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Volume 8 Additional Information

Appendix 4: Ornithology Additional Information Report (Caledonia OWF)

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Acronyms and Abbreviations

BTO	British Trust for Ornithology
CPGR	Counterfactual Population Growth Rate
CPS	Counterfactual Population Size
CRM	Collision Risk Modelling
EIAR	Environmental Impact Assessment Report
HRA	Habitats Regulations Appraisal
MD-LOT	Marine Directorate – Licensing Operations Team
MMFR	Mean Max Foraging Range
OECC	Offshore Export Cable Corridor
OWF	Offshore Wind Farm
PVA	Population Viability Analysis
RIAA	Report to Inform Appropriate Assessment
SD	Standard Deviation
SMP	Seabird Monitoring Programme
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area

1 Introduction

1.1.1.1 Since the submission of the consent applications for the Caledonia Offshore Wind Farm (OWF), referred to as the Proposed Development (Offshore), the Marine Directorate – Licensing Operations Team (MD-LOT) has requested supplementary information from Caledonia Offshore Wind Farm Ltd. (the Applicant). The Request for Additional Information is required to provide clarity on a number of queries in relation to assessments on offshore and intertidal ornithology. This document presents the supplementary information requested for the Proposed Development (Offshore).

1.1.1.2 Table 1-1 sets out the clarifications/supplementary information requested by MD-LOT via written response (dated 17 July 2025), based on NatureScot's representations (letter dated on 27 March 2025). The Applicant response is included within the table.

1.1.1.3 This report, therefore, provides all of the supplementary information requested by MD-LOT in relation to the Proposed Development (Offshore). Full Applicant's responses to representations received from NatureScot (letter dated 27 March 2025) are provided in the Gap Analysis submitted to MD-LOT accompanying the Addendum package.

Table 1-1: Clarifications and supplementary information requested by MD-LOT, with corresponding NatureScot representations and Applicant responses.

Topic	MD-LOT requirement	NatureScot representation	Applicant response
Cumulative assessments	*"Cumulative and in-combination assessments have not been conducted for Caledonia North or Caledonia South individually within the EIA and RIAA, these are required to be submitted. "*	*"Regarding the cumulative assessments, PVAs were not carried out for the Caledonia North or Caledonia South project alone scenarios cumulatively with other plans or projects. It is important to note that the magnitude of impact for Caledonia [North/South] would be lower comparative to the full Caledonia OWF. We agree with this logic. However, this approach means we cannot assess the cumulative impacts of Caledonia North or Caledonia South as standalone developments."*	No updates to cumulative assessments are required for the Proposed Development (Offshore). Cumulative assessments have been undertaken for Caledonia North (excluding Caledonia South) (Volume 8, Appendix 5: Ornithology Additional Information Report (Caledonia North)) and for Caledonia South (excluding Caledonia North) (Volume 8, Appendix 6: Ornithology Additional Information Report (Caledonia South)) as agreed in consultation with NatureScot and MD-LOT within a consultation meeting on 04 June 2024.

Topic	MD-LOT requirement	NatureScot representation	Applicant response
Assessment of distributional responses during construction and decommissioning	*"A qualitative assessment for the cumulative assessment of distributional responses during construction and decommissioning for ornithology. This is required in line with the NatureScot representation dated 25 June 2025."*	*"This was raised in our advice dated 21st August 2024 in which we stated we would expect to see some consideration of displacement during construction: "There is no requirement for a quantitative assessment in the consideration of this issue however, we are content to consider additional years on the PVA as a stand-in for assessment for distributional responses during construction and decommissioning". However, there has been no cumulative assessment of distributional responses during construction or decommissioning within the EIA Report. The justification provided for this exclusion is at odds with the potential construction scenarios presented in the EIA Report, particularly the sequential scenario which we would not necessarily consider to be temporally limited. We request clarity regarding why our advice regarding the cumulative assessment of distributional responses during construction was not followed and advise this assessment should be undertaken."*	As discussed in consultation with NatureScot and MD-LOT within a consultation meeting on 04 June 2024, a qualitative cumulative assessment of potential distributional responses during construction and decommissioning phases of the Proposed Development (Offshore) is presented in Section 3.

Topic	MD-LOT requirement	NatureScot representation	Applicant response
Habitats Regulations Appraisal (HRA) screening and apportioning	*"In relation to the Report to Inform Appropriate Assessment ("RIAA"), updated screening and apportioning, with subsequent consideration of the requirement for further Population Viability Analysis ("PVA") is required in line with NatureScot guidance."*	*"The Applicant has incorrectly used the geometric centre element of the apportioning methodology to rescreen the original list of designated sites and qualifying species that have been taken through into the RIAA."* *'"In the RIAA Part 3, section 9.1.1.4, it states "It is important to note that in order to calculate accurate at sea distance, Caledonia South is unable to be treated separately, as such distances are provided to the centre of the Caledonia OWF". Our understanding of this statement is that the same geometric centre distance has been applied to all three scenarios (North, South, Proposed Development (Offshore)), which would have implications for the apportioning and screening for all scenarios. We disagree with the approach taken and advise that Caledonia South and Caledonia North should be calculated individually."*	As discussed in consultation with NatureScot and MD-LOT within consultation meetings on 04 June 2025 and 07 August 2025, revised HRA screening has been undertaken using the nearest edge of the OWF to the nearest edge of the Special Protection Area (SPA)/Ramsar (closest distance around land). This has been undertaken separately for the Proposed Development (Offshore) (Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF)), Caledonia North (Volume 8, Appendix 8: Ornithology HRA Screening (Caledonia North)) and Caledonia South (Volume 8, Appendix 9: Ornithology HRA Screening (Caledonia South)). As discussed in consultation with NatureScot and MD-LOT within consultation meetings on 04 June 2025 and 07 August 2025 revised HRA apportionment has been undertaken using the geometric centre of the OWF to the geometric centre of the SPA/Ramsar (closest distance around land). This has been undertaken separately for the Proposed Development (Offshore) (as outlined in Section 4 and detailed within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)), Caledonia North (Volume 8, Appendix 11: Ornithology Apportioning Technical Report (Caledonia North)) and Caledonia South (Volume 8, Appendix 12: Ornithology Apportioning Technical Report (Caledonia South)).

Topic	MD-LOT requirement	NatureScot representation	Applicant response
			Updated predicted impacts for distributional responses and collision as a result of the changes made to HRA screening and apportionment for the Proposed Development (Offshore) alone and in-combination with other plans and projects during the operational and maintenance phase are presented in Section 5.
In Combination Assessment	*"Cumulative and in-combination assessments have not been conducted for Caledonia North or Caledonia South individually within the EIA and RIAA, these are required to be submitted. "*	*"One RIAA was submitted, covering Caledonia North (alone), Caledonia South (alone) and the Proposed Development (Offshore) (alone and in-combination with other plans and projects). We highlight that no in-combination assessment has been presented for Caledonia North or Caledonia South. As such we have been unable to draw conclusions on the in-combination assessment impacts for Caledonia North and Caledonia South as standalone proposals."*	No updates to cumulative assessments are required for the Proposed Development (Offshore) based on this advice. However, an updated in-combination assessment is presented for the Proposed Development (Offshore) within Section 5 to account for the changes made to HRA screening and apportionment for the Proposed Development (Offshore). In-combination assessments have been undertaken for Caledonia North (excluding Caledonia South) (Volume 8, Appendix 5: Ornithology Additional Information Report (Caledonia North)) and for Caledonia South (excluding Caledonia North) (Volume 8, Appendix 6: Ornithology Additional Information Report (Caledonia South)) as agreed in consultation with NatureScot and MD-LOT within a consultation meeting on 04 June 2024.

