Salamander Offshore Wind Farm

Offshore Application: HRA Derogation Case, Compensation Plan Roadmap

Volume RP.A.3, Report 2: HRA Derogation Case, Compensation Plan Roadmap

SALAMANDER

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Document Title:	Salamander Offshore Wind Farm HRA Derogation Case, Compensation Plan Roadmap
Document no:	08614145
Project:	Salamander Offshore Wind Farm
Revision	00
Originator	Salamander Wind Project Company and NIRAS
Date	April 2024

Revision History:

Revision	Date	Status	Originator	Reviewed	Approved
00	19 April 2024	Final	Salamander Wind Project Company and NIRAS	Salamander	Hugh Yendole

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Glossary

Term	Definition
Applicant	Salamander Wind Project Company Limited (formerly called Simply Blue Energy (Scotland) Limited), a joint venture between Ørsted, Simply Blue Group and Subsea7.
Appropriate Assessment (AA)	An assessment to determine the implications of a plan or project on a European site in view of the site's Conservation Objectives. An AA forms part of the Habitats Regulations Appraisal and is required when a plan or project is likely to have a significant effect on a European site.
Compensation / Compensatory Measures	The term compensatory measures is not defined in the Habitats Regulations. Compensatory measures are however, considered to comprise those measures which are independent of the project, (including any associated mitigation), and are intended to offset the negative effects of the plan or project so that the overall ecological coherence of the UK site network is maintained.

Term	Definition
Competent Authority	The term derives from the Habitats Regulations and relates to the exercise of the functions and duties under those Regulations. Competent authorities are defined in the Habitat Regulations as including "any Minister, government department, public or statutory undertaker, public body of any description or person holding a public office". In the context of a plan or project, the competent authority is the authority with the power or duty to determine whether or not the proposal can proceed (SNH, 2014).
European site	A Special Area of Conservation (SAC) or candidate SAC (cSAC), a Special Protection Area (SPA) or a site listed as a Site of Community Importance (SCI). Proposed SPAs (pSPAs) and proposed SACs (pSACs) also afforded the same protection as European sites (Scottish Government, 2015[1]) as are Ramsar sites where they overlap with an SPA or SAC. European offshore marine sites are also referred to as “European sites” for the purposes of this document.
de minimis	That which is regarded as so insignificant as to be unworthy of attention with a defined limit or threshold based on this. This term should be interpreted in context.
Favourable Conservation Status	For the purposes of the Habitat’s Regulations these have the meanings as defined in the Habitats Directive (Article 1(e) and 1(i)), the conservation status of a natural habitat is be taken as “favourable“ when: • its natural range and areas it covers within that range are stable or increasing, and; • the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and; • the conservation status of its typical species is favourable as defined in Article 1(i). • Article 1(i) The conservation status will be taken as „favourable“ when: • population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and; • the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and; • there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

[1] Scotland's National Marine Plan - gov.scot (www.gov.scot)

Term	Definition
Habitats Directive	European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Habitats Regulations	The Conservation (Natural Habitats, &c.) Regulations 1994 (As Amended); The Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017.
Habitats Regulations Appraisal (HRA)	A process which helps determine likely significant effects and (where appropriate) assesses adverse impacts on the integrity of European sites. The process consists of up several sequential stages , which include : screening for LSE, appropriate assessment to determine AEoI, assessment of alternative solutions, assessment of imperative reasons of over-riding public interest (IROPI) and compensatory measures.
HRA derogation provisions	The sequential legal tests that must be met if a Competent Authority is to agree to a project notwithstanding a negative assessment of the implications for a European site. This consists of a 3-step process where first it must be demonstrated that no feasible alternative solutions to the project exist, secondly that there are imperative reasons of overriding public interest for the project to proceed and finally that suitable compensatory measures are secured that preserve the coherence of the site network.
Highly Pathogenic Avian Influenza	Virus that has resulted in an outbreak in seabirds.
In-Combination Effect	The effect of the Salamander Project in-combination with the effects from other plans and projects on the same feature/receptor.
Natura 2000 Network	A coherent European ecological network of Special Areas of Conservation and Special Protection Areas comprising sites located within European Union Member States. This term is now superseded in the UK context by the term 'UK site network'.
Net zero by 2045 commitment	The Scottish governments legally binding target of achieving net zero greenhouse gas emissions by 2045, set out in the Climate Change (Scotland) Act 2009 as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Scottish Government, 2009; 2019b).
Offshore Array Area	The offshore area within which the wind turbine generators, foundations, mooring lines and anchors, and inter-array cables and associated infrastructure will be located.
Report to Inform Appropriate Assessment	The information provided by the Applicant to support the Competent Authority carrying out the Appropriate Assessment and wider HRA. This is has been provided alongside other application documents. (**Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**).

Term	Definition
Offshore Development	The entire Offshore Development, including all offshore components of the Project (WTGs, Inter-array and Offshore Export Cable(s), floating substructures, mooring lines and anchors, and all other associated offshore infrastructure) required across all Project phases from development to decommissioning, for which the Applicant is seeking consent.
Salamander Project	The proposed Salamander Offshore Wind Farm. The term covers all elements of both the offshore and onshore aspects of the project.
Salamander Wind Project Company Ltd	Salamander Wind Project Company Limited (formerly called Simply Blue Energy (Scotland) Limited), a joint venture between Ørsted, Simply Blue Group and Subsea7.
Special Area of Conservation (SAC)	Strictly protected sites designated pursuant to Article 3 of the Habitats Directive (via the Habitats Regulations) for habitats listed on Annex I and species listed on Annex II of the directive.
Special Protection Area (SPA)	Strictly protected sites designated pursuant to Article 4 of the Birds Directive (via the Habitats Regulations) for species listed on Annex I of the Directive and for regularly occurring migratory species.
UK Site Network	The network of European Sites in the UK. Prior to the UK's exit from the EU these sites formed part of the EU ecological network known as "Natura 2000".
WTG Footprint Area	The area of sea surface occupied by the infrastructure at or above sea level (i.e. the WTGs and associated floating substructure).

Acronyms

Term	Definition
AA	Appropriate Assessment
AEOI	Adverse Effect on Integrity
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
EU	European Union

Term	Definition
HPAI	Highly Pathogenic Avian Influenza Virus
HRA	Habitats Regulations Appraisal
IROPI	Imperative Reasons of Overriding Public Interest
km	kilometres
MD-LOT	Marine Directorate – Licensing Operations Team
RIAA	Report to Inform an Appropriate Assessment
SAC	Special Areas of Conservation
SMP-OWE	Sectoral Marine Plan for Offshore Wind Energy
SNCB	Statutory Nature Conservation Body
SNH	Scottish Natural Heritage now NatureScot
SPA	Special Protection Area
UK	United Kingdom

1 Introduction

1.1 Background

1.1.1.1 The Applicant, Salamander Wind Project Company Limited (SWPC) a joint venture (JV) partnership between Orsted, Simply Blue Group and Subsea7, is proposing the development of the Salamander Offshore Wind Farm (hereafter 'Salamander Project'). The Salamander Project will consist of the installation of a floating offshore wind farm (up to 100 megawatts (MW) capacity) approximately 35 kilometres (km) east of Peterhead. It will consist of both offshore and onshore infrastructure, including an offshore generating station (wind farm), export cables to landfall, energy balancing infrastructure (EBI) and connection to the electricity transmission network, however the Derogation Case (**Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3**) and this report are only relevant to the Offshore Development of the Salamander Project. Full details of the project are available in the EIAR (**Volume ER.A.2, Chapter 4: Project Description**).

1.1.1.2 As part of the Offshore Development application process required for the Salamander Project, Scottish Ministers are required to carry out a Habitats Regulation Appraisal (HRA), to assess the Salamander Project's impact upon European Sites. The Onshore Development aspects will be subject to a separate application process and will be accompanied by an Onshore RIAA. To inform the Scottish Minister's HRA the Offshore Report to Inform Appropriate Assessment (RIAA) (**Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**) was prepared in support of the Application. The Offshore RIAA draws on the Screening Report (SBES, 2023), together with consultee feedback to provide context to the Appropriate Assessment and to determine if offshore aspects of the Salamander Project will have an adverse effect on integrity (AEOI) for any European site, either alone or in-combination. Appendix A 'Update to Stage 3 Screening for Assessment in Stages 4 and 5' of the Offshore RIAA presents a summary of all sites and features assessed in further detail.

1.1.1.3 Where the Scottish Ministers cannot rule out an Adverse Effect on the Integrity (AEOI) of a European Site they may only proceed to authorise that project in line with the HRA derogation provisions. These require that firstly there are no feasible alternatives to the project, secondly that there are Imperative Reasons of Overriding Public Interest (IROPI) in proceeding with the project and lastly that any compensatory measures necessary to ensure the overall coherence of the UK site network are secured. Engagement and feedback from Marine Directorate - Licensing and Operations Team (MD-LOT) and NatureScot on the offshore aspects of the Salamander Project as well as public domain information for other projects in planning application stages initially informed the decision for the Salamander Project to prepare a derogation case without prejudice to the as yet unknown HRA conclusions of Scottish Ministers. To ensure that Scottish Ministers have the necessary information available should they require it, a derogation case has been prepared by consisting of the HRA Derogation Case, Part 1-3 (**Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3**) which addresses alternatives (Part 2, of the report) and IROPI (Part 3, of the report) as well as this document, the HRA Derogation case, Compensation Plan Roadmap **(Volume RP.A.3, Report 2: HRA Derogation Case, Compensation Plan Roadmap)** which addresses how the Applicant intends to proceed with securing compensatory measures, where required.

1.1.1.4 The Applicant's assessment conclusions indicate that there are several instances where AEOI cannot be ruled out beyond all reasonable scientific doubt for certain sites when considering the effects of the Salamander Project's Offshore Development in-combination with other projects (**Section 1.1**). Where this applies the Applicant accepts that the Scottish Ministers will need to apply the HRA derogation provisions in respect of these sites in order to determine the Application. The Applicant has also sought to identify and include all other impacts on sites and species, that Scottish Ministers may deem necessary to apply the HRA derogation provisions to, notwithstanding the conclusion of the Offshore RIAA that there would be no AEOI

of these sites **(**Section 11 and 13, **Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment).** The Applicant firmly maintains these assessment conclusions represent a realistic and precautionary assessment of the potential impacts of the offshore aspects of the Salamander Project based on the latest available evidence. Where such site impacts are included within this document, it is on the understanding that this information is provided without prejudice to the HRA conclusions of the Scottish Ministers and conclusions of the Applicants Offshore RIAA and in order to facilitate and expedite a timely determination process.

1.2 Content and Structure

1.2.1.1 This report should be read in conjunction with the HRA Derogation Case, Part 1-3 **(Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3)**, Along with the Alternatives and IROPI cases, the Derogation Case, Part 1-3 also presents additional detail regarding the legal framework and process as well as the guidance and case law that has been considered of relevance (Part 1, of the report). This information is not repeated within this document in order to reduce duplication and report length.

1.2.1.2 In certain instances, some degree of duplication of information has been deemed necessary where the detail is central to the purpose of the report and is retained so as to aid interpretation and navigation by the reader. This primarily relates to the summaries provided regarding predicted impacts.

1.2.1.3 The purpose of this report is to provide the following relevant information for Scottish Ministers:

- A summary and quantification of the effects of the offshore aspects of the Salamander Project on European sites that may require compensation (**Section 2**);
- Description of the aims and objectives of the compensation (**Section 3)**;
- Description of the process for identifying feasible compensatory measures (**Section 4**);
- A shortlist of the options for compensation measures as well as the evidence to support them (**Section 5**); and
- A road map for the refinement of the shortlisted measures into a full Compensation Plan to be submitted to Scottish Ministers (**Section 6**).

1.2.1.4 The above structure and content follow in line with other recent examples in the Scottish context, as well as guidance deemed relevant to the development of the report, including the DTA advice note to Marine Scotland: Framework to evaluate ornithological compensatory measures for offshore wind (2021) and Defra's Best practice guidance for developing compensatory measures in relation to marine protected areas (2021). There is no published guidance from Scottish Ministers on HRA compensatory measures available at the time of writing this report.

