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SCOTTISH MINISTERS' ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR DESIGNATED SPECIAL AREAS OF CONSERVATION AND SPECIAL PROTECTION AREAS IN VIEW OF THE SITES' CONSERVATION OBJECTIVES.

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, AND FOR MARINE LICENCES UNDER THE MARINE (SCOTLAND) ACT 2010 AND THE MARINE AND COASTAL ACCESS ACT 2009 FOR THE CONSTRUCTION AND OPERATION OF THE SALAMANDER OFFSHORE WIND FARM AND ASSOCIATED TRANSMISSION INFRASTRUCTURE.

SITE DETAILS: SALAMANDER OFFSHORE WIND FARM, APPROXIMATELY 35 KM EAST OF PETERHEAD

Name	**Assessor or Approver**	**Date**
Kirsty Black	Assessor	1 November 2024
Julie Miller	Assessor	21 November 2024
Louise Msika	Approver	02 December 2024

TABLE OF CONTENTS

LIST OF TABLES

Glossary of Terms

AA	Appropriate Assessment
AEOSI	Adverse Effect on Site Integrity
Applicant	Salamander Wind Project Applicant Ltd
Berwick Bank	Berwick Bank Wind Farm
CGR	Counterfactual Growth Rate
CPS	Counterfactual of Population Size
CRM	Collision Risk Modelling
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
HPAI	Highly Pathogenic Avian Influenza
HRA	Habitats Regulations Appraisal
IBM	Individual-Based Modelling
km	Kilometres
LAT	Lowest Astronomical Tide
LSE	Likely Significant Effect
m	Metres
MHWS	Mean High Water Springs
MW	Megawatts
OFFSAB	Outer Firth of Forth and St Andrews Bay Complex
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
PDE	Project Design Envelope
PVA	Population Viability Analysis
RIAA	Report to Inform Appropriate Assessment
RSPB Scotland	Royal Society for the Protection of Birds Scotland
SAC	Special Area of Conservation
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
UXO	Unexploded Ordnance
WTG	Wind Turbine Generators

SECTION 1: BACKGROUND

1 Appropriate assessment conclusion

1.1 This AA concludes that there will be no AEOSI on the Calf of Eday SPA, Cape Wrath SPA, Copinsay SPA, Coquet Island SPA, Fair Isle SPA, Fetlar SPA, Flannan Isles SPA, Foula SPA, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Loch of Strathbeg SPA, Marwick Head SPA, Mingulay and Berneray SPA, North Rona and Sula Sgeir SPA, Northumberland Marine SPA, Noss SPA, Rathlin Island SPA, Rousay SPA, Shiant Isles SPA, St Kilda SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, West Westray SPA and Ythan Estuary, Sands of Forvie and Meikle Loch SPA as well as the Moray Firth SAC from the Salamander OWF either alone or in combination with other plans or projects, providing that the conditions set out in section 4 are complied with.

1.2 The Scottish Ministers consider that the most up to date and best scientific advice available has been used in reaching the conclusion that the Salamander OWF will not adversely affect the integrity of the above sites and is satisfied that no reasonable scientific doubt remains.

1.3 The AA concludes there will be an AEOSI from the Salamander OWF in combination with other plans or projects for the following features and SPAs:

- Gannet at Forth Islands SPA and OFFSAB SPA (breeding);
- Kittiwake at Buchan Ness to Collieston Coast SPA, East Caithness Cliffs SPA, Forth Islands SPA, Fowlsheugh SPA, North Caithness Cliffs SPA, OFFSAB SPA (breeding and non-breeding) and Troup Pennan and Lion's Heads SPA; and,
- Seabird assemblage qualifiers for Buchan Ness to Collieston Coast SPA (kittiwake), East Caithness Cliffs SPA (kittiwake), Forth Islands SPA (gannet and kittiwake), Fowlsheugh SPA (kittiwake), North Caithness Cliffs SPA (kittiwake), OFFSAB SPA (breeding and non-breeding kittiwake and breeding gannet) and Troup Pennan and Lion's Heads SPA (kittiwake).

1.4 Further, the AA is unable to conclude beyond reasonable scientific doubt that there will be no AEOSI from Salamander OWF alone or in combination with other plans or projects for the following features and SPAs:

Alone:

- Guillemot at Buchan Ness to Collieston Coast SPA and OFFSAB SPA (breeding and non-breeding); and,
- Seabird assemblage at Buchan Ness to Collieston Coast SPA (guillemot) and OFFSAB SPA (breeding and non-breeding guillemot).

In-combination:

- Kittiwake at St Abb's Head to Fast Castle SPA;
- Guillemot at Troup, Pennan and Lion's Heads SPA;
- Puffin at Forth Islands SPA and OFFSAB SPA (breeding);
- Razorbill at East Caithness Cliffs SPA, Fowlsheugh SPA, OFFSAB SPA (non-breeding) and Troup, Pennan and Lion's Heads SPA; and,
- Seabird assemblage feature of St Abb's Head to Fast Castle SPA (kittiwake).

1.5 The Scottish Ministers therefore conclude that Salamander OWF can only be consented if a derogation case is agreed under regulation 49 of the Conservation (Natural Habitats, &c.) Regulations 1994 and regulation 29 of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

2 Introduction

2.1 This is a record of the AA undertaken by the Scottish Ministers in regards to the Applicant's proposal to construct and operate the Salamander OWF located approximately 35 km off the coast of Peterhead as required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 and Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (collectively known as "the Habitats Regulations"). The Scottish Ministers as the 'competent authority' under the Habitats Regulations, can only agree to a project after having ascertained that the project will not adversely affect the integrity of any European site (SACs or SPAs), either alone or in combination with other plans or projects. If AEOSI is identified through the AA then a competent authority can only agree to a project if the requirements of the derogation provisions in the Habitats Regulations are met. The derogation process is not part of the AA and, given the conclusions of the AA, is considered separately in other documentation relating to the application for the Salamander OWF.

2.2 NatureScot, operating name of Scottish Natural Heritage, Natural England and the Northern Ireland Environment Agency have been consulted in accordance with Regulation 48(3) of the Conservation (Natural Habitats, &c.) Regulations 1994 and Regulation 28(4) of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

3 Details of proposed project

3.1 The Applicant has submitted marine licence applications in respect of the construction and operation of a generating station and offshore transmission infrastructure works under part 4 of the Marine and Coastal Access Act 2009 and part 4 of the Marine (Scotland) Act 2010. Additionally, the Applicant has submitted an application for consent under section 36 of the Electricity Act

1989 in respect of the project. These applications are collectively referred to as the "Application". A full description of the project can be found in volume ER.A.2, chapter 4 of the EIA Report, as submitted on 26 April 2024. The section 36 consent and marine licences applied for are for an operational period of 35 years. As part of the Application, the Applicant also submitted a RIAA which has been used to inform the AA.

3.2 The Applicant proposes to construct and operate the Salamander OWF approximately 35 km off the coast of Peterhead, Scotland with a generating capacity of around 100 MW, consisting of up to 7 WTGs with floating substructures.

3.3 Mooring lines will be used to connect the structures to the seabed, with a range of mooring systems being considered. Between three to eight mooring lines will be required per floating substructure, presenting a worst case design scenario of up to 56 mooring lines in total.

3.4 The mooring lines will be connected to an anchor, with drag-embedment anchors, vertical load anchors, piles, suction caissons or gravity anchors currently being considered for use. One anchor per mooring line may be required, or multiple lines may be connected to a common anchor between the floating substructures.

3.5 A range of WTG models are being considered, and the final model of WTG will be selected post-consent. A summary of the worst-case design scenario for the WTGs as provided in volume ER.A.2, chapter 4 of the EIA Report is presented below in Table 1.

Table 1. WTG Parameters

Parameter	**Salamander OWF**
Number of WTGs	≤7
Rotor Blade Diameter	≤250m
Total Rotor Swept Area	≤343,612 m2
Height of Lowest Blade Tip (still water level for semi-submersible and lowest astronomical tide for tension leg platform)	≥ 22 m
Height of Highest Blade Tip (ordnance datum newlyn)	≤ 310 m

Hub Height (still water level)	≤ 172.5 m
Spacing between Turbines (from centre point of WTG tower)	≥ 1,000 m

3.6 HVAC cables, operating at 66 kV are planned to be used for the transfer of power between the floating wind turbines, and from the OWF to the landfall.

3.7 There may be up to 8 inter-array cables between the individual WTGs, as well as any subsea hubs to collect power output, and up to 2 offshore export cables between the offshore array area and landfall to export the power produced. The worst case design scenario is a total combined length of offshore cables within the offshore array area of ≤35 km and within the offshore export cable area corridor of ≤85 km.

3.8 Due to the use of floating substructures, dynamic cables will be used for all or part of the inter-array connections between WTGs as they are able to accommodate movement of the floating substructures without imparting excessive loads on the cables.

3.9 For cable installation, pre-lay surveys will be completed to identify any required obstacle removal along the buried portion of the cable route. Ploughing, or dredging the cable route may also be necessary to level any sandwaves.

3.10 The cable sections will be loaded onto an installation vessel which will then move to the site of a pre-installed floating substructure and the cable will be pulled into the floating substructure and secured. The cable will then be deployed into the water column and the vessel will transit along the desired route, laying the cable as it goes.

3.11 For inter-array cables, the second end of the cable will then be deployed and pulled and secured into another floating substructure, while for offshore export cables, the cable will be pulled into a transition joint bay or the onshore substation at landfall.

3.12 Alternatively, the inter-array cables may be pre-installed and wet stored until the floating sub structure is brought to site.

3.13 It is intended that the offshore export cable(s) will be sufficiently buried beneath the seabed, however, in the event that soil conditions do not facilitate this, post-installation cable protection measures will be implemented as described in volume ER.A.2, chapter 4 of the EIA Report.

3.14 As part of the export system, up to two subsea hubs could be deployed within the offshore array area, which allow the connection of inter-array cables from

multiple WTGs to a single outgoing cable, allowing for greater flexibility in floating offshore wind farm layout design and construction.

3.15 The subsea hubs will be gravity-based, however, additional anchoring may be required which will be achieved by the use of either dead man anchors, suction bucket anchors, or small subsea piles. Piled anchors will be installed using either piling and/or drilling techniques, with only one anchor being piled at any time within the offshore array area, and no more than four piles taking place in a 24 hour period.

3.16 In preparation for construction, a range of additional supporting activities may take place including further offshore surveys, demarcation of the offshore array area and installation of buoys offshore. Seabed activities will also take place such as seabed clearance, sandwave levelling and boulder clearance. UXO clearance may also be required.

3.17 On and offshore construction is scheduled to take a maximum of 3 years, with the aim of being commissioned and operational by the end of 2029.

3.18 It is anticipated that landfall works, and installation of the moorings and anchors will be undertaken in the first year of offshore construction, with the WTG's being connected to the mooring systems and inter-array cables and then commissioned in the second year of offshore construction. The offshore export cables and inter-array cables may be installed in either the first or second year of offshore construction.

3.19 The offshore export cable(s) will make landfall east of Lunderton, north of Peterhead.

4 Consultation

4.1 NatureScot was consulted on the Salamander OWF on 10 May 2024 and responded on 02 July 2024. Further advice was sought from NatureScot on the 03 October 2024 following a clarification request from the Applicant and NatureScot responded on the 31 October 2024. NatureScot was asked for further advice regarding the OFFSAB SPA on 15 November 2024 and responded on 27 November 2024.

4.2 Natural England was consulted on the Salamander OWF, with specific reference to English SPA's, on 10 May 2024 and responded on 24 June 2024.

4.3 RSPB Scotland was consulted on the Salamander OWF on 10 May 2024 and responded on 16 July 2024.

4.4 The Northern Ireland Environment Agency was consulted on the Salamander OWF, with specific reference to Irish SPA's, on 03 October 2024 and responded on 01 November 20

5 Summary of Consultation Responses

5.1 The main points by each of the respondents that included HRA specific comments are summarised below. Copies of all consultation comments received by the Scottish Ministers can be found here for the consultation.

5.2 Where conclusions varied between NatureScot, Natural England and RSPB Scotland, additional text is included in the relevant species/SPA sections. Otherwise, only statements from NatureScot for Scottish SPAs and Natural England for English SPAs are included for each individual species and SPA combination.

5.3 A summary is included in **Table 2** below with respect to the responses on ornithology from all of the consultees.

Table 2. SPA interest features for which Scottish Ministers (AA), the Applicant, NatureScot, Natural England, and RSPB Scotland conclude an AEOSI from the Salamander OWF alone and in combination with other UK North Sea OWFs, either including or excluding Berwick Bank according to the reasoning in section 16.5.

Species	SPA	Alone					In combination					
		AA	The Applicant	NatureScot	Natural England	RSPB Scotland	AA	The Applicant	NatureScot	Natural England	RSPB Scotland	Does In combination assessment incl. Berwick Bank?
Gannet	Forth Islands	N	N	N	-	N	Y	N	Y	-	?	N
	Hermaness, Saxa Vord and Valla Field	N	N	N	-	-	N	N	N	-	-	N
	Outer Firth of Forth and St Andrews Bay Complex (breeding)	N	N	N	-	N	Y	N	Y	-	?	N
Guillemot	Buchan Ness to Collieston Coast	?	N	?	-	?	?	N	?	-	?	Y
	Outer Firth of Forth and St Andrews Bay Complex (breeding and non-breeding)	?	-	?	-	?	?	-	?	-	?	N
	Troup, Pennan and Lion's Heads	N	N	N	-	N	?	N	?	-	?	Y
Herring gull	Buchan Ness to Collieston Coast	N	N	N	-	-	N	N	N	-	-	Y
Kittiwake	Buchan Ness to Collieston Coast	N	N	N	-	N	Y	Y	Y	-	?	N
	East Caithness Cliffs	N	N	N	-	N	Y	N	Y	-	?	N
	Forth Islands	N	N	N	-	N	Y	N*	Y*	-	?	N
	Fowlsheugh	N	N	N	-	N	Y	Y	Y	-	?	N

	North Caithness Cliffs	N	N	N	-	N	Y	N*	Y	-	?	N
	Outer Firth of Forth and St Andrews Bay Complex (breeding and non-breeding)	N	N	N	-	N	Y	Y	Y	-	?	N
	St Abb's Head to Fast Castle	N	N	N	-	N	?	N*	?*	-	?	N
	Troup, Pennan and Lion's Heads	N	N	N	-	N	Y	Y	Y	-	?	N
Puffin	Forth Islands	N	N	N	-	N	?	N	?	-	?	N
	Outer Firth of Forth and St Andrews Bay Complex (breeding)	N	N	N	-	N	?	N	?	-	?	N
	Sule Skerry and Sule Stack	N	N	N	-	-	N	N	N	-	-	Y
Razorbill	East Caithness Cliffs	N	N	N	-	N	?	Y*	?	-	?	N
	Fowlsheugh	N	N	N	-	N	?	Y	?	-	?	N
	Outer Firth of Forth and St Andrews Bay Complex (non-breeding)	N	-	N	-	N	?	-	?	-	?	N
	Troup, Pennan and Lion's Heads	N	N	N	-	N	?	N	?	-	?	N
Seabird assemblage	Buchan Ness to Collieston Coast	?	N	?	-	N	Y	Y	Y	-	?	N
	East Caithness Cliffs	N	N	N	-	N	Y	Y*	Y	-	?	N
	Farne Islands	N	N	-	N	N	N	N	-	N	?	**N/Y****
	Forth Islands	N	N	N	-	N	Y	N*	Y	-	?	N
	Fowlsheugh	N	N	N	-	N	Y	Y	Y	-	?	N
	North Caithness Cliffs	N	N	N	-	N	Y	N*	Y	-	?	N
	Outer Firth of Forth and St Andrews Bay Complex (breeding and/or non-breeding)	N	N	N	-	N	Y	Y	Y	-	?	N
	St Abb's Head to Fast Castle	N	N	N	-	N	?	N*	?*	-	?	N
	Troup, Pennan and Lion's Heads	N	N	N	-	N	Y	Y	Y	-	?	N

Note: A '?' is listed where AEOSI is not concluded but cannot be ruled out.
*Noting that the Salamander OWF does not make a tangible contribution to the impacts.
** Named component kittiwake assessed excluding Berwick Bank, named component puffin assessed including Berwick Bank.

5.4 NatureScot

Marine Mammals

5.4.1 In its consultation response dated 02 July 2024, NatureScot agreed with the Applicant that there is potential for a likely significant effect to the bottlenose dolphin feature of the Moray Firth SAC. However, NatureScot agreed with the conclusion presented in the RIAA that there will be no adverse effect on the site integrity for the Moray Firth SAC with regards to the bottlenose dolphin

qualifying species, from the Salamander OWF, either alone or in combination with other developments.

Ornithology

5.4.2 NatureScot, in its response dated 02 July 2024, stated that its advice for collision is based on the Ozsanlav-Harris *et al*. (2023) rates which are used in the Applicant Approach. Its advice for displacement is based on the SNCB Approach, though it notes that the Applicant Approach has been considered. For kittiwake and gannet which are assessed for both collision and displacement, its advice is based on the SNCB Approach.

5.4.3 NatureScot agreed with the Applicant and advised no AEOSI for the following sites and features of Scottish SPAs from the Salamander OWF alone, as a result of displacement (auks) and a combination of displacement and collision mortality (kittiwake).

- Kittiwake at Buchan Ness to Collieston Coast SPA;
- Razorbill at Fowlsheugh SPA;
- Razorbill at Troup, Pennan and Lion's Heads SPA; and,
- Guillemot at Troup, Pennan and Lion's Heads SPA.

5.4.4 However, NatureScot disagreed with the Applicant for guillemot at Buchan Ness to Collieston Coast SPA and was unable to conclude no AEOSI for this feature from the Salamander OWF alone, as a result of displacement.

5.4.5 NatureScot advised AEOSI for multiple features across multiple SPAs for the Salamander OWF in combination with other OWFs at a UK North Sea spatial scale, as seen in **Table 2**. Whilst NatureScot agreed with some of the conclusions of the Applicant's RIAA, it disagreed with the RIAA and either concluded AEOSI for some qualifying features of some SPAs, or was unable to conclude no AEOSI, considering both in-combination options with and without Berwick Bank. For kittiwake at some SPAs it acknowledged that the Salamander OWF contribution to annual mortality is very low, i.e. less than one bird per annum namely for kittiwake at the Forth Islands SPA and St Abb's Head to Fast Castle SPA. In these two cases, NatureScot noted that the Salamander OWF does not make a tangible contribution to the impacts.

5.4.6 For in-combination impacts NatureScot concluded there will be an AEOSI for the following SPAs and qualifying features, as a result of combined displacement and collision mortality for gannet and kittiwake:

- Gannet at Forth Islands SPA;
- Kittiwake at Buchan Ness to Collieston Coast SPA;

- Kittiwake at East Caithness Cliffs SPA;
- Kittiwake at Fowlsheugh SPA;
- Kittiwake at North Caithness Cliffs SPA; and,
- Kittiwake at Troup, Pennan and Lion's Heads SPA.

5.4.7 NatureScot further concluded AEOSI in combination for kittiwake at Forth Islands SPA as a result of a combination of displacement and collision mortality. However, it considered that the contribution from the Salamander OWF would be minimal.

5.4.8 In addition, NatureScot was unable to conclude no AEOSI for the following SPAs and qualifying features in combination with other OWF, as a result of displacement (auks):

- Guillemot at Buchan Ness to Collieston Coast SPA;
- Guillemot at Troup, Pennan and Lion's Heads SPA;
- Puffin at Forth Islands SPA;
- Razorbill at East Caithness Cliffs SPA;
- Razorbill at Fowlsheugh SPA; and,
- Razorbill at Troup, Pennan and Lion's Heads SPA.

5.4.9 NatureScot additionally was unable to conclude no AEOSI for kittiwake at St Abb's Head to Fast Castle SPA, as a result of a combination of displacement and collision mortality, in combination with other OWF. However, it considered the contribution from the Salamander OWF would be minimal.

5.4.10 NatureScot in its response of 02 July 2024, included the text "*(breeding)*" in the species column of *Table 15: Summary of NatureScot conclusions for OFFSAB*. However, NatureScot provided a correction to the Scottish Ministers dated 27 November 2024 noting that this column should read "*(breeding and/or non-breeding)*" to reflect that guillemot and kittiwake are both breeding and non-breeding features, and that razorbill are a non-breeding feature.

5.5 Natural England

Ornithology

5.5.1 Natural England, in its response dated 24 June 2024 agreed with the RIAA that the Salamander OWF would not result in AEOSI to any English SPAs. Natural England later noted that within the Application additional adult mortality for kittiwake from the Farne Islands SPA is less than 1 bird and stated that after reviewing the documents as well as the measures proposed to mitigate for any adverse effects, there would be no AEOSI alone for English SPAs, and that any additional in-combination impacts from Salamander OWF would be '*de-minimis*'.

5.6 Northern Ireland Environment Agency

5.6.1 The Northern Ireland Environment Agency responded on the 01 November 2024 with no comments to make on the Salamander OWF.

5.7 RSPB Scotland

Ornithology

5.7.1 RSPB Scotland, in its response dated 16 July 2024, acknowledged that it had been unable to fully interrogate model methods, inputs, and outputs so assumed the models have been carried out using the correct parameters.

5.7.2 In general terms, RSPB Scotland considered the SNCB Approach a good reflection of the likely impact of the Salamander OWF, with the exception of the collision avoidance rates of non-breeding gannet. RSPB Scotland noted that the avoidance rate for gannet is based on the non-breeding season and does not reflect behaviours during the breeding season. Therefore, RSPB Scotland's view is that the 98% avoidance rate is more appropriate for breeding gannets.

5.7.3 RSPB Scotland agreed with the Applicant's presenting of alternative approaches; one recommended by NatureScot and one preferred by the Applicant. However, RSPB Scotland stated "*… the [Applicant] refers throughout to the NatureScot guidance in prejudicial terms as "overly precautionary", whilst referring to their own approach as "evidence-led", implying that the NatureScot approach is not.*" RSPB Scotland stated that its in-combination conclusions are based on what is presented in the RIAA as the SNCB Approach, noting NatureScot's advice on the use of Ozsanlav-Harris *et al.* (2023).