Topic	MD-LOT requirement	NatureScot representation	Applicant response
Population Viability Analysis (PVA)	*"In relation to the Report to Inform Appropriate Assessment ("RIAA"), updated screening and apportioning, with subsequent consideration of the requirement for further Population Viability Analysis ("PVA") is required in line with NatureScot guidance."* *"Cumulative and in-combination assessments have not been conducted for Caledonia North or Caledonia South individually within the EIA and RIAA, these are required to be submitted."* *"A PVA assessment is required with regards to collision risk for great black backed gull at Copinsay SPA and Hoy SPA, for both project alone and in combination with other projects."*	*"PVAs where the project alone or in-combination impacts meet or exceed a 0.02 percentage point decrease in annual adult survival, for the following scenarios: 1) Guidance approach high and low (e.g. for auks, 60% displacement; 3-5% mortality and 60% displacement; 1-3% mortality); 2) 35 years run-time and 3) Against most recent counts, i.e. SMP (Harris where relevant for gannet) rather than citation."* *"With regards to collision risk, we require further PVA assessment for great black-backed gull at Copinsay SPA and Hoy SPA, for both project alone and in-combination."*	Updated PVA has been undertaken for relevant populations due to the revised predicted impacts of the Proposed Development (Offshore) as outlined in Section 6 and detailed within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF). Updated assessment conclusions are presented within Section 7. PVA has also been carried out for great black-backed gull at the Copinsay SPA as requested by NatureScot. As agreed in within a consultation meeting with NatureScot on 7 August 2025, PVA is not required for Hoy SPA (as the site is beyond Mean Max Foraging Range +1 Standard Deviation, both straight-line and around coast).
Nocturnal Activity Factor	*"With regards to stochastic Collision Risk Modelling (CRM), the Applicant has used 0 for the stochastic Nocturnal Activity Factor (NAF) for great skua without justification. NatureScot advised that the stochastic NAF for great skua should be 0.125 and request clarification of this approach and if necessary, a reassessment"*	*"With regards to stochastic Collision Risk Modelling (CRM), the Applicant has used 0 for the stochastic Nocturnal Activity Factor (NAF) for great skua without justification. We advised that the stochastic NAF for great skua should be 0.125. We request clarification of this approach and if necessary, a reassessment."*	As agreed in consultation with NatureScot and MD-LOT within a consultation meeting on 04 June 2024, NatureScot is content with the conclusions made in the assessment (using 0 for the stochastic Nocturnal Activity Factor), and no further action is required.

2 Consultation and Engagement

2.1.1.1 Following the submission of the Caledonia North and Caledonia South consent applications in November 2024 and the receipt of representations from key stakeholders in March 2025, two formal consultation meetings were held with MD-LOT and NatureScot on 04 June 2025 and 07 August 2025 in relation to the submitted ornithological assessment. The purpose of these meetings was to discuss NatureScot's representations in relation to offshore and intertidal ornithology Environmental Impact Assessment (EIA) and Habitats Regulations Appraisal (HRA) assessments undertaken (letter dated 27 March 2025). These meetings were undertaken prior to the formal receipt of the official Request for Additional Information from MD-LOT (received on 17 July 2025 via email).

2.1.1.2 Written feedback from NatureScot was requested and received by the Applicant following submission of the consent applications in November 2024, including (among other correspondence) advice on HRA screening (07 August 2025), apportionment (18 August 2025) and cumulative assessment (21 August 2025) (see Section 3 in Volume 8: Caledonia Offshore Wind Farm EIAR and HRA Addendum).

2.1.1.3 The Applicant's responses to representation received from NatureScot (letter dated 27 March 2025) are provided in the Gap Analysis submitted to MD-LOT and these points are addressed within this appendix as outlined in Section 1.

3 EIA Updates

3.1 Assessment of Distributional Responses During Construction and Decommissioning

3.1.1 Overview

3.1.1.1 In line with NatureScot's representations following submission (letter dated 27 March 2025), this Section presents the qualitative assessment of potential distributional responses during construction and decommissioning phases presented as part of the consent applications within the Environmental Impact Assessment Report (EIAR). It is noted that this has been extended to ensure that the assessment considers the potential cumulative impact of distributional responses during construction and decommissioning.

3.1.2 Construction

3.1.2.1 During the construction phase, the following effects have been screened in due to potential impacts on ornithological features:

- Distributional responses (Impacts 1 and 2):
  - Impact 1: Construction and associated vessel traffic associated with the Caledonia OWF (i.e., Array Area); and
  - Impact 2: Construction and associated vessel traffic within the Caledonia Offshore Export Cable Corridor (OECC).

Impact 1: Distributional Responses – Construction and Associated Vessel Traffic within the Caledonia OWF

3.1.2.2 Seabirds could be disturbed during the construction phase of the Proposed Development (Offshore)by activities such as the installation of foundations, towers, blades, export cables and other infrastructure, as well as the movement of vessels. This disturbance may result in displacement of birds from the Caledonia OWF area and other areas in which vessels associated with construction occur, driving a temporary habitat loss and potentially reducing the area available to birds for activities including foraging and loafing.

3.1.2.3 The potential effects of distributional responses from construction will be limited spatially and temporally, primarily affecting birds foraging within construction areas and vessel operation, with the extent of effects dependent on the activities taking place. The effects are considered to be reversable in nature, with birds returning to the area following the end of the activity taking place.

3.1.2.4 It is important to consider the potential for a cumulative effect for distributional responses from construction together with impacts of other relevant plans and projects. Due to the distance of the Proposed Development (Offshore) from other plans and projects, the localised nature of the potential impacts, it is concluded that there is no potential for a cumulative effect due to this impact pathway. Projects within sufficiently close proximity to the Proposed Development (Offshore) (such as Beatrice, Moray East and Moray West OWFs)) for potential cumulative effects to occur have already been built and commissioned. Therefore, the only potential for a cumulative effect would come from the two phases of the Proposed Development (Offshore) should Caledonia North and Caledonia South be constructed at the same time. However, this impact is already captured as the Proposed Development (Offshore); as such, the conclusions above are expected to also be applicable for the potential for a cumulative effect for distributional responses from construction.

3.1.2.5 It is assumed that the level of impact during the decommissioning phase for distributional responses within the Caledonia OWF would be similar to that of the construction phase and thus the conclusions above are expected to also be applicable to the decommissioning phase.

Impact 2: Distributional Responses - Construction and Associated Vessel Traffic within the Caledonia OECC

3.1.2.6 The intertidal ornithology assessment area ranges across the intertidal section of the Caledonia OECC to the low water mark of the Landfall Site, above which the onshore ecology section considers and is subsequently assessed.

3.1.2.7 During construction of the Proposed Development (Offshore), distributional responses due to vessel activity, and construction work in the Caledonia OECC may occur for some seabirds and wildfowl. The offshore export cables will make landfall at Stake Ness on the Aberdeenshire coast, located to the west of Whitehills. A full description of the construction of the Proposed Development is presented in Volume 1, Chapter 3: Proposed Development Description (Offshore) and Volume 1, Chapter 5; Proposed Development Phasing.

3.1.2.8 It is anticipated that the four offshore export cables (two associated with Caledonia North and two associated with Caledonia South) will be pulled-in through a conduit prepared by Horizontal Directional Drilling (HDD). This trenchless technique avoids interaction with surface features and is used to install ducts through which cables can be pulled. HDD involves drilling through the ground from an onshore HDD site compound to a point offshore beyond the intertidal area, ideally with sufficient water depth for the cable laying vessel to access. It is anticipated that the HDD punch-out location will be situated within the shallow subtidal area, and the intertidal zone will be avoided (likely between 10 and 40m water depths).

Consequently, the main distributional response impact in the intertidal section of the Caledonia OECC will be from vessel disturbance at the HDD exit pits.

3.1.2.9 To assess the potential displacement during construction and decommissioning in the intertidal zone on bird populations, a 500m buffer was applied to the intertidal area and Landfall Site. To assess the connectivity of species observed within the intertidal vantage point surveys, a 15km and 20km buffer was added to the 500m buffer for wildfowl and geese, while Mean Max Foraging Range (MMFR) + 1SD was added for seabirds.

3.1.2.10 A range of species were recorded in the intertidal surveys within the intertidal area of Stake Ness. The species found with the greatest peak counts were herring gull, oystercatcher and lapwing. The following 22 species observed in the intertidal area represented <1% of the Scottish population:

- Black-headed Gull (*Larus ridibundus*);
- Common Gull (*Larus canus*);
- Cormorant (*Phalacrocorax carbo*);
- Curlew (*Numenius arquata*);
- Dunlin (*Calidris alpina*);
- Eider (*Somateria mollissima*);
- Fulmar (*Fulmarus glacialis*);
- Goldeneye (*Bucephala clangula*);
- Great Black-backed Gull (*Larus marinus*);
- Guillemot (*Uria aalge*);
- Lapwing (*Vanellus vanellus*);
- Long-tailed Duck (*Clangula hyemalis*);
- Oystercatcher (*Haematopus ostralegus*);
- Peregrine (*Falco peregrinus*);
- Pink-footed Goose (*Anser brachyrhynchus*);
- Razorbill (*Alca torda*);
- Red-breasted Merganser (*Mergus serrator*);
- Redshank (*Tringa totanus*);
- Red-throated Diver (*Gavia stellata*);
- Ringed Plover (*Charadrius hiaticula*);
- Shag (*Phalacrocorax aristotelis*); and
- Turnstone (*Arenaria interpres*).