1.3 Road map process

1.3.1.1 In consideration of the specific needs case of the Salamander Project (Section 10, **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3**) and with the agreement of MD-LOT and NatureScot (meeting held October 2023), the Applicant has prepared this compensation plan roadmap to address the potential compensation requirements associated with the Salamander Project Offshore Development at a high level and outline further steps necessary to demonstrate that appropriate measures can be secured. The Applicant recognises that further engagement and supplementary information will be necessary post submission but before the Application is determined by MD-LOT.

2 Quantifying Effects on Conservation Objectives

2.1 Introduction

2.1.1.1 The Offshore RIAA (**Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**) provides the information to inform an Appropriate Assessment (AA) for all the sites and features screened in. The results of screening are presented in the Offshore RIAA Appendix A: 'Update to Stage 3 Screening for Assessment in Stages 4 and 5', with the conclusions of the assessment presented in Section 13 of the Offshore RIAA. The assessment is made on the basis of defined parameters (to inform the approach to assessing collision risk and distributional response), to provide the Applicant's approach and the SNCB approach, with these parameters defined in Sections 7.2.2 and 7.2.8 of the Offshore RIAA. In addition, for the in-combination assessment only, further scenarios are included to allow for a with and without Berwick Bank scenario (as requested by NatureScot, see Table 1-2 of the Offshore RIAA.

2.1.1.2 The conclusions of the Offshore RIAA are based on the Applicant's approach, with the SNCB's approach provided within the Offshore RIAA without prejudice. The conclusions for the Offshore RIAA for the Salamander Project alone are for no adverse effect on integrity (AEOI) in all cases regardless of the approach to assessment. However, in-combination the assessment was not able to conclude no AEOI beyond all reasonable scientific doubt when considering all defined assessment parameters or assessment scenarios. How those conclusions are incorporated into this report are defined as follows (with respect to the offshore aspects of the Salamander Project):

- **Full Derogation Case**: where the Salamander Project concludes >1 individual birds per annum for the Salamander Project alone based on the Applicant's approach and the assessment cannot conclude no AEOI in-combination, the site and species progresses to a full Derogation Case;
- **Without Prejudice Derogation Case**: two potential triggers for inclusion in the without prejudice case. These are firstly: where the Salamander Project concludes >0 individual birds per annum under any assessment scenario and AEOI cannot be ruled out in at least one assessment scenario, whether the Applicants and/or the SNCB approach with or without Berwick Bank (and is not covered under the full Derogation Case). Secondly: where the Salamander Project concludes >0 individual birds per annum, and the site/species is already subject to a derogation case in the public domain, regardless of the conclusions of the Salamander Project Offshore RIAA.

2.1.1.3 A *de minimis* case is put forward where the contribution from the offshore aspects of the Salamander Project is <1 individual per annum, with that reflected in the inclusion of these sites/species in the without prejudice case only, with further information provided in Section 11.2 of the Offshore RIAA.

2.1.1.4 The projects with a public domain derogation case (as of the time of writing, April 2024) that include one or more of the sites and features where the Salamander Project has potential to contribute to an in-combination effect are Berwick Bank (SSE Renewables, 2022a and 2023), Green Volt (Green Volt, 2023) and West of Orkney (West of Orkney, 2023). All three projects are pending a decision and therefore the final position as regards conclusions on AEOI has yet to be determined by the Competent Authority. Further, it should be noted that should the conclusion in the Appropriate Assessment be an AEOI, and that compensation is required, that would reduce the in-combination totals applied in the Offshore RIAA (**Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment)** and potentially reduce the risk of an AEOI as a consequence of subsequent projects including the Salamander Project (for example Project A may contribute 50 individuals of a species to the in-combination totals which are compensated for and removed from the in-combination totals, with the subsequent Project B having a contribution of 5 that are not considered adverse).

2.1.1.5 It is noted that a number of additional sites and species are included in at least one of the three referenced derogation cases submitted by the projects referenced above (Berwick Bank, Green Volt and West of Orkney) but not included here for the Salamander Project. These relate to sites and species that have not been screened in for assessment by the Salamander Project (Appendix A: 'Update to Stage 3 Screening for Assessment in Stages 4 and 5' within the Offshore RIAA **Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment)** or where zero birds have been apportioned to that site during assessment (**Volume RP.A.2, Report 1: Apportioning Report**). Those sites and species are not considered further within this report, but are listed below for reference:

- East Caithness Cliffs SPA and great black-backed gull *Larus marinus* (not screened in for the Salamander Project);
- East Caithness Cliffs SPA and Atlantic puffin *Fratercula arctica* (hereafter puffin) (not screened in for the Salamander Project);
- Forth Islands SPA and guillemot *Uria aalge* (not screened in for the Salamander Project);
- Fowlsheugh SPA and guillemot (zero birds apportioned for the Salamander Project);
- St Abbs Head to Fast Castle SPA and guillemot (not screened in for the Salamander Project);
- St Abbs Head to Fast Castle SPA and razorbill *Alca torda* (not screened in for the Salamander Project);
- Sule Skerry and Sule Stack SPA and guillemot (not screened in for the Salamander Project); and
- Sule Skerry and Sule Stack SPA and black-legged kittiwake *Rissa tridactyla* (hereafter referred to as kittiwake) (not screened in for the Salamander Project).

2.2 The Sites and Species

2.2.1.1 The full derogation case consists of four sites, all of which have a potential AEOI on kittiwake when considered in-combination with other plans and projects under the Applicant's approach to assessment.

2.2.1.2 The without prejudice derogation case consists nine sites, for kittiwake, razorbill, gannet or puffin. Where the Offshore RIAA concluded AEOI under any assessment scenario (or concluded no AEOI on the basis of a *de minimis* case) that is summarized in Table 11-109 in the Offshore RIAA.

2.2.1.3 The sites and species referenced above are summarised in **Table 2-1** below, including comment regarding the conclusion drawn in the Offshore RIAA (**Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**) together with the number of birds apportioned from the Salamander Project (per annum) to that site.

Table 2-1 Sites and features included within the derogation case (full and without prejudice) accompanying the application for the Salamander Project's Offshore Development (grey shading indicates triggers for inclusion, purple for full status and green for without prejudice).

Site	Species	Included in an Existing Derogation Case			Annual Adult Mortality (Applicant's Approach)	Annual Adult Mortality (SNCB approach)	RIAA conclusion based on the Applicants' Approach	RIAA conclusion based on the high SNCB Approach?	Full Derogation Case	Without prejudice Derogation Case
		West of Orkney	Berwick Bank	Green Volt						
Buchan Ness to Collieston Coast SPA	Kittiwake	No	**Yes**	**Yes**	9.0	11.9-19.7	**AEOI in-combination**	**AEOI in-combination**	**Yes**	n/a
East Caithness Cliffs SPA	Razorbill	No	**Yes**	**Yes**	0.08	0.1-0.3	No AEOI	No AEOI	No	**Yes**
	Kittiwake	**Yes**	**Yes**	**Yes**	1.4	1.9-3.1	No AEOI	**AEOI in-combination**	No	**Yes**
Farne Islands SPA	Kittiwake (Assemblage Qualification)	No	**Yes**	No	0.1	0.2-0.3	No AEOI	No AEOI	No	**Yes**
Forth Islands SPA	Kittiwake	No	**Yes**	No	0.2	0.3-0.4	No AEOI	No AEOI	No	**Yes**
	Gannet	No	**Yes**	**Yes**	1.6	2.0-3.8	No AEOI	No AEOI	No	**Yes**
	Puffin	No	**Yes**	No	0.6	3.8	No AEOI	No AEOI	No	**Yes**
Fowlsheugh SPA	Kittiwake	No	**Yes**	**Yes**	1.9	2.5-4.1	**AEOI in-combination**	**AEOI in-combination**	**Yes**	n/a

Site	Species	Included in an Existing Derogation Case			Annual Adult Mortality (Applicant's Approach)	Annual Adult Mortality (SNCB approach)	RIAA conclusion based on the Applicants' Approach	RIAA conclusion based on the high SNCB Approach?	Full Derogation Case	Without prejudice Derogation Case
		West of Orkney	Berwick Bank	Green Volt						
	Razorbill	No	**Yes**	No	0.4	1.5-2.5	No AEOI	**AEOI in-combination**	No	**Yes**
Hermaness Saxa Vord & Valla Field SPA	Gannet	No	**Yes**	**Yes**	0.6-1.3	0.7-1.4	No AEOI	No AEOI	No	**Yes**
North Caithness Cliffs SPA	Kittiwake	**Yes**	No	No	0.2	0.3-0.5	No AEOI	No AEOI	No	**Yes**
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	No	No	No	The Conservation and Management Advice (NatureScot and JNCC, 2022) states that 'No site-reference population is set for kittiwake at the Outer Firth of Forth and St Andrews Bay Complex SPA due to the turnover of kittiwakes within the foraging area. For breeding kittiwake, when assessing plans or projects, the population impact should be considered in relation to the site reference populations for the above SPAs' (the named SPAs being Buchan Ness to Collieston Coast SPA, Forth Islands SPA, Fowlsheugh SPA, St Abb's Head to Fast Castle SPA and Troup Pennan and Lion's Head SPA). Therefore the requirement for compensation at the Outer Firth of Forth and St Andrews Bay Complex SPA is addressed here with respect to these breeding SPAs.				**Yes**	n/a
	Gannet	No	**Yes**	No	The Conservation and Management Advice (NatureScot and JNCC, 2022) states that 'No site-reference population is set for gannet at the Outer Firth of Forth and St Andrews Bay Complex SPA due to the turnover of gannets within the foraging area. For breeding gannet, when assessing plans or projects, the population impact should be considered in relation to the site reference				No	**Yes**

Site	Species	Included in an Existing Derogation Case			Annual Adult Mortality (Applicant's Approach)	Annual Adult Mortality (SNCB approach)	RIAA conclusion based on the Applicants' Approach	RIAA conclusion based on the high SNCB Approach?	Full Derogation Case	Without prejudice Derogation Case
		West of Orkney	Berwick Bank	Green Volt						
					populations for the Forth Islands SPA'. Therefore the requirement for compensation at the Outer Firth of Forth and St Andrews Bay Complex SPA is addressed here with respect to that breeding SPA.					
St Abb's Head to Fast Castle SPA	Kittiwake	No	**Yes**	No	0.2	0.3-0.4	No AEOI	No AEOI	No	**Yes**
Troup Pennan and Lion's Head SPA	Kittiwake	No	**Yes**	No	3.0	3.9-6.5	**AEOI in-combination**	**AEOI in-combination**	**Yes**	n/a
	Razorbill	No	No	**Yes**	0.3	0.9-1.6	No AEOI	No AEOI	No	**Yes**

2.3 Potential Impact on the Coherence of the UK Site Network

2.3.1.1 The number of birds requiring compensation is summarised in **Table 2-2** below, with the total number per species across all full derogation case sites provided, followed by the total number per species for all sites. No seabirds have been apportioned to the Outer Firth of Forth and St Andrews Bay Complex SPA as there is no site reference population, and therefore that SPA is not included in **Table 2-2**. Population impacts are instead considered in relation to the site reference populations at the relevant functionally linked SPAs (in line with NatureScot and JNCC, 2022).