5.7.4 RSPB Scotland disagreed with the Applicant Approach of scoping out certain SPA features based on a '*de-minimis'* approach. RSPB Scotland also disagreed with the approach of excluding 'compensated for' projects from the in-combination assessment.

5.7.5 For in-isolation impacts, RSPB Scotland disagreed with the Applicant's conclusion for guillemot at Buchan Ness to Collieston Coast SPA, stating that a potential AEOSI could not be ruled out for guillemot at Buchan Ness to Collieston Coast SPA for the Salamander OWF alone. RSPB Scotland did not present its conclusions for other features and sites for the Salamander OWF alone.

5.7.6 For in-combination impacts, RSPB Scotland considered that potential AEOSI could not be ruled out for:

- Gannet at Forth Islands SPA;

- Guillemot at Buchan Ness to Collieston Coast SPA;
- Guillemot at Troup, Pennan and Lion's Heads SPA;
- Kittiwake at Buchan Ness to Collieston Coast SPA;
- Kittiwake at East Caithness Cliffs SPA;
- Kittiwake at Farne Islands SPA;
- Kittiwake at Forth Islands SPA;
- Kittiwake at Fowlsheugh SPA;
- Kittiwake at North Caithness Cliffs SPA;
- Kittiwake at St Abb's Head to Fast Castle SPA;
- Kittiwake at Troup, Pennan and Lion's Heads SPA;
- Puffin at Forth Islands SPA;
- Razorbill at East Caithness Cliffs SPA;
- Razorbill at Fowlsheugh SPA; and,
- Razorbill at Troup, Pennan and Lion's Heads SPA.

5.7.7 Finally, RSPB Scotland considered that potential AEOSI could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA in combination with other UK North Sea OWFs.

SECTION 2: INFORMATION ON EUROPEAN SITES

6 Background information and qualifying interests for the relevant European sites

6.1 This section provides links to the NatureScot SiteLink website and the Natural England Designated Sites View website where the background information on the sites being considered in this assessment is available. The qualifying interests for the sites are listed as are the conservation objectives.

6.2 In Scotland, there is an established policy position whereby any named qualifying species of an assemblage feature in an SPA are considered by NatureScot to be protected in their own right, akin to non-assemblage named qualifying species. This is because the SPA conservation objectives are set for individual species rather than the assemblage and therefore should be assessed and impacts concluded at the scale of the individual species. In England, it is the unit of the assemblage as a whole at which the conservation objectives are set and therefore on which advice is provided by Natural England. Accordingly, the AA follows the approach by the respective SNCBs for SPAs in Scotland and England, presenting conclusions for all species listed in the SPA citation in their own right for Scotland (irrespective of qualifying as part of an assemblage or as a named non-assemblage species).

Table 3 Name of European sites affected and relevant links

Buchan Ness to Collieston Coast SPA

https://sitelink.nature.scot/site/8473

Calf of Eday SPA
https://sitelink.nature.scot/site/8478
Cape Wrath SPA
https://sitelink.nature.scot/site/8481

Copinsay SPA
https://sitelink.nature.scot/site/8485

Coquet Island SPA
https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK9006031

East Caithness Cliffs SPA
https://sitelink.nature.scot/site/8492

Fair Isle SPA
https://sitelink.nature.scot/site/8496

Farne Islands SPA
https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK9006021

Fetlar SPA
https://sitelink.nature.scot/site/8498

Flannan Isles SPA
https://sitelink.nature.scot/site/8502

Forth Islands SPA
https://sitelink.nature.scot/site/8500

Foula SPA
https://sitelink.nature.scot/site/8504

Fowlsheugh SPA
https://sitelink.nature.scot/site/8505

Handa SPA
https://sitelink.nature.scot/site/8511

Hermaness, Saxa Vord and Valla Field SPA
https://sitelink.nature.scot/site/8512

Hoy SPA
https://sitelink.nature.scot/site/8513

Loch of Strathbeg SPA
https://sitelink.nature.scot/site/8537

Marwick Head SPA
https://sitelink.nature.scot/site/8544

Mingulay and Berneray SPA
https://sitelink.nature.scot/site/8545

North Caithness Cliffs SPA
https://sitelink.nature.scot/site/8554

North Rona and Sula Sgeir SPA
https://sitelink.nature.scot/site/8558

Northumberland Marine SPA
https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK9020325

Noss SPA
https://sitelink.nature.scot/site/8561

Outer Firth of Forth and St Andrews Bay Complex SPA
https://sitelink.nature.scot/site/10478

Rathlin Island SPA
https://www.daera-ni.gov.uk/protected-areas/rathlin-island-spa

Rousay SPA
https://sitelink.nature.scot/site/8573

Shiant Isles SPA
https://sitelink.nature.scot/site/8575

St Abb's Head to Fast Castle SPA
https://sitelink.nature.scot/site/8579

St Kilda SPA
https://sitelink.nature.scot/site/8580

Sule Skerry and Sule Stack SPA
https://sitelink.nature.scot/site/8581

Sumburgh Head SPA
https://sitelink.nature.scot/site/8582

Troup, Pennan and Lion's Heads SPA
https://sitelink.nature.scot/site/8587

West Westray SPA
https://sitelink.nature.scot/site/8589

Ythan Estuary, Sands of Forvie and Meikle Loch SPA
https://sitelink.nature.scot/site/8592

Moray Firth SAC
https://sitelink.nature.scot/site/8327

Table 4 Qualifying interests

Buchan Ness to Collieston Coast SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Calf of Eday SPA
Cormorant (*Phalacrocorax carbo carbo*)*, breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Great black-backed gull (*Larus marinus*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Cape Wrath SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Copinsay SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Great black-backed gull (*Larus marinus*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Coquet Island SPA
Arctic tern (*Sterna paradisaea*)
Atlantic puffin (*Fratercula arctica*)*, breeding
Black-headed gull (*Chroicocephalus ridibundus*)*, breeding
Black-legged kittiwake (*Rissa tridactyla*)*
Common tern (*Sterna hirundo*)
Herring gull (*Larus argentatus*)*
Lesser black-backed gull (*Larus fuscus*)*
Northern fulmar (*Fulmarus glacialis*)*
Roseate tern (*Sterna dougallii*)
Sandwich tern (*Thalasseus sandvicensis*)
Seabird assemblage, breeding and non-breeding

* indicates assemblage qualifier only

East Caithness Cliffs SPA
Cormorant (*Phalacrocorax carbo*)*, breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Great black-backed gull (*Larus marinus*)*, breeding
Guillemot (*Uria aalge*), breeding
Herring gull (*Larus argentatus*), breeding
Kittiwake (*Rissa tridactyla*), breeding
Peregrine falcon (*Falco peregrinus*), breeding
Razorbill (*Alca torda*), breeding
Shag (*Phalacrocorax aristotelis*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Fair Isle SPA
Arctic skua (*Stercorarius parasiticus*)*, breeding
Arctic tern (*Sterna paradisaea*), breeding
Fair Isle wren (*Troglodytes troglodytes fridariensis*), breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Gannet (*Morus bassanus*)*, breeding
Great skua (*Stercorarius skua*)*, breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*)*, breeding
Shag (*Phalacrocorax aristotelis*)*, breeding

Seabird assemblage, breeding

* indicates assemblage qualifier only

Farne Islands SPA

Arctic tern (*Sterna paradisaea*), breeding
Common tern (*Sterna hirundo*), breeding
Cormorant (*Phalacrocorax carbo*)*, breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*)*, breeding
Roseate tern (*Sterna dougallii*), breeding
Sandwich tern (*Thalasseus sandvicensis*), breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Fetlar SPA

Arctic skua (*Stercorarius parasiticus*)*, breeding
Arctic tern (*Sterna paradisaea*), breeding
Dunlin *(Calidris alpina schinzii)*, breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Great skua (*Stercorarius skua*), breeding
Red-necked phalarope (*Phalaropus lobatus*), breeding
Whimbrel (*Numenius phaeopus*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Flannan Isles SPA

Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Leach's storm petrel (*Oceanodroma leucorhoa*), breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Forth Islands SPA

Arctic tern (*Sterna paradisaea*), breeding
Common tern (*Sterna hirundo*), breeding
Cormorant (*Phalacrocorax carbo*)*, breeding

Gannet (*Morus bassanus*), breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Lesser black-backed gull (*Larus fuscus*), breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*, breeding
Roseate tern (*Sterna dougallii*), breeding
Sandwich tern (*Sterna sandvicensis*), breeding
Shag (*Phalacrocorax aristotelis*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Foula SPA
Arctic skua (*Stercorarius parasiticus*)*, breeding
Arctic tern (*Sterna paradisaea*), breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Great skua (*Stercorarius skua*), breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Leach's storm petrel (*Oceanodroma leucorhoa*), breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*, breeding
Red-throated diver (*Gavia stellata*), breeding
Shag (*Phalacrocorax aristotelis*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Fowlsheugh SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*), breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*), breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Handa SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Great skua (*Stercorarius skua*)*, breeding
Guillemot (*Uria aalge*), breeding

Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Hermaness, Saxa Vord and Valla Field SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Gannet (*Morus bassanus*), breeding
Great skua (*Stercorarius skua*), breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*), breeding
Red-throated diver (*Gavia stellata*)
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Hoy SPA
Arctic skua (*Stercorarius parasiticus*)*, breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Great black-backed gull (*Larus marinus*)*, breeding
Great skua (*Stercorarius skua*), breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Peregrine falcon (*Falco peregrinus*), breeding
Puffin (*Fratercula arctica*)*, breeding
Red-throated diver (*Gavia stellata*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Loch of Strathbeg SPA
Barnacle goose (*Branta leucopsis*), non-breeding
Goldeneye (*Bucephala clangula*)*, non-breeding
Greylag goose (*Anser anser*), non-breeding
Pink-footed goose (*Anser brachyrhynchus*), non-breeding
Sandwich tern (*Sterna sandvicensis*), breeding
Teal (*Anas crecca*)*, non-breeding
Whooper swan (*Cygnus cygnus*), non-breeding
Waterfowl assemblage, non-breeding

* indicates assemblage qualifier only

Marwick Head SPA
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Mingulay and Berneray SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*), breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

North Caithness Cliffs SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Peregrine falcon (*Falco peregrinus*), breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

North Rona and Sula Sgeir SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Gannet (*Morus bassanus*), breeding
Great black-backed gull (*Larus marinus*)*, breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Leach's storm petrel (*Oceanodroma leucorhoa*), breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*)*, breeding
Storm petrel (*Hydrobates pelagicus*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Northumberland Marine SPA
Arctic tern (*Sterna paradisaea*), breeding
Black-headed gull (*Chroicocephalus ridibundus*)*, breeding
Black-legged kittiwake (*Rissa tridactyla*)*, breeding
Common tern (*Sterna hirundo*), breeding
European shag (*Gulosus aristotelis*)*, breeding
Great black-backed gull (*Larus marinus*)*
Great cormorant (*Phalacrocorax carbo*)*, breeding
Guillemot (*Uria aalge*), breeding
Herring gull (*Larus argentatus*)*
Lesser black-backed gull (*Larus fuscus*)*
Little tern (*Sternula albifrons*), breeding
Fulmar (*Fulmarus glacialis*)*
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*
Roseate tern (*Sterna dougallii*), breeding
Sandwich tern (*Thalasseus sandvicensis*), breeding
Seabird assemblage, breeding and non-breeding

* indicates assemblage qualifier only

Noss SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Gannet (*Morus bassanus*), breeding
Great skua (*Stercorarius skua*), breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Outer Firth of Forth and St Andrews Bay Complex SPA
Arctic tern (*Sterna paradisaea*), breeding
Black-headed gull (*Chroicocephalus ridibundus*), non-breeding
Common eider (*Somateria mollissima*), non-breeding
Common gull (*Larus canus*), non-breeding
Common scoter (*Melanitta nigra*), non-breeding
Common tern (*Sterna hirundo*), breeding
Gannet (*Morus bassanus*), breeding
Goldeneye (*Bucephala clangula*), non-breeding
Guillemot (*Uria aalge*), breeding and non-breeding
Herring gull (*Larus argentatus*), breeding and non-breeding
Kittiwake (*Rissa tridactyla*), breeding and non-breeding

Little gull (*Hydrocoloeus minutus*), non-breeding
Long-tailed duck (*Clangula hyemalis*), non-breeding
Manx shearwater (*Puffinus puffinus*), breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*), non-breeding
Red-breasted merganser (*Mergus serrator*), non-breeding
Red-throated diver (*Gavia stellata*), non-breeding
Shag (*Gulosus aristotelis*), breeding and non-breeding
Slavonian grebe (*Podiceps auritus*), non-breeding
Velvet scoter (*Melanitta fusca*), non-breeding
Seabird assemblage, breeding and non-breeding
Waterfowl assemblage, non-breeding

Rathlin Island SPA
Common gull (*Larus canus*)*, breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*), breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*), breeding
Lesser black-backed gull (*Larus fuscus*)*, breeding
Peregrine falcon (*Falco peregrinus*), breeding
Puffin (*Fratercula arctica*)*, breeding
Razorbill (*Alca torda*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Rousay SPA
Arctic skua (*Stercorarius parasiticus*)*, breeding
Arctic tern (*Sterna paradisaea*), breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Shiant Isles SPA
Barnacle goose (*Branta leucopsis*), non-breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*), breeding

Shag (*Phalacrocorax aristotelis*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

St Abb's Head to Fast Castle SPA
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

St Kilda SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Gannet (*Morus bassanus*), breeding
Great skua (*Stercorarius skua*), breeding
Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Leach's storm petrel (*Oceanodroma leucorhoa*), breeding
Manx shearwater (*Puffinus puffinus*)*, breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*, breeding
Storm petrel (*Hydrobates pelagicus*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Sule Skerry and Sule Stack SPA
Gannet (*Morus bassanus*), breeding
Guillemot (*Uria aalge*)*, breeding
Leach's storm petrel (*Oceanodroma leucorhoa*), breeding
Puffin (*Fratercula arctica*), breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Storm petrel (*Hydrobates pelagicus*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Sumburgh Head SPA
Arctic tern (*Sterna paradisaea*), breeding
Fulmar (*Fulmarus glacialis*)*, breeding

Guillemot (*Uria aalge*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Seabird assemblage, breeding
* indicates assemblage qualifier only

Troup, Pennan and Lion's Heads SPA
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

West Westray SPA
Arctic skua (*Stercorarius parasiticus*)*, breeding
Arctic tern (*Sterna paradisaea*), breeding
Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*), breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Ythan Estuary, Sands of Forvie and Meikle Loch SPA
Common eider (*Somateria mollissima*)*, non-breeding
Common tern (*Sterna hirundo*), breeding
Lapwing (*Vanellus vanellus*)*, non-breeding
Little tern (*Sterna albifrons*), breeding
Pink-footed goose (*Anser brachyrhynchus*), non-breeding
Redshank (*Tringa totanus*)*, non-breeding
Sandwich tern (*Sterna sandvicensis*), breeding
Waterfowl assemblage, non-breeding

* indicates assemblage qualifier only

Moray Firth SAC
Bottlenose dolphin (*Tursiops truncates*)
Subtidal sandbanks

Table 5 Conservation objectives

Buchan Ness to Collieston Coast SPA; Calf of Eday SPA; Cape Wrath SPA, Copinsay SPA, East Caithness Cliffs SPA; Fair Isle SPA; Fetlar SPA; Flannan Isles SPA; Forth Islands SPA; Fowlsheugh SPA; Handa SPA; Hermaness, Saxa Vord and Valla Field SPA; Hoy SPA; Loch of Strathbeg SPA; Marwick Head SPA; Mingulay and Berneray SPA; North Caithness Cliffs SPA; North Rona and Sula Sgeir SPA; Noss SPA; Rousay SPA; Shiant Isles SPA; St Abb's Head to Fast Castle SPA; Sule Skerry and Sule Stack SPA; Sumburgh Head SPA; Troup, Pennan and Lion's Heads SPA; West Westray SPA;

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species; and,
- No significant disturbance of the species.

Coquet Island SPA; Farne Islands SPA

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

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

Foula SPA (draft conservation objectives)

1. To ensure that the qualifying features of Foula SPA and the Seas off Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of Foula SPA and the Seas off Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

   2a. The populations of the qualifying features are viable components of Foula SPA and Seas off Foula SPA.

   2b. The distributions of the qualifying features throughout Foula SPA and Seas off Foula SPA are maintained by avoiding significant disturbance of the species.

   2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at Foula SPA and Seas off Foula SPA.

Northumberland Marine SPA

The site's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified.

The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

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

Rathlin Island SPA

- To maintain each feature in favourable condition
- To maintain or enhance the population of the qualifying species
- Fledging success sufficient to maintain or enhance population
- To maintain or enhance the range of habitats utilised by the qualifying species
- To ensure that the integrity of the site is maintained
- To ensure there is no significant disturbance of the species
- To ensure 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

St Kilda SPA (draft conservation objectives)

1. To ensure that the qualifying features of St Kilda SPA and the Seas off St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of St Kilda SPA and the Seas off St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

   2a. The populations of qualifying features are viable components of St Kilda SPA and Seas off St Kilda SPA.

   2b. The distributions of the qualifying features throughout St Kilda SPA and Seas off St Kilda SPA are maintained by avoiding significant disturbance of the species.

   2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at St Kilda SPA and/or Seas off St Kilda SPA.

Outer Firth of Forth and St Andrews Bay Complex ("OFFSAB") SPA

1. To ensure that the qualifying features of the OFFSAB SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.
2. To ensure that the integrity of the OFFSAB SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

   2a The populations of the qualifying features are viable components of the OFFSAB SPA.

   2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.

   2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the OFFSAB SPA.

Ythan Estuary, Sands of Forvie and Meikle Loch SPA

1. To ensure that the qualifying features of the Ythan Estuary, Sands of Forvie and Meikle Loch SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of the Ythan Estuary, Sands of Forvie and Meikle Loch SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

   2a. The populations of the qualifying features are viable components of the site.

   2b. The distributions of the qualifying features throughout the site are maintained, or where appropriate restored, by avoiding significant disturbance of the species.

   2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Ythan Estuary, Sands of Forvie and Meikle Loch SPA.

Moray Firth SAC

1. To ensure that the qualifying features of Moray Firth SAC are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of Moray Firth SAC is maintained or restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

<u>For bottlenose dolphin:</u>

2a. The population of bottlenose dolphin is a viable component of the site.
2b. The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
2c. The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.

<u>For subtidal sandbanks:</u>

2a. Extent and distribution of the habitat within the site. 2b. Structure and function of the habitat and the supporting environment on which it relies. 2c. Distribution and viability of typical species of the habitat.

SECTION 3: APPROPRIATE ASSESSMENT IN RELATION TO THE HABITATS REGULATIONS

7 Requirement for AA

7.1 Is the project directly connected with or necessary to the conservation management of the sites?

7.1.1 The project is not directly connected with or necessary to the conservation management of the sites.

7.2 *Is the project likely to have a significant effect on the qualifying interests?*

7.2.1 In its consultation response of 02 July 2024, NatureScot advised that the Salamander OWF has potential to have LSE on the bottlenose dolphin qualifying interest of the Moray Firth SAC as a result of underwater noise, collision, entanglement and EMF.

7.2.2 In addition, in its response dated 02 July 2024, NatureScot advised that it agreed with the conclusions reached in Appendix A of the RIAA that the Salamander OWF is likely to have a significant effect on the following SPAs and qualifying interests as a result of collision mortality and displacement:

Buchan Ness to Collieston Coast SPA

- Fulmar, breeding
- Guillemot, breeding
- Herring gull, breeding
- Kittiwake, breeding
- Shag, breeding
- Seabird assemblage, breeding

Calf of Eday SPA

- Fulmar, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Cape Wrath SPA

- Fulmar, breeding
- Kittiwake, breeding

- Puffin, breeding
- Seabird assemblage, breeding

Copinsay SPA
- Fulmar, breeding
- Guillemot, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

East Caithness Cliffs SPA
- Fulmar, breeding
- Kittiwake, breeding
- Razorbill, breeding
- Seabird assemblage, breeding

Fair Isle SPA
- Fulmar, breeding
- Gannet, breeding
- Kittiwake, breeding
- Puffin, breeding
- Seabird assemblage, breeding

Fetlar SPA
- Fulmar, breeding
- Seabird assemblage, breeding

Flannan Isles SPA
- Fulmar, breeding
- Seabird assemblage, breeding

Forth Islands SPA
- Gannet, breeding
- Kittiwake, breeding
- Puffin, breeding
- Seabird assemblage, breeding

Foula SPA
- Fulmar, breeding
- Kittiwake, breeding
- Puffin, breeding
- Seabird assemblage, breeding

Fowlsheugh SPA
- Fulmar, breeding
- Guillemot, breeding
- Herring gull, breeding
- Kittiwake, breeding
- Razorbill, breeding

- Seabird assemblage, breeding

Handa SPA
- Fulmar, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Hermaness, Saxa Vord and Valla Field SPA
- Fulmar, breeding
- Gannet, breeding
- Seabird assemblage, breeding

Hoy SPA
- Fulmar, breeding
- Guillemot, breeding
- Kittiwake, breeding
- Puffin, breeding
- Seabird assemblage, breeding

Loch of Strathbeg SPA
- Sandwich tern, breeding

Marwick Head SPA
- Kittiwake, breeding
- Seabird assemblage, breeding

Mingulay and Berneray SPA
- Fulmar, breeding
- Seabird assemblage, breeding

North Caithness Cliffs SPA
- Fulmar, breeding
- Kittiwake, breeding
- Puffin, breeding
- Razorbill, breeding
- Seabird assemblage, breeding

North Rona and Sula Sgeir SPA
- Fulmar, breeding
- Gannet, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Noss SPA
- Fulmar, breeding
- Gannet, breeding
- Kittiwake, breeding
- Puffin, breeding

- Seabird assemblage, breeding

OFFSAB SPA
- Gannet, breeding
- Kittiwake, breeding and non-breeding
- Guillemot, breeding and non-breeding
- Razorbill, non-breeding
- Puffin, breeding
- Seabird assemblage, breeding and non-breeding

Rousay SPA
- Fulmar, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Shiant Isles SPA
- Fulmar, breeding
- Seabird assemblage, breeding

St Abb's Head to Fast Castle SPA
- Kittiwake, breeding
- Seabird assemblage, breeding

St Kilda SPA
- Fulmar, breeding

Sule Skerry and Sule Stack SPA
- Gannet, breeding
- Puffin, breeding
- Seabird assemblage, breeding

Sumburgh Head SPA
- Fulmar, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Troup, Pennan and Lion's Heads SPA
- Fulmar, breeding
- Guillemot, breeding
- Herring gull, breeding
- Kittiwake, breeding
- Razorbill, breeding
- Seabird assemblage, breeding

West Westray SPA
- Fulmar, breeding
- Kittiwake, breeding
- Seabird assemblage, breeding

Ythan Estuary, Sands of Forvie and Meikle Loch SPA

- Common eider, non-breeding
- Common tern, breeding
- Little tern, breeding
- Sandwich tern, breeding
- Waterfowl assemblage, non-breeding

7.2.3 In its response dated 24 June 2024, Natural England advised that it agreed with the conclusions in Table 13-1 of the RIAA that the Salamander OWF is likely to have a significant effect on the following SPAs and qualifying interests as a result of collision mortality and displacement:

Coquet Island SPA

- Fulmar
- Kittiwake
- Puffin, breeding

Farne Islands SPA

- Kittiwake, breeding
- Puffin, breeding

Northumberland Marine SPA

- Kittiwake, breeding
- Puffin, breeding

7.2.4 The RIAA also identified LSE on the breeding fulmar qualifying interest of the Rathlin Island SPA. The Department of Agriculture, Environment and Rural Affairs was invited to comment on this however had no comments to make.