3.1.2.11 Herring gull were observed with peak count of 1,110 individuals over the winter period (October to March) between 2022 and 2024. The individuals observed during the survey period accounted for 1.11% of the Scottish population (Burnell *et al*., 2023[1]). Herring gull are considered to have a low risk to displacement impacts (Furness and Wade, 2012[2]; Furness *et al.,* 2013[3]; Bradbury *et al*., 2014[4]; SNCBs, Updated 2022[5]). As herring gull have a large foraging range (85.60km, MMFR + 1SD), the displacement impacts occurring from the localised construction and decommissioning activity are considered to be low. Furthermore, gull species are generally found aggregating around vessels rather than being displaced by them and therefore it is unlikely that impact with occur as a result of vessel activity in proximity to the HDD exit pit.

Magnitude of Impact

3.1.2.12 The impact will only be focused onto one area of the intertidal zone at a time (localised) and the maximum duration of installation of offshore export cables within the Caledonia OECC will be six months. Work under the HDD exit pit will be carried out over a short period of time, with only 24 hours required to complete excavation of the exit pit and transition zone the activity. Therefore, all activity within the intertidal zone will be temporally limited and reversible in nature.

3.1.2.13 Based upon the limited potential for impacts on intertidal ornithological receptors, with works undertaken being temporally and spatially limited, the magnitude of potential impact is expected to be **Negligible** for the Proposed Development (Offshore).

Sensitivity of Receptors

3.1.2.14 The species listed above have the potential to be impacted by intertidal works, with varying levels of sensitivity to noise and/or visual disturbance. Although some species may be considered to have high sensitivity levels, the magnitude of impact is expected to remain low.

3.1.2.15 The sensitivity of offshore and intertidal receptors to potential disturbance and displacement impacts is expected to vary across species ranging from low (gull species) to high (diver species) (Furness and Wade, 2012[2]; Furness *et al*., 2013[3]; Bradbury *et al*., 2014[4]). Conservation value is also variable, ranging from low (cormorant) to high (common gull, great black-backed gull, red-throated diver). Therefore, as a precautionary measure, the overall assessment considers **High** sensitivity.

Significance of Effect

3.1.2.16 Taking the precautionary **High** sensitivity of intertidal ornithological receptors and the **Negligible** magnitude of disturbance from vehicles and vessels during construction, the impact is considered to be **Negligible** and **Not Significant in EIA terms** following the matrix approach applied within the EIAR (Table 3-1).

3.1.2.17 In terms of the consideration of a potential cumulative effect from construction and associated vessel traffic within the Caledonia OECC. The conclusions of no potential cumulative effect as outlined above in paragraph 3.1.2.4 are anticipated to remain applicable.

3.1.2.18 It is assumed that the level of impact during the decommissioning phase for distributional responses due to Caledonia OECC related traffic would be similar to that of the construction phase and thus the conclusions above are expected to also be applicable to the decommissioning phase.

Table 3-1: Relationship between impact magnitude and receptor sensitivity to use as a guide to assign significance of effect.

Significance of Effect		Sensitivity of Receptor			
		Negligible	Low	Medium	High
Impact Magnitude	Negligible	Negligible	Negligible	Negligible	Negligible
	Low	Negligible	Negligible	Minor	Minor
	Medium	Negligible	Minor	Moderate	Moderate
	High	Negligible	Minor	Moderate	Major

3.1.3 Decommissioning

3.1.3.1 This Section presents the assessment of impacts arising from the decommissioning phase of the Proposed Development (Offshore).

3.1.3.2 During these phases, the following effects have been screened in for potential impacts to ornithological features:

- Distributional responses (Impacts 3 and 4):
  - Impact 3: Decommissioning and associated vessel traffic associated within the Caledonia OWF (i.e., Array Area); and
  - Impact 4: Decommissioning and associated vessel traffic within the Caledonia OECC.

Impact 3: Distributional Responses - Decommissioning and Associated Vessel Traffic within the Caledonia OWF

3.1.3.3 See Impact 1: Distributional Responses – Construction and associated vessel traffic within the Caledonia OWF in Section 3.1.2.

Impact 4: Distributional Responses - Decommissioning and Associated Vessel Traffic within the Caledonia OECC

3.1.3.4 See Impact 2: Distributional Responses - Construction and associated vessel traffic within the Caledonia OECC in Section 3.1.2.

4 HRA Apportionment

4.1 Background

4.1.1.1 Since the submission of the Caledonia North and Caledonia South consent applications in November 2024, updates requested by stakeholders have been made to HRA screening for the Proposed Development (Offshore) (as outlined in Section 1 and detailed within Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF)).

4.1.1.2 In line with the Request for Additional Information from MD-LOT (17 July 2025) and NatureScot's representations following submission (letter dated 27 March 2025), HRA Apportionment has been carried out based on the following updates (as outlined in Section 1 and detailed within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)):

- Apportionment has been undertaken to account for the updates made to HRA Screening for the Proposed Development (Offshore); and
- Apportionment has also been undertaken separately for Caledonia North (Volume 8, Appendix 11: Ornithology Apportioning Technical Report (Caledonia North)) and Caledonia South (Volume 8, Appendix 12: Ornithology Apportioning Technical Report (Caledonia South)) as requested and updated assessments are presented for the Proposed Development (Offshore) (within Section 5), Caledonia North (Volume 8, Appendix 5: Ornithology Additional Information Report (Caledonia North)) and Caledonia South (Volume 8, Appendix 6: Ornithology Additional Information Report (Caledonia South).

4.2 Breeding Season Colony Counts

4.2.1.1 As described in Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF), the majority of breeding population size calculations are based on the colony counts from the British Trust for Ornithology (BTO) Seabird Monitoring Programme (SMP) database. Colony counts for East Caithness Cliffs SPA were derived from Burnell *et al*. (2023[1]) as requested by NatureScot within a consultation meeting regarding NatureScot representations following submission of the original application (04 June 2025).

4.2.1.2 For clarity, within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF), sub-colonies have been grouped in order to provide transparency and to highlight the main SPA they contribute to (i.e., the individuals from the sub-colonies have been added together to provide SPA total individuals that are used within updated assessments). A breakdown of SPAs and the sub-colonies that feed into them, including the individuals contributing to these sites is presented within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF). The year(s) that the colony counts were recorded in are also provided.

4.3 Definitions of Seasons

4.3.1.1 The seasonal definitions used within updated HRA assessments for the Proposed Development (Offshore) are based on those presented in NatureScot (2020[6]). The use of these defined seasons was agreed with NatureScot during pre-application consultation (May 2023), and are presented in Table 4-1 (as outlined in Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)) for seabird species included in the assessment.

Table 4-1: Defined seasons in the Scottish Marine Environment used in the assessment for key species (NatureScot, 2020[6]).

Species	Breeding Season	Non-breeding Season
Kittiwake	Mid-April to August	September to Early April
Great black-backed gull	April to August	September to March
Herring gull	April to August	September to March
Common guillemot	April to mid-August	Late August to March
Razorbill	April to mid-August	Late August to March
Puffin	April to Mid- August	Late August to March
Gannet	Mid-March to September	October to Early-March

4.4 HRA Apportionment Methodology and Results

4.4.1 Overview

4.4.1.1 Details of how updated apportionment of potential impacts to individual features of specific SPAs is calculated is presented within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF). Table 4-2 to Table 4-8 present the final apportionment rates (Level of Apportionment % (apportionment of breeding adults, calculated by multiplying the proportional weight of the SPA with the total breeding adult percentage)) for each species associated with any specific designated site alongside species-specific apportioned abundance (Apportioned Abundance; breeding adults) and/or collision risk (Apportioned Collision Risk; breeding adults) apportioned to Caledonia OWF seasonally. For SPAs that have more than one sub-colony contributing to their overall number, the totals of the sub-colonies are added together to provide a single value for the apportionment towards the SPA. These represent updates to the tables and results in the consent application documents (Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).