Table 2-2 Quantification of the number of birds potentially requiring compensation

Species	Site	Full or Without Prejudice Derogation Case	Number Requiring Compensation	
			Applicant's Approach	*SNCB Approach*
Kittiwake	Buchan Ness to Collieston Coast SPA	Full Derogation Case	9.0	11.9-19.7
	East Caithness Cliffs SPA	Without Prejudice Derogation Case	1.4	1.9-3.1
	Farne Islands SPA	Without Prejudice Derogation Case	0.1	0.2-0.3
	Forth Islands SPA	Without Prejudice Derogation Case	0.2	0.3-0.4
	Fowlsheugh SPA	Full Derogation Case	1.9	2.5-4.1
	North Caithness Cliffs SPA	Without Prejudice Derogation Case	0.2	0.3-0.5
	St Abb's Head to Fast Castle SPA	Without Prejudice Derogation Case	0.2	0.3-0.4
	Troup Pennan and Lion's Head SPA	Full Derogation Case	3.0	3.9-6.5
	Total for the species for the full Derogation Case		*13.9*	*18.3-30.3*
	Total for the species across all sites		*16.0*	*21.3-35*
Razorbill	East Caithness Cliffs SPA	Without Prejudice Derogation Case	0.08	0.1-0.3
	Fowlsheugh SPA	Without Prejudice Derogation Case	0.4	1.5-2.5

Species	Site	Full or Without Prejudice Derogation Case	Number Requiring Compensation	
			Applicant's Approach	*SNCB Approach*
	Troup Pennan and Lion's Head SPA	Without Prejudice Derogation Case	0.3	0.9-1.6
	Total for the species for the full Derogation Case		*Zero*	*Zero*
	Total for the species across all sites		*0.78*	*2.5-4.4*
Gannet	Forth Islands SPA	Without Prejudice Derogation Case	1.6	2.0-3.8
	Hermaness, Saxa Vord & Valla Field SPA	Without Prejudice Derogation Case	0.6-1.3	0.7-1.4
	Total for the species for the full Derogation Case		*Zero*	*Zero*
	Total for the species across all sites		*2.2-2.9*	*2.7-5.2*
Puffin	Forth Islands SPA	Without Prejudice Derogation Case	0.6	3.8
	Total for the species for the full Derogation Case		*Zero*	*Zero*
	Total for the species across all sites		*0.6*	*3.8*

2.3.1.2 It is important to note that the Habitats Regulations (as referenced in Section 1.6 of the Offshore RIAA **Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**) do not require that compensation secures the coherence of the European site which is adversely affected but refer explicitly to the "overall coherence" of the "network". The ordinary and natural meaning of the text in the Habitats Regulations therefore is that the compensatory measures must protect the overall coherence of the network, not the site which is adversely affected.

2.3.1.3 Such an interpretation aligns with the text found in the Article 6(4) of the Habitats Directive: "If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted." Additional information is provided in Section 3 of **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3.**

2.3.1.4 The conservation objectives for each site and species are considered in **Table 2-3**. That information is presented first for the sites and species within the full derogation case and followed by the sites and species

within the without prejudice derogation case. With respect to the sites and species included on a without prejudice basis, the position of the Applicant is that, there is no potential for an AEOI alone or in-combination with respect to these sites and species. This conclusion is drawn from the Applicant's approach to assessment which the Applicant firmly upholds as representing the most robust approach (section 7.2 of the Offshore RIAA provides further detail **Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**). However, these sites are included here as a 'without prejudice' case, should the Competent Authority determine that an AEOI cannot be ruled out.

Table 2-3 Conservation objectives for the sites and species

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
Full Derogation Case					
Buchan Ness to Collieston Coast SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 33 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.	Avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained. 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 - No significant disturbance of the species	The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of kittiwake within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of kittiwake as a result of distributional response and/or collision. This impact pathway has the potential to affect the conservation objective to maintain the population of kittiwake as a viable component of the site.	Compensation will be achieved by providing additional adult recruits and/or reducing mortality of kittiwakes, to compensate for those that may be lost as a result of the Salamander Project.
Fowlsheugh SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 91 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.			
Troup Pennan SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 54 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.			

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
Outer Firth of Forth & St Andrews Bay Complex SPA (NatureScot and JNCC, 2022)	Kittiwake	The Offshore Array Area is 131 km from the SPA. There is no site reference population of kittiwake for the SPA, with impacts to breeding kittiwake at the SPA instead considered in relation to the functionally linked SPAs .	To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting the following objectives for each qualifying feature: - **The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA** - The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species - The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA The condition of kittiwake at the Outer Firth of Forth and St Andrews Bay Complex SPA is	The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of kittiwake within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of kittiwake as a result of distributional response and/or collision. This impact pathway has the potential to affect the conservation objectives to a) ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status and b) ensure that the population of kittiwake is a viable component of the Outer Firth of Forth and St Andrews Bay Complex SPA.	Compensation will be achieved by providing additional adult recruits and/or reducing mortality of kittiwakes, to compensate for those that may be lost as a result of the Salamander Project. Compensation for kittiwake at the SPA will therefore be delivered by compensation with respect to the relevant functionally linked SPAs.

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
			considered to be unfavourable and consequently, the Conservation Objectives seek to restore favourable condition. - Ensure breeding kittiwake have the ability to recover at the relevant SPA breeding colonies - Ensure kittiwake within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons - Ensure kittiwake can move safely between the site and important areas of functionally linked land outwith the site		
Without Prejudice Derogation Case					
East Caithness Cliffs SPA (NatureScot 2023a)	Razorbill	The Offshore Array Area is 134 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.	Avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained. To ensure for the qualifying species that the following are maintained in the long term:	The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of razorbill within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of	Compensation will be achieved if required by providing additional adult recruits and/or reducing mortality

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
Fowlsheugh SPA (NatureScot 2023a)	Razorbill	The Offshore Array Area is 91 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.	- **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 - No significant disturbance of the species	habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of razorbill as a result of distributional response. This impact pathway has the potential to affect the conservation objective to maintain the population of razorbill as a viable component of the site, with a requirement for compensation if the Competent Authority considers that AEOI cannot be ruled out (noting that under the Applicant's approach a conclusion of no AEOI was drawn).	of razorbill, to compensate for those that may be lost as a result of the Salamander Project.
Troup, Pennan and Lion's Heads SPA (NatureScot, 2023a)	Razorbill	The Offshore Array Area is 54 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.			
East Caithness Cliffs SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 134 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.		The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of kittiwake within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species.	Compensation will be achieved if required by providing additional adult recruits and/or reducing mortality of kittiwakes, to compensate for those that may be lost as a result of the
Forth Islands SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 172 km from the SPA. Potential for impact will only occur as a result of individuals			

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
		from the colony occurring in the area (or vicinity) of the Offshore Array Area.		The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of kittiwake as a result of distributional response and/or collision. This impact pathway has the potential to affect the conservation objective to maintain the population of kittiwake as a viable component of the site, with a requirement for compensation if the Competent Authority considers that AEOI cannot be ruled out (noting that under the Applicant's approach a conclusion of no AEOI was drawn).	Salamander Project.
North Caithness Cliffs SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 147 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.			
St Abb's Head to Fast Castle SPA (NatureScot, 2023a)	Kittiwake	The Offshore Array Area is 192 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.			
Farne Islands SPA (Natural England, undated)	Kittiwake	The Offshore Array Area is 216 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.	Subject to natural change, ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:		

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
			- The extent and distribution of the habitats of the qualifying features - The structure and function of the habitats of the qualifying features - The supporting processes on which the habitats of the qualifying features rely - **The population of each of the qualifying features** - The distribution of the qualifying features within the site		
Forth Islands SPA (NatureScot, 2023a)	Gannet	The Offshore Array Area is 172 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.	Avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained. 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	The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of gannet within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects,	Compensation will be achieved if required by providing additional adult recruits and/or reducing mortality of gannet, to compensate for those that may be lost as a result of the
Hermaness, Saxa Vord and Valla Field SPA (NatureScot, 2023a)	Gannet	The Offshore Array Area is 343 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in			

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
		the area (or vicinity) of the Offshore Array Area.	- Distribution and extent of habitats supporting the species - Structure, function and supporting processes of habitats supporting the species - No significant disturbance of the species	would lead to the mortality of gannet as a result of distributional response and/or collision. This impact pathway has the potential to affect the conservation objective to maintain the population of gannet as a viable component of the site, with a requirement for compensation if the Competent Authority considers that AEOI cannot be ruled out (noting that under the Applicant's approach a conclusion of no AEOI was drawn).	Salamander Project.
Forth Islands SPA (NatureScot, 2023a)	Puffin	The Offshore Array Area is 172 km from the SPA. Potential for impact will only occur as a result of individuals from the colony occurring in the area (or vicinity) of the Offshore Array Area.		The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of puffin within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of puffin as a result of distributional response. This impact pathway has the potential to affect the conservation objective to maintain the population of puffin as a viable component of the site, with a requirement for	Compensation will be achieved if required by providing additional adult recruits and/or reducing mortality of puffin, to compensate for those that may be lost as a result of the Salamander Project.

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
				compensation if the Competent Authority considers that AEOI cannot be ruled out (noting that under the Applicant's approach a conclusion of no AEOI was drawn).	
Outer Firth of Forth & St Andrews Bay Complex SPA (NatureScot and JNCC, 2022)	Gannet	The Offshore Array Area is 131 km from the SPA. There is no site reference population of gannet for the SPA, with impacts to breeding gannet at the SPA instead considered in relation to the functionally linked SPA.	To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting the following objectives for each qualifying feature: - **The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA** - The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species - The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	The Proposed Development will not have an adverse effect on the conservation objectives with regards to disturbance or distribution of gannet within the SPA. The physical loss or damage of habitats will not lead to an adverse effect as a result of the Salamander project and therefore, will not affect the conservation objectives to maintain the distribution and extent of habitats supporting the species, or the structure, function and supporting processes of habitats supporting the species. The potential impact pathway of the Salamander Project, in combination with other plans and projects, would lead to the mortality of gannet as a result of distributional response and/or collision. This impact pathway has the potential to affect the conservation objectives to a) ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status and b) ensure that the population of gannet is a viable component of the Outer Firth of Forth and St Andrews Bay Complex SPA, with a	Compensation will be achieved if required by providing additional adult recruits and/or reducing mortality of gannet, to compensate for those that may be lost as a result of the Salamander Project. Compensation for gannet at the SPA will therefore be delivered by compensation with respect to the functionally linked SPA.

Site	Species	Direct or Indirect	Conservation Objectives	Potential for an AEOI?	Requirement for Compensation?
			appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA The condition of gannet at the Outer Firth of Forth and St Andrews Bay Complex SPA is considered to be favourable and consequently, with the following site specific advice. - Ensure gannets within the Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons - Ensure gannets can move safely between the site and important areas of functionally linked land outwith the site	requirement for compensation if the Competent Authority considers that AEOI cannot be ruled out (noting that under the Applicant's approach a conclusion of no AEOI was drawn).	

3 Compensation Aims and Objectives

3.1 The Aims and Objectives of the Compensation Measure(s)

3.1.1.1 As required by the Habitats Regulations and referenced in NatureScot's HRA guidance Stages 8 and 9[2] (which addresses Imperative Reasons of Overriding Public Interest (IROPI) (see **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3**), there is the requirement "Where a plan or project is to proceed for imperative reasons of overriding public interest Scottish Ministers have a duty to secure any compensatory measures necessary to ensure the overall coherence of the UK site network is protected (regulation 53 of the Habitats Regulations)".

3.1.1.2 The overall aim of the compensatory measure(s) is therefore to maintain the coherence of the UK site network, in the context of the potential impacts from the offshore aspects of the Salamander Project alone. That aim will be delivered through the overarching objective of the proposed compensation measure(s), which is to support the relevant conservation objectives as identified under **Section 2** through offsetting the damage to the adult populations of seabirds at the impacted sites that may occur as a result of the offshore aspects of the Salamander Project alone. That damage will be offset through the implementation of one or more compensatory measure(s), that are aimed at, *inter alia,* reducing mortality, increasing recruitment, increasing breeding success and/or increasing productivity.

3.1.1.3 As set out in **Section 3,** conservation objectives requiring compensation will be limited to maintaining the population of a species. The compensation measures will provide additional recruits and/or reduce mortality into the relevant species population, which forms part of the UK site network, therefore maintaining the network's coherence. The ability to provide additional recruits and/or reduce mortality within the relevant population is a key criteria in selecting the compensation measures, which are set out in **Section 5**.

[2] https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra

4 Identification and feasibility assessment of potential compensation measures

4.1.1.1 The identification of suitable compensation measures for the target species followed a stepwise process utilising a range of sources to generate an initial longlist of potential options, before these options were refined into a shortlist of potential compensation measures. The deliverability of potential measures was taken into account in this process (as such deliverability can have the potential to result in a measure being non-viable even if ecologically sound). The longlist draws on expert knowledge and experience held within the project team, together with existing information on compensation measures such as options from previous project proposals, grey literature and relevant guidance on compensation options. An overview of the sources used is presented within **Table 4-1**.