8 Background

8.1 The AA has considered the Application documentation, the contextual supporting documents and consultee representations, in particular those of NatureScot, Marine Directorate – Science, Evidence, Data and Digital (previously Marine Scotland Science), Natural England and RSPB Scotland. The Scottish Ministers consider that the primary focus of the AA should be the implications of the project for the relevant sites in view of those sites' conservation objectives relating to the maintenance of the relevant qualifying features as a viable component of the sites.

8.2 The AA relies upon the SNCB Approach. The SNCB Approach applies more precautionary avoidance rates relative to updated guidance, i.e. based on 2014 guidance for species that are assessed for collision and displacement (i.e. kittiwake and gannet) and species that are only assessed for displacement

(i.e. auks). For species only assessed for collision (i.e. herring gull), the Applicant Approach is assessed as it reflects updated guidance since scoping (see section 9).

8.3 The AA considers deviations from the recommended NatureScot guidance. The AA considers the Counterfactual of Population Size ("CPS") which is the ratio of the predicted impacted population size to that of the predicted population size in the absence of the Salamander OWF, at the end of the 35 year operating period e.g. if the CPS returned a value of 0.5, that would indicate a 50% reduction in the population size predicted as a result of the Salamander OWF. The Counterfactual Growth Rate ("CGR"), the ratio of the growth rate of an impacted versus unimpacted population where a value of 0.5 indicates a 50% reduction in growth rate, is also presented and provides additional context.

8.4 HPAI

8.4.1 In 2021, there was an outbreak of Highly Pathogenic Avian Influenza ("HPAI") in wild birds. In 2022, and to a lesser extent in 2023, further outbreaks of HPAI impacted many species and colonies of UK seabirds. The Applicant's ornithology assessment has been carried out without any adjustments in respect to HPAI, assuming reductions in population or colony sizes would translate to proportional reductions in at-sea densities and, therefore, predicted mortalities from the Salamander OWF. It is unclear what impact mass mortality events such as HPAI have had on seabird populations. The AA's conclusions consider the implications of HPAI on those species and sites considered most vulnerable, in particular:

- Gannet at Forth Islands SPA;
- Gannet at Hermaness, Saxa Vord and Valla Field SPA;
- Herring gull at Buchan Ness to Collieston Coast SPA;
- Kittiwake at Farne Islands SPA; and,
- Kittiwake at Forth Islands SPA.

8.4.2 The AA concludes that HPAI outbreaks necessitate greater precaution for the above sites and species. This is because, whilst population numbers may be reduced, the life history of seabirds (slow maturing, low reproduction) means that colonies impacted by pressures such as HPAI may be more sensitive to additional mortality from offshore wind development, exacerbating declines or preventing recovery. In the absence of an appropriate quantitative mechanism, the AA takes a qualitative approach and considers HPAI in terms of precaution built into the assessment, the size and scale of the Salamander OWF and the reported ranges of predicted impact.

9 Information on approaches and methods used to inform the AA

9.1 This section summarises key components of the assessment methodologies and any variation in approach taken by the Applicant from that advised by NatureScot and the Scottish Ministers. The implications of this variation, general areas of uncertainty and precaution in the approaches, and evidence provided by the Applicant in support of the variations to the advised approaches are presented.

9.2 The Applicant presented two different methodologies in its assessment, the SNCB Approach, and the Applicant Approach. The SNCB Approach follows guidance provided by NatureScot in its Scoping Opinion advice dated 5 May 2023. The Applicant Approach uses updated avoidance rates in the CRM, and different mortality and displacement rates in the matrix method for estimating displacement impacts. The differences between the two approaches are outlined in Table 6 and Table 7, which are derived from Tables 2-4 in volume ER.A.4, annex 12.3 and Table 3 in volume ER.A.4, annex 12.5 of the Applicant's EIA Report.

9.3 The Applicant provides the CPS and CGR population metrics as a median, and the median values are used in the AA to inform its conclusions. No supporting metric of interquartile range or standard deviation to understand the variance in the models is provided as a number by the Applicant. Whilst it is not imperative to provide these to reach conclusions, the reporting of accompanying metrics helps understand confidence in the model.

9.4 Collision Risk Modelling

9.4.1 The Applicant provides outputs for stochastic CRM Option 2, with the deterministic Band (2012) model approach outputs provided for context, in volume 4, annex 12.3 of its EIA Report. Outputs were generated using the R package stochLAB (Caneco, 2022), which contains the functions that underpin the sCRM tool shiny app created by the same team.

9.4.2 The Applicant Approach and the SNCB Approach for collision differ only in the avoidance rate used (although note they vary in displacement parameters), noted in Table 6. The Applicant Approach adopts the recently published Ozsanlav-Harris *et al.* (2023) avoidance rates. For the SNCB Approach, the Applicant includes avoidance rates based on joint SNCB advice dated 2014, which NatureScot (2023) online guidance no longer recommends. Since then, the updated Joint SNCB statement (published 15 August 2024), mirrors the avoidance rates as per Ozsanlav-Harris *et al.* (2023). In consideration of the Applicant Approach, NatureScot in its response dated 02 July 2024, acknowledged that the difference between the Ozsanlav-Harris *et al.* (2023) rates used in the Applicant Approach relative to the NatureScot (2023) online

guidance on avoidance rates is small (to the fourth decimal place) with minimal consequences to collision mortality estimates and so is an appropriate approach for evaluating impacts of collision. However, in the Applicant Approach for kittiwake and gannet species where collision mortality is summed with displacement mortality for inclusion in the PVA, it is not possible to disentangle the collision estimates resulting from the updated avoidance rates. This is because the displacement parameters used in the Applicant Approach in volume ER.A.4, annex 12.7 of the EIA Report, at time of application, do not reflect guidance provided by NatureScot (21 June 2023). Displacement parameters are further discussed in Section **Error! Reference source not found.**. Therefore, the evaluation following the SNCB Approach and summed impacts for these species includes some additional precaution due to this inclusion of outdated avoidance rates in collision estimates.

9.4.3 This AA aligns with the approach advised by NatureScot in its consultation response dated 02 July 2024. For species where mortality caused by collision and displacement is summed prior to the PVA, namely kittiwake and gannet, the SNCB Approach has been relied on. This is due to the Applicant Approach using parameters for displacement that do not reflect scoping or updated guidance. Collision and displacement impacts for these species are then combined for PVA. The AA takes into consideration that the SNCB Approach for collision relies on 2014 avoidance rates, which confer increased precaution into the overall assessment. For species where mortality is estimated for collision but not displacement, e.g. herring gull, the Applicant Approach for collision mortality estimate is assessed, as this uses the more recent Ozsanlav-Harris *et al.* (2023) avoidance rates, which are minimally different than the current guidance rates advised by NatureScot.

9.4.4 In reaching its conclusions on AEOSI, NatureScot stated in its response to the Applicant's clarification request (31 October 2024) that it focuses on the PVA results derived from the SNCB Approach (primarily the CPS) by looking at the range of values, rather than just the upper figure. It also reviews the CGR outputs as well as several other factors such as:

- short / long term colony trend;
- condition of qualifying features;
- species life history;
- proportional importance of species in Scotland and UK;
- recent HPAI impacts;
- climate change sensitivity; and,
- proposal scale and location.

9.4.5 In following the SNCB Approach, this AA considers a range of values, and the contextual factors highlighted by NatureScot and set out above to inform its

conclusions. This contextual information may be of particular relevance for species where HPAI or other mass mortality events have occurred. The AA relies upon the recommended displacement and mortality rates used in the upper SNCB Approach because this reflects the best available evidence, appropriately accounts for the uncertainties that exist around the mortality rates that might result from displacement from OWFs, and takes a suitably precautionary approach to current uncertainties in the evidence base. Therefore, the AA relies on the upper SNCB Approach throughout.

Table 6. Differences in CRM input parameters between the Applicant Approach and the SNCB's recommended Approach.

Parameter	Species	Deterministic CRM		Stochastic CRM	
		Applicant's Approach	SNCB's Approach	Applicant's Approach	SNCB's Approach
Species biometrics (Body length/wing span(m))	Gannet	0.935/ 1.73	0.935/ 1.73	0.935 (0.0325)/ 1.73 (0.0375)	0.935 (0.0325)/ 1.73 (0.0375)
	Kittiwake	0.39/1.08	0.39/1.08	0.39 (0.005)/ 1.08 (0.0625)	0.39 (0.005)/ 1.08 (0.0625)
	Herring gull	0.60/1.44	0.60/1.44	0.60 (0.0225)/ 1.44 (0.030)	0.60 (0.0225)/ 1.44 (0.030)
	Great black-backed gull	0.71/1.58	0.71/1.58	0.71 (0.035)/ 1.58 (0.0375)	0.71 (0.035)/ 1.58 (0.0375)
	Fulmar	0.45/1.07	0.45/1.07	0.45 (0.025)/ 1.07 (0.025)	0.45 (0.025)/ 1.07 (0.025)
Avoidance rate		Avoidance rate (SNCBs, 2014)	Avoidance rate (Ozsanlav-Harris *et al.*, 2023)	Avoidance rate (SNCBs, 2014)	Avoidance rate (Ozsanlav-Harris *et al.*, 2023)
	Gannet	0.989 (+/- 0.002)	0.992	0.989 (+/- 0.002)	0.993 (+/- 0.0003)
	Kittiwake	0.989 (+/- 0.002	0.992*	0.989 (+/- 0.002)	0.993* (+/- 0.0003)
	Herring gull	0.995 (+/- 0.002)	0.994	0.995 (+/- 0.001)	0.994 (+/- 0.0004
	Great black-backed gull	0.995 (+/- 0.002)	0.994	0.995 (+/- 0.001)	0.994 (+/- 0.0004)
	Fulmar	0.990 (+/- 0.002)	0.990	0.990 (+/- 0.001)	0.991 (+/- 0.0002)
Flight speed (m/s)	Gannet	14.9	14.9	14.9	14.9
	Kittiwake	13.1	13.1	13.1	13.1
	Herring gull	12.8	12.8	12.8	12.8
	Great black-backed gull	13.7	13.7	13.7	13.7
	Fulmar	13.0	13.0	13.0	13.0
Nocturnal Activity Factor (%)	Gannet	8.0	8.0	8.0	8.0
	Kittiwake	25.0	25.0	25.0	25.0
	Herring gull	37.5	37.5	37.5	37.5
	Great black-backed gull	37.5	37.5	37.5	37.5
	Fulmar	80.0	80.0	80.0	80.0
Flight type	Gannet	Gliding	Gliding	Gliding	Gliding
	Kittiwake	Flapping	Flapping	Flapping	Flapping
	Herring gull	Flapping	Flapping	Flapping	Flapping

	Great black-backed gull	Flapping	Flapping	Flapping	Flapping
	Fulmar	Flapping	Flapping	Flapping	Flapping
Flight heights	Gannet	Johnston *et al.* (2014a, b), Uniform risk distribution.	Johnston *et al.* (2014a, b), Uniform risk distribution.	Johnston *et al.* (2014a, b), Uniform risk distribution.	Johnston *et al.* (2014a, b), Uniform risk distribution.
	Kittiwake				
	Herring gull				
	Great black-backed gull				
	Fulmar				

*The all-gull rate was used as recommended in NatureScot guidance.

Note: Cells with no highlight indicate both parties agree on the input parameter, grey indicates disagreement on the input parameter. Comparisons are separate for the deterministic and stochastic models. Figures in brackets are standard deviations (SD).

9.4.6 Natural England did not provide comment on the methodology in relation to the collision risk modelling approaches.

9.5 Displacement

9.5.1 Displacement impacts are estimated in the Applicant's assessment (volume 4, annex 12.5 and volume 3, chapter 12 of the EIA Report) using the matrix approach. NatureScot guidance recommends a range of mortality rates are presented when using the matrix approach, reflected in a lower and upper set of values. This approach provides a range of values to inform conclusions, reflecting uncertainty in the evidence available and of particular use where impacts are uncertain. The differences between the Applicant Approach and the SNCB Approach, as shown in Table 7, include lower displacement rates applied for auks in the Applicant Approach, and lower mortality rates (representing a single value rather than a range) applied for auks, kittiwake and gannet in the Applicant Approach.

Table 7. Displacement and mortality rates used in the assessments.

Species	Applicant's Approach (displacement rate / displacement mortality rate)		SNCB's Approach (displacement rate / displacement mortality rate)	
	Breeding	Non-Breeding	Breeding	Non-Breeding
Guillemot	50% / 1%	50% / 1%	60% / 3-5%	60% / 1-3%
Razorbill	50% / 1%	50% / 1%	60% / 3-5%	60% / 1-3%
Puffin	50% / 1%	50% / -	60% / 3-5%	60% / -
Gannet	70% / 1%	70% / 1%	70% / 1-3%	70% / 1-3%
Kittiwake	30% / 1%	30% / 1%	30% / 1-3%	30% / 1-3%

9.5.2 The Applicant presented evidence for the use of different mortality rates and displacement rates than those advised in the scoping opinion in section 12.10.4 of volume ER.A.3, chapter 12 of the Applicant's EIA Report.

9.5.3 This AA follows the approach taken by NatureScot as described in its consultation response dated 02 July 2024; for species that are assessed for displacement, namely kittiwake, auks and gannet, advice is based on the SNCB Approach, though NatureScot note that it is useful to have the Applicant Approach for context and it has been considered.

9.5.4 Natural England did not comment on the methodology in relation to the displacement approaches.

Kittiwake

9.5.5 For kittiwake, the Applicant considers both the displacement and displacement mortality rates to be "*highly precautionary*". The Applicant's justification for this is based on several cited reports. The Joint SNCB Interim Displacement Advice Note (SNCB 2022) did not place kittiwake in the 'most sensitive' category for disturbance. The Applicant highlights that kittiwake has only been considered for collision and not displacement in English assessments citing Ørsted 2022 and DESNZ 2023, however the specific reports are not listed in the references provided. In addition, the Applicant reports post-construction studies by Dierschke *et al.* (2016) and MacArthur Green (2023) as evidence of low sensitivity to distributional response in kittiwake. Dierschke *et al.* (2016) carried out a review of avoidance and attraction to seabirds to 20 OWFs (none in northern North Sea), finding that evidence of positive, negative or neutral distributional response of kittiwake to OWF was mixed, with no recognisable effect overall.

9.5.6 This AA highlights that in this case a lack of evidence for sensitivity to disturbance does not necessarily equate to evidence of a low sensitivity to disturbance, particularly when the studies included in the review did not include any from the Scottish North Sea. The MacArthur Green (2023) report details operational monitoring studies at the Beatrice OWF and concludes no displacement was detected for kittiwake or auks. The limited survey periods on which the results of this report are based show, by the authors' admission, a very variable distribution of seabirds in the study area in the years surveyed. It is therefore unlikely that avoidance would be detectable given the known interannual variability in seabird at-sea distribution (Lamb *et al.,* 2024). This study also only considers within-wind farm displacement (meso-avoidance), and does not consider macro-avoidance, i.e. displacement from the wind farm footprint, and therefore does not provide good evidence for the overall displacement impact on auks, instead focusing only on birds that are present in the wind farm and therefore not impacted.

9.5.7 Various studies highlight evidence of displacement of kittiwakes (e.g. Peschko *et al*. 2020, O'Hanlon *et al.* 2023). Crucially, they have been found to show mixed responses. The consequence of the response is likely to vary depending on timing, i.e. when centrally placed during the breeding season, which may impact breeding success or potentially during dispersal or migratory movements in non-breeding stages which could impact survival. A key aspect of this is that we are unclear how kittiwake might respond. As such, this AA considers that there is a mixed body of evidence on responses of kittiwake to OWFs, such that some are displaced, and some are not, resulting

in both risks of displacement and collision needing assessment across all seasons. This AA relies on the SNCB rates for displacement of kittiwake.

9.5.8 Despite the presentation of evidence by the Applicant, a displacement rate of 30% has been used for both the Applicant Approach and the SNCB Approach, with only the displacement mortality rates differing, being 1% and 1-3%, respectively. The Applicant has justified its use of a 1% displacement mortality rate based on its SeabORD modelling results (EIA Report volume 4, annex 12.6), which identified a 0.007% difference in mortality between OWF presence / absence scenarios at

- Troup Pennan and Lion's Heads SPA;
- Buchan Ness to Collieston Coast SPA;
- Fowlsheugh SPA; and,
- East Caithness Cliffs SPA.

9.5.9 The Applicant also cites Ruffino *et al.* (2023), suggesting this study indicates limited potential overlap between kittiwake foraging areas and the Salamander OWF array area, with displaced kittiwake likely to have access to alternative foraging habitat. Further, the Applicant hypothesises that due to the lack of central place constraint to kittiwake foraging areas in the non-breeding season, impacts of displacement from habitat will be lower outside the breeding season, and therefore 1% mortality is precautionary. However, as highlighted above, while displacement of kittiwake during the breeding season may impact breeding success, displacement outside the breeding season may impact dispersal or migratory movements, which could affect survival rate. This AA advises that kittiwake are highly constrained in the depth at which they forage and their prey availability, namely sandeel, is both spatially and temporally highly variable in the North Sea. In addition, environmental factors influence variation in sandeel abundance and availability (Régnier *et al.* 2024), which can exacerbate potential displacement impacts. Therefore, this AA advises that the NatureScot guidance on displacement mortality rate for kittiwake applies the appropriate precaution.

9.5.10 This AA acknowledges the basis of the evidence put forward by the Applicant as justification for considering displacement rates and displacement mortality rates for kittiwake to be highly precautionary but advises limitations in the context of the studies presented and other studies with contrasting conclusions on the evidence of displacement of kittiwakes. Therefore, in the absence of more robust and/or consistent evidence, the Scottish Ministers agree that the NatureScot guidance on these metrics applies appropriate precaution.

Auks

9.5.11 For auks, the Applicant uses a 50% displacement rate and a 1% mortality rate (breeding and non-breeding), compared to 60% and 3-5% (breeding) and 1-

3% (non-breeding) which reflects the advice in the scoping opinion captured by the SNCB Approach. The Applicant outlines several lines of evidence for this choice, including the size of the Salamander OWF, the recent analysis of post-consent monitoring data showing low levels of displacement (MacArthur Green 2023) results, and an overall weak but variable response to displacement reported in Dierschke *et al.* (2016).

9.5.12 This AA acknowledges that the evidence that Dierschke *et al.* (2016) present on guillemot and razorbill displacement is mixed (but almost entirely shows avoidance) and is based on studies not conducted in the northern North Sea. Dierschke *et al.* (2016) hypothesise that the strong variation found may be influenced by changes in prey availability for these species. This AA advises that the MacArthur Green (2023) study only considers within-wind farm displacement (meso-avoidance), and does not consider macro-avoidance, i.e. displacement from the wind farm footprint, and only within 400 m of each turbine. Therefore, this study does not provide good evidence for the overall displacement impact on auks, instead focusing only on birds that are present in the wind farm and therefore not impacted. In the meta-analysis of displacement studies, Lamb *et al.* (2024) found that the probability of detecting a displacement effect was positively influenced by the survey area covered and the distance of the counterfactual area from the study area.

9.5.13 Notwithstanding the fact that the study design of MacArthur Green (2023) cannot address displacement from the wind farm footprint by only making comparisons within 400 m of turbines, the small scale and the use of within-wind farm counterfactual areas for the MacArthur Green (2023) weaken its ability to detect distributional change based on the findings of Lamb *et al.* (2024).

9.5.14 The Applicant also cites the Hornsea Four review (APEM 2022), which concluded that a displacement rate of 50% and mortality rate of 1% was appropriate for use in relation to distributional response assessments being undertaken for the Hornsea Four OWF. The APEM (2022) report found that when auk density was high, the distributional response was less than 50%. Because the density of each auk species recorded in the Salamander OWF array area exceeded the density value put forward by APEM (2022) as ‘high’ during some portion of the year, the Applicant states that this justifies the use of a lower displacement rate for the Salamander OWF.

9.5.15 This AA acknowledges the APEM (2022) report provided a valuable review of auk displacement, especially highlighting that confidence in published studies may be lower than previously indicated due to inappropriate analytical methods. However, since the publication of the APEM (2022) report, a larger and more sophisticated meta-analysis of displacement studies has been published, which accounts for a greater range of biological, study design and

OWF design parameters (Lamb *et al.* 2024). This research confirmed the descriptive assessment put forward by Dierschke *et al.* (2016), that there was systematic displacement of auks from OWF with high probability of negative effects, based on data from North American and European sources. The Applicant also does not present the results of recent research into displacement rates of guillemot conducted in the German North Sea, which demonstrated strong avoidance of OWF both in the breeding season (Peschko *et al.* 2020) and in the autumn and winter (Peschko *et al.* 2024).

9.5.16 Therefore, this AA follows NatureScot's view that the emerging evidence regarding distributional responses is mixed and insufficiently conclusive to deviate from the displacement and mortality rates recommended in its response to the Scoping Report. This AA advises that the NatureScot rates apply appropriate precaution, and therefore the AA relies on the SNCB Approach for estimating displacement effects for its conclusions.