4.4.2 CRM and Distributional Responses Apportioned Impacts

4.4.2.1 As no changes were requested for the Collision Risk Modelling (CRM) or distributional responses assessment previously carried out for the Proposed Development (Offshore), the updated apportionment methodology outlined above and updated final apportionment rates (Level of Apportionment % within Table 4-2 to Table 4-8) were used to apportion distributional response and collision mortalities outlined within the original submission (these documents also outline relevant methodologies for CRM and distributional responses assessment carried out for the Proposed Development (Offshore)):

- Distributional responses: Volume 7B, Appendix 6-2: Offshore Ornithology Distributional Responses Technical Report; and
- Collision risk: Volume 7B, Appendix 6-3: Offshore Ornithology Collision Risk Modelling Technical Report.

4.4.2.2 Updated apportioned seasonal impacts for distributional responses (Apportioned Abundance; breeding adults) and CRM (Apportioned Collision Risk; breeding adults) are presented in Table 4-2 to Table 4-8 (updated seasonal breakdowns of the apportioned distributional responses mortalities is presented in Annex 1 – Seasonal Proposed Development (Offshore) Alone Impacts. These represent updates to the tables and results in the consent application documents (Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).

4.4.2.3 As agreed in consultation, a macro-avoidance rate of 70% has been applied to gannet densities during the non-breeding season (October – early-March). During the breeding season (mid-March – September), the monthly in-flight densities have not been adjusted for macro-avoidance. This approach has been presented as the Guidance Approach. The Applicant Approach has also been presented, with the macro-avoidance rate applied to the predicted mortalities in all months.

4.4.2.4 The Applicant has decided to include the Year 1 August count for puffin in the non-breeding season rather than during the breeding season (as discussed in a consultation meeting with NatureScot in May 2024). This is due to the Year 1 August abundance being considered to reflect migration rather than individuals present in the breeding season. This approach has been presented as the Applicant Approach (whereby the Year 1 August abundance has been incorporated as part of the non-breeding season). The Guidance Approach has also been presented, whereby the Year 1 August abundance for puffin has been incorporated as part of the breeding season.

Table 4-2: Kittiwake level of abundance and collision risk apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)
East Caithness Cliffs SPA	23.03	5.84 (Autumn) 7.72 (Spring)	469.50	28.22	12.73	0.77
North Caithness Cliffs SPA	2.99	1.47 (Autumn) 1.94 (Spring)	61.05	7.09	1.66	0.19
Troup, Pennan and Lion's Heads SPA	10.15	2.15 (Autumn) 2.85 (Spring)	206.97	10.40	5.61	0.29
Copinsay SPA	0.11	0.10 (Autumn) 0.13 (Spring)	2.22	0.46	0.06	0.01
Hoy SPA	0.09	0.06 (Autumn) 0.08 (Spring)	1.85	0.28	0.05	0.01
Buchan Ness to Collieston Coast SPA	3.37	1.81 (Autumn) 2.40 (Spring)	68.67	8.76	1.86	0.24
Rousay SPA	0.07	0.26 (Autumn) 0.34 (Spring)	1.33	1.23	0.04	0.03

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)
Marwick Head SPA	0.22	0.08 (Autumn) 0.10 (Spring)	4.47	0.37	0.12	0.01
Calf of Eday SPA	0.02	0.11 (Autumn) 0.14 (Spring)	0.47	0.52	0.01	0.01
West Westray SPA	0.46	1.74 (Autumn) 2.30 (Spring)	9.43	8.42	0.26	0.23
Fowlsheugh SPA	2.48	1.35 (Autumn) 1.78 (Spring)	50.52	6.52	1.37	0.18
Cape Wrath SPA	0.26	0.02 (Autumn) 0.03 (Spring)	5.21	0.12	0.14	<0.01
Fair Isle SPA	0.03	0.11 (Autumn) 0.15 (Spring)	0.67	0.54	0.02	0.01
Sumburgh Head SPA	0.02	0.03 (Autumn) 0.04 (Spring)	0.32	0.15	0.01	<0.01
Foula SPA	0.02	0.05 (Autumn) 0.06 (Spring)	0.45	0.23	0.01	0.01

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)
North Rona and Sula Sgeir SPA	0.03	<0.01 (Autumn) <0.01 (Spring)	0.51	0.01	0.01	<0.01
Forth Islands SPA	0.47	0.45 (Autumn) 0.59 (Spring)	9.50	2.16	0.26	0.06
Noss SPA	<0.01	0.07 (Autumn) 0.10 (Spring)	0.05	0.35	<0.01	0.01
St Abb's Head to Fast Castle SPA	0.31	0.49 (Autumn) 0.65 (Spring)	6.31	2.38	0.17	0.07
Hermaness, Saxa Vord and Valla Field SPA	<0.01	0.06 (Autumn) 0.07 (Spring)	0.07	0.27	<0.01	0.01
Handa SPA	0.25	<0.01 (Autumn) 0.01 (Spring)	5.09	0.02	0.14	<0.01
Shiant Isles SPA	0.03	<0.01 (Autumn) <0.01 (Spring)	0.70	0.01	0.02	<0.01
Farne Islands SPA	-	0.50 (Autumn) 0.66 (Spring)	-	2.40	-	0.07

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)	Breeding Season (Mid-April to August)	Non-breeding Season (September to early-April)
Note, two weightings for apportioning non-breeding season kittiwake are provided for autumn migration (September to December), and spring migration (January to Early-April). The autumn weighting has been used to apportion the potential numbers of non-breeding kittiwake distributional response as the mean peak of this species was recorded during the autumn migration season. While both the Spring and Autumn weightings have been used to apportion collision mortalities during the non-breeding season.						

Table 4-3: Gannet level of abundance and collision risk apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)
Sule Skerry and Sule Stack SPA	2.92	0.20 (Autumn) <0.01 (Spring)	26.55	0.65	0.11* / 0.36**	<0.01* / <0.01**
Fair Isle SPA	2.00	1.38 (Autumn) 2.21 (Spring)	18.19	4.33	0.07* / 0.25**	0.01* / 0.01**
North Rona and Sula Sgeir SPA	1.34	0.40 (Autumn) <0.01 (Spring)	12.13	1.27	0.05* / 0.16**	<0.01* / <0.01**
Forth Islands SPA	19.37	24.32 (Autumn) 31.27 (Spring)	175.97	76.60	0.72* / 2.39**	0.17* / 0.17**
Noss SPA	2.01	3.42 (Autumn) 5.51 (Spring)	18.29	10.79	0.07* / 0.25**	0.02* / 0.02**
Hermaness, Saxa Vord and Valla Field SPA	1.76	8.54 (Autumn) 13.73 (Spring)	15.99	26.90	0.07* / 0.22**	0.06* / 0.06**
Flamborough and Filey Coast SPA	-	4.85 (Autumn) 6.23 (Spring)	-	15.27	-	0.03* / 0.03**

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)		Apportioned Collision Risk (Breeding Adults)	
	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)	Breeding Season (Mid-March to September)	Non-breeding Season (October to Early-March)
Note, two weightings for apportioning non-breeding season gannet are provided for autumn migration (October to November), and spring migration (December to Early-March). The autumn weighting has been used to apportion the potential numbers of non-breeding gannet distributional response as the mean peak of this species was recorded during the autumn migration season. While both the Spring and Autumn weightings have been used to apportion collision mortalities during the non-breeding season. * The Applicant Approach has also been presented, with the macro-avoidance rate applied to the predicted mortalities in all months. ** It should be noted that as agreed in consultation a macro-avoidance rate of 70% has been applied to gannet densities during the non-breeding season. During the breeding season, the monthly in-flight densities have not been adjusted for macro-avoidance. This approach has been presented as the Guidance Approach.						