Table 4-1: Summary of information sources used during the longlisting process

Source	Description
Published literature – Including but not limited to Furness *et al*. (2013), Furness (2021), JNCC (2020), Stanbury *et al*. (2017), etc.	Key information presented on drivers of population change and potential conservation actions which may be delivered as compensation.
Previous and current offshore wind farm proposals (including but not limited to: Berwick Bank, West of Orkney, Green Volt, Hornsea Four, Hornsea Three, Sheringham and Dudgeon Extensions, East Anglia projects, Norfolk Vanguard and Boreas).	Significant work has already been undertaken within the industry to try and identify suitable compensation measure for seabirds. These projects have been reviewed, with suitable measures added to the Salamander Project longlist. It is of note that the list includes projects with a derogation case for sites that differ to those relevant to the Salamander Project, however the approach applied and the measures suggested are relevant here especially where the same species were under consideration.
Seabird blogs (e.g. Royal Society for the Protection of Birds (RSPB) and newsletters (e.g. the Seabird Group)	Blog posts and newsletters share information from those on the front line of seabird conservation and can present opportunities for compensation (for example, delivering artificial nesting boxes for certain species).
Designated site information (primarily through the NatureScot and Natural England websites)	Review of known pressures, condition, management and site based literature for seabird SPAs.
Expert judgement	Knowledge from experienced ornithologists who have a history of developing and implementing compensation cases for offshore wind at both a project and strategic level.

4.1.1.2 The approach to longlisting considered compensation measures under a number of different potential approaches, which can be summarised as follows:

- Strategic compensation measure(s) – typically requiring government involvement to be delivered and may include measures delivered through strategic programmes
- Linkage to a compensation measure(s) being progressed by a Joint Venture partner; and
- Project level compensation measure(s).

4.1.1.3 The potentially available measures considered fall broadly into the following groups (in no particular order):

- Predator reduction;
- Expansion of the UK site network;
- Artificial nesting;
- Reducing human pressure (wide ranging and including disturbance);
- Habitat enhancement;
- Fishery based measures; and
- Supplementary feeding.

4.1.1.4 The longlist approach therefore provides a robust and fully encompassing foundation to develop compensation options as part of the Applicant's compensation strategy.

4.1.1.5 Once potential measures were identified through the longlisting approach, they were investigated further to understand their suitability and alignment with compensation guidance, before being scored against the published compensation criteria available at that time (i.e., preference hierarchy, location, technically feasible, timing, additionality and scale) (Defra, 2021). It is noted that equivalent advice in Scotland is limited to the unpublished 2021 advice provided by DTA with an update to that understood to be pending at the time of writing (April 2024). Further, an updated consultation was published by Defra in February 2024 (Defra, 2024). The current Defra (2024) consultation document emphasises the need for ecological effectiveness of measures, in the context of ecological structures and functions necessary to support the features at risk, followed by local circumstances and proximity, with parallels to the Defra 2021 guidance.

4.1.1.6 The screening process is described below, with those measures scoring above a pre-determined level (as set out in **Figure 4-1**) forming the shortlist discussed in **Section 5**.

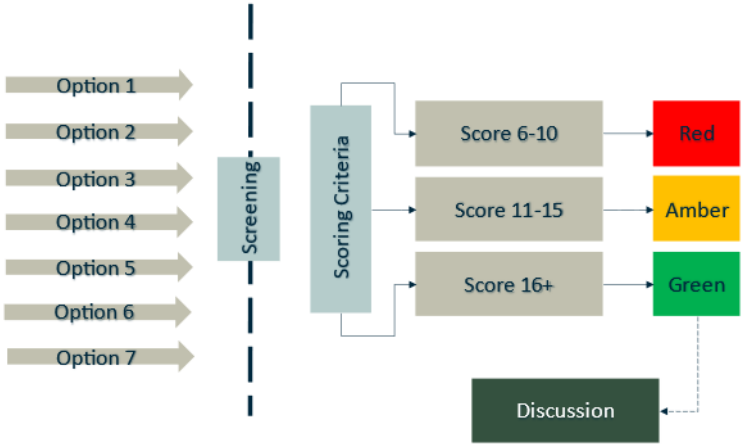

Figure 4-1 Screening process for compensation measures

4.1.1.7 The screening process applied has been adapted from the Defra guidance (2021) and has been applied on previous compensation projects in a UK context. It is noted that Defra's position has evolved since this was published with a document published for consultation (Defra, 2024). Furthermore, the approach broadly aligns with the guidance on compensation provided by Marine Directorate (available in a draft unpublished format, DTA, 2021). This process has scored measures based on current knowledge and available evidence. As the evidence base for certain measures increases, or potential barriers to implementation are determined, the scores of measures may change which may result in measures being either progressed or removed from the process.

4.1.1.8 The screening criteria applied are defined in **Table 4-2**. Potential compensation measures that scored sufficiently when the screening criteria were applied have been progressed through to the preferred list of compensation measures (**Section 5**).

Table 4-2 Screening criteria applied to the Salamander Project long list of compensation measures (based on Defra 2021)

Criterion	Description	Score
Preference	Defra preference hierarchy	4 = Address the specific impact in the same location
		3 = Provide the same ecological function as the impacted feature; if necessary, in a different location
		2 = Comparable ecological function in the same location
		1 = Comparable ecological function in a different location
Location	Measures should be in a location where they will be most effective at maintaining the overall coherence of the UK site network. Delivering compensation at the affected SPA, or other protected site, should be considered the most effective and will score higher.	4 = Option can be utilised by species from the protected site
		3 = Species within a protected site can be affected by the option
		2 = Species can be affected by option and species is within the UK portion of the biogeographic region
		1 = Option can be reached by species and is located within the wider biogeographic region
Technical feasibility	Compensation options must be technically feasible to allow implementation. This criterion will be decided based on evidence of challenges to implementation, with options supported by evidence and with limited barriers to delivery gaining a higher score.	5 = Technical delivery of option is well evidenced, achievable without any substantial challenges and there is certainty in the outcomes
		4 = Technical delivery is evidenced but some challenges with delivery and some uncertainty in the outcomes
		3 = There is some evidence of delivery and some uncertainty regarding outcomes
		2 = Little to no evidence of delivery and considerable uncertainty in outcomes

		1 = No evidence of delivery and considerable uncertainty in outcomes
Timing	Compensation should be secured before the species is impacted. High scoring compensation options in this category will be those which can be in place, functioning and contributing to the coherence of the UK site network before any impact occurs. Higher scores are also awarded to those with higher certainty associated with their timelines.	4 = High degree of certainty compensation will be in place, functioning and contributing to the coherence of the UK site network before impact
		3 = Some certainty compensation will be in place, functioning and contributing to the coherence of the UK site network before impact occurs
		2 = Low certainty compensation will be in place, functioning and contributing to the coherence of the UK site network before impact occurs
		1 = Compensation will not be in place, functioning and contributing to the coherence of the UK site network before impact occurs
Additionality	Compensation must be additional to the normal practices required for the protection and management of the Protected Site. Any measures that will already be undertaken by Government bodies to ensure that sites or species are in favourable condition should not be considered.	2 = Confidence that measure will exceed what is considered 'normal' site management
		1 = Unlikely that measure will exceed what is considered 'normal' site management
Scale	Compensatory measures should address the impact of the activity at a scale sufficient to deliver the required ratio of compensation.	3 = Potential for high numbers of birds, eggs or nest sites to be provided per year (100s) from option
		2 = Potential for moderate numbers of birds, eggs or nest sites to be provided per year (10s) from option
		1 = Potential for low numbers of birds, eggs or nest sites to be provided per year (<10) from option

5 Short list of compensation measures

5.1 Review of short list compensation measures

5.1.1.1 The compensation measures identified through the longlist screening process outlined in **Section 4** are summarised in **Table 5-1**. It is of note that supplementary feeding did not progress from the longlisting to the short list, with the measure deemed not viable for the Salamander Project.

5.1.1.2 The measures are then described in **Sections 5.2** to **5.4**, using a list of criteria focused on delivery of the measure and not purely the screening criterions identified in **Table 4-2**. These delivery criteria are as follows:

- **Location for compensation measure** – a critical criteria for delivery of compensation, as the measure needs to be implemented in the real world and therefore a location is required (including feasibility of that location, having regard to questions of issues around land ownership, access etc. Depending on the land use requirements and existing ownership of land, it is noted that facility exists, if necessary and the appropriate tests can be met, for compulsory purchase of land);
- **Stakeholder consultation** – key for several reasons, potentially including local knowledge, acceptability, land ownership/management/use, and consenting considerations;
- **Sufficiency –** can the measure deliver sufficient compensation to offset the effect?;
- **Assessments and consents** – is it likely or expected that for a measure to be implemented it will require specific consents or in some cases assessments such as a measure specific HRA?;
- **Delivery** – can the measure be delivered by the Applicant or does this require and/or depend on the involvement of external parties? Is there a need for a regulatory change?;
- **Timescales** – both in terms of timescales to a deliverable compensation package but also timescale to the measure being in 'operation';
- **Monitoring requirements** –expectation of monitoring to ensure the measure works; and
- **Adaptive management**- what are the options that could be implemented should the measure not deliver on the expected sufficiency and timescale?

Table 5-1 Shortlist of compensation measures

Measure	Specifics	Kittiwake?	Razorbill?	Puffin?	Gannet?	Screening Criteria Score
Measures potentially delivered via a strategic fund and/or requiring government involvement						
Measure 1 - Fishery based measure	Potential measures include closures, quota reduction, management. Strongly linked to the Sandeel (Prohibition of Fishing) (Scotland) Order 2024 and equivalent English provisions which came into force on 26 March 2024 for named seabird species excluding gannet[3]	**Yes**	**Yes**	**Yes**	**No**	**16**
Measure 2 - Expansion of the UK site network - SPA designation	A new designation or an extension to an existing (additional species and/or increased footprint)	**Yes**	**Yes**	**Yes**	**Yes**	**15 (Marine SPA)** **16 (SPA)**
Measure 3 - Reducing human pressure (excluding disturbance)	Potential measures linked to marine litter/ghost fishing, pollution and HPAI	**Yes**	**Yes**	**Yes**	**Yes**	**8-13**
Linkage to a Joint Venture partner measure						
Measure 4 - Artificial nesting	Existing plans to construct artificial nesting structures as compensation for projects elsewhere.	**Yes**	No	No	No	17
Project level compensation measure						

[3] https://consult.gov.scot/marine-scotland/consultation-on-proposals-to-close-fishing/#:~:text=The%20Sandeel%20(Prohibition%20Of%20Fishing,force%20on%2026%20March%202024.

Measure	Specifics	Kittiwake?	Razorbill?	Puffin?	Gannet?	Screening Criteria Score
Measure 5 - Predator reduction	Control of mammalian predators. Potential to include complete exclusion, predator reduction and biosecurity measures.	**Yes**	**Yes**	**Yes**	No	12-18
Measure 6 - Reducing human pressure (disturbance)	Managing existing levels of human disturbance at a nesting colony.	**Yes**	**Yes**	**Yes**	**Yes**	**12-13**
Measure 7 - Habitat enhancement	Enhancing existing nesting habitat and surrounds to support nesting seabirds.	**Yes**	**Yes**	**Yes**	**Yes**	**12-14**
Measure 8 - Fishery bycatch	Measure(s) to reduce the incidental bycatch of seabirds in commercial fisheries	No	No	No	**Yes**	**16**

5.2 Measures potentially delivered via a strategic fund and/or requiring government involvement

5.2.1.1 Strategic measures typically require Government (or Government Agency) for approval, although the supporting evidence and a road map to delivery (among other required documentation) can be prepared by the Applicant. Such measures could also be progressed through a mechanism such as the Scottish Marine Environmental Enhancement Fund (SMEEF). It is noted that when such a fund is established, potentially all of the measures considered here could be progressed through such a fund. However, until a framework is in place to do so, where a measure can be progressed without Government (or Government Agency) involvement these are considered separately in subsequent sections. In the recent update on the delivery timescales for the Sectoral Marine Plan for Offshore Wind Energy (SMP-OWE) (including INTOG projects) (Scottish Government, 2024), specific reference is made to a strategic compensation process. These measures are therefore deemed strategic for the Salamander Project, as they cannot be delivered solely at project level and would require involvement of other organisations and in some instances a new mechanism for delivery to be established.