9.5.17 The Applicant cites Searle *et al.* (2018) and van Kooten *et al.* (2019), studies that have been published since the 2017 SNCB guidance update, in support of its position of displacement rates being precautionary. However, due to the seasonal limitation of the IBM approach from Searle *et al.* (2018), specifically, restrictions to the chick-rearing period and therefore not taking into account displacement occurring outside of this period, and high level of uncertainty associated with parameter estimation within the model, together with the geographical context of the van Kooten *et al.* (2019) IBM approach, this AA determines that until more evidence is available from Scottish waters, the recommended displacement rates from NatureScot apply appropriate precaution and therefore, the AA relies on the SNCB Approach to displacement for its conclusions.

9.5.18 The Applicant also presents Royal HaskoningDHV (2013) and Leopold & Verdaat (2018) as evidence of reduced distributional response over time (habituation) at Thanet OWF, England, and Luchterduinen OWF, the Netherlands, respectively. However, the Royal HaskoningDHV (2013) report also demonstrated that guillemot numbers were variable across survey years both within the OWF and in control areas, reducing confidence in attributing habituation to an apparent decline in displacement for guillemot. Numbers of razorbill recorded in surveys for Thanet OWF were low (20 individuals pre-construction peak count), and no puffins were found, also reducing confidence in this report as evidence for potential habituation. Leopold & Verdaat (2018) was a qualitative pilot only, detailing the findings of two days of observation within the OWF, and therefore does not provide robust, quantitative evidence to inform displacement rates.

9.5.19 For auk displacement mortality rates, the Applicant considers a single value of 1% precautionary. The Applicant justifies this approach, presenting studies

using IBM (Searle *et al.* 2018, van Kooten *et al.* 2019) for auks during the breeding season, which identified mortality rates more likely to range between 0.5% and 1%. For the non-breeding period, the Applicant proposes that due to a lack of constricted central place foraging at this time of year distributional effects would be lower. However, as for the displacement rate, due to the seasonal limitation of the IBM approach from Searle *et al.* (2018) (restricted to the chick-rearing period and therefore not taking into account displacement impacts outside of this period which may influence adult survival) and a high level of uncertainty associated with parameter estimation within the model, and geographic context of the van Kooten *et al.* (2019) IBM approach, this AA determines that until more evidence is available the recommended displacement mortality rates from NatureScot apply appropriate precaution, and therefore, the AA relies on the SNCB Approach to displacement for its conclusions.

Gannet

9.5.20 For gannet, the Applicant agrees with the displacement rate of 70% in the SNCB Approach. For displacement mortality rate the Applicant uses a single value of 1% which it considers precautionary as opposed to a range of 1%-3% in the SNCB Approach. To support this, the Applicant cites Searle *et al.* (2014) as showing no population-level effects of displacement observed for gannet.

9.5.21 The Applicant also uses energetic costs calculated by Masden *et al*. (2010) and mean maximum foraging distance of gannet from Woodward *et al.* (2019) to estimate a scaled increase in expenditure for gannet due to displacement from the Salamander OWF and predicts this value will not result in "*notable mortalities*", although the Applicant does not quantify this in terms of additional adult mortality. The AA acknowledges the logic in the Applicant's use of the Masden *et al.* (2010) calculation of increased energetic costs. However, it is notable that the calculations in this paper were based on tracking data collected from only 14 adult individuals during the chick-rearing period in 1998-99 (Hamer *et al.* 2001), and energy budget data collected on 20 adult individuals from a Canadian colony in 1984-85 (Birt-Friesen *et al.* 1989). Therefore, the estimates of increased energy expenditure for additional distances travelled by gannet are unlikely to be representative of contemporary conditions in Scottish waters, and techniques for calculating both foraging trip measurements and energetic cost will have improved in accuracy in the last 20-30 years.

9.5.22 The AA also highlights the level of uncertainty included in the estimated parameters included in the Searle *et al.* (2014) modelling approach, and its restriction to the chick-rearing period, which cannot account for displacement mortality outside this period (i.e. particularly impacts on overwinter adult survival). Therefore, the displacement mortality rates from NatureScot apply

appropriate precaution and thus the AA relies on the SNCB Approach to displacement for its conclusions.

AA conclusion on displacement

9.5.23 In summary, the AA determines that until more evidence is available, particularly from Scottish waters, the recommended displacement and mortality rates from NatureScot for all species and species groups apply appropriate precaution and the AA relies on the SNCB Approach to displacement for its conclusions.

9.6 Population Viability Analysis

9.6.1 The Applicant undertook a PVA assessment for individual SPAs (RIAA, Volume RP.A.2.2) using the Natural England PVA tool R code (tool v 2.0, NEPVA R package: v 4.17; Searle *et al*. 2019, Mobbs *et al*. 2020).

9.6.2 PVA was undertaken for any potential impact that met or exceeded a 0.02% percentage point increase in baseline mortality of a given species in relation to the Biologically Defined Minimum Population Scale, following NatureScot (2023).

9.6.3 Density independent models were run, including both environmental and demographic stochasticity, with both the CPS and the CGR reported. Results were presented for a 35 year time span, based on the Salamander OWF lease period, alongside a 25 year and 50 year span, based on the NatureScot advice.

9.6.4 Outputs from the PVA were generally presented for both the Applicant Approach and SNCB Approach and for upper and lower scenarios where applicable, for example, for those species assessed using a range of displacement mortality rates. This approach provides a range of values to inform conclusions, of particular use in the context of species where HPAI or other mass mortality population impacts are likely to be a relevant consideration, but their impacts are uncertain. However, the project-alone PVAs are based on the SNCBs (2014) avoidance rates only, as no scenarios using the Ozsanlav-Harris *et al*. (2023) rates (i.e. the Applicant Approach) met the threshold for PVA.

9.6.5 Impacts are presented only as the number of adults. Impacts within the PVA simulations were applied proportionally to immature age-classes (based upon the stable age distribution of the Leslie matrix; Searle et. al., 2019), as such impacts on immatures were accounted for at the population level and were not directly reported. The Applicant made no allowance for sabbatical birds within

the assessment, as seen in section 2.1.1 of its PVA (EIA Report, volume 4, annex 12.4). Sabbatical birds are adults within the breeding population which do not attempt to breed during a given year. Not accounting for sabbatical birds when apportioning mortality to breeding colonies means that population level impacts may be overestimated in the PVA. The approach taken in the AA of ignoring sabbatical birds is therefore more precautionary.

9.6.6 The Applicant, where possible, used colony-specific demographic productivity rates supplied within the Natural England PVA tool, which originate from the Seabird Monitoring Programme Database (JNCC *et al*. 2023). This used data from the last ten years to calculate an average productivity value, unless this was unavailable, in which case older data were used. Where these were not available, published national values were used (Horswill & Robinson 2015). For survival rates, published national values, set within the Natural England PVA tool and originating from Horswill & Robinson 2015, were used.

9.6.7 The Applicant calculated initial population sizes at individual SPAs from the Seabird Count census (Burnell *et al*. 2023), with the number of breeding birds calculated (kittiwake: Apparently Occupied Nests x 2; guillemot/razorbill: Individuals x 1.34) following Mitchell *et al.* (2004).

9.6.8 For the other species (gannet, puffin and herring gull), no reference to their origin is provided by the Applicant, but the population sizes given in a summary of conclusions table in the RIAA match those from the Seabird Count census (Burnell *et al.* 2023).

9.6.9 The potential impacts on seabird populations of mortality due to outbreaks of HPAI in Scottish seabirds are acknowledged by the Applicant but no specific adjustments to account for these impacts have been made in the Application. The Applicant aligned to Natural England's interim guidance that was submitted as part of Natural England's representation to the Ossian Scoping Report (MD-LOT, 2023). Therefore, all quantitative assessment was carried out without any adjustments in respect to HPAI. This assumes that reductions in population or colony sizes would translate to proportional reductions in at-sea densities and hence predicted mortalities from the Salamander OWF. It is unclear what impact mass mortality events such as HPAI have had on many seabird populations. The AA takes a qualitative approach and considers HPAI in terms of precaution built into the assessment, the size and scale of the Salamander OWF and the reported ranges of predicted impact, see section 8.4.1.

9.6.10 NatureScot's assessments are primarily based on the CPS outputs from PVAs for the species where a PVA was required, across the 35 years scenario, reflecting the Salamander OWF lease period. NatureScot has taken the following contextual information into account; CGR outputs, colony trend,

condition of qualifying features, species life history, proportional importance of species in Scotland and the UK, recent HPAI impacts and climate change sensitivity, when reaching its conclusions.

9.6.11 RSPB Scotland noted that the Applicant has recognised the importance of the recent outbreak of HPAI but stated that the implications have not been fully taken through the assessment. RSPB Scotland stated that HPAI will have implications for the representativeness of the site characterisation surveys. The AA takes a qualitative approach and considers HPAI in terms of precaution built into the assessment, the size and scale of the Salamander OWF and the reported ranges of predicted impact, see section 8.4.1.

9.7 In-combination

9.7.1 The Applicant used three criteria to determine whether an in-combination assessment should be carried out for a given feature:

1. The project alone impact is greater than or equal to one individual per year;
2. The project alone impact represents an increase in mortality rate of greater than or equal to 0.02 percentage points; and,
3. An AA for one or more of the other projects considered has concluded there is a potential AEOSI (or it is highlighted that NatureScot have raised concerns) to the feature (i.e. a full or without prejudice derogation case is available).

9.7.2 If one or more of the above criteria were met (based on either the Applicant Approach or the SNCB Approach), the site/species was carried forward to the in-combination assessment. If none of the above criteria were met, the Applicant concluded that there was no potential for the Salamander OWF to lead to any AEOSI in combination with other plans or projects.

9.7.3 By following the above approach to in-combination assessment, for some sites and species, the project level contribution was <1 bird per annum. The AA follows the view taken by NatureScot as described in its consultation response dated 02 July 2024. NatureScot does not support the use of a proposal alone impact of 1 bird per annum or more as a threshold but considers that the combination of criteria used has not, in this instance, excluded any qualifying features or sites from being taken forward for in-combination assessment.

9.7.4 NatureScot states that it does not support the use of the term '*de minimis*' where the Applicant refers to a '*de minimis'* case if the project level impact is found to be less than 1 individual per annum. However, it states that it recognises the need to consider instances where an impact from the proposal alone assessment makes no tangible contribution to the in-combination effect.

9.7.5 The AA aligns with NatureScot in not supporting the use and definition of *de minimus* as presented by the Applicant. In interpretating impacts the AA determines conclusions from the alone and in-combination assessments using the quantified assessment provided and in consideration of contextual information aligning with that of NatureScot in section 9.4.4.

9.7.6 In-combination impacts are assessed by the Applicant using a single UK North Sea scale scenario. All projects built, consented or with submitted applications up until October 2023 were included in the in-combination assessment in Table 2-3 within the RIAA. Most in-combination impact values used in the Application were taken directly from the Berwick Bank RIAA (RPS and Royal HaskoningDHV, 2022) and therefore follow the same methodology. Additionally, impact values for more recent applications were taken from the respective documents for Green Volt OWF (Green Volt, 2023), West of Orkney (Offshore Wind Power Limited, 2023) and Pentland OWF (Xodus Group Limited, 2022). As quantitative information for these projects was not available at the time Berwick Bank completed its assessment, values for these projects are not included in the UK North Sea totals presented by Berwick Bank.

9.7.7 For Green Volt OWF, the high and low values in the Green Volt RIAA refer to the Green Volt OWF and the SNCB Approaches (Green Volt, 2023). A single approach and set of values were used in the Pentland OWF application, so the contribution of Pentland OWF to the in-combination assessment was the same value for the high and low scenarios when included. It is noted, however, that an update to the Pentland OWF application included total impact numbers, rather than impact numbers apportioned to individual SPAs (Xodus Group Limited, 2022). Therefore, these updated values could not be incorporated into the in-combination assessment. The West of Orkney application (Offshore Wind Power Limited, 2023) combined the impacts of collision and displacement, so its individual contributions could not be assessed separately, and there was a lack of clarity specifically which methodology is used for the 'high' and 'low' mortality estimates (NatureScot consultation response to West of Orkney OWF, 13 December 2023).

9.7.8 Without an apportioned, SPA-level estimation of impacts from the updated Pentland OWF application and potentially revised values from West of Orkney, it is impossible to predict how this difference would affect the precaution of in-combination impacts in this assessment compared to the previously estimated impacts.

9.7.9 In the Berwick Bank documentation, it is confirmed that some developments have been updated to reflect as-built designs instead of as consented. However, it is not stated explicitly in either the Application or the Berwick Bank application whether sabbatical rates were applied to in-combination values, especially of relevance for English developments, which are not expected to

have had them applied previously. The Berwick Bank RIAA uses in-combination values partly derived from the Moray West OWF RIAA which states that sabbatical rate adjustment to impacts were only applied to Moray Firth developments, and that impacts from English developments were not adjusted to account for sabbatical birds. As discussed in section 9.6.5 of this AA, not accounting for breeding sabbaticals may lead to an overestimation of impacts on breeding individuals and is therefore more precautionary.

9.7.10 The impact values for the in-combination assessment are presented in the RIAA both including and excluding Berwick Bank following advice from NatureScot in its response to the Scoping Report dated 5 May 2023. The scenario excluding impacts from Berwick Bank is calculated by subtracting the Berwick Bank alone impacts from the UK North Sea regional total. Impacts are presented by the Applicant as 'low' and 'high' based on the Berwick Bank Developer Approach and Scoping B Approach respectively. For Berwick Bank, the higher impact estimate ('Scoping Approach B') is used, which originates from parameters and approaches recommended in the SNCB Approach for that assessment. This captures appropriate precaution in concluding on predicted impacts for Berwick Bank.

9.7.11 In the in-combination assessment, the Applicant presents a range of mortality and PVA values based on different parameters. Where the SNCB Approach 'lower' and 'upper' are presented, this is in relation to the range in displacement mortality specified in SNCB guidance. Where presented as the Applicant Approach 'lower' or 'upper' this is the values from the Salamander OWF alone impacts added to either the lowest or highest available effect values from other OWFs.

9.7.12 For auks (guillemot, razorbill, puffin) the Applicant presents only the upper SNCB Approach (referred to as "High" by the Applicant) mortality estimate and lower Applicant Approach (referred to as "Low" by the Applicant) mortality estimate for Salamander OWF in combination with other UK North Sea OWFs (see RIAA). The Applicant refers to 'low' in their in-combination approach as they include the lower mortality estimates from the assessments of UK North Sea OWFs, as described in section 9.7.10. Due to this, the mortality tables in sections 18, **Error! Reference source not found.** and **Error! Reference source not found.** of the AA refer to SNCB Approach 'Upper' and Applicant Approach 'Lower' and should be interpreted with reference to the distinction above. In its RIAA, the Applicant has considered its 'low' approach to be analogous with the lower SNCB Approach, and therefore does not present the lower SNCB Approach. However, because the displacement parameters used in the lower Applicant Approach and the lower SNCB Approach are not analogous, they cannot be interpreted comparatively as upper and lower estimates from the SNCB Approach. While the parameters included differ

between the approaches, differences are small and therefore the distinction does not impact the conclusions of this AA.

9.7.13 For a number of the in-combination impacts presented by the Applicant, inconsistencies including slight rounding errors and misreporting across documents were noticed. In addition, the total impact for the Applicant's 'Upper' Approach appears to have been miscalculated. However, these errors have no material consequence to impacts concluded by this AA.

9.8 Outer Firth of Forth and St Andrew's Bay Complex ("OFFSAB") SPA

9.8.1 The OFFSAB SPA is a marine SPA, designated as functionally linked to multiple breeding colony features of other SPAs, and is designated for breeding and non-breeding seabird features.

9.8.2 The following SPAs are considered functionally linked for specific species to the OFFSAB SPA:

- Forth Islands SPA;
- St Abb's Head to Fast Castle SPA;
- Fowlsheugh SPA;
- Buchan Ness to Collieston Coast SPA; and,
- Troup, Pennan and Lion's Heads SPA.

9.8.3 The approach taken in the AA is that the conclusions for a functionally linked SPA would also result in an equivalent conclusion for the OFFSAB SPA. This approach is also taken by NatureScot and outlined in its response dated 02 July 2024.

9.8.4 The Applicant did not identify connectivity between guillemot, razorbill and herring gull of OFFSAB SPA (HRA Screening Report) and therefore did not present an assessment for these features. However, conclusions for OFFSAB SPA component features are based upon functionally linked breeding SPAs specific to individual species (including Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA). Therefore, conclusions for OFFSAB SPA can be made based upon the assessment of the functionally linked sites for each species.

10 Sites/Species not taken through for further assessment

10.1 This section of the AA considers those species and sites considered for LSE in the HRA, but which did not meet the threshold for further quantitative assessment.

10.2 For all of the Scottish SPAs listed below, NatureScot concluded no AEOSI. The exceptions are the English sites; Coquet Island SPA, Northumberland Marine SPA, and the Northern Irish site Rathlin Island SPA.

10.3 Natural England advised that the Salamander OWF will not significantly adversely impact any English SPA.

10.4 The Northern Ireland Environment Agency responded with no comments, so no significant effects are assumed for Rathlin Island SPA.

10.5 The Scottish Ministers agree with the determination of no AEOSI for the following features when assessing project impacts from the Salamander OWF both alone and in combination at each of the stated SPAs without the need for further quantitative assessment:

Buchan Ness to Collieston Coast SPA
- Fulmar
- Shag

Calf of Eday SPA
- Fulmar
- Kittiwake
- Seabird assemblage

Cape Wrath SPA
- Fulmar
- Kittiwake
- Puffin
- Seabird assemblage

Copinsay SPA
- Guillemot
- Fulmar
- Kittiwake
- Seabird assemblage

Coquet Island SPA
- Fulmar
- Kittiwake
- Puffin
- Seabird assemblage

East Caithness Cliffs SPA
- Fulmar

Fair Isle SPA
- Fulmar
- Gannet

- Kittiwake
- Puffin
- Seabird assemblage

Fetlar SPA
- Fulmar
- Seabird assemblage

Flannan Isles SPA
- Fulmar
- Seabird assemblage

Foula SPA
- Fulmar
- Kittiwake
- Puffin
- Seabird assemblage

Fowlsheugh SPA
- Guillemot
- Fulmar
- Herring gull

Handa SPA
- Fulmar
- Kittiwake
- Seabird assemblage

Hermaness, Saxa Vord and Valla Field SPA
- Fulmar
- Seabird assemblage

Hoy SPA
- Guillemot
- Fulmar
- Kittiwake
- Puffin
- Seabird assemblage

Loch of Strathbeg SPA
- Sandwich tern

Marwick Head SPA
- Kittiwake
- Seabird assemblage

Mingulay and Berneray SPA
- Fulmar
- Seabird assemblage

North Caithness Cliffs SPA
- Fulmar
- Puffin
- Razorbill

North Rona and Sula Sgeir SPA
- Fulmar
- Gannet
- Kittiwake
- Seabird assemblage

Noss SPA
- Fulmar
- Gannet
- Kittiwake
- Puffin
- Seabird assemblage

Northumberland Marine SPA
- Kittiwake
- Puffin
- Seabird assemblage

Rathlin Island SPA
- Fulmar
- Seabird assemblage

Rousay SPA
- Fulmar
- Kittiwake
- Seabird assemblage

Shiant Isles SPA
- Fulmar
- Seabird assemblage

St. Kilda SPA
- Fulmar

Sule Skerry and Sule Stack SPA
- Gannet
- Seabird assemblage

Sumburgh Head SPA
- Fulmar
- Kittiwake
- Seabird assemblage

Troup, Pennan and Lion's Heads SPA
- Fulmar
- Herring gull

West Westray SPA
- Fulmar
- Kittiwake
- Seabird assemblage

Ythan Estuary, Sands of Forvie and Meikle Loch SPA
- Common tern
- Eider
- Little tern
- Sandwich tern
- Seabird assemblage

10.6 The Scottish Ministers agree with the determination of no AEOSI for the following features for project impacts alone only at each of the stated SPAs without the need for further quantitative assessment:

Buchan Ness to Collieston Coast SPA
- Herring gull

East Caithness Cliffs SPA
- Kittiwake
- Razorbill
- Seabird assemblage (kittiwake and razorbill)

Farne Islands SPA
- Kittiwake
- Puffin
- Seabird assemblage (kittiwake and puffin)

Forth Islands SPA
- Gannet
- Kittiwake
- Puffin
- Seabird assemblage (kittiwake)

Fowlsheugh SPA
- Kittiwake

Hermaness, Saxa Vord and Valla Field SPA
- Gannet

North Caithness Cliffs SPA
- Kittiwake
- Seabird assemblage (kittiwake)

OFFSAB

- Gannet (breeding)
- Puffin (breeding)

St Abb's Head to Fast Castle SPA

- Kittiwake
- Seabird assemblage (kittiwake)

Sule Skerry and Sule Stack SPA

- Puffin

Troup, Pennan and Lion's Heads SPA

- Kittiwake

10.7 Full justification for these conclusions is provided in Appendix A.

11 Guillemot – alone assessment

11.1 Buchan Ness to Collieston Coast SPA

11.1.1 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the Salamander OWF RIAA. In consideration of the SNCB Approach, NatureScot determined that it was unable to conclude no AEOSI for guillemot as a qualifying feature of Buchan Ness to Collieston Coast SPA.

11.1.2 The Buchan Ness to Collieston Coast SPA guillemot population size of 39,440 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 8. Estimated annual guillemot mortality at Buchan Ness to Collieston Coast SPA from Salamander OWF alone (see Tables 7-16, 7-17: RIAA; and Table 2-7: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
Displacement		60% displacement / 3-5% mortality for breeding season, 1-3% mortality for non-breeding season		50% displacement / 1% mortality for breeding and non-breeding seasons
		Lower	Upper	-
		64.8	128.6	26.6
Total impact		64.8	128.6	26.6
PVA (35 years)	CPS	0.936	0.877	0.973
	CGR	0.998	0.996	0.999

11.1.3 The CPS of the lower range of the SNCB Approach is reported as 0.936. This translates as a 6.4% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.877, this translates as a 12.3% reduction in population size after 35 years relative to an unimpacted population.