Table 4-4: Guillemot level of abundance apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)	
	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)
East Caithness Cliffs SPA	37.33	24.00	6,007.07	1,610.67
North Caithness Cliffs SPA	4.90	7.45	789.09	500.22
Troup, Pennan and Lion's Heads SPA	5.62	5.73	904.49	384.36
Copinsay SPA	0.06	0.16	10.20	10.57
Hoy SPA	0.70	1.96	112.14	131.66
Buchan Ness to Collieston Coast SPA	1.53	4.89	246.77	328.34
Rousay SPA	0.16	0.95	25.05	63.80
Marwick Head SPA	0.29	1.54	47.20	103.10
Calf of Eday SPA	0.15	0.89	24.77	59.62
West Westray SPA	0.73	5.24	118.03	351.41
Sule Skerry and Sule Stack SPA	0.19	1.71	31.33	115.05
Fair Isle SPA	0.27	2.94	43.32	197.46

Table 4-5: Razorbill level of abundance apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)	
	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)
East Caithness Cliffs SPA	38.37	4.22	675.99	81.52
North Caithness Cliffs SPA	4.30	0.55	75.83	10.53
Troup, Pennan and Lion's Heads SPA	5.27	0.59	92.90	11.37
West Westray SPA	0.26	0.18	4.63	3.41
Fair Isle SPA	0.14	0.29	2.43	5.67

Table 4-6: Puffin level of abundance apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)		Apportioned Abundance (Breeding Adults)	
	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)	Breeding Season (April to Mid-August)	Non-breeding Season (Late-August to March)
North Caithness Cliffs SPA	2.30	0.13	16.07* / 47.43**	3.80* / 1.69**
Hoy SPA	0.43	0.45	2.97* / 8.78**	13.60* / 6.05**
Cape Wrath SPA	0.09	<0.01	0.60* / 1.76**	0.04* / 0.02**
Sule Skerry and Sule Stack SPA	10.88	0.05	75.97* / 224.28**	1.54* / 0.69**
Fair Isle SPA	2.47	1.38	17.25* / 50.93**	41.60* / 18.50**
Foula SPA	1.19	2.91	8.28* / 24.45**	87.43* / 38.88**
North Rona and Sula Sgeir SPA	0.27	<0.01	1.87* / 5.53**	0.14* / 0.06**
Forth Islands SPA	20.34	26.83	142.02* / 419.24**	806.07* / 358.43**
Noss SPA	0.05	0.10	0.33* / 0.99**	3.12* / 1.39**

Note, apportioned abundance is presented for the Applicant Approach and the Guidance Approach, respectively.

* It should be noted the Applicant has decided to include the Year 1 August count in the non-breeding season rather than during the breeding season. This is due to the Year 1 August abundance being considered to reflect migration rather than individuals present in the breeding season.

** The mean seasonal peaks for puffin have also been presented with the August count included in the breeding season as per the Guidance Approach.

Table 4-7: Great black-backed gull level of collision risk apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)	Apportioned Collision Risk (Breeding Adults)
	Non-breeding Season (September to March)	
East Caithness Cliffs SPA	0.38	0.06
Copinsay SPA	0.48	0.07
Hoy SPA	0.13	0.02
Species assessed for the non-breeding season only, approach agreed with NatureScot via email on 07 August 2025.		

Table 4-8: Herring gull level of collision risk apportioned seasonally.

Designated Site	Level of Apportionment (Breeding Adults) (%)	Apportioned Collision Risk (Breeding Adults)
	Non-breeding Season (September to March)	
East Caithness Cliffs SPA	1.44	0.04
Buchan Ness to Collieston Coast SPA	1.32	0.04
Troup, Pennan and Lion's Heads SPA	0.68	0.02
Species assessed for the non-breeding season only, approach agreed with NatureScot via email on 07 August 2025.		

5 Assessment for Considering Population Level Consequences from Impacts of Collision and Distributional Responses

5.1 Overview

5.1.1.1 The potential for distributional responses to result in an Adverse Effect on Site Integrity (AEoSI) during the operational and maintenance phase of the Proposed Development (Offshore) relates to relevant designates sites and features outlined within Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF). Details on how the predicted impacts have been apportioned to particular populations can be found in Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF).

5.1.1.2 Within this appendix, updated impacts for distributional responses have been assessed using both the Applicant Approach, with evidence in support of this approach described in full in the Review of Relevant Evidence (Volume 8, Appendix 21: Offshore Ornithology Distributional Responses Technical Report – Review of Relevant Evidence) and the Guidance Approach, which follows NatureScot Guidance Note 8 (NatureScot, 2023[7]). Table 5-1 summarises the two approaches taken.

5.1.1.3 Impacts for collision have been assessed using both the Applicant Approach and the Guidance Approach, which are described in full within Volume 7B, Appendix 6-3: Offshore Ornithology Collision Risk Modelling Technical Report.

5.1.1.4 Kittiwake have been screened into the assessment for collision risk as they are susceptible to collision due to their flight height distribution and behaviours. Kittiwake have also been assessed for distributional responses as requested by NatureScot during consultation; however, the Applicant remains of the position that kittiwake do not require assessment for distributional responses due to the evidence base detailed within Volume 8, Appendix 21: Offshore Ornithology Distributional Responses Technical Report – Review of Relevant Evidence, suggesting kittiwake show limited behavioural response to OWFs with respect to potential displacement. Distributional responses are assessed based on the birds within the Caledonia OWF and 2km buffer. A Guidance approach only is presented for kittiwake based on a displacement rate of 30% and a 1-3% mortality rate for operational and maintenance phase distributional response impacts (as outlined in Table 5-1).

Table 5-1: Displacement and mortality rates used for the NatureScot Guidance Approach and the Applicant Approach, for the assessment during the operational and maintenance phase of the Proposed Development (Offshore).

Species	Displacement Rate	Mortality Rate – Breeding Season	Mortality Rate – Non-breeding Season
Guidance Approach			
Guillemot, Razorbill and Puffin	60%	3% and 5%	1% and 3%
Kittiwake	30%	1% and 3%	1% and 3%
Gannet	70%	1% and 3%	1% and 3%
Applicant Approach			
Guillemot, Razorbill and Puffin	50%*	1%	1%
Kittiwake	Not Assessed	Not Assessed	Not Assessed
Gannet	70%	1%	1%
* The displacement rate presented for auks as part of the Applicant Approach is considered to be a maximum displacement rate as detailed and evidenced within Volume 8, Appendix 21: Offshore Ornithology Distributional Responses Technical Report – Review of Relevant Evidence.			

5.1.1.5 In line with the original submission, gannet and kittiwake have both been assessed for both distributional responses and collision risk. The suggestion within the NatureScot guidance is to use an additive approach (i.e., total predicted impact = total predicted collision rate + total predicted distributional responses mortality). These impacts are presented as combined impacts from distributional responses and collision. It is important to note that this approach does not consider that birds that have been displaced from the Caledonia OWF are not at risk from collision. Such an approach could therefore lead to the overestimation of the combined impact of collision and distributional responses.

5.1.1.6 Where no differences exist between Guidance and Applicant Approach's to assessments these are presented under the Guidance Approach to avoid repetition. Further details regarding the differences between the Guidance and Applicant Approach for distributional response assessment is provided within Volume 8, Appendix 21: Offshore Ornithology Distributional Responses Technical Report – Review of Relevant Evidence.

5.2 Revised Assessment of Predicted Impacts to Sites and Features

5.2.1.1 In line with NatureScot's representations (letter dated 27 March 2025) and the Request for Additional Information from MD-LOT (received on 17 July 2025 via email), predicted impacts for designated sites and features for the Proposed Development (Offshore) alone have been reviewed following NatureScot Guidance Note 11 (NatureScot, 2023[8]). This guidance states the recommended threshold for use of PVA is a predicted change of 0.02% in the adult survival rate (i.e., change in survival rate percentage point change) of each species screened in for each designated site. Further to this, as agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted adult mortality to an SPA annually between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases). When both thresholds are reached for significant metrics, these are shown in Table 5-2 to Table 5-7 (i.e., where scenarios are marked by a 'Y' in both column 'Threshold Reached for Undertaking PVA (≥0.02)' and column 'Impact change threshold reached for undertaking PVA (0.5 of a bird)'.

5.3 Proposed Development (Offshore) Alone Impact

5.3.1 Summary

5.3.1.1 Updated annual impacts from the Proposed Development (Offshore) alone are provided for distributional responses, collision and combined impacts for relevant species, using the Applicant Approach (Table 5-2 to Table 5-4) and the Guidance Approach (Table 5-5 to Table 5-7), to features of designates sites as listed in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF). The values for the annual apportioned predicted mortality from both distributional responses and collision for each feature and designated site were reassessed as stated in Section 4 (further details are presented within Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)) and apportioned as outlined within tables presented in Section 4.4.2.