5.2.1.2 Critical to the feasibility of such strategic measures for the Salamander Project are timescales. The timescales are integral to the Project Objectives as defined in Section 10.2 of **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3**. In particular, to enable the Salamander Project 'to be operational ahead of the large scale floating projects of ScotWind, thus supporting the project in meetings it's core objectives'. Specifically, can the compensation be secured and delivered on a timescale that enables the Salamander Project to meet its core objectives.

5.2.2 Measure 1 – Fishery Based Measures

5.2.2.1 Measure is potentially relevant to three species under consideration (kittiwake, razorbill, puffin).

5.2.2.2 With respect to commercial fishery measures, the Sandeel (Prohibition of Fishing) (Scotland) Order 2024 and equivalent English provisions came into force on 26 March 2024. Sandeel fishery closure (or management) is a compensation measure proposed by the Berwick Bank project[4], with that application accompanied by a 'Fisheries Compensatory Measures Evidence Report' (SSE Renewables, 2022b). The key references that support the links between prey sufficiency and seabirds, including the role of the sandeel fishery in that, are contained in the Berwick Bank Derogation Case (SSE Renewables, 2022a and b) and the consultation documents that were issued with regards the proposed closure of the fishery in Scottish waters (e.g. Scottish Government, 2023). Collectively, these documents make the case for prey availability being a key limiting factor on seabird populations, with removing or reducing a key pressure on seabird prey (commercial fishing) providing a route for increased prey availability, with the consequent potential to support seabird populations and to potentially enable population recovery.

5.2.2.3 It is of note that in the final business and regulatory impact assessment (BRIA) (Scottish Government, 2024) the following comment is made "of the proposal to close fishing for sandeel in all Scottish waters the Scottish Government will assess the suitability and potential benefits of the closure of fishing for sandeel as a compensatory measure if, and when, it may be required in support of a case for derogating from the Habitats Regulations to facilitate the consenting and deployment of offshore wind projects".

[4] https://marine.gov.scot/node/23324

5.2.2.4 For such fishery management measures to be a suitable compensation option for the Salamander Project, the following points are relevant:

- **Location for compensation measure** – identified through the sandeel measures highlighted above;
- **Stakeholder consultation** – has been progressed by government to date;
- **Sufficiency** – given the level of interest in the measure by the Berwick Bank project (and on the assumption that Berwick Bank is consented with the sandeel fishery measures included as a required compensation measure), clarification on the remaining potential in the measure is required to be clear that sufficient compensation could also be delivered for the species and scale of required compensation for the Salamander Project;
- **Assessments and consents** – requirement on the Salamander Project expected to be focused to justification for the sufficiency of the measure as compensation for the Salamander Project, with all else under the control of the regulator;
- **Delivery** – delivery of the measure sits with the Scottish Government and therefore clarity would be needed that the planned fishery control would be implemented and that approval could be gained for its use as compensation for the Salamander Project;
- **Timescales** – while it is understood that strategic compensation is linked to the development of the updated SMP-OWE, with the updated draft expected to be published in Autumn 2024 for further consultation with adoption not expected until Spring 2025 (Scottish Government, 2024) and is therefore a risk to the anticipated consenting timescales for the Salamander Project (earliest indicative onshore construction planned for 2027, with the indicative start of offshore construction in Q2 2028. The Offshore Array is anticipated to be commissioned and operational by Q4 2029, as per the Offshore RIAA. Timescales for delivery of the measure would be defined by the organisation delivering strategic compensation;
- **Monitoring requirements** – these would need to be agreed strategically, with any contribution required by projects relying on the measure as compensation to be discussed and agreed (e.g. monitoring of sandeel productivity, monitoring of seabird fishing, monitoring of prey brought back to nest, monitoring of seabird colonies etc); and
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include increasing the scale of the fishery measure (in extent and/or duration) or looking towards other compensation measures on the Salamander Project short list.

5.2.2.5 While strategic compensation is a clear preference for the Salamander Project, it is apparent that there are a number of factors outside the control of the Salamander Project that would need to be addressed before fishery measures could be delivered as a strategic compensation option, not least of which is the timescales for delivery of such a measure. The objectives of the Salamander Project are defined in **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3** with the time to operation being integral to these.

5.2.3 Measure 2 - Special Protection Area Designation

5.2.3.1 Measure is potentially relevant to all four species under consideration (kittiwake, razorbill, puffin and gannet).

5.2.3.2 The Defra guidance from 2021 included designation of a new marine protected area as a potential compensatory measure. The 2018 EU guidance on managing Natura 2000 sites also considers “the addition to the Natura 2000 network of a new site of comparable quality to the original site” as a potential compensation measure. The Defra guidance recognises that site designation is a process that can require substantial data collection, analysis and local engagement potentially running over several years. Further,

the guidance recognises that no process currently exists for designating marine protected areas for compensation (although presumably that could be a function of the planned strategic compensation expected alongside the updated SMP-OWE).

5.2.3.3 There are a number of key references relevant to this measure, with a non-exhaustive summary presented in **Table 5-2** below. Of note here is the sufficiency of the UK site network (are sufficient seabirds protected within SPAs at present?), which can influence the need for additional seabirds being brought into the UK site network. In addition, the most recent strategic breeding seabird counts cited (Burnell *et al*., 2023) predate highly pathogenic avian influenza (HPAI) and it is expected (as evidenced by Tremlett *et al*., 2024) that subsequent colony counts for some locations and species will fall, calling into question the potential for new or extensions to breeding seabird SPAs.

Table 5-2 Key references for new Special Protection Area designation

Reference	Relevance
Guidance documents. Including documents that outline the process for identifying and designating a new site.	JNCC (2004b). Marine Natura 2000 – Process for Consideration of Offshore SACs and for SPAs and SACs which cross the 12n mile boundary. JNCC 04 P09. Natural England (2014). Establishing marine Special Protection Areas. TIN120. Scottish Natural Heritage (2018). Overview of the Scottish marine Special Protection Area selection process. JNCC (no date, a). Defining SPA Boundaries At Sea. JNCC (no date, b). Seabird populations in the identification of marine SPAs. JNCC (no date, c). Generic maintenance extensions around seabird breeding colonies: data collection and analysis. JNCC (no date, d). Identification of important marine areas for inshore wintering waterbirds. JNCC (no date, e). Identification of possible marine SPAs for seabirds: The European Seabirds at Sea database, analysis and boundary delineation. JNCC (no date, f). Tern marine SPA identification: Tracking data collection and analysis. JNCC (no date, g). Identification of important marine areas for little terns around breeding colony SPAs. JNCC (no date, h). Red-throated diver marine SPA identification: Data collection and analysis. JNCC (no date, i). Shag marine SPA identification: Data collection, collation and analysis. JNCC (no date, j). Principles guiding the use of evidence in the identification of possible Special Protection Areas in Scotland.

Reference	Relevance
Network reviews. Including documents that review the existing network, including its sufficiency.	JNCC (2004, a) Marine Natura 2000: Update on Progress in Marine Natura. JNCC 04 P05. Stroud et al. (2016). The status of UK SPAs in the 2000s: the Third Network Review. [c.1,108] pp. JNCC, Peterborough.
Site selection. Including documents that review data to determine potential locations for new SPAs and extensions to existing SPAs.	JNCC (2004, c). Developing the UK network of SPAs in the marine environment: immediate priorities for further work on inshore concentrations of waterbirds outside the breeding season. MN2KPG7_5_SPAnetwork 2004. JNCC (no date, k). Selection of the most appropriate seabird hotspots as possible SPAs in offshore waters. Scottish Government and Marine Scotland (2018). SEA of Marine Proposed Special Protection Areas Strategic Environmental Assessment Environmental Report August 2018. Scottish Government (2019). Proposed Special Protection Areas for Scottish marine birds Supplementary Consultation on SEA and site classification. Scottish Government (2022). Marine Proposed Special Protection Areas SEA Post Adoption Statement.
Data. Including evidence that could be drawn on to understand changes in bird distribution and density which could underpin new SPA locations or extensions to existing SPAs.	Mitchell et al. (2004). Seabird Populations of Britain and Ireland: results of the Seabird 2000 census (1998-2002). Published by T and A.D. Poyser, London. Burnell, D., Perkins, A. J., Newton, S. F., Bolton, M., Tierney, T. D., Dunn, T. E., Vaughan, R. (2023). Seabirds Count A Census of Breeding Seabirds in Britain and Ireland (2015–2021). Seabirds at sea data. Numerous documents that present seabird density at sea, mainly collected as part of strategic or project level baseline data surveys. Coverage of data therefore focused in areas of existing interest for offshore wind and for areas subject to strategic review. Additional data is available from seabird tagging studies.

5.2.3.4 The potential for the measure to deliver compensation for the Salamander Project is summarised in **Table 5-3**.

Table 5-3 Potential for a new or extension to an existing Special Protection Area as compensation for the Salamander Project

SPA Option	Evidence Requirement	Potential Route to Site Identification?
Physical extension to the footprint of an existing breeding seabird SPA.	Evidence that the named species of seabirds breed adjacent to an existing SPA boundary.	Comparison of the location of seabird colonies between Mitchell *et al*. (2004) and Burnell *et al*. (2023) to identify a potential change in colony locations, including colonies outside existing SPA boundaries.
Addition of the species to an existing breeding seabird SPA (where it is not currently a named species).	Evidence that seabirds not named as designated features of an SPA (or as part of the assemblage) breed within the SPA in sufficient numbers to qualify.	Comparison of the named species per SPA with the breeding seabirds within relevant colonies from Burnell *et al*. (2023). Comparison with the required threshold for citation.
Designation of a new SPA for breeding seabirds	Evidence that a discrete breeding seabird colony (or group of colonies) that sits outside the existing UK site network, with seabirds breeding in sufficient numbers to qualify.	Comparison of the location of seabird colonies between SPA locations, Mitchell *et al*. (2004) and Burnell *et al*. (2023) to identify colony locations outside the UK site network, and the associated species and numbers of individuals recorded as breeding.
Physical extension to a foraging or non breeding SPA for seabirds	Evidence that seabird at sea densities adjacent to an existing SPA boundary are sufficient for inclusion (or demonstrate inter annual variability in key areas requiring additional geographic coverage).	Revisit the process applied by the JNCC and Marine Scotland (as referenced in several documents in **Table 5-2**) to identify such areas at sea where new data allows (for example where new project or regional survey data has been collected for offshore wind or where academic publications offer new insights such as work by Buckingham *et al*. (2022).
Addition of the species to an existing foraging or non breeding seabird SPA (where it is not currently a named species)	Evidence that seabirds not named as designated features of an SPA (or as part of the assemblage) occur within the SPA in sufficient numbers to qualify.	
Designation of a new SPA for foraging or non breeding seabirds	Evidence that usage of areas of sea by seabirds that sits outside the existing UK site network, occurs in sufficient numbers and frequencies to qualify.	

5.2.3.5 For such SPA designation and/or extension to be a suitable compensation option for the Salamander Project, the following points are relevant:

- **Location for compensation measure** – would need to be identified through one or more of the potential routes to site identification identified in **Table 5-3**;
- **Stakeholder consultation** – would be expected to mirror the process required for the recent rounds of SPA identification and designation (e.g. as referenced in the site selection documents in **Table 5-2**);
- **Sufficiency** – there is a minimum number of individual birds required to designate a new SPA or to add a species to the list of named bird species at an SPA, with that number expected to significantly exceed the requirement for compensation for the Salamander Project and therefore the sufficiency test (should a site be identified and designated) would be expected to be exceeded;
- **Assessments and consents** – the guidance documents identified in **Table 5-2** indicate the assessments and process required to identify and designate a new or extension to existing SPA;
- **Delivery** – delivery of the measure sits with the Scottish Government and therefore clarity would be needed that there is a need for additional sites/species within the UK site network and that, should a site be identified, the designation process would be implemented and that approval could be gained for its use as compensation for the Salamander Project;
- **Timescales** – while it is understood that strategic compensation is linked to the development of the updated SMP-OWE, implementation of the SMP-OWE is not expected until Spring 2025 and is therefore a risk to the anticipated consenting timescales for the Salamander Project (earliest indicative onshore construction planned for 2027, with the indicative start of offshore construction in Q2 2028. The Offshore Array is anticipated to be commissioned and operational by Q4 2029. Timescales for delivery of the measure would be defined by the organisation delivering strategic compensation and/or the relevant nature conservation advisor);
- **Monitoring requirements** – these would need to be agreed strategically, with any contribution required by projects relying on the measure as compensation to be discussed and agreed (e.g. monitoring of seabird colonies etc); and
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include increasing the extent of an SPA boundary or looking towards other compensation measures on the Salamander Project short list.