11.1.4 The CGR of the lower range of the SNCB Approach is reported as 0.998. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.996, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

11.1.5 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

11.1.6 **The Scottish Ministers are unable to conclude no AEOSI for the guillemot feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF alone based on the upper SNCB Approach.**

11.2 Troup, Pennan and Lion's Heads SPA

11.2.1 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF alone would result in no AEOSI for guillemot as a qualifying feature of Troup, Pennan and Lion's Heads SPA.

11.2.2 The Troup, Pennan and Lion's Heads SPA guillemot population size of 31,893 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 9. Estimated annual guillemot mortality at Troup, Pennan and Lion's Heads SPA from the Salamander OWF alone (see Tables 7-16,7-17: RIAA; and Table 2-7: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type	SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
Displacement	60% displacement / 3-5% mortality for breeding season, 1-3% mortality for non-breeding season		50% displacement / 1% mortality for breeding and non-breeding season
	Lower	Upper	-
	27.4	62.4	14.6
Total impact	27.4	62.4	14.6

PVA (35 years)	CPS	0.966	0.924	0.982
	CGR	0.999	0.998	0.999

11.2.3 The CPS of the lower range of the SNCB Approach is reported as 0.966. This translates as a 3.4% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.924, this translates as a 7.6% reduction in population size after 35 years relative to an unimpacted population.

11.2.4 The CGR of the lower range of the SNCB Approach is reported as 0.999. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.998, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

11.2.5 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

11.2.6 **The Scottish Ministers conclude no AEOSI for the guillemot feature of Troup, Pennan and Lion's Heads SPA from the Salamander OWF alone based on the upper SNCB Approach.**

11.3 Outer Firth of Forth and St Andrews Bay Complex SPA

11.3.1 NatureScot in its response of 02 July 2024 did not specifically provide a conclusion on breeding and non-breeding guillemot as a component feature of OFFSAB SPA however advised that the conclusion should be based on the conclusion for functionally linked SPA assessments.

11.3.2 For guillemot, the following SPAs are considered functionally linked to OFFSAB SPA: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, and Buchan Ness to Collieston Coast SPA. The Forth Islands and St Abb's Head to Fast Castle SPAs were not screened in and assessed for project alone impacts as the Salamander OWF is beyond the foraging range of guillemot from these sites.

11.3.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding

seasons when using the OFFSAB marine SPA. Guillemot are however, a designated breeding and non-breeding feature of the OFFSAB SPA.

11.3.4 The conclusion for the breeding and non-breeding guillemot feature at OFFSAB SPA is based on consideration of the conclusions for the functionally linked Buchan Ness to Collieston Coast SPA. Scottish Ministers are unable to conclude no AEOSI for the breeding guillemot feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF alone, based on the upper SNCB Approach.

11.3.5 **The Scottish Ministers are unable to conclude no AEOSI for the breeding and non-breeding guillemot feature of OFFSAB SPA from Salamander OWF alone based on the upper SNCB Approach.**

12 Kittiwake – alone assessment

12.1 Buchan Ness to Collieston Coast SPA

12.1.1 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that Salamander OWF alone would result in no AEOSI for kittiwake as a qualifying feature of Buchan Ness to Collieston Coast SPA.

12.1.2 The Buchan Ness to Collieston Coast SPA kittiwake population size of 22,590 individuals in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 10. Estimated annual kittiwake mortality at Buchan Ness to Collieston Coast SPA from the Salamander OWF alone (see Tables 7-57, 7-58: RIAA; and Table 2-6: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
Displacement		30% displacement / 1-3% mortality for breeding season, 1-3% mortality for non-breeding season		30% displacement / 1% mortality for breeding and non-breeding seasons
		Lower	Upper	-
		3.9	11.7	3.9
Collision		Avoidance rate 0.989, basic CRM + option 2, mean monthly densities		Avoidance rate 0.993, basic CRM + option 2, mean monthly densities
		8	8	5.1
Total impact		11.9	19.7	9
PVA (35 years)	CPS	0.978	0.963	*
	CGR	0.999	0.999	*

*The Applicant Approach did not meet the 0.02% threshold to require PVA as such no results are presented

12.1.3 The CPS of the lower range of the SNCB Approach is reported as 0.978. This translates as a 2.2% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.963, this translates as a 3.7% reduction in population size after 35 years relative to an unimpacted population.

12.1.4 The CGR of the lower range of the SNCB Approach is reported as 0.999. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.999, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

12.1.5 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

12.1.6 **The Scottish Ministers conclude no AEOSI for the kittiwake feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF alone based on the upper SNCB Approach.**

12.2 Outer Firth of Forth and St Andrews Bay Complex SPA

12.2.1 NatureScot in its response of 02 July 2024 did not specifically provide a conclusion on breeding and non-breeding kittiwake as a component feature of OFFSAB SPA however advised that the conclusion should be based on the conclusion for the functionally linked SPA.

12.2.2 For kittiwake, the following SPAs are considered functionally linked to OFFSAB SPA: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA. Only Buchan Ness to Collieston Coast SPA was screened in and assessed for project alone impacts to this species as the others did not meet or exceed the 0.02% percentage point threshold increase in baseline mortality.

12.2.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding

seasons when using the OFFSAB marine SPA. Kittiwake are however, a designated breeding and non-breeding feature of the OFFSAB SPA.

12.2.4 The conclusion for the breeding and non-breeding kittiwake feature of the OFFSAB SPA is based on the conclusion for the functionally linked Buchan Ness to Collieston Coast SPA, for which Scottish Ministers conclude no AEOSI for the breeding kittiwake feature from the Salamander OWF alone, based on the upper SNCB Approach.

12.2.5 **The Scottish Ministers conclude no AEOSI for the breeding and non-breeding kittiwake feature of OFFSAB SPA from Salamander OWF alone based on the upper SNCB Approach.**

13 Razorbill – alone assessment

13.1 Troup, Pennan and Lion's Heads SPA

13.1.1 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF alone would result in no AEOSI for razorbill as a qualifying feature of Troup, Pennan and Lion's Heads SPA.

13.1.2 The Troup, Pennan and Lion's Heads SPA razorbill population size of 6,054 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 11. Estimated annual razorbill mortality at Troup, Pennan and Lion's Heads SPA from the Salamander OWF alone (see Tables 7-22 and 7-23: RIAA; and Table 2-8: RIAA Annex 2) plus PVA outputs.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
Displacement		60% displacement / 3-5% mortality for breeding season, 1-3% mortality for non-breeding season		50% displacement / 1% mortality for breeding and non-breeding seasons
		Lower	Upper	-
		0.9	1.6	0.3
Total impact		0.9	1.6	0.3
PVA (35 years)	CPS	0.995	0.990	*
	CGR	1.000	1.000	*

* The Applicant Approach did not meet the 0.02% threshold to require PVA as such no results are presented

13.1.3 The CPS of the lower range of the SNCB Approach is reported as 0.995. This translates as a <1% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach

is reported as 0.990, this translates as a 1% reduction in population size after 35 years relative to an unimpacted population.

13.1.4 The CGR of the lower range of the SNCB Approach is reported as 1.000. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 1.000, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

13.1.5 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

13.1.6 **The Scottish Ministers conclude no AEOSI for the razorbill feature of Troup, Pennan and Lion's Heads SPA from the Salamander OWF alone based on the upper SNCB Approach.**

13.2 Fowlsheugh SPA

13.2.1 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF alone would result in no AEOSI for razorbill as a qualifying feature of Fowlsheugh SPA.

13.2.2 The Fowlsheugh SPA razorbill population size of 18,844 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 12. Estimated annual razorbill mortality at Fowlsheugh SPA from the Salamander OWF alone (see Tables 7-22 and 7-23: RIAA; and Table 2-8: RIAA Annex 2) plus PVA outputs.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
Displacement		60% displacement / 3-5% mortality for breeding season, 1-3% mortality for non-breeding season		50% displacement / 1% mortality for breeding and non-breeding seasons
		Lower	Upper	Lower
		1.5	2.5	0.4
Total impact		1.5	2.5	0.4
PVA (35 years)	CPS	0.997	0.994	*
	CGR	1.000	1.000	*

* The Applicant Approach did not meet the 0.02% threshold to require PVA as such no results are presented

13.2.3 The CPS of the lower range of the SNCB Approach is reported as 0.997. This translates as a <1% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.994, this translates as a <1% reduction in population size after 35 years relative to an unimpacted population.

13.2.4 The CGR of the lower range of the SNCB Approach is reported as 1.000. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 1.000, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

13.2.5 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

13.2.6 **The Scottish Ministers conclude no AEOSI for the razorbill feature of Fowlsheugh SPA from the Salamander OWF alone based on the upper SNCB Approach.**

13.3 Outer Firth of Forth and St Andrews Bay Complex SPA

13.3.1 NatureScot in its response of 02 July 2024 did not specifically provide a conclusion on non-breeding razorbill as a component feature of OFFSAB SPA however advised that the conclusion should be based on the conclusion for likely functionally linked SPAs.

13.3.2 Razorbill are designated at the OFFSAB SPA in densities reflecting population contributions from many different colonies and turnover within the site. However, conclusions for non-breeding razorbill may be reached in consideration of assessments of those likely functionally linked SPA for breeding razorbill.

13.3.3 For razorbill, the following SPAs are considered likely functionally linked to OFFSAB SPA: Fowlsheugh SPA and Troup, Pennan and Lion’s Heads SPA. In its response dated 27 November 2024, NatureScot indicated that these sites are likely to be functionally linked to OFFSAB SPA for razorbill, based on the mean maximum foraging range of 122 km for this species.

13.3.4 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding

seasons when using the OFFSAB marine SPA. NatureScot continued that its assessment for razorbill in relation to Fowlsheugh and Troup, Pennan and Lion's Heads SPAs was based on breeding and non-breeding impacts and are likely to be functionally linked to OFFSAB SPA.

13.3.5 The AA considers the information on the assessment for razorbill provided in the RIAA relative to potential impact pathways, the potential of SPAs contributing to this non-breeding population and risk of impact during the non-breeding season.

13.3.6 The conclusion for the non-breeding razorbill feature of OFFSAB SPA is based on the conclusion for the likely functionally linked Fowlsheugh SPA and Troup, Pennan and Lion's Heads SPA, for which Scottish Ministers conclude no AEOSI for the breeding razorbill feature from the Salamander OWF alone, based on the upper SNCB Approach.

13.3.7 **The Scottish Ministers conclude no AEOSI for the non-breeding razorbill feature of OFFSAB SPA from Salamander OWF alone based on the upper SNCB Approach.**

14 Seabird assemblage - alone assessment

14.1 See individual species accounts above for quantitative impact assessments including mortality estimates and PVA outputs for component species for each SPA. Details of species which are features in their own right or listed as assemblage qualifiers only are shown in Table 4.

14.2 Buchan Ness to Collieston Coast SPA

14.2.1 Buchan Ness to Collieston Coast SPA has a breeding seabird assemblage qualifying feature which includes the following named components taken through to the AA: guillemot, herring gull and kittiwake. NatureScot advised in its response dated 02 July 2024, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for guillemot at Buchan Ness to Collieston Coast SPA, from the Salamander OWF alone. Consequently, NatureScot also advised it was unable to conclude no AEOSI for guillemot, as a named component of the breeding seabird assemblage at Buchan Ness to Collieston Coast SPA.

14.2.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

14.2.3 **The Scottish Ministers are unable to conclude no AEOSI for the seabird assemblage feature of Buchan Ness to Collieston Coast SPA (based on guillemot as a named component) from the Salamander OWF alone based on the upper SNCB Approach.**

14.3 Fowlsheugh SPA

14.3.1 Fowlsheugh SPA has a breeding seabird assemblage qualifying feature which includes the following named components taken through to the AA: razorbill. NatureScot advised in its response dated 02 July 2024, in consideration of the SNCB Approach, of no AEOSI for razorbill at Fowlsheugh SPA, from the Salamander OWF alone. Consequently, NatureScot also advised no AEOSI for razorbill as a named component of the breeding seabird assemblage at Fowlsheugh SPA.

14.3.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

14.3.3 **The Scottish Ministers conclude no AEOSI for the seabird assemblage feature of Fowlsheugh SPA (based on razorbill as a named component) from the Salamander OWF alone based on the upper SNCB Approach.**

14.4 Troup, Pennan and Lion's Heads SPA

14.4.1 Troup, Pennan and Lion's Heads SPA has a breeding seabird assemblage qualifying feature which includes the following named components taken through to the AA: guillemot and razorbill. NatureScot advised in its response dated 02 July 2024, in consideration of the SNCB Approach, it concludes no AEOSI for guillemot and razorbill at Troup, Pennan and Lion's Heads SPA, from the Salamander OWF alone. Consequently, NatureScot also advised no AEOSI for guillemot and razorbill, as named components of the breeding seabird assemblage at Troup, Pennan and Lion's Heads SPA.

14.4.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

14.4.3 **The Scottish Ministers conclude no AEOSI for the seabird assemblage feature of Troup, Pennan and Lion's Heads SPA (based on razorbill and**

guillemot as named components) from the Salamander OWF alone based on the upper SNCB Approach.

14.5 Outer Firth of Forth and St Andrews Bay Complex SPA

14.5.1 The OFFSAB SPA has a breeding and/or non-breeding seabird assemblage qualifying feature which includes the following named seabird components included in this quantitative assessment: kittiwake (breeding and non-breeding), guillemot (breeding and non-breeding) and razorbill (non-breeding), which are also features of functionally linked breeding colony SPAs. In its response dated 02 July 2024, NatureScot did not specifically provide a conclusion on the seabird assemblage feature at OFFSAB SPA however advised that the conclusion should be based on the conclusion for functionally linked SPAs.

14.5.2 The following SPAs are considered functionally linked to OFFSAB SPA for specific species: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA.

14.5.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding seasons when using the OFFSAB marine SPA.

14.5.4 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

14.5.5 The conclusion for the breeding and non-breeding seabird assemblage feature of OFFSAB SPA is based on the conclusions of those qualifying features of OFFSAB assessed at functionally linked SPAs. Consequently, the conclusion for the seabird assemblage qualifying feature of OFFSAB SPA is based on the assessment of the breeding guillemot feature at the functionally linked Buchan Ness to Collieston Coast SPA, for which Scottish Ministers are unable to conclude no AEOSI based on the upper SNCB Approach.

14.5.6 **The Scottish Ministers are unable to conclude no AEOSI for the breeding and non-breeding seabird assemblage feature of OFFSAB SPA (based on guillemot as a named component) from the Salamander OWF alone based on the upper SNCB Approach.**

15 Bottlenose dolphin – alone assessment

15.1 Moray Firth SAC

15.1.1 NatureScot agreed with the assessment provided in the RIAA that the Salamander OWF will have a LSE on the bottlenose dolphin qualifying feature of the Moray Firth SAC. Underwater noise was identified as a potential impact pathway during all phases of the Salamander OWF. Additionally, entanglement, collision with WTGs and EMF as an indirect impact on prey sources, were also identified as potential sources of impact during the operational phase only.

15.1.2 With regard to direct entanglement, tension in the mooring lines and design of the dynamic cabling will not allow for loops to develop and as such reduces the risk ensuring that it will not result in AEOSI. The risk of secondary entanglement in derelict fishing gear is highly dependent on the characteristics of the gear itself, however, the risk is deemed to be low and will not result in AEOSI.

15.1.3 The RIAA concluded no AEOSI as a result of collision with WTGs as bottlenose dolphins have the ability to perceive and therefore avoid newly introduced infrastructure.

15.1.4 Any negative impact on prey species as a result of EMF would not adversely affect bottlenose dolphins as they are generalist feeders and not reliant on a single prey species, as such the RIAA concluded no AEOSI as a result of EMF.

15.1.5 The RIAA noted the key sources for potential impacts to bottlenose dolphins as underwater noise from surveys, UXO clearance, vessels, general construction activity or during the piling of anchors. The risk of disturbance in relation to noise generated during surveys, UXO clearance, vessel disturbance and general construction will be localised, short term and temporary and will not result in widespread or long term displacement. There is the potential for noise from piling to cause auditory injury, disturbance and displacement to bottlenose dolphins however with standard mitigation measures the risk can be reduced such that it will not cause AEOSI. NatureScot agreed that mitigation to reduce these effects can be finalised within a Marine Mammal Mitigation Protocol (“MMMP”) and agreed with the conclusion reached in the RIAA of no AEOSI.

15.1.6 The Scottish Ministers agree with NatureScot and conclude that there will be no AEOSI of the Moray Firth SAC from the Salamander OWF alone.

15.1.7 A condition to reflect the required mitigation, noted in the RIAA as an MMMP, will be addressed as part of a piling strategy and has been added to section 4

below to ensure this is secured through the section 36 consent and marine licences.

15.1.8 **The Scottish Ministers conclude no AEOSI for the bottlenose dolphin feature of the Moray Firth SAC from the Salamander OWF alone.**

16 In-combination assessment methodology

16.1 A review has been carried out of all the projects which currently have an active or open application for a marine licence, section 36 consent or European Protected Species licence and associated AA which identified LSE on the qualifying features of the same designated sites as are affected by the Salamander OWF. Projects in English waters identified by the Applicant in the RIAA have also been included.

16.2 Section 4.6 of volume ER.A.2, chapter 4 of the EIA Report for the Salamander OWF indicates that construction is not likely to commence until Q2 2028 therefore any licences which expire before this date are not considered further in this assessment.

16.3 A number of licences to carry out periodic maintenance dredging and sea deposit of dredged material have been issued and will have LSE on the qualifying features of the same designated sites as the Salamander OWF, however any impact from these projects will be minor and short term and therefore not have a significant contribution to in-combination effects with the Salamander OWF. There are also a number of active marine licences to deposit fish farms which will have LSE on the same designated sites as the Salamander OWF, however effects from these projects are also minor and not likely to lead to significant in-combination effects with the Salamander OWF. These dredging, sea deposit and fish farm licences are not considered further in this assessment.

16.4 The identified projects have been separated into offshore wind farm projects (Table 13) and non-wind farm projects (Table 14).

Table 13 Wind farm projects which are considered in the in-combination assessment for Salamander OWF

Project Name	Description
Aberdeen Bay OWF	Operational wind farm consisting of 11 turbines. https://marine.gov.scot/ml/european-offshore-wind-deployment-centre

Beatrice OWF	Operational wind farm in the outer Moray Firth, 13.5 km offshore. The wind farm consists of 84 WTGs over an area of 131.5 km2. An EPS licence for post consent benthic and geophysical surveys has also been issued. https://marine.gov.scot/ml/beatrice-offshore-windfarm
Blyth Demonstration	Operational wind farm consisting of 15 turbines – Phase 1 Consented wind farm consisting of up to 5 floating turbines – Phase 2.
Dogger Bank Creyke Beck A	Under construction wind farm consisting of up to 200 turbines.
Dogger Bank Creyke Beck B	Under construction wind farm consisting of up to 200 turbines.
Dogger Bank C	Under construction wind farm with a generating capacity of up to 1,400MW.
Dudgeon	Operational wind farm consisting of up to 67 turbines.
Dudgeon Extension Project	Application for up to 30 turbines.
East Anglia One	Operational wind farm consisting of up to 325 turbines.
East Anglia One North	Consented wind farm consisting of up to 67 turbines.
East Anglia Two	Consented wind farm consisting of up to 75 turbines.
East Anglia Three	Consented wind farm consisting of up to 172 turbines.
Forthwind Demonstration Project	A single 20 MW test and demonstration WTG and metmast, located approximately 1.5 km from the shore of Methil, Firth of Forth. Construction is yet to commence. https://marine.gov.scot/ml/forthwind-demonstration-project
Galloper	Operational wind farm consisting of up to 56 turbines.
Greater Gabbard	Operation wind farm consisting of 140 turbines.
Green Volt OWF	Consented wind farm consisting of up to 35 WTGs located approximately 80 km off the Aberdeenshire coastline. The project is anticipated to begin construction in quarter 4 2025. https://marine.gov.scot/ml/green-volt-offshore-windfarm
Gunfleet Sands	Operational wind farm consisting of up to 30 turbines.
Hornsea Project One	Operational wind farm consisting of up to 120 turbines.
Hornsea Project Two	Under construction wind farm consisting of up to 360 turbines.
Hornsea Project Three	Consented wind farm consisting of up to 231 turbines.
Hornsea Project Four	Consented wind farm consisting of up to 180 turbines.
Humber Gateway	Operational wind farm consisting of up to 83 turbines.