5.3.2 Proposed Development (Offshore) Alone Impacts Using Applicant Approach

Table 5-2: Proposed Development (Offshore) alone impacts from distributional responses when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)*
East Caithness Cliffs SPA							
Guillemot	6.1	38.09	199,966	12,197.90	0.019	N	N/A
Razorbill	10.5	3.79	40,373	4,239.15	0.009	N	N/A
North Caithness Cliffs SPA							
Guillemot	6.1	6.45	62,102	3,788.24	0.010	N	N/A
Razorbill	10.5	0.43	12,329	1,294.58	0.004	N	N/A
Puffin**	9.4	0.10	6,766	636.00	0.001	N	N/A
Troup, Pennan and Lion's Heads SPA							
Guillemot	6.1	6.44	47,719	2,910.84	0.014	N	N/A
Razorbill	10.5	0.52	8,801	924.11	0.006	N	N/A
Copinsay SPA							
Guillemot	6.1	0.10	1,312	80.02	0.008	N	N/A
Hoy SPA							
Guillemot	6.1	1.22	16,345	997.06	0.007	N	N/A
Puffin**	9.4	0.08	722	67.87	0.011	N	N/A
Buchan Ness to Collieston Coast SPA							
Guillemot	6.1	2.88	40,763	2,486.54	0.007	N	N/A
Rousay SPA							
Guillemot	6.1	0.44	7,921	483.17	0.006	N	N/A
Marwick Head SPA							
Guillemot	6.1	0.75	12,800	780.78	0.006	N	N/A
Calf of Eday SPA							
Guillemot	6.1	0.42	7,402	451.53	0.006	N	N/A
West Westray SPA							
Guillemot	6.1	2.35	43,035	2,625.14	0.005	N	N/A
Razorbill	10.5	0.04	3,103	325.86	0.001	N	N/A
Cape Wrath SPA							
Puffin**	9.4	<0.01	428	40.23	0.001	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)*
Sule Skerry and Sule Stack SPA							
Puffin**	9.4	0.39	95,484	8,975.50	<0.001	N	N/A
Gannet	8.1	0.19	15,648	1,267.49	0.001	N	N/A
Guillemot	6.1	0.73	14,284	871.32	0.005	N	N/A
Fair Isle SPA							
Razorbill	10.5	0.04	2,580	270.90	0.002	N	N/A
Puffin**	9.4	0.29	13,332	1,253.21	0.002	N	N/A
Gannet	8.1	0.16	11,184	905.90	0.001	N	N/A
Guillemot	6.1	1.20	24,515	1,495.42	0.005	N	N/A
Foula SPA							
Puffin**	9.4	0.48	12,702	1,193.99	0.004	N	N/A
North Rona and Sula Sgeir SPA							
Puffin**	9.4	0.01	5,668	532.79	<0.001	N	N/A
Gannet	8.1	0.09	18,990	1,538.19	<0.001	N	N/A
Forth Islands SPA							
Gannet	8.1	1.77	162,000	13,122.00	0.001	N	N/A
Puffin**	9.4	4.74	117,960	11,088.24	0.004	N	N/A
Noss SPA							
Puffin**	9.4	0.02	1,194	112.24	0.001	N	N/A
Gannet	8.1	0.20	24,670	1,998.27	0.001	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Gannet	8.1	0.30	39,606	3,208.09	0.001	N	N/A
Flamborough and Filey Coast SPA							
Gannet***	8.1	0.11	31,588	2,558.63	<0.001	N	N/A

* As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

** It should be noted that the Applicant has decided to include the Year 1 August count in the non-breeding season rather than during the breeding season. This is due to the Year 1 August abundance from the baseline DAS being considered to reflect migration rather than individuals present in the breeding season.

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios.

Table 5-3: Proposed Development (Offshore) alone impacts from collision when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)*
Sule Skerry and Sule Stack SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.11	15,648	1,267.49	0.001	N	N/A
Fair Isle SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.08	11,184	905.90	0.001	N	N/A
North Rona and Sula Sgeir SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.05	18,990	1,538.19	<0.001	N	N/A
Forth Islands SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.89	162,000	13,122.00	0.001	N	N/A
Noss SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.10	24,670	1,998.27	<0.001	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.13	39,606	3,208.09	<0.001	N	N/A
Flamborough and Filey Coast SPA							
Gannet (Applicant Approach to macro-avoidance)**	8.1	0.03	31,588	2,558.63	<0.001	N	N/A

* As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios.

Table 5-4: Proposed Development (Offshore) alone impacts from distributional responses and collision combined when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)*
Sule Skerry and Sule Stack SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.30	15,648	1,267.49	0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.55	15,648	1,267.49	0.004	N	N/A
Fair Isle SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.24	11,184	905.90	0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.41	11,184	905.90	0.004	N	N/A
North Rona and Sula Sgeir SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.15	18,990	1,538.19	0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.26	18,990	1,538.19	0.001	N	N/A
Forth Islands SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	2.66	162,000	13,122.00	0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	4.33	162,000	13,122.00	0.003	N	N/A
Noss SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.30	24,670	1,998.27	0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.48	24,670	1,998.27	0.002	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.43	39,606	3,208.09	0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.58	39,606	3,208.09	0.001	N	N/A
Flamborough and Filey Coast SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.14	31,588	2,558.63	<0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)**	8.1	0.14	31,588	2,558.63	<0.001	N	N/A

*As agreed in consultation with NatureScot (consultation meetings dated 4 June 2025 / 7 August 2025 and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)*
** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only. Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Note, where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios.							