5.2.3.6 As for the fishery measure option discussed above, while strategic compensation is a clear preference for the Salamander Project, it is apparent that there are a number of factors outside the control of the Salamander Project that would need to be addressed before new or extensions to SPA designations could be delivered as a strategic compensation option; not least of which is the requirement for regulator involvement to secure the measure, the influence of HPAI on existing data sets and the timescales for delivery of such a measure. The objectives of the Salamander Project are defined in the **Volume RP.A.3, Report 1: HRA Derogation Case, Part 1-3** with the time to operation being integral to these. Further engagement would be necessary to confirm if timescales make this measure feasible for the Salamander Project.

5.2.4 Measure 3 - Reducing Human Pressures

5.2.4.1 The measure 'reducing human pressures' covers a large topic but for the purposes of the current report is focused on the following:

- Management of marine litter and hazardous material in the marine environment;

- Pollution prevention and/or management; and
- HPAI.

Management of Marine Litter

5.2.4.2 Measure is potentially relevant to all four species under consideration (kittiwake, razorbill, puffin and gannet).

5.2.4.3 Marine litter as a hazard for marine species including seabirds is well documented (e.g. Battisti *et al.*, 2019, Rodríguez *et al*., 2013). Management of marine litter and hazardous material was investigated as a potential compensation measure for example by Hornsea Three with respect to Annex I habitats (e.g. Hornsea 3 Offshore Wind Farm, 2020) and as a management measure for Hornsea Four (with respect to maintaining artificial nesting structures, see Hornsea Project Four, 2022a). Its viability as a compensation measure is strongly linked to practical issues around locating litter, quantifying its presence/impact, correlating the benefit of removal in terms of the compensation requirement and subsequent removal of the litter, with experience indicating significant constraints in practice on the deliverability of the measure. A strategic workstream could look to manage the issue holistically (for example through the Marine Litter Strategy for Scotland[5]), however the difficulties around quantifying the benefit and linking that benefit to the aims and objectives of the compensation for the Salamander Project (see **Section 3**) would remain problematic and would need to be devised and agreed before the measure could be viewed as a compensation option for the Salamander Project.

5.2.4.4 For marine litter to be considered a potential compensation measure for the Salamander Project, a number of critical paths would therefore require attention which include the following:

- **Location for compensation measure** – presence of marine litter and/or hazardous substances would need to be identified by survey, likely within an agreed area or extent within foraging range of the relevant SPA species (noting difficulties with locating marine litter and likely to be more focused at agreeing an area to clear);
- **Stakeholder consultation** – initial consultation expected to link to strategic programmes to determine plans and current funding routes (including how the Salamander Project could contribute in the context of additionality), before consulting on expectations of location, extent and approach to quantification of the benefit;
- **Sufficiency** – this is likely to be a complicated process to establish and require consultation to agree, with an expectation of 'small numbers' potentially delivered through this route;
- **Assessments and consents** – requirement for consenting likely to be linked to any consents required for survey and if consent is required to retrieve and dispose of the marine litter. Any assessment required likely to be focused on quantifying the benefit of the measure;
- **Delivery** – delivery of the measure at a strategic level sits with the Scottish Government and therefore clarity would be needed that there is a need for additional support to current programmes, the timescales involved and that approval could be gained for its use as compensation for the Salamander Project;
- **Timescales** – while it is understood that strategic compensation is linked to the development of the updated SMP-OWE, implementation of the SMP-OWE is not expected until Spring 2025 and is therefore a risk to the anticipated consenting timescales for the Salamander Project (earliest indicative onshore construction planned for 2027, with the indicative start of offshore

[5] https://www.gov.scot/publications/marine-litter-strategy-scotland-2/

construction in Q2 2028. The Offshore Array is anticipated to be commissioned and operational by Q4 2029. Timescales for delivery of the measure would be defined by the organisation delivering strategic compensation);

- **Monitoring requirements** – these would need to be agreed strategically, with any contribution required by projects relying on the measure as compensation to be discussed and agreed (e.g. monitoring of presence/absence of marine litter, identification of sources of marine litter etc); and
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include increasing the area of search to locate and remove marine litter or looking towards other compensation measures on the Salamander Project short list.

Pollution Prevention and Management

5.2.4.5 Measure is potentially relevant to all four species under consideration (kittiwake, razorbill, puffin and gannet).

5.2.4.6 Pollution prevention and/or management is a perennial issue for the marine environment and Scotland is no exception. Key sources of pollution raised in the literature with respect to seabirds include direct sources such as oil spills (which are accidental and therefore cannot be predicted but can have a visible quantifiable impact, e.g. O'Hanlon *et al*. 2023)) together with the more indirect and diffuse sources of pollution much of which enters the marine environment from rivers or the atmosphere (but is difficult to address at source or to quantify the impact to the species being considered here e.g. see Natural Resources Wales, 2014). The practical issues for pollution prevention as a compensation measure for the Salamander Project have similarities to those for marine litter, notably in relation to the difficulties around quantifying the benefit of addressing marine pollution and linking that benefit to the aims and objectives of the compensation for the Salamander Project (see **Section 3**). These would remain problematic and would need to be devised and agreed before the measure could be viewed as a compensation option for the Salamander Project.

5.2.4.7 Therefore, for marine pollution prevention and/or management to be considered a potential compensation measure for the Salamander Project, a number of critical paths would require attention which include the following:

- **Location for compensation measure** – in the context of marine pollution this is more likely to relate to the location of the original source, in terms of which source(s) of marine pollution could be addressed either directly at that source or indirectly through removal from or management within the marine environment. Such an approach would likely need to be via provision of support to an existing framework or strategy (e.g. through contribution to a programme of works such as DynamicCoast[6] or SMEEF[7]), requiring consideration of additionality if the approach were to be applied as compensation;
- **Stakeholder consultation** – initial consultation expected to link to strategic programmes to determine plans and current funding routes (including how the Salamander Project could contribute in the context of additionality) and the appetite for external involvement from a separate project, before consulting on expectations of type of marine pollution, the relevant industries (including existing obligations on those industries) and approach to quantification of the benefit;

[6] https://www.dynamiccoast.com/
[7] https://smeef.scot/

- **Sufficiency** – this is likely to be a complicated process to establish and require consultation to agree, with considerable uncertainty on the metric that could potentially be delivered through this route;
- **Assessments and consents** – requirement for consenting likely to be linked to any consents required for survey and if consent is required for whichever industry or human activity is resulting in the pollution and potentially if required to resolve the pollution. Any assessment required likely to be focused at least in the initial stages on quantifying the benefit of the measure;
- **Delivery** – delivery of the measure at a strategic level sits with the Scottish Government and therefore clarity would be needed that there is a need for additional support to current programmes, the timescales involved and that approval could be gained for its use as compensation for the Salamander Project;
- **Timescales** – while it is understood that strategic compensation is linked to the development of the updated SMP-OWE, implementation of the SMP-OWE is not expected until Spring 2025 and is therefore a risk to the anticipated consenting timescales for the Salamander Project (earliest indicative onshore construction planned for 2027, with the indicative start of offshore construction in Q2 2028. The Offshore Array is anticipated to be commissioned and operational by Q4 2029. Timescales for delivery of the measure would be defined by the organisation delivering strategic compensation);
- **Monitoring requirements** – these would need to be agreed strategically, with any contribution required by projects relying on the measure as compensation to be discussed and agreed (e.g. monitoring of changing levels of pollution and the ecological response); and
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include increasing the scope of the measure or looking towards other compensation measures on the Salamander Project short list.

Avian Flu (Highly Pathogenic Avian Influenza)

5.2.4.8 Measure is potentially relevant to all four species under consideration (kittiwake, razorbill, puffin and gannet).

5.2.4.9 Highly Pathogenic Avian Influenza Virus (HPAI) outbreaks in seabirds are unprecedented in the Northern Hemisphere (Wille, 2022). Since its emergence in 2020, HPAI H5N1 clade 2.3.4.4b virus (HPAI) has had a profound impact on UK seabirds, devastating populations in the 2022 breeding season (Falchieri *et al*. 2022) and again in 2023[8]. Though infections were initially reported in gulls (Laridae) and gannets, it was the populations of great skua that were at first significantly affected in Europe (European Food Safety Authority et al. 2022). HPAI was first detected in great skua during summer 2021 (April – November) on several islands off the north and west coast of Scotland (Banyard *et al*. 2022).

5.2.4.10 By September 2022, HPAI had been detected in Scotland amongst 15 breeding seabird species and over 20,500 birds were reported dead (NatureScot, 2023b). Of the 15 species of seabird identified, the list includes gannet, guillemot and kittiwake among the species with highest impact, with razorbill included with the species noted as having lowest impact. The updated colony count data available post HPAI (Tremlett *et al*. 2024) noted significant changes in the colony counts in Scotland for gannet (-3 to -37%), kittiwake (-83 to +191%) and guillemot (-91 to +64%), with updates for razorbill not provided.

5.2.4.11 For compensation measures to relate to HPAI, there needs to be a route to support birds for either preventing or minimising risk of infection or supporting birds to recover post infection. Key examples that

[8] https://www.nature.scot/avian-flu-causes-another-challenging-summer-seabirds

have been proposed in the wider literature of measures to support seabirds or alleviate the consequences of HPAI include those discussed below, noting the potential for such measures to be implemented as compensation.

5.2.4.12 To understand the consequences of HPAI there is a need for research to understand how seabird populations have responded to HPAI. However, it is unclear how this could directly relate to compensation (for example how could the sufficiency of the measure be quantified) as this would be related more towards understanding the consequences of the impact unless the conclusions shed light on future measures that could reduce the negative consequences in the future.

5.2.4.13 If seabirds were more resilient to HPAI, it is reasonable to expect that the consequences of HPAI would be less severe on seabird populations. Increasing resilience of seabirds can be undertaken by reducing pressures elsewhere, for example through measures that improve seabird populations, survival of chicks or general seabird health. However, such resilience may result in any case from a more direct route to compensation e.g. addressing the limitations on seabird prey through the fishery measure discussed above, with significant complications to link such an indirect support to increased resilience to HPAI and further to quantify the benefit in terms of compensation.

5.2.4.14 Suggestions and practical measures taken to date to support seabirds in response to HPAI include site management measures, which can be aimed at reducing the risk of the disease spreading. Examples could include enabling reduced access to breeding seabird colonies for visitors and providing PPE and disinfectant to staff. Such examples offer a potential practical and direct measure that could be implemented as compensation. However, evidence to demonstrate a reduction in transmission and therefore to quantify any benefit is lacking, which would mean addressing the sufficiency of the measure as compensation would be complex.

5.2.4.15 Finally, other measures implemented to date to understand and attempt to control the spread of HPAI include the removal and disposal of dead birds, with funding and expanding the work in the breeding season potentially being a practical and direct measure that could be implemented as compensation. However, as for the measures above evidence to demonstrate a reduction in transmission/mortality and therefore to quantify any benefit is lacking, which would mean addressing the sufficiency of the measure as compensation would be complex.