Hywind Scotland Pilot Park	Five 6 MW floating WTGs, installed approximately 25 km off the coast of Peterhead. The project is now operational. https://marine.gov.scot/ml/hywind-scotland-pilot-park
Inch Cape OWF	A maximum of 72 wind turbines will be installed 15-22 km form the Angus coastline. The project is due to begin construction mid-2025. https://marine.gov.scot/ml/inch-cape-offshore-windfarm-revised-design
Kentish Flats	Operational wind farm consisting of up to 30 turbines.
Kincardine OWF	A demonstrator floating wind farm consisting of five 9.5 MW turbines located about 8 miles of the coast to the south-east of Aberdeen. The project is now operational. https://marine.gov.scot/ml/kincardine-offshore-windfarm-0
Lincs, Lynn and Inner Dowsing	Operational wind farm consisting of up to 75 turbines – Lincs Operational wind farm consisting of up to 54 turbines – Lynn and Inner Dowsing
London Array	Operational wind farm consisting of up to 175 turbines.
Methil (also known as the Levenmouth Demonstration Turbine)	A single 7 MW demonstration turbine, located at the Fife Energy Park, Methil, Firth of Forth. The project is currently operational. https://marine.gov.scot/ml/levenmouth-demonstration-turbine
Moray East OWF	An operational offshore wind farm 22 km from Caithness. The wind farm consists of 100 WTGs. https://marine.gov.scot/ml/moray-east-offshore-windfarm
Moray West OWF	A maximum of 60 WTGs will be installed off the Caithness coast. The project is currently under construction and due to be operational by June 2025. https://marine.gov.scot/ml/moray-west-offshore-windfarm
Neart na Gaoithe OWF	A maximum of 54 WTGs will be installed 15-22 km from the Angus coastline. The project is currently under construction and is due to complete construction July 2025. https://marine.gov.scot/ml/neart-na-gaoithe-offshore-wind-farm-revised-design
Norfolk Boreas	Consented wind farm consisting of up to 158 turbines.
Norfolk Vanguard	Consented wind farm consisting of up to 200 turbines.
Pentland OWF	Consented wind farm of up to 6 floating WTGs located approximately 7.5 km from the coast of Dounreay, Caithness. Offshore construction activities are anticipated to commence 2027. https://marine.gov.scot/ml/pentland-floating-offshore-wind-farm

Race Bank	Operational wind farm consisting of 91 turbines.
Rampion	Under construction wind farm consisting of up to 175 turbines.
Rampion 2	Application for up to 90 turbines.
Scroby Sands	Operational wind farm consisting of 30 turbines.
Seagreen Alpha and Bravo OWFs and Seagreen 1A	A maximum of 150 WTGs located 27 km from the Angus coastline. 114 of the turbines are now operational. https://marine.gov.scot/ml/seagreen-alpha-and-bravo-offshore-wind-farms Seagreen 1A consists of the remaining 36 WTGs, to be located within the Seagreen Alpha and Bravo array areas, with an export cable to Cockenzie, East Lothian. The project is consented, however a commencement date for construction has not been determined. https://marine.gov.scot/ml/seagreen-1a-export-cable-corridor
Sheringham Shoal	Operational wind farm consisting of 88 turbines.
Sheringham Shoal Extension Project	Application for up to 23 turbines.
Sofia	Under construction wind farm with a generating capacity of up to 1,400MW.
Teeside	Operational wind farm consisting of 27 turbines.
Thanet	Constructed wind farm consisting of 100 turbines.
Triton Knoll	Operational wind farm consisting of 90 turbines.
Westermost Rough	Operational wind farm consisting of 35 turbines.
West of Orkney	Application for up to 125 turbines. https://marine.gov.scot/ml/west-orkney-wind-farm

Table 14 Non-wind farm projects which are considered in the in-combination assessment for Salamander OWF

Project Name	Description
Eastern Green Link 2	Installation of a 436 km HVDC cable between Peterhead in Aberdeenshire and Drax in North Yorkshire. https://marine.gov.scot/ml/marine-licence-eastern-green-link-2-egl2-hvdc-cables-and-cable-protection-peterhead-drax-00009943
Cambois Cable Connection	Installation of up to four HVDC export cables from offshore converter stations platforms within Berwick Bank. Construction is due to begin in Q4 2026.
MeyGen Tidal Turbines	Tidal array in the Inner Sound of the Pentland Firth. Four turbines have been installed. Consent for phase 1b consisting of an additional four turbines has been granted but plans for the remaining 53 turbines have not yet been confirmed.

	https://marine.gov.scot/ml/meygen-tidal-energy-project-
North Coast and Orkney Geophysical Surveys	Surveys of 24 cable routes with a maximum survey area of 240 km^2. Surveys are expected to take 360 days over a four year period. https://marine.gov.scot/node/24821
Orbital Eday 3 - Fall of Warness Tidal Test Site, European Marine Energy Centre	The Orbital Eday 3 proposal is to construct, alter or improve one Orbital O2-X tidal energy device at the EMEC Fall of Warness Tidal Test Site. https://marine.gov.scot/node/24690

16.5 Applications have also been received for the Berwick Bank Wind Farm consisting of 307 WTGs, 47.6 km from the coast of East Lothian. A determination has not yet been made on the applications for Berwick Bank however, the AA has concluded that it will have an AEOSI for a number of qualifying features of SPAs or the AA is unable to conclude that Berwick Bank will not have an AEOSI. Berwick Bank can therefore only be consented if a derogation case is agreed, including compensatory measures to offset its impacts on those species/sites where the AA cannot conclude that there will be no AEOSI. This means that if Berwick Bank is consented, the effects from Berwick Bank on these species/sites will be compensated for and on this basis, they will not be considered in the in-combination assessment for Salamander OWF. Berwick Bank will be considered in the in-combination assessment for those species/sites where it has LSE but no AEOSI.

16.6 Where the AA concludes AEOSI or is unable to conclude no AEOSI from the Salamander OWF alone, this is the conclusion of the AA for that species/site and before the Salamander OWF could be consented, a derogation case would have to be agreed under the Habitats Regulations. In these cases, the in-combination assessment is presented for information only. Where the AA concludes no AEOSI from the Salamander OWF alone, the in-combination assessment is considered for the conclusion of the AA. Where the AA then concludes AEOSI or is unable to conclude no AEOSI from the Salamander OWF in combination with other projects, the level of impact from the Salamander OWF, as presented in Table 34, is the impact from the Salamander OWF alone. The mortality contribution of Salamander OWF alone to the in-combination assessments are presented as ranges for each feature assessed in combination; these ranges represent the mortality according to the lower and upper values of the SNCB Approach. This range informs uncertainty within the assessment process, however conclusions are based on the SNCB upper value for the reasons given in section 9.4.5.

17 Gannet – in-combination assessment

17.1 Forth Islands SPA

17.1.1 The AA for Berwick Bank concluded an AEOSI for gannet at the Forth Islands SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

17.1.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for gannet as a qualifying feature of Forth Islands SPA.

17.1.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for gannet from Forth Islands SPA ranges from 2.0 to 3.8 birds per annum following the SNCB Approach. The Forth Islands SPA gannet population size of 150,518 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 15. Estimated annual gannet mortality at Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-50, 11-53, 11-55, 11-56: RIAA; and Table 3-28: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		113	339.4	113	113
Collision		556.2	563.2	555.8	562.8
Total impact		669.3	902.6	668.8	902.2
PVA (35 years)	CPS	0.828	0.775	0.828	0.775
	CGR	0.995	0.993	0.995	0.993

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species. All values are copied directly from the RIAA/PVA documents.

17.1.4 The CPS of the lower range of the SNCB Approach is reported as 0.828. This translates as a 17.2% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.775, this translates as a 22.5% reduction in population size after 35 years relative to an unimpacted population.

17.1.5 The CGR of the lower range of the SNCB Approach is reported as 0.995. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.993, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

17.1.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

17.1.7 **The Scottish Ministers conclude AEOSI for the gannet feature of Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

17.2 Hermaness, Saxa Vord and Valla Field SPA

17.2.1 The AA for Berwick Bank was unable to conclude no AEOSI for gannet at the Hermaness, Saxa Vord and Valla Field SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

17.2.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in no AEOSI for gannet as a qualifying feature of Hermaness, Saxa Vord and Valla Field SPA.

17.2.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for gannet from Hermaness, Saxa Vord and Valla Field SPA ranges from 0.7 to 1.4 birds per annum following the SNCB Approach. The Hermaness, Saxa Vord and Valla Field SPA gannet population size of 59,124 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 16. Estimated annual gannet mortality at Hermaness, Saxa Vord and Valla Field SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-69, 11-72, 11-75: RIAA; and Table 3-28: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		14	41.8	14	14
Collision		66.3	69	66.1	68.9
Total impact		80.3	110.9	80.1	110.7
PVA (35 years)	CPS	0.944	0.924	0.944	0.924
	CGR	0.998	0.998	0.998	0.998

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species. All values are copied directly from the RIAA/PVA documents.

17.2.4 The CPS of the lower range of the SNCB Approach is reported as 0.944. This translates as a 5.6% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.924, this translates as a 7.6% reduction in population size after 35 years relative to an unimpacted population.

17.2.5 The CGR of the lower range of the SNCB Approach is reported as 0.998. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.998, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

17.2.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

17.2.7 **The Scottish Ministers conclude no AEOSI for the gannet feature of Hermaness, Saxa Vord and Valla Field SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

17.3 Outer Firth of Forth and St Andrews Bay Complex SPA

17.3.1 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for breeding gannet as a qualifying feature of OFFSAB SPA.

17.3.2 For gannet, Forth Islands SPA is considered functionally linked to OFFSAB SPA.

17.3.3 The conclusion for OFFSAB SPA is based on the conclusion for the functionally linked Forth Islands SPA, for which Scottish Ministers conclude AEOSI for the breeding gannet feature from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.

17.3.4 **The Scottish Ministers conclude AEOSI for the breeding gannet feature of OFFSAB SPA from Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

18 Guillemot – in-combination assessment

18.1 For guillemot the Applicant reports only the upper SNCB Approach mortality estimate and lower Applicant Approach mortality estimate for Salamander OWF in combination with other UK North Sea OWFs in the RIAA (as presented in the mortality tables below). While the parameters included differ between the approaches, differences are small and therefore the distinction does not impact the conclusions of this AA. Please refer to section 9.7.12 for details.

18.2 Buchan Ness to Collieston Coast SPA

18.2.1 This AA was unable to conclude no AEOSI for guillemot as a qualifying feature of the Buchan Ness to Collieston Coast SPA from Salamander OWF alone and therefore the in-combination assessment is presented below for information only.

18.2.2 The AA for Berwick Bank concluded no AEOSI for the guillemot feature at the Buchan Ness to Collieston Coast SPA and therefore it is included in the in-combination assessment for the Salamander OWF.

18.2.3 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that for the Salamander OWF, in combination with other UK North Sea OWFs, it was unable to conclude no AEOSI for guillemot as a qualifying feature of Buchan Ness to Collieston Coast SPA.

18.2.4 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for guillemot from Buchan Ness to Collieston Coast SPA ranges from 26.6 to 128.8 birds per annum following the SNCB Approach. The Buchan Ness to Collieston Coast SPA guillemot population size of 39,440 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 17. Estimated annual guillemot mortality at Buchan Ness to Collieston Coast SPA from the Salamander OWF in combination with other UK North Sea OWFs, including Berwick Bank (see Tables 11-14, 11-15: RIAA; and Table 3-30: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	197.5	40.5
Total impact		-	197.5	40.5
PVA (35 years)	CPS	-	0.817	0.960

CGR	-	0.994	0.999

Note: Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

18.2.5 The CPS of the upper range of the SNCB Approach is reported as 0.817, this translates as a 18.3% reduction in population size after 35 years relative to an unimpacted population.

18.2.6 The CGR of the upper range of the SNCB Approach is reported as 0.994, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

18.2.7 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

18.2.8 **The Scottish Ministers are unable to conclude no AEOSI for the guillemot feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

18.3 Troup, Pennan and Lion's Heads SPA

18.3.1 The AA for Berwick Bank concluded no AEOSI for the guillemot feature at the Troup, Pennan and Lion's Heads SPA and therefore it is included in the in-combination assessment for the Salamander OWF.

18.3.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for guillemot as a qualifying feature of Troup, Pennan and Lion's Heads SPA.

18.3.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for guillemot from The Troup, Pennan and Lion's Heads SPA ranges from 14.6 to 62.4 birds per annum following the SNCB Approach. The Troup, Pennan and Lion's Heads SPA guillemot population size of 31,893 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 18. Estimated annual guillemot mortality at Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs, including Berwick Bank (see Tables 11-104, 11-105: RIAA; and Table 3-31: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant's Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	121.6	27.4
Total impact		-	121.6	27.4
PVA (35 years)	CPS	-	0.858	0.966
	CGR	-	0.996	0.999

Note: Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

18.3.4 The CPS of the upper range of the SNCB Approach is reported as 0.858, this translates as a 14.2% reduction in population size after 35 years relative to an unimpacted population.

18.3.5 The CGR of the lower range of the SNCB Approach is not reported. The CGR of the upper range of the SNCB Approach is reported as 0.996, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

18.3.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

18.3.7 **The Scottish Ministers are unable to conclude no AEOSI for the guillemot feature of Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

18.4 Outer Firth of Forth and St Andrews Bay Complex SPA

18.4.1 This AA was unable to conclude no AEOSI for guillemot as a qualifying feature of the OFFSAB SPA from Salamander OWF alone and therefore the in-combination assessment is presented below for information only.

18.4.2 NatureScot in its response of 02 July 2024 highlighted that the RIAA did not include an assessment for guillemot, which is a qualifying feature of OFFSAB SPA (breeding and non-breeding).

18.4.3 For guillemot, the following SPAs are considered functionally linked to OFFSAB SPA: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, and Buchan Ness to Collieston Coast SPA. The Forth Islands and St Abb's Head to Fast Castle SPAs were not screened into this in-

combination assessment as the Salamander OWF is out with the foraging range of guillemot from these sites.

18.4.4 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding seasons when using the OFFSAB marine SPA.

18.4.5 The conclusion for OFFSAB SPA is based on the conclusion for the functionally linked Buchan Ness to Collieston Coast SPA, for which Scottish Ministers are unable to conclude no AEOSI for the breeding guillemot feature from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.

18.4.6 **The Scottish Ministers are unable to conclude no AEOSI for the breeding and non-breeding guillemot feature of OFFSAB SPA from Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

19 Herring gull – in-combination assessment

19.1 Buchan Ness to Collieston Coast SPA

19.1.1 Berwick Bank did not carry out a quantitative assessment of the impact to herring gull at Buchan Ness to Collieston Coast SPA because it was not assessed as having LSE. Thus, the Salamander OWF RIAA does not present a quantitative in-combination assessment including Berwick Bank. However, due to the very small impact on herring gull at Buchan Ness to Collieston Coast SPA from Berwick Bank, including it in the in-combination assessment for Salamander OWF will not change the conclusion of this AA.

19.1.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the Applicant Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in no AEOSI for herring gull as a qualifying feature of Buchan Ness to Collieston Coast SPA.

19.1.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for herring gull from Buchan Ness to Collieston Coast SPA is 1.1 birds per annum following the Applicant Approach. The Buchan Ness to Collieston Coast SPA herring gull population size of 4,154 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 19. Estimated annual herring gull mortality at Buchan Ness to Collieston Coast SPA from the Salamander OWF in combination with other UK North Sea OWFs (see Tables 11-11, 11-12: RIAA; and Table 3-38: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach*: mortalities per annum	Applicant Approach**: mortalities per annum
Collision		3.5	3.7
Total impact		3.5	3.7
PVA (35 years)	CPS	0.965	0.963
	CGR	0.999	0.999

* Avoidance rate 0.995, basic CRM + option 2, mean monthly densities
** Avoidance rate 0.994, basic CRM + option 2, mean monthly densities.
Note: Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species. Herring gull is only assessed for collision and therefore does not have lower and upper values.

19.1.4 As described in section 9.4.3, the Applicant Approach for estimating collision mortality is assessed in preference to the SNCB Approach for species such as herring gull where only collision (and not displacement) mortalities are calculated.

19.1.5 The CPS of the Applicant Approach is reported as 0.963, this translates as a 3.7% reduction in population size after 35 years relative to an unimpacted population.

19.1.6 The CGR of the Applicant Approach is reported as 0.999, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

19.1.7 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

19.1.8 **The Scottish Ministers conclude no AEOSI for the herring gull feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the Applicant Approach.**

20 Kittiwake – in-combination assessment

20.1 Buchan Ness to Collieston Coast SPA

20.1.1 The AA for Berwick Bank concluded an AEOSI for the kittiwake feature at the Buchan Ness to Collieston Coast SPA and therefore for the reasons given in

section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.1.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of Buchan Ness to Collieston Coast SPA.

20.1.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from Buchan Ness to Collieston Coast SPA ranges from 11.9 to 19.7 birds per annum following the SNCB Approach. The Buchan Ness to Collieston Coast SPA kittiwake population size of 22,590 individuals used in the Application was taken from Seabirds Count (Burnell e*t al*. 2023).

Table 20. Estimated annual kittiwake mortality at Buchan Ness to Collieston Coast SPA from Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-3, 11-6, 11-8, 11-9: RIAA; and Table 3-20: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		10.6	21.8	10.6	10.6
Collision		68.4	68.8	65.5	65.9
Total impact		79	90.6	76.1	87.7
PVA (35 years)	CPS	0.862	0.843	0.866	0.847
	CGR	0.996	0.995	0.996	0.995

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species. All values are copied directly from the RIAA/PVA documents.

20.1.4 The CPS of the lower range of the SNCB Approach is reported as 0.862. This translates as a 13.8% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.843, this translates as a 15.7% reduction in population size after 35 years relative to an unimpacted population.

20.1.5 The CGR of the lower range of the SNCB Approach is reported as 0.996. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.995, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.1.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

20.1.7 **The Scottish Ministers conclude AEOSI for the kittiwake feature of Buchan Ness to Collieston Coast SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.2 East Caithness Cliffs SPA

20.2.1 The AA for Berwick Bank concluded an AEOSI for kittiwake at the East Caithness Cliffs SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.2.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of East Caithness Cliffs SPA.

20.2.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from East Caithness Cliffs SPA ranges from 1.9 to 3.1 birds per annum following the SNCB Approach. The East Caithness Cliffs SPA kittiwake population size of 48,958 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 21. Estimated annual kittiwake mortality at East Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-17, 11-20, 11-22, 11-23: RIAA; and Table 3-21: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		54.9	164	54.9	54.9
Collision		220.3	222.4	219.9	220
Total impact		275.2	386.4	274.7	385.9
PVA (35 years)	CPS	0.787	0.714	0.787	0.714
	CGR	0.993	0.991	0.993	0.991

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.2.4 The CPS of the lower range of the SNCB Approach is reported as 0.787. This translates as a 21.3% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.714, this translates as a 28.6% reduction in population size after 35 years relative to an unimpacted population.

20.2.5 The CGR of the lower range of the SNCB Approach is reported as 0.993. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.991, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.2.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

20.2.7 **The Scottish Ministers conclude AEOSI for the kittiwake feature of East Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.3 Farne Islands SPA

20.3.1 Kittiwake is a named component of the seabird breeding assemblage only and not a feature in its own right so is considered under section 23.5 and not separately here, see rationale in section 6.2.

20.4 Forth Islands SPA

20.4.1 The AA for Berwick Bank concluded an AEOSI for the kittiwake feature at the Forth Islands SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.4.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of Forth Islands SPA. However, NatureScot stated that the proposal would not make a tangible contribution to the impacts. In reaching its conclusion NatureScot noted the very low CPS values, a minimal contribution from Salamander OWF, the unfavourable declining condition of the species and a 22% population decline between Seabird 2000 and the Seabirds Count.

20.4.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from Forth Islands SPA ranges from 0.3 to 0.4 birds per annum following the SNCB Approach. The Forth Islands SPA kittiwake population size of 9,084 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 22. Estimated annual kittiwake mortality at Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-39, 11-42, 11-44, 11-45: RIAA; and Table 3-23: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		7.5	22.4	7.5	7.5
Collision		25.3	25.5	25.2	25.4
Total impact		32.8	47.8	32.7	47.6
PVA (35 years)	CPS	0.857	0.799	0.858	0.800
	CGR	0.996	0.994	0.996	0.994

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.4.4 The CPS of the lower range of the SNCB Approach is reported as 0.857. This translates as a 14.3% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.799, this translates as a 20.1% reduction in population size after 35 years relative to an unimpacted population.

20.4.5 The CGR of the lower range of the SNCB Approach is reported as 0.996. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.994, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.4.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. The AA acknowledges the small impact contribution from Salamander OWF to the in-combination assessment, however in consideration of the assessment provided and further contextual considerations such as those outlined in section 9.4.4. the AA concludes that the in-combination assessment confers an AEOSI.

20.4.7 **The Scottish Ministers conclude an AEOSI for the kittiwake feature of Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.5 Fowlsheugh SPA

20.5.1 The AA for Berwick Bank concluded an AEOSI for kittiwake at the Fowlsheugh SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.5.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of Fowlsheugh SPA.

20.5.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from Fowlsheugh SPA ranges from 2.5 to 4.1 birds per annum following the SNCB Approach. The Fowlsheugh SPA kittiwake population size of 28,078 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 23. Estimated annual kittiwake mortality at Fowlsheugh SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-58, 11-61, 11-63, 11-64: RIAA; and Table 3-24: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		16.3	48.6	16.3	16.3
Collision		80.1	80.6	79.5	80
Total impact		96.4	129.2	95.8	128.6
PVA (35 years)	CPS	0.864	0.822	0.865	0.823
	CGR	0.996	0.995	0.996	0.995

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.5.4 The CPS of the lower range of the SNCB Approach is reported as 0.864. This translates as a 13.6% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.822, this translates as a 17.8% reduction in population size after 35 years relative to an unimpacted population.

20.5.5 The CGR of the lower range of the SNCB Approach is reported as 0.996. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.995, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.5.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

20.5.7 **The Scottish Ministers conclude AEOSI for the kittiwake feature of Fowlsheugh SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.6 North Caithness Cliffs SPA

20.6.1 The AA for Berwick Bank concluded an AEOSI for kittiwake at the North Caithness Cliffs SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.6.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of North Caithness Cliffs SPA.

20.6.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from North Caithness Cliffs SPA ranges from 0.3 to 0.5 birds per annum following the SNCB Approach. The North Caithness Cliffs SPA kittiwake population size of 11,142 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 24. Estimated annual kittiwake mortality at North Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-77, 11-80, 11-82, 11-83: RIAA; and Table 3: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type	SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
	Lower	Upper	Lower	Upper
Displacement	9	21.9	9	9
Collision	43.8	45.2	43.7	45.1
Total impact	52.8	67.1	52.7	66.8

PVA (35 years)	CPS	0.817	0.774	0.818	0.774
	CGR	0.994	0.993	0.994	0.993

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.6.4 The CPS of the lower range of the SNCB Approach is reported as 0.817. This translates as a 18.3% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.774, this translates as a 22.6% reduction in population size after 35 years relative to an unimpacted population.

20.6.5 The CGR of the lower range of the SNCB Approach is reported as 0.994. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.993, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.6.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

20.6.7 **The Scottish Ministers conclude AEOSI for the kittiwake feature of North Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.7 St Abb's Head to Fast Castle SPA

20.7.1 The AA for Berwick Bank concluded an AEOSI for the kittiwake feature at the St Abb’s Head to Fast Castle SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.7.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for kittiwake as a qualifying feature of St Abb's Head to Fast Castle SPA. However, NatureScot noted that the proposal would not make a tangible contribution to the impacts. In reaching its conclusion NatureScot noted the moderately low CPS values without Berwick Bank, the large CPS range reflecting the uncertainty within the assessment, the Salamander OWF contribution to the mortality is minimal, the species

condition is unfavourable declining, and a population decline of 68% between Seabird 2000 and the Seabirds Count.