5.3.3 Proposed Development (Offshore) Alone Impacts Using the Guidance Approach

Table 5-5: Proposed Development (Offshore) alone impacts from distributional responses when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
East Caithness Cliffs SPA							
Kittiwake	14.6	1.49 - 4.48	48,958	7,147.87	0.003 - 0.009	N	N/A
Guillemot	6.1	117.79 - 209.20 (124.19 – 222.16)	199,966	12,197.90	0.059 - 0.105	Y	Y
Razorbill	10.5	12.66 - 21.75 (12.00 – 20.66)	40,373	4,239.15	0.031 - 0.054	Y	Y
North Caithness Cliffs SPA							
Kittiwake	14.6	0.20 - 0.61	18,608	2,716.77	0.001 - 0.003	N	N/A
Guillemot	6.1	17.20 - 32.68 (16.13 – 31.64)	62,102	3,788.24	0.028 - 0.053	Y	Y
Razorbill	10.5	1.43 - 2.46 (1.84 – 3.14)	12,329	1,294.58	0.012 - 0.020	Y	Y
Puffin***	9.4	0.86 - 1.45 (0.99 – 1.66)	6,766	636.00	0.013 - 0.021	Y	N
Troup, Pennan and Lion's Heads SPA							
Kittiwake	14.6	0.65 - 1.96	27,344	3,992.22	0.002 - 0.007	N	N/A
Guillemot	6.1	18.59 - 34.05 (18.45 – 34.37)	47,719	2,910.84	0.039 - 0.071	Y	N
Razorbill	10.5	1.74 - 2.99 (1.95 – 3.34)	8,801	924.11	0.020 - 0.034	Y	N
Copinsay SPA							
Kittiwake	14.6	0.01 - 0.02	670	97.82	0.001 - 0.004	N	N/A
Guillemot	6.1	0.25 - 0.50 (2.10 – 4.34)	1,312	80.02	0.019 - 0.038	Y	Y
Hoy SPA							
Kittiwake	14.6	0.01 - 0.02	608	88.77	0.001 - 0.003	N	N/A
Guillemot	6.1	2.81 - 5.73 (2.88 – 6.04)	16,345	997.06	0.017 - 0.035	Y	N
Puffin***	9.4	0.19 - 0.37 (0.16 – 0.32)	722	67.87	0.027 - 0.052	Y	N
Buchan Ness to Collieston Coast SPA							
Kittiwake	14.6	0.23 - 0.70	27,094	3,955.72	0.001 - 0.003	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Guillemot	6.1	6.41 - 13.31 (Not assessed previously)	40,763	2,486.54	0.016 - 0.033	Y	Y
Rousay SPA							
Kittiwake	14.6	0.01 - 0.02	962	140.45	0.001 - 0.002	N	N/A
Guillemot	6.1	0.83 - 1.90 (0.89 – 2.08)	7,921	483.17	0.011 - 0.024	Y	N
Marwick Head SPA							
Kittiwake	14.6	0.01 - 0.04	2,878	420.19	0.001 - 0.002	N	N/A
Guillemot	6.1	1.47 - 3.27 (1.55 – 3.55)	12,800	780.78	0.011 - 0.026	Y	N
Calf of Eday SPA							
Kittiwake	14.6	<0.01 - 0.01	324	47.30	0.001 - 0.003	N	N/A
Guillemot	6.1	0.80 - 1.82 (0.85 – 1.98)	7,402	451.53	0.011 - 0.025	Y	N
West Westray SPA							
Kittiwake	14.6	0.05 - 0.16	8,004	1,168.58	0.001 - 0.002	N	N/A
Guillemot	6.1	4.23 - 9.87 (4.25 – 10.17)	43,035	2,625.14	0.010 - 0.023	Y	N
Razorbill	10.5	0.10 - 0.20	3,103	325.86	0.003 - 0.006	N	N/A
Fowlsheugh SPA							
Kittiwake	14.6	0.17 - 0.51	40,156	5,862.78	<0.001 - 0.001	N	N/A
Cape Wrath SPA							
Kittiwake	14.6	0.02 - 0.05	6,656	971.78	<0.001 - 0.001	N	N/A
Puffin***	9.4	0.03 - 0.05	428	40.23	0.007 - 0.012	N	N/A
Sule Skerry and Sule Stack SPA							
Puffin***	9.4	4.04 - 6.74	95,484	8,975.50	0.004 - 0.007	N	N/A
Gannet	8.1	0.19 - 0.57	15,648	1,267.49	0.001 - 0.004	N	N/A
Guillemot	6.1	1.25 - 3.01 (Not assessed previously)	14,284	871.32	0.009 - 0.021	Y	Y
Fair Isle SPA							
Kittiwake	14.6	<0.01 - 0.01	896	130.82	<0.001 - 0.001	N	N/A
Razorbill	10.5	0.08 - 0.17	2,580	270.90	0.003 - 0.007	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Puffin***	9.4	1.03 - 1.86	13,332	1,253.21	0.008 - 0.014	N	N/A
Gannet	8.1	0.16 - 0.47	11,184	905.90	0.001 - 0.004	N	N/A
Guillemot	6.1	1.96 - 4.85	24,515	1,495.42	0.008 - <0.020	N	N/A
Sumburgh Head SPA							
Kittiwake	14.6	<0.01	691	100.89	<0.001 - 0.001	N	N/A
Foula SPA							
Kittiwake	14.6	<0.01 - 0.01	1,193	174.18	<0.001 - 0.001	N	N/A
Puffin***	9.4	0.67 – 1.43	12,702	1,193.99	0.005 - 0.011	N	N/A
North Rona and Sula Sgeir SPA							
Kittiwake	14.6	<0.01	1,424	207.90	<0.001	N	N/A
Puffin***	9.4	0.10 - 0.17	5,668	532.79	0.002 - 0.003	N	N/A
Gannet	8.1	0.09 - 0.28	18,990	1,538.19	<0.001 - 0.001	N	N/A
Forth Islands SPA							
Kittiwake	14.6	0.04 - 0.11	14,216	2,075.54	<0.001 - 0.001	N	N/A
Gannet	8.1	1.77 - 5.30	162,000	13,122.00	0.001 - 0.003	N	N/A
Puffin***	9.4	9.70 – 19.03	117,960	11,088.24	0.008 - 0.016	N	N/A
Noss SPA							
Kittiwake	14.6	<0.01	154	22.48	0.001 - 0.002	N	N/A
Puffin***	9.4	0.03 – 0.05	1,194	112.24	0.002 - 0.005	N	N/A
Gannet	8.1	0.20 - 0.61	2,4670	1,998.27	0.001 - 0.002	N	N/A
St Abb's Head to Fast Castle SPA							
Kittiwake	14.6	0.03 - 0.08	11,992	1,750.83	<0.001 - 0.001	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Kittiwake	14.6	<0.01	378	55.19	<0.001 – 0.001	N	N/A
Gannet	8.1	0.30 - 0.90	39,606	3,208.09	0.001 - 0.002	N	N/A
Handa SPA							
Kittiwake	14.6	0.02 - 0.05	9,178	1,339.99	<0.001 - 0.001	N	N/A
Shiant Isles SPA							
Kittiwake	14.6	<0.01 - 0.01	2,318	338.43	<0.001	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Farne Islands SPA							
Kittiwake****	14.6	0.01 - 0.02	5,790	845.34	<0.001	N	N/A
Flamborough and Filey Coast SPA							
Gannet****	8.1	0.11 - 0.32	31,588	2,558.63	<0.001 - 0.001	N	N/A

* Values presented in brackets present the annual apportioned predicted mortality for the Proposed Development (Offshore) submitted at application. These values are only presented for scenarios where the threshold is reached for undertaking PVA.

** As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

*** The mean seasonal peaks for puffin have been presented with the August count included in the breeding season as per the Guidance Approach, see Table 4-6.

**** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios. Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.

Table 5-6: Proposed Development (Offshore) alone impacts from collision when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
East Caithness Cliffs SPA							
Kittiwake	14.6	13.50 (14.30)	48,958	7,147.87	0.028	Y	Y
Great black-backed gull***	11.5	0.06	532	61.18	0.011	N	N/A
Herring gull***	16.6	0.04	6,600	1,095.60	0.001	N	N/A
North Caithness Cliffs SPA							
Kittiwake	14.6	1.85	18,608	2,716.77	0.010	N	N/A
Troup, Pennan and Lion's Heads SPA							
Kittiwake	14.6	5.90 (5.83)	27,344	3,992.22	0.022	Y	N
Herring gull***	16.6	0.02	1,108	183.93	0.002	N	N/A
Copinsay SPA							
Kittiwake	14.6	0.07	670	97.82	0.011	N	N/A
Great black-backed gull***	11.5	0.07 (0.07)	97	11.16	0.074	Y	N (requested by NatureScot)
Hoy SPA							
Kittiwake	14.6	0.06	608	88.77	0.010	N	N/A
Great black-backed gull***	11.5	0.02	775	89.13	0.003	N	N/A
Buchan Ness to Collieston Coast SPA							
Kittiwake	14.6	2.10	27,094	3,955.72	0.008	N	N/A
Herring gull***	16.6	0.04	4,536	752.98	0.001	N	N/A
Rousay SPA							
Kittiwake	14.6	0.07	962	140.45	0.007	N	N/A
Marwick Head SPA							
Kittiwake	14.6	0.13	2,878	420.19	0.005	N	N/A
Calf of Eday SPA							
Kittiwake	14.6	0.03	324	47.30	0.008	N	N/A
West Westray SPA							
Kittiwake	14.6	0.49	8,004	1,168.58	0.006	N	N/A
Fowlsheugh SPA							
Kittiwake	14.6	1.55	40,156	5,862.78	0.004	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Cape Wrath SPA							
Kittiwake	14.6	0.14	6,656	971.78	0.002	N	N/A
Sule Skerry and Sule Stack SPA							
Gannet (Guidance Approach to macro-avoidance)	8.1	0.36	15,648	1,267.49	0.002	N	N/A
Fair Isle SPA							
Kittiwake	14.6	0.03	896	130.82	0.004	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.26	11,184	905.90	0.002	N	N/A
Sumburgh Head SPA							
Kittiwake	14.6	0.01	691	100.89	0.002	N	N/A
Foula SPA							
Kittiwake	14.6	0.02	1,193	174.18	0.002	N	N/A
North Rona and Sula Sgeir SPA							
Kittiwake	14.6	0.01	1,424	207.90	0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.17	18,990	1,538.19	0.001	N	N/A
Forth Islands SPA							
Kittiwake	14.6	0.32	14,216	2,075.54	0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	2.56	162,000	13,122.00	0.002	N	N/A
Noss SPA							
Kittiwake	14.6	0.01	154	22.48	0.007	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.27	24,670	1,998.27	0.001	N	N/A
St Abb's Head to Fast Castle SPA							
Kittiwake	14.6	0.24	11,992	1,750.83	0.002	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Kittiwake	14.6	0.01	378	55.19	0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.28	39,606	3,208.09	0.001	N	N/A
Handa SPA							
Kittiwake	14.6	0.14	9,178	1,339.99	0.002	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Shiant Isles SPA							
Kittiwake	14.6	0.02	2,318	338.43	0.001	N	N/A
Farne Islands SPA							
Kittiwake***	14.6	0.07	5,790	845.34	0.001	N	N/A
Flamborough and Filey Coast SPA							
Gannet (Guidance Approach to macro-avoidance)***	8.1	0.03	31,588	2,558.63	<0.001	N	N/A

* Values presented in brackets present the annual apportioned predicted mortality for the Proposed Development (Offshore) submitted at application. These values are only presented for scenarios where the threshold is reached for undertaking PVA.