5.2.4.16 Therefore, for measures to manage or support issues around HPAI to be considered a potential compensation measure for the Salamander Project, a number of critical paths would require attention. Not least of which, is the ongoing threat of HPAI – should the prevalence of the disease in the wild bird population fall while obviously beneficial to the seabirds, in terms of compensation then the options available to support seabirds will reduce in number. The critical paths therefore include the following:

- **Location for compensation measure** – depends on the example(s) for compensation measures applied but likely to require the selection of a suitable seabird nesting site(s) where HPAI has either been a significant issue or where vulnerable seabirds are known to nest, in a location where at least one of the above examples could be practically implemented (e.g. physical access to cliff nesting birds is likely to be a significant constraint);
- **Stakeholder consultation** – initial consultation expected to focus on determining the appetite for and feasibility of the measure(s), including identification of potential location(s) and project partners, with the approach to quantification of the benefit critical to the acceptability as a measure;
- **Sufficiency** – this is likely to be a complicated process to establish and require consultation to agree, with considerable uncertainty on the metric that could potentially be delivered through

this route (not least because of uncertainty over the continuing impact from HPAI on UK seabirds going forward);

- **Assessments and consents** – requirement for consenting likely to be linked to any consents required for access to seabirds and dealing with any disease present. Any assessment required likely to be focused on quantifying the benefit of the measure;
- **Delivery** – delivery of the measure at a strategic level likely to sit with the Scottish Government and therefore clarity would be needed that there is a need for additional support to current programmes, that HPAI remains a threat into the 2024 breeding season (and beyond), the timescales involved and that approval could be gained for its use as compensation for the Salamander Project;
- **Timescales** – while it is understood that strategic compensation is linked to the development of the updated SMP-OWE, implementation of the SMP-OWE is not expected until Spring 2025 and is therefore a risk to the anticipated consenting timescales for the Salamander Project (earliest indicative onshore construction planned for 2027, with the indicative start of offshore construction in Q2 2028. The Offshore Array is anticipated to be commissioned and operational by Q4 2029. Timescales for delivery of the measure would be defined by the organisation delivering strategic compensation);
- **Monitoring requirements** – these would need to be agreed strategically, with any contribution required by projects relying on the measure as compensation to be discussed and agreed (e.g. monitoring breeding birds for signs of HPAI, counting dead birds, determining any change in prevalence of the disease post instigation of measures etc); and
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include increasing the scope of the measure or looking towards other compensation measures on the Salamander Project short list.

5.3 Linkage to a Joint Venture Partner Measure

5.3.1 Measure 4 - Offshore Artificial Nesting Structures

5.3.1.1 Measure is potentially relevant to a single species under consideration (kittiwake).

5.3.1.2 Evidence strongly suggests that the provision of offshore artificial nesting structures (ANS) could be an adequate compensatory measure by providing potentially optimal nesting habitat in close proximity to foraging grounds (and therefore reduce foraging duration for central place foragers), lower predation risk (due to distance offshore and design to prevent large gull roosting), 360 degree access to foraging habitat, and protection from exposure (due to detailed structure design) (Christensen-Dalsgaard *et al*., 2018).

5.3.1.3 Kittiwake are known to nest both onshore and offshore on artificial structures, such as buildings and oil rigs. A study by Christensen-Dalsgaard et al. (2019) determined that offshore rigs had the greatest rates of kittiwake breeding productivity, followed by onshore man-made structures, and with natural cliffs having the lowest rates of productivity. Breeding razorbill and guillemot have also been recorded on offshore structures, including installations in the Southern North Sea in 2021 and 2022 (Hornsea Four (2022d) and E. Morgan (pers. comm.)).

5.3.1.4 ANS are being progressed and or required as compensation measures for kittiwake for the Hornsea Four[9] and Hornsea Three[10] projects, both being delivered by Orsted, one of the joint venture partners for the Salamander Project. For Hornsea Three, structures are in the water[10] and for Hornsea Four there is a

[9] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010098/EN010098-002326-Copy%20of%20SOS%20Decision%20Letter.pdf
[10] https://orsted.co.uk/media/newsroom/news/2023/07/how03-nesting-structures

requirement in Schedule 16 Part 2 of the DCO[11] to deliver compensation for kittiwake in line with the Kittiwake Compensation Implementation Plan (Hornsea Four, 2022b). Hornsea Four has publicly stated that it is open to collaboration on the offshore ANS if the potential arises (e.g. see The Crown Estate and NIRAS, 2024). Therefore, should the Hornsea Four plans have sufficient capacity and the project is in agreement, there is potential for these existing plans to offer an opportunity to the Salamander Project for a rapid compensation option through collaborative work between the projects. Effectively through apportioning of excess capacity of an ANS between participating projects, with a corresponding reduction in timescale to delivery and certainty in delivery for the Salamander Project (because the measure has already been subject to significant assessment and consenting).

5.3.1.5 For collaborative offshore ANS to be considered a suitable compensation option for the Salamander Project, key next steps include:

- **Location for compensation measure** – when identifying suitable locations for offshore nesting structures, the following points will need to be considered:
    - Distance from prey resource: shorter foraging distances are generally linked to higher breeding success (e.g. Daunt et al., 2002; Lewis et al., 2001);
    - Avoidance of creating competition with existing SPA populations: tracking studies show that birds tend to avoid foraging in areas that are populated with a higher number of birds from a neighbouring colony than from their own colony (Wakefield et al., 2017);
    - Distance from land: how far offshore an artificial nesting structure is may influence its suitability for colonisation;
    - All the above have been addressed for the collaborative ANS option for the projects progressing these, however the question over the suitability of the locations for the Salamander Project would need to be determined.
- **Stakeholder consultation** – initial consultation expected to link to efforts progressed by a joint venture partner, before consulting with stakeholders on the acceptability of the location, measure and approach to quantification of the benefit;
- **Sufficiency** – The aim of the measure is to support a breeding colony with sufficiently high breeding success rates to sustain the required breeding population (of adults). Clarity would be required that sufficient capacity exists in the measure as designed and planned to deliver for the Salamander Project in addition to the instigating project;
- **Assessments and consents** – these either have or are expected to be required by the relevant joint venture partner already progressing the measure, with any additional assessment required for the Salamander Project likely to be limited to work to demonstrate the viability of the option for a Scottish project;
- **Delivery** – delivery of the measure is a requirement for the joint venture partner, with agreements required to confirm responsibilities and obligations on the Salamander Project;
- **Timescales** – joint venture project timescales need to be determined, to ensure that these are compatible with the required timescales for the Salamander Project. Timescales for delivery of the measure would be defined by the joint venture partner leading on the measure;

[11] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010098/EN010098-002330-DCO%20Hornsea%204%20OWF%20signed.pdf

- **Monitoring requirements** – monitoring methods will be discussed and agreed with relevant stakeholders post-consent. Core monitoring will focus on determining success of the measure and include:
    - colony counts;
    - productivity monitoring;
    - colonisation rate; and
    - monitoring natal dispersal.
- **Adaptive management -** would need to be discussed and agreed with the regulator but could include an extension of ANS to facilitate further nesting spaces which will include the provision of additional nesting structures if capacity in one location is exceeded. Other adaptive management options might include:
    - Application of predator deterrents;
    - Provision of additional protection from elements;
    - Ability to adjust size or orientation of compartments;
    - Provision of trace nests, decoys, and playback to encourage colonisation;
    - Relocation of the nesting structure; and
    - Management of fisheries of important seabird prey to increase availability.

5.4 Project level compensation measures

5.4.1 Measure 5 - Predator reduction

5.4.1.1 Measure is potentially relevant to three species under consideration (kittiwake, razorbill, puffin).

5.4.1.2 Invasive mammalian species influence ground nesting seabird colonies by predating eggs, chicks and adults; changing the distribution of breeding colonies and changing nesting habitat. There are many species that have been introduced into sensitive island and mainland ecosystems within the UK that have become established populations (Stanbury et al., 2017). The reduction, or even complete removal, of predators from a nesting colony can result in significant benefits to the breeding success of seabirds, particularly auks, gulls, shearwaters and petrels (Barkham, 2023). Its profound importance as a conservation priority is therefore widely recognized (Thomas et al. 2017; Stanbury et al., 2017). UK seabird populations face predation from two prolific non-native mammalian predatory species: American mink *Neovison vison* and brown rat *Rattus norvegicus* together with the black rat *Rattus rattus*.

5.4.1.3 Comprehensive reviews of these two mammalian predators and impacts on seabird colonies can be found in Stanbury *et al*. (2017), Thomas *et al*. (2017), and Lopez *et al*. (2023).

5.4.1.4 For invasive predator reduction to be considered a suitable compensation option for the Salamander Project, a number of critical paths would require attention which include the following:

- **Location for compensation measure** – it is anticipated that reduction or eradication of invasive mammalian predators at a suitable location will result in reduced seabird mortality and therefore provide additional seabird recruits to the UK population and the UK site network. The key next step in the success of this measure is identifying a suitable site. Factors in determining the viability of a site include (in no particular order):
    - Presence of invasive mammal and population size;

- Evidence of nesting seabirds and/or unused nesting habitat (as well as seabird population trends);
- The accessibility of nesting areas to predators;
- The ease with which invasives can be eliminated and the site maintained predator-free;
- Scale of impact;
- Coherence to the network; and
- Stakeholder support (including the land owner and/or manager).

- **Stakeholder consultation** – buy-in from land owners and communities is key to the success of a predator reduction programme. As a result, stakeholder consultation is a primary step to progressing this measure;
- **Sufficiency** – past projects have quantified predator-free available nest sites (for rat eradication programmes) or quantified the scale of predation in SPAs without predator control based on available evidence (for mink). Stakeholder consultation will be critical to refine and agree on the metric, in particular the available data to support the measure at the identified location;
- **Assessments and consents** – requirement for consenting likely to be linked to any consents required by land owners and communities where control will take place, together with relevant consents for humanely killing the target species. Any assessment required likely to be focused on quantifying the benefit of the measure and if within an SPA potentially HRA requirements;
- **Delivery** – the delivery of this measure sits within the Salamander Project's control. Trained professionals will carry out the predator reduction programme according to the plans that will be set out for the chosen site;
- **Timescales** – implementation of the programme should be carried out upon receiving a consent decision, and before the operation phase commences. The duration of the eradication process would depend on the population of the target species and the size of the site. Mink control would be an ongoing effort, while rat eradication from islands typically spans up to two years followed by biosecurity measures. Upon identifying a final location, predator eradication specialists would provide a more precise timeframe. Monitoring productivity would span multiple breeding seasons;
- **Monitoring requirements** – a monitoring programme should be collaboratively designed with the delivery partner and in consultation with key stakeholders and include details on frequency, duration, and methodology. Any monitoring programme is required to document:
    - Predator presence (reinfestation);
    - Seabird population responses (at the site of control);
    - Seabird productivity (at the site of control); and
    - Seabird population trends (regionally).
- **Adaptive management** – an integral component of the long-term security of any predator reduction or eradication programme would be biosecurity measures to prevent reinvasion. Biosecurity must be managed adaptively to account for ongoing risks of reinvasion. Other adaptive management options include methods to increase the likelihood of key seabird species recolonising a breeding site through habitat manipulation and social attraction, or expansion of the scale and/or effort applied to the measure.

5.4.2 Measure 6 and 7 - Human disturbance and habitat management

Human disturbance and habitat enhancement (site management)

5.4.2.1 Measure is potentially relevant to all four species under consideration (kittiwake, razorbill, puffin and gannet).

5.4.2.2 There is reasonable evidence that human disturbance negatively impacts seabirds, including seabird breeding productivity, as a result of responses such as increased stress (Beale & Monaghan, 2004; Harris and Wanless, 1995), increased time away from nest sites (Finney, 2002), and even breeding failure or abandonment (Harris and Wanless, 1995; Audubon, 2021).

5.4.2.3 Impacts of human disturbance leading to reduced nesting success has been documented for kittiwake (Beale and Monaghan, 2004), auks (Harris and Wanless, 1995) and gannet (Allbrook and Quinn, 2020).

5.4.2.4 It is clear that human disturbance, such as visitor pressure to a seabird colony, can have adverse implications on the breeding success of those seabird colonies. Conversely, providing visitor access to charismatic wildlife is often desirable; it potentially yields conservation revenue and also increases the public appreciation of, and support for, conservation (Beale, 2007).

5.4.2.5 Therefore, rather than preventing visitor access to seabird colonies completely, there are some locations where additional management (such as improved footpaths and access restrictions, and provision of hides/viewing screens) could lead to reduced disturbance and therefore increased breeding success, whilst maintaining the visitor experience.

