effective for razorbills as none were bycaught during trials conducted by Ørsted, however, the reason for it (whether lack of razorbills in the area, or the effective performance of LEBs) is unclear. According to Northridge et al. (2020) approximately 100 - 200 razorbills are bycaught each year, primarily in static net fisheries and midwater trawls. Although this number is relatively small, it is broadly comparable to the equivalent bycatch rate for guillemot (1,500 - 2,500 individuals; Northridge et al. 2020), taking into account the relative population size.

90. It is therefore considered that bycatch reduction could be an effective compensatory measure for razorbill.

5.4 Puffin

91. Puffins were not recorded as bycatch in the UK-based studies, preventing any quantification of potential benefits from this measure, although there is a potential that some benefit could be provided through measures for the other auk species. It is noted that the bycatch monitoring effort of the fisheries in the UK covers around 1% of the fishing activities. Therefore, uncertainty around the estimates is highlighted across the literature and projects, with experts suspecting the estimates to be rather underestimated. It is, however, likely that any measure would be primarily effective during the breeding season, as this species winters over a very wide area in the eastern Atlantic.

92. Given the uncertain benefits, bycatch reduction is not proposed for this species.

5.5 Outline Delivery Roadmap

93. In the event that it is agreed that bycatch is to be progressed as a compensation measure for the Bellrock Wind Farm Infrastructure, the outline steps for delivery would include:

- Consultation with relevant stakeholders (including SNCBs and fisheries specialists) to further inform the development of appropriate measure(s);
- Identification of fisheries where bycatch of target seabird species is likely to contribute significantly to mortality at a regional or national level, and confirm those most suitable for delivery of the compensation measure;

- Establish baseline bycatch mortality at selected fisheries, through review of existing available data and/or implementation of specific fisheries monitoring;
- Work with fisheries to trial bycatch reduction measures (e.g. above water deterrents) to confirm efficacy (noting that it is expected that this would start to contribute to mortality reduction);
- Review trial results with stakeholders and agree implementation and monitoring plan for delivery of agreed method(s);
- Implement and monitor agreed bycatch reduction measures; and
- Review monitoring results and implement adaptive management if required.

94. An example timeline for delivery is set out below in **Table 5.1**.

Table 5.1: Example Timeline for Delivery

Stage	Timeframe
Stakeholder consultation and fisheries review	2026-2027
Selection of target fisheries and baseline bycatch monitoring	2027-2028
Trials of bycatch reduction method(s) and agree measures to be implemented with stakeholders	2028-2029
Implementation of agreed bycatch reduction measures and monitoring	2030 onwards
Review and adaptive measures (if required)	Ongoing thereafter

5.6 Conclusion

95. Reducing bycatch as a compensation measure has been adopted by several OWF projects, focusing either on longline or gillnet fisheries, depending on the target species. As evidenced by a review of recent OWF applications in Scotland and England, although the scale of implementation is not always detailed in compensation plans submitted at the application stage, a common conclusion has emerged; given the available annual bycatch estimates (which are likely to be underestimated) there is likely to be sufficient scope for projects to compensate for potential effects. An additional benefit of bycatch reduction targeting specific species is the concurrent decrease in mortality of other bycaught species for which no AEoSI has been identified, such as fulmar (the most frequently bycaught species in UK waters), seaducks, divers, cormorants, and shearwaters.

96. Bycatch reduction is therefore considered to be a potentially suitable compensation measure for the Bellrock Wind Farm Infrastructure for gannet and razorbill, although there is insufficient evidence for the inclusion of kittiwake or puffin at this stage.

97. The Applicant considers that delivery of bycatch reduction at a project level is unlikely to be feasible. However, it is considered that effective bycatch reduction measures in commercial fisheries could be achieved through collaboration with other OWF projects.

98. Accordingly, the Applicant has retained this measure as an option for compensation delivery and will continue discussions with other offshore wind projects over potential collaborative initiatives.

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