20.7.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from St Abb's Head to Fast Castle SPA ranges from 0.3 to 0.4 birds per annum following the SNCB Approach. The St Abb's Head to Fast Castle SPA kittiwake population size of 10,300 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 25. Estimated annual kittiwake mortality at St Abb's Head to Fast Castle SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-85, 11-88, 11-90, 11-91: RIAA; and Table 3-26: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		5	14.9	5	5
Collision		16.6	16.6	16.5	16.5
Total impact		21.6	31.5	21.5	31.2
PVA (35 years)	CPS	0.914	0.878	0.915	0.879
	CGR	0.998	0.996	0.998	0.996

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.7.4 The CPS of the lower range of the SNCB Approach is reported as 0.914. This translates as an 8.6% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.878, this translates as a 12.2% reduction in population size after 35 years relative to an unimpacted population.

20.7.5 The CGR of the lower range of the SNCB Approach is reported as 0.998. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.996, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.7.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. The AA acknowledges the small impact contribution from Salamander OWF to the in-combination assessment, however in consideration of the assessment provided and further contextual considerations such as those outlined in section 9.4.4. the AA concludes that

the in-combination assessment confers a conclusion of unable to conclude no AEOSI.

20.7.7 **The Scottish Ministers are unable to conclude no AEOSI for the kittiwake feature of St Abb's Head to Fast Castle SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.8 Troup, Pennan and Lion's Heads SPA

20.8.1 The AA for Berwick Bank concluded an AEOSI for the kittiwake feature at the Troup, Pennan and Lion's Heads SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

20.8.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for kittiwake as a qualifying feature of Troup, Pennan and Lion's Heads SPA.

20.8.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake from Troup, Pennan and Lion's Heads SPA ranges from 3.9 to 6.5 birds per annum following the SNCB Approach. The Troup, Pennan and Lion's Heads SPA kittiwake population size of 21,323 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 26. Estimated annual kittiwake mortality at Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-96, 11-99, 11-101, 11-102: RIAA; and Table 3-27: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		12.9	38	12.9	12.9
Collision		56.4	57.1	55.5	56.1
Total impact		69.3	95.1	68.3	94.1
PVA (35 years)	CPS	0.870	0.826	0.872	0.828
	CGR	0.996	0.995	0.996	0.995

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

20.8.4 The CPS of the lower range of the SNCB Approach is reported as 0.870. This translates as a 13.0% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.826, this translates as a 17.4% reduction in population size after 35 years relative to an unimpacted population.

20.8.5 The CGR of the lower range of the SNCB Approach is reported as 0.996. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.995, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

20.8.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

20.8.7 **The Scottish Ministers conclude AEOSI for the kittiwake feature of Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

20.9 Outer Firth of Forth and St Andrews Bay Complex SPA

20.9.1 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in AEOSI for breeding and non-breeding kittiwake as a qualifying feature of OFFSAB SPA.

20.9.2 For kittiwake, the following SPAs are considered functionally linked to OFFSAB SPA: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA.

20.9.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding seasons when using the OFFSAB marine SPA.

20.9.4 The conclusion for OFFSAB SPA is based on the conclusion for the functionally linked Buchan Ness to Collieston Coast SPA, Forth Islands SPA, Fowlsheugh SPA, and Troup, Pennan and Lion's Heads SPA, for which Scottish Ministers conclude AEOSI for the breeding and non-breeding

kittiwake feature from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.

20.9.5 **The Scottish Ministers conclude AEOSI for the breeding and non-breeding kittiwake feature of OFFSAB SPA from Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

21 Puffin – in-combination assessment

21.1 For puffin the Applicant reports only the upper SNCB Approach mortality estimate and lower Applicant Approach mortality estimate for Salamander OWF in combination with other UK North Sea OWFs in the RIAA (as presented in the mortality tables below). While the parameters included differ between the approaches, differences are small and therefore the distinction does not impact the conclusions of this AA. Please refer to section 9.7.12 for details.

21.2 Farne Islands SPA

21.2.1 Puffin is a named component of the seabird breeding assemblage only and not a feature in its own right so is considered under section 23.6 and not separately here, see rationale in paragraph 6.2.

21.3 Forth Islands SPA

21.3.1 The AA for Berwick Bank concluded an AEOSI for puffin at the Forth Islands SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

21.3.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for puffin as a qualifying feature of Forth Islands SPA.

21.3.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for puffin from Forth Islands SPA is 3.8 birds per annum following the SNCB Approach. The Forth Islands SPA puffin population size of 85,846 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 27. Estimated annual puffin mortality at Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see

Tables 11-47, 11-48: RIAA; and Table 3-55: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	248.3	42.7
Total impact		-	248.3	42.7
PVA (35 years)	CPS	-	0.885	0.979
	CGR	-	0.997	0.999

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

21.3.4 The CPS of the upper range of the SNCB Approach is reported as 0.885, this translates as an 11.5% reduction in population size after 35 years relative to an unimpacted population.

21.3.5 The CGR of the upper range of the SNCB Approach is reported as 0.997, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

21.3.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

21.3.7 **The Scottish Ministers are unable to conclude no AEOSI for the puffin feature of Forth Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

21.4 Sule Skerry and Sule Stack SPA

21.4.1 Berwick Bank did not carry out a quantitative assessment of the impact to puffin at the Sule Skerry and Sule Stack SPA because it was not assessed as having LSE. Thus, the Salamander OWF RIAA does not present a quantitative in-combination assessment including Berwick Bank. However, due to the very small impact on puffin at the Sule Skerry and Sule Stack SPA from Berwick Bank, including it in the in-combination assessment for Salamander OWF will not change the conclusion of this AA.

21.4.2 NatureScot in its response of 02 July 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would

result in no AEOSI for puffin as a qualifying feature of Sule Skerry and Sule Stack SPA.

21.4.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for puffin from Sule Skerry and Sule Stack SPA is 1.6 birds per annum following the SNCB Approach. The Sule Skerry and Sule Stack SPA puffin population size of 95,484 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 28. Estimated annual puffin mortality at Sule Skerry and Sule Stack SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-93, 11-94: RIAA; and Table 3-37: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	109.4	66.3
Total impact		-	109.4	66.3
PVA (35 years)	CPS	-	0.953	0.971
	CGR	-	0.999	0.999

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

21.4.4 The CPS of the upper range of the SNCB Approach is reported as 0.953, this translates as a 4.7% reduction in population size after 35 years relative to an unimpacted population.

21.4.5 The CGR of the upper range of the SNCB Approach is reported as 0.999, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

21.4.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

21.4.7 **The AA concludes no AEOSI for the puffin feature of Sule Skerry and Sule Stack SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

21.5 Outer Firth of Forth and St Andrews Bay Complex SPA

21.5.1 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would result in no AEOSI for breeding puffin as a qualifying feature of OFFSAB SPA.

21.5.2 For puffin, Forth Islands SPA is considered functionally linked to OFFSAB SPA.

21.5.3 The conclusion for OFFSAB SPA is based on the conclusion for the functionally linked Forth Islands SPA, for which Scottish Ministers are unable to conclude no AEOSI for the breeding puffin feature from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.

21.5.4 **The Scottish Ministers are unable to conclude no AEOSI for the breeding puffin feature of OFFSAB SPA from Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

22 Razorbill – in-combination assessment

22.1 For razorbill the Applicant reports only the upper SNCB Approach mortality estimate and lower Applicant Approach mortality estimate for Salamander OWF in combination with other UK North Sea OWFs in the RIAA (as presented in the mortality tables below). While the parameters included differ between the approaches, differences are small and therefore the distinction does not impact the conclusions of this AA. Please refer to section 9.7.12 for details.

22.2 East Caithness Cliffs SPA

22.2.1 The AA for Berwick Bank concluded an AEOSI for razorbill at the East Caithness Cliffs SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

22.2.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for razorbill as a qualifying feature of East Caithness Cliffs SPA.

22.2.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for razorbill from East Caithness Cliffs SPA is 0.6 birds per annum following the SNCB Approach. The East Caithness Cliffs SPA razorbill population size of 40,373 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023).

Table 29. Estimated annual razorbill mortality at East Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-25, 11-26: RIAA; and Table 3-34: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	291.9	61.8
Total impact		-	291.9	61.8
PVA (35 years)	CPS	-	0.736	0.938
	CGR	-	0.992	0.998

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

22.2.4 The CPS of the upper range of the SNCB Approach is reported as 0.736, this translates as a 26.4% reduction in population size after 35 years relative to an unimpacted population.

22.2.5 The CGR of the upper range of the SNCB Approach is reported as 0.992, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

22.2.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

22.2.7 **The AA is unable to conclude no AEOSI for the razorbill of East Caithness Cliffs SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

22.3 Fowlsheugh SPA

22.3.1 The AA for Berwick Bank concluded an AEOSI for razorbill at the Fowlsheugh SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

22.3.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for razorbill as a qualifying feature of Fowlsheugh SPA.

22.3.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for razorbill from Fowlsheugh is 2.5 birds per annum following the SNCB Approach. The Fowlsheugh SPA razorbill population size of 18,844 individuals used in the Application was taken from Seabirds Count (Burnell *et al*. 2023.

Table 30. Estimated annual razorbill mortality at Fowlsheugh SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-66, 11-67: RIAA; and Table 3-32: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	86.4	16.9
Total impact		-	86.4	16.9
PVA (35 years)	CPS	-	0.824	0.963
	CGR	-	0.995	0.999

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

22.3.4 The CPS of the upper range of the SNCB Approach is reported as 0.824, this translates as a 17.6% reduction in population size after 35 years relative to an unimpacted population.

22.3.5 The CGR of the upper range of the SNCB Approach is reported as 0.995, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

22.3.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

22.3.7 **The AA is unable to conclude no AEOSI for the razorbill feature of Fowlsheugh SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

22.4 Troup, Pennan and Lion's Heads SPA

22.4.1 The AA for Berwick Bank concluded an AEOSI for razorbill at the Troup, Pennan and Lion's Heads SPA and therefore for the reasons given in section

16.5, it is excluded from the in-combination assessment for the Salamander OWF.

22.4.2 NatureScot in its response of 02 July 2024 disagreed with the conclusions of the RIAA. In consideration of the SNCB Approach, NatureScot was unable to conclude that the Salamander OWF, in combination with other UK North Sea OWFs, would have no AEOSI for razorbill as a qualifying feature of Troup, Pennan and Lion's Heads SPA.

22.4.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for razorbill from Troup, Pennan and Lion's Heads SPA is 1.6 birds per annum following the SNCB Approach. The Troup, Pennan and Lion's Heads SPA razorbill population size of 6,054 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 31. Estimated annual razorbill mortality at Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-107, 11-108: RIAA; and Table 3-33: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	15.3	3.7
Total impact		-	15.3	3.7
PVA (35 years)	CPS	-	0.899	0.974
	CGR	-	0.997	0.999

Note: See section **Error! Reference source not found.**7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

22.4.4 The CPS of the upper range of the SNCB Approach is reported as 0.899, this translates as a 9.9% reduction in population size after 35 years relative to an unimpacted population.

22.4.5 The CGR of the upper range of the SNCB Approach is reported as 0.997, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

22.4.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

22.4.7 **The Scottish Ministers are unable to conclude no AEOSI for the razorbill feature of Troup, Pennan and Lion's Heads SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

22.5 Outer Firth of Forth and St Andrews Bay Complex SPA

22.5.1 NatureScot in its response of 02 July 2024 highlighted that the RIAA did not include an assessment for razorbill, which is a qualifying feature of OFFSAB SPA (non-breeding). In consideration of the SNCB Approach, NatureScot was unable to conclude no AEOSI from Salamander OWF, in combination with other UK North Sea OWFs for non-breeding razorbill as a qualifying feature of OFFSAB SPA.

22.5.2 For razorbill, the following SPAs are considered likely functionally linked to OFFSAB SPA: Fowlsheugh SPA, and Troup, Pennan and Lion's Heads SPA. In its response dated 27 November 2024, NatureScot indicated that these sites are likely to be functionally linked to OFFSAB SPA for razorbill, based on the mean maximum foraging range of 122 km for this species.

22.5.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding seasons when using the OFFSAB marine SPA.

22.5.4 The conclusion for OFFSAB SPA is based on the conclusion for the potentially functionally linked Fowlsheugh SPA, and Troup, Pennan and Lion's Heads SPA, for which Scottish Ministers are unable to conclude no AEOSI for the razorbill feature from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.

22.5.5 **The Scottish Ministers are unable to conclude no AEOSI for the non-breeding razorbill feature of OFFSAB SPA from Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23 Seabird assemblage – in-combination assessment

23.1 See individual species accounts above for quantitative impact assessments including mortality estimates and PVA outputs for component species for each Scottish SPA. For the reasons given in section 6.2, assemblages at English SPAs are assessed in full in this section. Details of species which are features in their own right or listed as assemblage qualifiers only are shown in Table 4.

23.2 Buchan Ness to Collieston Coast SPA

23.2.1 This AA was unable to conclude no AEOSI for seabird assemblage as a qualifying feature of the Buchan Ness to Collieston Coast SPA from Salamander OWF alone therefore the in-combination assessment is presented below for information.

23.2.2 Buchan Ness to Collieston Coast SPA has a breeding seabird assemblage qualifying feature which includes the following named components included in this quantitative assessment: guillemot, herring gull and kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for guillemot, no AEOSI for herring gull and an AEOSI for kittiwake at Buchan Ness to Collieston Coast SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at Buchan Ness to Collieston Coast SPA based on named components.

23.2.3 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.2.4 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of Buchan Ness to Collieston Coast SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.3 East Caithness Cliffs

23.3.1 East Caithness Cliffs SPA has a breeding seabird assemblage qualifying feature which includes the following named components included in this quantitative assessment: razorbill and kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for razorbill and concludes an AEOSI for kittiwake at East Caithness Cliffs SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at East Caithness Cliffs SPA based on named components.

23.3.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution

in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.3.3 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of East Caithness Cliffs SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.4 Farne Islands SPA

23.5 Kittiwake as a named component of the Farnes Islands SPA breeding seabird assemblage

23.5.1 The AA for Berwick Bank concluded an AEOSI for kittiwake as a named component of the seabird assemblage feature at the Farne Islands SPA and therefore for the reasons given in section 16.5, it is excluded from the in-combination assessment for the Salamander OWF.

23.5.2 Natural England in its response of 24 June 2024 agreed with the conclusions of the Salamander RIAA. Following the SNCB Approach, Salamander OWF, in combination with other UK North Sea OWFs, would result in no AEOSI for kittiwake as a named component of the seabird assemblage feature of Farne Islands SPA.

23.5.3 RSPB Scotland, in its response dated 16 July 2024, consider potential AEOSI cannot be excluded for Salamander OWF in combination with other UK North Sea OWFs for kittiwake as a component of Farne Islands SPA.

23.5.4 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for kittiwake for Farne Islands SPA ranges from 0.2 to 0.3 birds per annum following the SNCB Approach. The Farne Islands SPA kittiwake population size of 8,804 individuals used in the Application was taken from the Seabirds Count (Burnell *et al.* 2023).

Table 32. Estimated annual kittiwake mortality at Farne Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs, excluding Berwick Bank (see Tables 11-28, 11-31, 11-33, 11-34: RIAA; and Table 3-22: RIAA Annex 2) plus PVA outputs. Median is shown.).

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum	
		Lower	Upper	Lower	Upper
Displacement		1.9	5.6	1.9	1.9
Collision		10.8	10.8	10.8	10.8
Total impact		12.7	16.4	12.6	16.2
PVA (35 years)	CPS	0.941	0.925	0.941	0.925

	CGR	0.998	0.998	0.998	0.998

Note: See section 9.7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

23.5.5 The CPS of the lower range of the SNCB Approach is reported as 0.941. This translates as a 5.9% reduction in population size after 35 years relative to an unimpacted population. The CPS of the upper range of the SNCB Approach is reported as 0.925, this translates as a 7.5% reduction in population size after 35 years relative to an unimpacted population.

23.5.6 The CGR of the lower range of the SNCB Approach is reported as 0.998. This translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population. The CGR of the upper range of the SNCB Approach is reported as 0.998, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

23.5.7 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from, Natural England and RSPB Scotland.

23.5.8 **The Scottish Ministers conclude no AEOSI for kittiwake as a named component of the seabird assemblage feature of Farne Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.6 Puffin as a named component of the Farnes Islands SPA breeding seabird assemblage

23.6.1 The AA for Berwick Bank concluded no AEOSI for puffin as a named component of the seabird assemblage feature at the Farne Islands SPA and therefore it is included in the in-combination assessment for the Salamander OWF.

23.6.2 Natural England in its response of 24 June 2024 agreed with the conclusions of the RIAA. In consideration of the SNCB Approach, Natural England concluded that the Salamander OWF, in combination with other UK North Sea OWFs, would result in no AEOSI for puffin as a named component of the seabird assemblage feature of the Farne Islands SPA.

23.6.3 The predicted mortality contribution of the Salamander OWF to the in-combination assessment for puffin from Farne Islands SPA is 2.5 birds per annum following the SNCB Approach. The Farne Islands SPA puffin population size of 87,504 individuals used in the Application was taken from Seabirds Count (Burnell *et al.* 2023).

Table 33. Estimated annual puffin mortality at Farne Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs, including Berwick Bank (see Tables 11-36, 11-37: RIAA; and Table 3-35: RIAA Annex 2) plus PVA outputs. Median is shown.

Impact type		SNCB Approach: mortalities per annum		Applicant Approach: mortalities per annum
		Lower	Upper	Lower
Displacement		-	36.6	7
Total impact		-	36.6	7
PVA (35 years)	CPS	-	0.982	-
	CGR	-	1	-

The Applicant Approach did not meet the 0.02% threshold to require PVA as such no results are presented. Note: See section 9.7.11 for a description of the difference between upper and lower definitions of SNCB and Applicant Approaches. Values were calculated as per sections 9.4 Collision Risk Modelling and 9.5 Displacement for each species.

23.6.4 The CPS of the upper range of the SNCB Approach is reported as 0.982, this translates as a 1.8% reduction in population size after 35 years relative to an unimpacted population.

23.6.5 The CGR of the upper range of the SNCB Approach is reported as 1, this translates as a <1% reduction in growth rate after 35 years relative to an unimpacted population.

23.6.6 In reaching their conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from Natural England and RSPB Scotland.

23.6.7 **The Scottish Ministers conclude no AEOSI for puffin as a named assemblage feature of the Farne Islands SPA from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.7 Forth Islands SPA

23.7.1 Forth Islands SPA has a breeding seabird assemblage qualifying feature which includes the following named components included in this quantitative assessment: gannet, puffin and kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for puffin and concludes an AEOSI for gannet and kittiwake at Forth Islands SPA, from Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at Forth Islands SPA based on named components.

23.7.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.7.3 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of Forth Islands SPA (based on gannet and kittiwake as named components) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.8 Fowlsheugh SPA

23.8.1 Fowlsheugh SPA has a breeding seabird assemblage qualifying feature which includes the following named components included in this quantitative assessment: razorbill and kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for razorbill and concludes an AEOSI for kittiwake at Fowlsheugh SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at Fowlsheugh SPA based on named components.

23.8.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.8.3 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of Fowlsheugh SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.9 North Caithness Cliffs SPA

23.9.1 North Caithness Cliffs SPA has a breeding seabird assemblage qualifying feature which includes the following named component included in this quantitative assessment: kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, an AEOSI for kittiwake at North Caithness Cliffs SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at North Caithness Cliffs SPA based on named components.

23.9.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.9.3 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of North Caithness Cliffs SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.10 Outer Firth of Forth and St Andrew's Bay Complex SPA

23.10.1 The OFFSAB SPA has a breeding and/or non-breeding seabird assemblage qualifying feature which includes the following named seabird components included in this quantitative assessment: kittiwake (breeding and non-breeding), guillemot (breeding and non-breeding), razorbill (non-breeding), puffin (breeding) and gannet (breeding), which are also features of functionally linked breeding colony SPAs. In its response dated 02 July 2024, NatureScot did not specifically provide a conclusion on the seabird assemblage feature at OFFSAB SPA however it advised that the conclusion should be based on the conclusion for functionally linked SPAs.

23.10.2 The following SPAs are considered functionally linked to OFFSAB SPA for specific species: Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA.

23.10.3 In its response of 27 November 2024, NatureScot highlighted that all qualifying features are protected throughout the whole site, throughout the whole year. This means that irrespective of the season for which they are designated, the qualifying features are protected during both their breeding and non-breeding seasons when using the OFFSAB marine SPA.

23.10.4 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.10.5 The conclusion for the breeding and non-breeding seabird assemblage feature of OFFSAB SPA is based on the conclusions of those qualifying features of OFFSAB assessed at functionally linked SPAs.

23.10.6 The conclusion for the seabird assemblage feature of OFFSAB SPA is based on the conclusion for the breeding kittiwake and breeding gannet features of the functionally linked breeding colony SPAs; Buchan Ness to Collieston Coast, Fowlsheugh and Troup, Pennan and Lion's Heads SPAs (kittiwake) and Forth Islands SPA (kittiwake and gannet), for which Scottish Ministers conclude an AEOSI, from the Salamander OWF in combination with other UK North Sea OWFs, based on the upper SNCB Approach.

23.10.7 **The Scottish Ministers conclude an AEOSI for the breeding and non-breeding seabird assemblage feature of OFFSAB SPA (based on kittiwake and gannet as named components) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.11 St Abb's Head to Fast Castle SPA

23.11.1 St Abb's Head to Fast Castle SPA has a breeding seabird assemblage qualifying feature which includes the following named component included in this quantitative assessment: kittiwake. In its response dated 02 July 2024, NatureScot advised, in consideration of the SNCB Approach, it is unable to conclude no AEOSI for kittiwake at St Abb's Head to Fast Castle SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at St Abb's Head to Fast Castle SPA based on named components.

23.11.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.11.3 **The Scottish Ministers are unable to conclude no AEOSI for the seabird assemblage feature of St Abb's Head to Fast Castle SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

23.12 Troup, Pennan and Lion's Heads SPA

23.12.1 Troup, Pennan and Lion's Heads SPA has a breeding seabird assemblage qualifying feature which includes the following named components included in this quantitative assessment: guillemot, razorbill and kittiwake. In its response date 02 July 2024, NatureScot advised, in consideration of the SNCB

Approach, it is unable to conclude no AEOSI for guillemot and razorbill and concludes an AEOSI for kittiwake at Troup, Pennan and Lion's Heads SPA, from the Salamander OWF in combination with other UK North Sea OWFs. Consequently, NatureScot also advised the above for the breeding seabird assemblage feature at Troup, Pennan and Lion's Heads SPA based on named components.