5.4.2.6 By implementing reductions in human disturbance, these adverse impacts can be reduced, or even removed, leading to increases in breeding success and/or survival rates and therefore increases in the wider biogeographic population of each species. If sufficient additional breeding can be encouraged then the overall breeding populations will increase, thereby maintaining the coherence of the network of SPAs designated (UK site network), at least in part, for each relevant species.

5.4.2.7 As well as reducing human disturbance, actions can be taken to enhance the breeding habitat of these seabirds species, and thus increase breeding success and/or reduce mortality. This is not a standalone measure, and would compliment human disturbance measures. Habitat enhancement can involve measures such as management of vegetation (for example, cutting of vegetation to enable access to nest sites and reduced risk of entanglement) and removal of invasive plants species (for example, at Craigleith, Firth of Forth, tree mallow *Malva arborea* covers the ground and prevents puffin from accessing burrows and reduces soil stability (Van Der Wal *et al.*, 2008)).

5.4.2.8 For human disturbance and/or habitat enhancement to be considered a suitable compensation option for the Salamander Project, key next steps include:

- **Location for compensation measure** – this will require the selection of suitable seabird nesting site(s) where human disturbance impacts are known to occur and/or habitat management is required to improve nesting success (that would qualify under the need to address additionality);
- **Stakeholder consultation** – there will be a need to obtain buy-in from land owners and site managers. There is also a need to consult with stakeholders on the acceptability of the location, measure and approach to quantification of the benefit;
- **Sufficiency** – the aim of the measure is to support a breeding colony with sufficiently high breeding success rates to sustain the required breeding population (of adults). Stakeholder consultation will be critical to refine and agree on the metric;

- **Assessments and consents** – consents that may be required could relate to any additional infrastructure needed, or changes to access if these relate to public rights of way or core path alterations. Consideration may also need to be given to HRA requirements for works within a designated site (unless the measures are deemed directly connected with or necessary to site management for nature conservation). Other than the potential requirement for HRA, assessments required are likely to be focused on gathering evidence and quantifying the benefit of the measure;
- **Delivery** – the delivery of this measure sits within the Salamander Project's control. Staff will be provided/contracted to oversee human disturbance reduction measures (e.g. warden role) and/or undertake habitat management measures;
- **Timescales** – implementation of the measures should be carried out upon receiving a consent decision, and before the operation phase commences. Monitoring productivity would span multiple breeding seasons. Timescale for delivery of the measure, once a location has been identified and secured, would be expected in 1-2 breeding seasons;
- **Monitoring requirements** – monitoring methods will be discussed and agreed with relevant stakeholders post-consent. Core monitoring will focus on determining success of the measure and may include some or all of the following:
    - colony counts;
    - productivity monitoring;
    - monitoring natal dispersal;
    - human disturbance levels; and/or
    - vegetation/habitat change monitoring.
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include additional disturbance reduction measures and/or habitat enhancement measures, either at the existing selected location or at additional locations.

5.4.3 Measure 8 - Fishery Bycatch

5.4.3.1 Measure is potentially relevant to one species under consideration (gannet).

5.4.3.2 Bycatch of seabirds refers to the incidental catch of seabirds within in commercial fishing activities; gannet feeding ecology makes this species highly vulnerable to bycatch (Gremillet *et al*., 2020). It was originally thought that only surface and shallow pelagic fishing gear would catch shallow diving species such as gannet, but despite the lack of overlap in diving range and fishing depth it has also been identified that they can also be caught in deep nets during deployment or hauling (Bradbury *et al*., 2017). Longline fishing appears to present the greatest threat to gannet in UK waters, with an estimate of 50 to 150 gannet likely bycaught each year (Kingston *et al*., 2023). Bradbury *et al*. (2017) assessed individual species and assigned Species Sensitivity Index (SSI) scores for each type of fishing gear, ranking gannet in the top ten of 53 species for sensitivity to surface, pelagic and benthic fishing gear, and the top ranked species for sensitivity to surface gear.

5.4.3.3 There are a variety of factors which can influence bycatch numbers. In the UK, bycatch rates for gannet appear to be highest in the summer and in the more northern parts of the UK fisheries range. Bycatch rates may also be affected by: bird behaviour; the time of day lines are set; the prevailing weather conditions; and the performance of any bird deterrent devices used (Northridge *et al*., 2023). Increased sunlight is understood to lead to higher bycatch rates, explaining the higher rates seen in the summer months and in lines set at dawn (Marine Directorate, 2023). Another study on the Scottish longline European hake

Merluccius merluccius fishery found the sink rates on some parts of the gear to be well below standards (Marine Directorate, 2023).

5.4.3.4 There is the potential to apply mitigation measures to alleviate bycatch, for example types of hooks, bird scarers, fishery methods applied.

- **Location for compensation measure** –location for this measure relates not just to a geographic location (where the seabirds and fisheries are known to interact and bycatch occurs) but also specific vessels as a number of vessels may be required to sign up to a bycatch reduction programme;
- **Stakeholder consultation** – a key step in the approach would be consultation with fishers but also the relevant fishery organisation(s) and government agencies. That consultation would be in addition with consultation with stakeholders on the acceptability of the approach, the location/vessel(s), the measure and approach to quantification of the benefit;
- **Sufficiency** – the aim of the measure would be to reduce bycatch of adult birds in larger numbers than the total required for compensation. Sufficiency may also need to take account of the seasonality of the impact and connectivity of the birds to the UK site network;
- **Assessments and consents** – the need for any consents and assessments will depend on the licensing regime that applies to the fishing vessel(s) involved;
- **Delivery** – the delivery and monitoring of this measure sits within the Salamander Project's control but is dependent on others (primarily the fishers) as a project partner to implement (likely to be driven by finding). There would be a requirement for monitoring of the implementation to confirm the efficacy and compliance with the measure;
- **Timescales** – implementation of the measures should be carried out upon receiving a consent decision, and before the operation phase commences. Timescale for delivery of the measure is linked to reaching agreement with fishers (to deliver the measure) and stakeholders (that the measure is acceptable), with potential for seasonality to feature with respect to the timing of when seabirds and fishers coincide;
- **Monitoring requirements** – monitoring methods will be discussed and agreed with relevant stakeholders post-consent. Core monitoring will focus on determining success of the measure and may include some or all of the following:
    - use of fishery observers;
    - access to vessel logbooks;
    - use of a camera mounted system on vessels; and
    - reporting by fishers.
- **Adaptive management** – would need to be discussed and agreed with the regulator but could include additional vessels or additional measures to reduce risk of bycatch.

6 Roadmap Process

6.1 Refining the shortlist

6.1.1.1 This report provides a summary and quantification of the predicted impacts associated with the Salamander Project for which Scottish Ministers may consider it necessary to secure compensatory measures. As identified within **Section 2**, the impacts included within this report are drawn from the conclusions of the in-combination assessment for Ornithology within the Offshore RIAA (Section 11, **Volume RP.A.1, Report 1: Report to Inform Appropriate Assessment**) and also with regard to other offshore wind project licence application processes that are in the public domain at the time of writing. Further refinement of the species and sites deemed to require compensatory measures is expected. The Applicant has therefore sought to include an extended shortlist within this document **(Section 5**) to provide adequate options regarding all potential sites and species whilst allowing for further future refinement.

6.1.1.2 Notwithstanding refinement associated with the species and sites included, the shortlisted compensatory measures themselves require further refinement based on a more detailed consideration of feasibility, in particular noting the key drivers around timescale associated with the Salamander Project's needs case and objectives.

6.1.1.3 The shortlist of compensatory measures identified was developed via expert judgement drawing on contemporary industry examples and experience. However, it has not yet been subject to external consultation with key stakeholders. This feedback will be crucial to the refinement process. The Applicant is seeking feedback on these listed measures as the next step towards created a more focused shortlist.

6.2 Supplementary documents for submission

6.2.1.1 In-line with the process agreed with MD-LOT and NatureScot (Meeting held October 2023), the Applicant is committed to preparing a set of supplementary documents that build on the content of this report by providing greater detail, focused on the refined shortlist of compensatory measures. This suite of documents will consist of:

- An Ecological Evidence Report
- A Compensation Plan
- Compensation Plan Overview Report
- Outline Implementation and Monitoring Plans (one per species)

6.2.1.2 The Ecological Evidence Report will draw together the evidence and literature that provides the ecological justification and premise for progressing with selected shortlisted measures with regards to specific species. It will use the extended shortlist presented in **Section 5** as a foundation to build from and address all relevant species so as to provide a more streamlined and more readily navigable report.

6.2.1.3 Similarly, the development of the Salamander Project's Compensation Plan and Compensation Overview Report will address the refined shortlist of compensatory measures in full. The development of the Compensation Plan will provide confirmation of the site(s), the processes in place to secure the measure and or site(s) and identify where further consents and assessments may be required. Crucially the development of this document will drive the consultation and engagement process required for developing an agreed set of measures. Through this, focus will also be given to the identification and prioritisation of measures that allow for delivery through collaboration or input to strategic mechanisms, where they align with the Salamander Project timelines and needs case. Whereas, the Compensation Overview Report will

be a high-level document designed to provide signposting and summaries across the suite of compensation documents in order to support stakeholder understanding and interpretation.

6.2.1.4 Lastly separate Outline Implementation and Monitoring Plans (IMPs) will be produced to provide delivery proposals for the agreed measures. These will individually address the selected measure(s) and or relevant species. The Outline IMPs will set out detail addressing scale, location and design, as well as the programme, monitoring and reporting requirements specific to the measures.

6.3 Consultation and engagement

6.3.1.1 The needs case and objectives that the Salamander Project responds to as a 'stepping stone' project within the Innovation category of the INTOG leasing round presents particular time frame constraints that have limited the opportunities for more detailed engagement from the assessment processes up to application submission. The Applicant appreciates the pragmatic and flexible approach that key stakeholders have taken in recognition of this, in particular MD-LOT and NatureScot's support of a roadmap approach.

6.3.1.2 Notwithstanding this, novel approaches and deviation from suggested process represents a challenge for the Salamander Project and key advisory stakeholders to this process. Moving forward, the Salamander Project observes that iterative engagement will be necessary to establish an agreed set of measures that are deliverable in line with the time frame constrains noted above as well as in a format that is acceptable and agreeable to the key stakeholders to the process.

6.4 Indicative road map

6.4.1.1 **Figure 6-1** below provides an indicative timeline for the delivery of the supplementary documents outlined in **Section 6.2** in support of the Salamander Project's Application and Derogation Case. It also shows key activities that are necessary to inform the development of these documents.

6.4.1.2 The Applicant presents the details in **Figure 6-1** on an indicative basis in recognition that the influence of external events on this process may be substantial. Not least the development and adoption of a revised Sectoral Marine Plan for Offshore Wind Energy that addresses INTOG projects. As well as with the associated development of strategic compensation programmes of work.

6.4.1.3 Key activities detailed within **Figure 6-1** may out of necessity be iterative and as such defined timeframes may be adjusted.

	2024									2025
Compensation Reports	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Q1**
Ecological Evidence				Draft prepared		Further Draft prepared		Further Draft prepared		Reports submitted end 2024
Compensation Plan										
Overview Report										
*Outline IMP(s)**										
Activities										
Application consultation	Application consultation will inform position on species and sites requiring compensation									
Compensation measure consultation	Salamander Project led consultation on the development of compensation documents will be undertaken.									
Other engagement	Iterative engagement with a range of statutotry and non-statutory stakeholders will be undertaken throughout road map process.									
Feasibility appraisal	Detailed consideration of technical, financial, legal and other feasibility issues to achieve a refined shortlist. Iterative where necessary.									
Site identification	Identification of suitable sites and opportunities is necessary, developing into the eventual securing of rights									
Identification of delivery partners	Collaboration pursued where opportunities are available. To be informed by the refined shortlist and further engagement									
Identification of delivery Mechanisms	Identification of additional consents requirements. Monitoring of strategic fund development and preparation of funding statements.									
Establishing design details	Consideration of surveys, practical design and cost elements of measures.									

Figure 6-1 Compensation Road Map deliverables and key activities to support delivery of supplementary documents

*IMPs would be developed in further detail post-consent.

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