23.12.2 In reaching their conclusions, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland.

23.12.3 **The Scottish Ministers conclude an AEOSI for the seabird assemblage feature of Troup, Pennan and Lion's Heads SPA (based on kittiwake as a named component) from the Salamander OWF in combination with other UK North Sea OWFs based on the upper SNCB Approach.**

24 Other Species

24.1 Migratory Species

24.1.1 In its advice dated 02 July 2024, NatureScot agreed with the conclusion of the HRA Stage 1: Screening report and RIAA that, because of low levels of predicted mortality, impacts on migratory birds would not be significant. This is despite impacts on migratory birds having been screened out based on data from 2014 (HRA Stage 1: Screening report; paragraph 6.4.2.5) which do not consider the increased number of offshore wind farm projects in Scottish waters and increased turbine heights. NatureScot stated that considering the small extent of the array area, it seems unlikely that using the updated review would have altered the conclusion.

24.1.2 The Strategic Ornithological Support Services Migration Assessment Tool ("SOSS MAT") was used in volume ER.A.3, chapter 12 of the EIA Report to identify the potential for interaction between migrating birds and the Salamander OWF array area. Spatial overlap was minimal, and the Salamander OWF had potential to interact with a small proportion of migration corridors for all species. Additionally, no migratory birds were observed in the site-specific digital aerial surveys. Migratory birds were scoped out of further assessment from the EIA Report and remain screened out of the RIAA as a result of a lack of potential for LSE.

24.1.3 Appendix B within the HRA Stage 1: Screening report only specifies the following two SPAs in relation to migratory waterbirds;

- Loch of Strathbeg SPA; and,
- Ythan Estuary, Sands of Forvie and Meikle Loch SPA.

24.1.4 Natural England did not provide any information on migrant waterbird features of any SPAs.

24.1.5 **The Scottish Ministers conclude no AEOSI for the migrant waterbird features of any SPA from the Salamander OWF alone.**

24.1.6 **The Scottish Ministers conclude no AEOSI for the migrant waterfowl features of any SPA from the Salamander OWF in combination with other UK North Sea OWFs.**

25 In-combination assessment on SPAs with non-offshore wind farms

25.1 The Scottish Ministers have also considered the potential for in-combination effects with Salamander OWF and the projects listed in Table 14, namely:

- Eastern Green Link 2 Cable
- Cambois Cable Connection
- MeyGen Tidal Turbines
- North Coast and Orkney Geophysical Surveys
- Orbital Eday 3 - Fall of Warness Tidal Test Site, European Marine Energy Centre

25.2 No additional in combination effects have been identified which would lead to an AEOSI of any of the SPAs impacted by Salamander OWF.

26 Bottlenose dolphin – in-combination assessment

26.1 LSE on the bottlenose dolphins of the Moray Firth SAC was identified for the following projects:

- Berwick Bank Wind Farm
- Green Volt OWF
- Inch Cape OWF
- Moray West OWF
- Neart na Gaoithe OWF
- Pentland OWF
- Seagreen Alpha and Bravo and Seagreen 1A

26.2 Seagreen Alpha and Bravo offshore wind farms are now operational. Moray West and Neart na Gaoithe OWFs are currently under construction and should

be fully operational in 2025, ahead of Salamander commencing construction in 2028. The main impacts on the Moray Firth SAC were during the construction. Considering this and the mitigation measures for marine mammals that are in place for all of the above projects, the Scottish Ministers conclude that there will be no AEOSI of the Moray Firth SAC from the Salamander OWF in combination with other projects.

26.3 The Scottish Ministers conclude no AEOSI for the bottlenose dolphin feature of the Moray Firth SAC from the Salamander OWF in combination with other projects.

27 Scottish Ministers conclusion

27.1 The Scottish Ministers have considered the sites' conservation objectives. In particular, the Scottish Ministers have considered the potential impact of Salamander OWF on maintaining the population of the species as a viable component of the site on the individual qualifying features of the SPAs.

27.2 **The AA was unable to conclude no AEOSI to the following qualifying features and sites from Salamander OWF alone based on the SNCB Approach:**

- Guillemot at Buchan Ness to Collieston Coast SPA and OFFSAB SPA (breeding and non-breeding); and
- Seabird assemblage at Buchan Ness to Collieston Coast SPA (guillemot) and OFFSAB (breeding and non-breeding guillemot).

27.3 The AA concluded AEOSI from the Salamander OWF in combination with UK North Sea OWFs, based on the SNCB Approach for the following breeding and/or non-breeding features and SPAs:

- Gannet at Forth Islands SPA and OFFSAB SPA (breeding);
- Kittiwake at Buchan Ness to Collieston Coast SPA, East Caithness Cliffs SPA, Forth Islands SPA, Fowlsheugh SPA, North Caithness Cliffs SPA, OFFSAB SPA (breeding and non-breeding) and Troup Pennan and Lion's Heads SPA; and,
- Seabird assemblage qualifiers for Buchan Ness to Collieston Coast SPA (kittiwake), East Caithness Cliffs SPA (kittiwake), Forth Islands SPA (gannet and kittiwake), Fowlsheugh SPA (kittiwake), North Caithness Cliffs SPA (kittiwake), OFFSAB SPA (breeding and non-breeding kittiwake and breeding gannet) and Troup Pennan and Lion's Heads SPA (kittiwake).

27.4 The AA was unable to conclude no AEOSI to the following qualifying features and sites in combination with UK North Sea OWFs based on the SNCB Approach:

- Kittiwake at St Abb's Head to Fast Castle SPA;
- Guillemot at Troup, Pennan and Lion's Heads SPA;
- Puffin at Forth Islands SPA and OFFSAB SPA (breeding);
- Razorbill at East Caithness Cliffs SPA, Fowlsheugh SPA, OFFSAB SPA (non-breeding) and Troup, Pennan and Lion's Heads SPA; and,
- Seabird assemblage feature of St Abb's Head to Fast Castle SPA (kittiwake).

27.5 The Scottish Ministers conclude that the Salamander OWF can only be consented if a derogation case is agreed under regulation 49 of the Conservation (Natural Habitats, &c.) Regulations 1994 and regulation 29 of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

27.6 A summary of the estimated mortalities for those sites/species where AEOSI was concluded, or the AA was unable to conclude no AEOSI is included below in Table 34. Where AEOSI is concluded or the AA is unable to conclude no AEOSI based on the in-combination effects, the proportion of the impact attributable to the Salamander OWF is the value from the assessment of the Salamander OWF alone.

Table 34. Mortality summary for species and sites where AEOSI was concluded, or Scottish Ministers were unable to conclude no AEOSI. For the in-combination section mortality values are from the alone assessment however the CPS values are from the in-combination assessment as these were not calculated for Salamander OWF alone.

Species	SPA	Mortality (birds per annum- upper value)	CPS (upper value)	Conclusion
Alone				
Guillemot	Buchan Ness to Collieston Coast SPA	128.6	0.877	Unable to conclude no AEOSI
Guillemot	OFFSAB SPA (breeding and non-breeding)	-	No value*	Unable to conclude no AEOSI
Seabird assemblage (guillemot)	Buchan Ness to Collieston Coast SPA	-	No value***	Unable to conclude no AEOSI
Seabird assemblage (guillemot)	OFFSAB SPA (breeding and non-breeding)	-	No value***	Unable to conclude no AEOSI
In-combination				

Species	SPA	Mortality (birds per annum- upper value)	CPS (upper value)	Conclusion
Guillemot	Troup, Pennan and Lion's Heads SPA	62.4	0.858	Unable to conclude no AEOSI
Kittiwake	Buchan Ness to Collieston Coast SPA	19.7	0.843	AEOSI
Kittiwake	East Caithness Cliffs SPA	3.1	0.714	AEOSI
Kittiwake	Forth Islands SPA	0.4	0.799	AEOSI
Kittiwake	Fowlsheugh SPA	4.1	0.822	AEOSI
Kittiwake	North Caithness Cliffs SPA	0.5	0.774	AEOSI
Kittiwake	Troup, Pennan and Lion's Heads SPA	6.5	0.826	AEOSI
Kittiwake	St Abb's Head to Fast Castle SPA	0.4	0.878	Unable to conclude no AEOSI
Kittiwake	OFFSAB SPA (breeding and non-breeding)	-	No value*	AEOSI
Puffin	Forth Islands SPA	3.8	0.885	Unable to conclude no AEOSI
Puffin	OFFSAB SPA (breeding)	-	No value*	Unable to conclude no AEOSI
Razorbill	East Caithness Cliffs SPA	0.6	0.736	Unable to conclude no AEOSI
Razorbill	Fowlsheugh SPA	2.5	0.824	Unable to conclude no AEOSI
Razorbill	Troup, Pennan and Lion's Heads SPA	1.6	0.899	Unable to conclude no AEOSI
Razorbill	OFFSAB SPA (non-breeding)	-	No value**	Unable to conclude no AEOSI
Gannet	Forth Islands SPA	3.8	0.775	AEOSI
Gannet	OFFSAB SPA (breeding)	-	No value*	AEOSI
Seabird assemblage (kittiwake)	Buchan Ness to Collieston Coast SPA	-	No value***	AEOSI
Seabird assemblage (kittiwake)	East Caithness Cliffs SPA	-	No value***	AEOSI

Species	SPA	Mortality (birds per annum- upper value)	CPS (upper value)	Conclusion
Seabird assemblage (kittiwake and gannet)	Forth Islands SPA	-	No value***	AEOSI
Seabird assemblage (kittiwake)	Fowlsheugh SPA	-	No value***	AEOSI
Seabird assemblage (kittiwake)	North Caithness Cliffs SPA	-	No value***	AEOSI
Seabird assemblage (kittiwake)	St. Abbs Head to Fast Castle SPA	-	No value***	Unable to conclude no AEOSI
Seabird assemblage (kittiwake)	Troup, Pennan and Lion's Heads SPA	-	No value***	AEOSI
Seabird assemblage (kittiwake and gannet)	OFFSAB (breeding and non-breeding)	-	No value***	AEOSI

* No values are provided for conclusions for OFFSAB SPA, this is because the impacted populations that are the qualifying features of this site, originate from colonies functionally linked to the OFFSAB SPA. As such concluded impact is recorded for those populations at their functionally linked SPA, relative to OFFSAB SPA.

** An exception to this is the non-breeding razorbill feature of OFFSAB SPA, this feature does not have a reference population and as such no value can be concluded explicitly. For razorbill at OFFSAB SPA, both NatureScot and the AA agree that impacts are suitably accounted for via those sites where there is a conclusion AEOSI or unable to conclude no AEOSI for razorbill.

***No values are provided for seabird assemblage features where the assemblage feature is a named feature of the same site as the impact has been assessed and concluded on the main feature.

SECTION 4: CONDITIONS

28 Conditions required to prevent AEOSI

28.1 The requirement for the below conditions is as a result of commitments in the EIA Report and RIAA, along with NatureScot's advice regarding mitigation measures to ensure that there will be no AEOSI of the Calf of Eday SPA, Cape Wrath SPA, Copinsay SPA, Coquet Island SPA, Fair Isle SPA, Fetlar SPA, Flannan Isles SPA, Foula Spa, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Loch of Strathbeg SPA, Marwick Head SPA, Mingulay and Berneray SPA, North Rona and Sula Sgeir SPA, Northumberland Marine SPA, Noss SPA, Rathlin Island SPA, Rousay SPA, Sands of Forvie and Meikle Loch SPA, Shiant Isles SPA, St Kilda SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, West Westray SPA and Ythan Estuary, Sands of Forvie and Meikle Loch SPA as well as the Moray Firth SAC. The mitigation measures in the conditions below would not change the AA conclusion of AEOSI, or unable to conclude no AEOSI, on the Buchan Ness to Collieston Coast SPA, East Caithness Cliffs SPA, Forth Islands SPA, Fowlsheugh SPA, North Caithness Cliffs SPA, OFFSAB SPA, St Abb's Head to Fast Castle SPA or Troup, Pennan and Lion's Heads SPA.

28.2 The conditions below relate to HRA concerns as well as covering other interests. The conditions here are written in their complete form and so may also refer to non-HRA interests. Where reference is made to other conditions, these are numbered as per the condition numbers which will be used in the section 36 consent if granted. Defined terms used in the conditions below will have the meaning given to them in the section 36 consent, if granted.

28.2.1 **Duration of the Consent**

The consent is for a period of 35 years from the date of Final Commissioning of the Development.

Written confirmation of the date of First Commissioning of the Development must be provided by the Developer to the Scottish Ministers and to Aberdeenshire Council, Aberdeen City Council and Angus Council no later than one calendar month after this date.

28.2.2 **Decommissioning**

There must be no Commencement of the Development until a Decommissioning Programme ("DP"), submitted in accordance with a section 105 notice served by the appropriate Minister, has been approved under section 106 of the Energy Act 2004 by the Scottish Ministers.

28.2.3 **Piling Strategy**

If piling is to be undertaken, the Developer must, no later than six months prior to the Commencement of the Development, submit a Piling Strategy ("PS"), in writing, to the Scottish Ministers for its written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot and any such other advisors as may be required at the discretion of the Scottish Ministers. The PS must be in accordance with the Application.

The PS must include:

a) Details of expected noise levels from pile-drilling/driving in order to inform point d) below;
b) Full details of the proposed method and anticipated duration of piling to be carried out at all locations;
c) Details of soft-start piling procedures and anticipated maximum piling energy required at each pile location;
d) Details of any mitigation such as Passive Acoustic Monitoring ("PAM"), Marine Mammal Observers ("MMO"), use and duration of Acoustic Deterrent Devices ("ADD") and monitoring to be employed during pile-driving, as agreed by the Scottish Ministers; and,
e) Details relating to necessary Marine Mammal Mitigation Protocols ("MMMP") for pile driving.

The PS must be in accordance with the Application and must also reflect any relevant monitoring or data collection carried out after submission of the Application. The PS must demonstrate the means by which the exposure to and/or the effects of underwater noise have been mitigated in respect to bottlenose dolphin and diadromous fish and how such bespoke mitigation has been informed. The PS must, so far as is reasonably practicable, be consistent with the Environmental Management Plan ("EMP"), the Project Environmental Monitoring Programme ("PEMP") and the Construction Method Statement ("CMS").

SECTION 5: REFERENCES

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Appendix A: Justification for species and SPAs with no AEOSI

Table 35. Justifications for no AEOSI as assessed in the RIAA and HRA Stage 1: Screening (codes below table). Where species were assessed with PVA, results shown are for Salamander OWF alone only. The threshold for triggering a PVA is an increase of more than 0.02% in the mortality rate. Justification for gannet and kittiwake is based on the assessment combination of collision and displacement, as illustrated by the Applicant.

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
Buchan Ness to Collieston Coast SPA	Kittiwake	0.01-0.03% increase in mortality rate (Upper end from SNCB Approach. Applicant cites increased avoidance rate for kittiwake from Ozsanlav-Harris *et al.* (2023) and states that the SNCB Approach would overestimate the impacts. Level of Impact Considered Negligible (see below).		RIAA
	Shag	DROECC-CD DROECC-OP	NA	RIAA
	Fulmar	Not assessed	Not assessed	
	Herring gull	NA	Does not meet the threshold for PVA alone	RIAA
Troup, Pennan and Lion's Heads SPA	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Guillemot	DROECC-CD CROECC-OP The annual growth rate is expected to be 0.1 – 0.2% lower under the impacted scenarios than under the unimpacted scenario. Impact of the project is minimal (see below)	NA	RIAA
	Razorbill	DROECC-CD CROECC-OP The annual growth rate is expected to be at most 0.02% lower under the SNCB high impacted scenarios than under the unimpacted scenario. The median CPS is	NA	RIAA

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
		reduced by 0.6% to 1.1% after 35 years. Impact of Project is minimal (see below)		
	Fulmar	Not assessed	Not assessed	
	Herring Gull	NA	0.003-0.004% increase in mortality rate.	RIAA
Forth Islands SPA	Gannet	Does not meet the threshold for PVA alone		RIAA
	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Puffin	Does not meet the threshold for PVA alone	NA	RIAA
	Seabird assemblage (kittiwake)	Does not meet the threshold for PVA alone		
Farne Islands SPA	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Puffin	Does not meet the threshold for PVA alone	NA	RIAA
	Seabird assemblage (kittiwake and puffin)	Does not meet the threshold for PVA alone		
Fowlsheugh SPA	Guillemot	DROECC-CD CROECC-OP Zero birds apportioned to the SPA.	NA	RIAA
	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Fulmar	Not assessed	Not assessed	
	Herring Gull	NA	Zero birds apportioned to the SPA. 0.00% increase in mortality rate.	RIAA
	Razorbill	DROECC-CD CROECC-OP The annual growth rate is expected to be less than 0.0% lower under all impact scenarios compared to the counterfactual, whilst the population size after 35 years is expected to be 0.5% to 1% lower than the CPS. Level of impact considered negligible (see below)	NA	RIAA

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
East Caithness Cliffs SPA	Fulmar	Not assessed	Not assessed	
	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Razorbill	Does not meet the threshold for PVA alone	NA	RIAA
	Seabird assemblage (kittiwake and razorbill)	Does not meet the threshold for PVA alone		
North Caithness Cliffs SPA	Razorbill	DROECC-CD CROECC-OP	NA	RIAA
	Puffin	DROECC-CD CROECC-OP 0.00-0.01% increase in mortality rate.	NA	RIAA
	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage (kittiwake)	Does not meet the threshold for PVA alone		
The Shiant Isles SPA	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
St Abb's to Fast Castle SPA	Kittiwake	Does not meet the threshold for PVA alone		RIAA
	Seabird assemblage (kittiwake)	Does not meet the threshold for PVA alone		
Copinsay SPA	Guillemot	DROECC-CD CROECC-OP Zero birds apportioned to the SPA. 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Hoy SPA	Puffin	DROECC-CD CROECC-OP 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Guillemot	DROECC-CD	NA	RIAA

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	**Collision**	
		CROECC-OP *Details for Hoy SPA is missing from the Distributional response tables (section 7.3.8) in the RIAA.*		
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
OFFSAB	Gannet	Does not meet the threshold for PVA alone		RIAA
	Puffin	Does not meet the threshold for PVA alone	NA	RIAA
	Seabird assemblage	Does not meet the threshold for PVA alone		
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	Common tern	Not assessed (potential connectivity with cable only)	Not assessed (potential connectivity with cable only)	HRA – Stg 1 Screening
	Eider	Not assessed (potential connectivity with cable only)	Not assessed (potential connectivity with cable only)	HRA – Stg 1 Screening
	Little tern	Not assessed (potential connectivity with cable only)	Not assessed (potential connectivity with cable only)	HRA – Stg 1 Screening
	Sandwich tern	NA	Not assessed – Utilisation of the marine environment by birds from the colony shows limited, if any usage of the offshore array area.	HRA – Stg 1 Screening
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Fair Isle SPA	Puffin	DROECC-CD CROECC-OP 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Gannet	0.00 – 0.01% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Flannan Isles SPA	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Calf of Eday SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Rousay SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
Rathlin Island SPA	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Marwick Head SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Mingulay and Berneray SPA	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
West Westray SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Cape Wrath SPA	Puffin	DROECC-CD CROECC-OP 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Sumburgh Head SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Loch of Strathbeg SPA	Sandwich tern	NA	No sandwich tern were detected in the full 2 years of DAS and therefore no collision mortality would be expected for Sandwich tern. There is, therefore, no potential for an AEOI.	RIAA
Handa SPA	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Sule Skerry and Sule Stack SPA	Gannet	0.00% increase in mortality rate		RIAA
	Puffin	Does not meet the threshold for PVA alone	NA	RIAA
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Northumberland Marine SPA	Fulmar	Not assessed	Not assessed	
	Kittiwake	Screened in for only Farne islands and no impact concluded		RIAA

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
	Puffin	Screened in for only Farne islands and no impact concluded	NA	RIAA
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Coquet Island SPA	Puffin	DROECC-CD CROECC-OP 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Noss SPA	Puffin	DROECC-CD CROECC-OP *Details for Noss SPA is missing from the Distributional response tables (section 7.3.10) in the RIAA.*	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Gannet	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Foula SPA	Puffin	DROECC-CD CROECC-OP Zero birds apportioned to the SPA. 0.00% increase in mortality rate	NA	RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
North Rona and Sula Sgeir SPA	Gannet	0.00% increase in mortality rate		RIAA
	Kittiwake	0.00% increase in mortality rate		RIAA
	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Fetlar SPA	Fulmar	Not assessed	Not assessed	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
Hermaness, Saxa Vord and Valla Field SPA	Fulmar	Not assessed	Not assessed	
	Gannet	Does not meet the threshold for PVA alone		RIAA

SPA	Feature	Reason for no AEOSI		Ref
		Displacement	Collision	
	Seabird assemblage	No AEOSI concluded for all assemblage features		
St Kilda SPA	Fulmar	Not assessed	Not assessed	

Level Impact Considered Negligible → This level of impact is considered to be negligible and does not represent an impact that could be said to adversely affect the likelihood of the SPA achieving its conservation objectives.

Impact of the Project is minimal → It would appear that the impact of the Project is minimal and would not lead to an adverse effect on the status of the [insert species] feature of the site, and therefore would not lead to an adverse effect on the integrity of [the site].

DROECC-CD → Distributional Response for the Offshore Export Cable Corridor (Construction and Decommissioning Phase). Distributional responses in relation to construction/decommissioning activities within the Offshore ECC are expected to be spatially and temporally limited to the vicinity of the cable laying vessel and associated support vessels. Any distributional responses will therefore be localised and temporary. Therefore, it is deemed that the magnitude of any impact would be negligible, and could not contribute to an AEOI for any feature of any SPA.

DROECC-OP → Distributional Response for the Offshore Export Cable Corridor (Operational Phase). Disturbance or displacement in the operational phase in the Offshore ECC could occur as a result of vessel movements related to inspections and/or repairs to the export cable. Any such vessel activity would be occasional and transient, and any distributional response would be spatially limited to the vicinity of the vessel(s). As such, the magnitude of any distributional response in the Offshore ECC in the operational phase is considered to be negligible and could not contribute to an AEOI for any feature of any SPA.