**As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios. Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.

Table 5-7: Proposed Development (Offshore) alone impacts from distributional responses and collision combined when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
East Caithness Cliffs SPA							
Kittiwake	14.6	15.00 - 17.98 (15.88 – 19.05)	48,958	7,147.87	0.031 - 0.037	Y	Y
North Caithness Cliffs SPA							
Kittiwake	14.6	2.05 - 2.46	18,608	2,716.77	0.011 - 0.013	N	N/A
Troup, Pennan and Lion's Heads SPA							
Kittiwake	14.6	6.55 - 7.85 (6.48 – 7.77)	27,344	3,992.22	0.024 - 0.029	Y	N
Copinsay SPA							
Kittiwake	14.6	0.08 - 0.10	670	97.82	0.012 - 0.015	N	N/A
Hoy SPA							
Kittiwake	14.6	0.06 - 0.08	608	88.77	0.011 - 0.013	N	N/A
Buchan Ness to Collieston Coast SPA							
Kittiwake	14.6	2.33 - 2.80	27,094	3,955.72	0.009 - 0.010	N	N/A
Rousay SPA							
Kittiwake	14.6	0.08 - 0.09	962	140.45	0.008 - 0.010	N	N/A
Marwick Head SPA							
Kittiwake	14.6	0.15 - 0.17	2,878	420.19	0.005 - 0.006	N	N/A
Calf of Eday SPA							
Kittiwake	14.6	0.03 - 0.04	324	47.30	0.009 - 0.011	N	N/A
West Westray SPA							
Kittiwake	14.6	0.54 - 0.65	8,004	1,168.58	0.007 - 0.008	N	N/A
Fowlsheugh SPA							
Kittiwake	14.6	1.72 - 2.06	40,156	5,862.78	0.004 - 0.005	N	N/A
Cape Wrath SPA							
Kittiwake	14.6	0.16 - 0.19	6,656	971.78	0.002 - 0.003	N	N/A
Sule Skerry and Sule Stack SPA							
Gannet (Applicant Approach to macro-avoidance)	8.1	0.30 – 0.68	15,648	1,267.49	0.002 – 0.004	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.55 - 0.93	15,648	1,267.49	0.004 - 0.006	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Fair Isle SPA							
Kittiwake	14.6	0.04	896	130.82	0.004 -0.005	N	N/A
Gannet (Applicant Approach to macro-avoidance)	8.1	0.24 – 0.56	11,184	905.90	0.002 – 0.005	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.41 - 0.73	11,184	905.90	0.004 - 0.007	N	N/A
Sumburgh Head SPA							
Kittiwake	14.6	0.01 - 0.02	691	100.89	0.002	N	N/A
Foula SPA							
Kittiwake	14.6	0.02	1,193	174.18	0.002	N	N/A
North Rona and Sula Sgeir SPA							
Kittiwake	14.6	0.02	1,424	207.90	0.001	N	N/A
Gannet (Applicant Approach to macro-avoidance)	8.1	0.15 – 0.33	18,990	1,538.19	0.001 - 0.002	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.26 - 0.45	18,990	1,538.19	0.001 - 0.002	N	N/A
Forth Islands SPA							
Kittiwake	14.6	0.35 - 0.42	14,216	2,075.54	0.002 - 0.003	N	N/A
Gannet (Applicant Approach to macro-avoidance)	8.1	4.33 - 7.86	162,000	13,122.00	0.003 - 0.005	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	2.66 – 6.19	162,000	13,122.00	0.002 - 0.004	N	N/A
Noss SPA							
Kittiwake	14.6	0.01	154	22.48	0.008 - 0.010	N	N/A
Gannet (Applicant Approach to macro-avoidance)	8.1	0.30 – 0.71	24,670	1,998.27	0.001 – 0.003	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.48 - 0.88	24,670	1,998.27	0.002 - 0.004	N	N/A
St Abb's Head to Fast Castle SPA							
Kittiwake	14.6	0.26 - 0.31	11,992	1,750.83	0.002 - 0.003	N	N/A
Hermaness, Saxa Vord and Valla Field SPA							
Kittiwake	14.6	0.01	378	55.19	0.003	N	N/A
Gannet (Applicant Approach to macro-avoidance)	8.1	0.43 – 1.03	39,606	3,208.09	0.001 - 0.003	N	N/A
Gannet (Guidance Approach to macro-avoidance)	8.1	0.58 - 1.18	39,606	3,208.09	0.001 - 0.003	N	N/A

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**
Handa SPA							
Kittiwake	14.6	0.15 - 0.18	9,178	1,339.99	0.002	N	N/A
Shiant Isles SPA							
Kittiwake	14.6	0.02 - 0.03	2,318	338.43	0.001	N	N/A
Farne Islands SPA							
Kittiwake***	14.6	0.07 - 0.09	5,790	845.34	0.001 - 0.002	N	N/A
Flamborough and Filey Coast SPA							
Gannet (Applicant Approach to macro-avoidance)***	8.1	0.14 -0.35	31,588	2,558.63	<0.001 - 0.001	N	N/A
Gannet (Guidance Approach to macro-avoidance)***	8.1	0.14 -0.35	31,588	2,558.63	<0.001 - 0.001	N	N/A

* Values presented in brackets present the annual apportioned predicted mortality for the Proposed Development (Offshore) submitted at application. These values are only presented for scenarios where the threshold is reached for undertaking PVA.

** As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e. where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios.

5.4 Summary of Proposed Development (Offshore) Alone Impacts

5.4.1.1 Assessments undertaken using the Applicant Approach (Table 5-2 to Table 5-4) and Guidance Approach (Table 5-5 to Table 5-7) present predicted operational and maintenance phase impacts from distributional responses, collision and from distributional responses and collision combined.

5.4.1.2 Where assessments undertaken for features and designated sites presented within Table 5-2 to Table 5-7 indicated predicted impacts to be below the threshold for undertaking further assessment using PVA (0.02 percentage point change in the published adult survival rate) predicted impacts would be indistinguishable from natural fluctuations in the population.

5.4.1.3 Therefore, the potential for an AEoSI to the conservation objectives of all features and sites considered due to predicted impacts from the Proposed Development (Offshore) alone during the operation and maintenance phase can be ruled out under the Applicant Approach and the Guidance Approach for these scenarios.

5.4.1.4 Assessments undertaken using the Guidance Approach, indicated predicted impacts to three features (guillemot, razorbill, and kittiwake) from five different designated sites (East Caithness Cliffs SPA, North Caithness Cliffs SPA, Copinsay SPA, Buchan Ness to Collieston Coast SPA and Sule Skerry and Sule Stack SPA) to have reached both the threshold for undertaking further assessment using PVA (0.02 percentage point change in adult survival rate) and where the difference in the impacted adults apportioned to an SPA annually between submission impacts and updated impacts are greater than 0.5 of a bird (as agreed in consultation with NatureScot; consultation meetings dated 04 June 2025 and 07 August 2025) as shown in Table 5-8. Whilst thresholds were not met for great black-backed gull at the Copinsay SPA, PVA has been carried out as requested by NatureScot.

5.4.1.5 PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.

Table 5-8: Impacts from distributional responses, collision and from distributional responses and collision combined to sites and features that have reached the threshold for undertaking PVA for the Proposed Development (Offshore) alone impacts.

Designated Site	Species	Impact	Annual Apportioned Predicted Mortality*	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**	Outcome
Guidance Approach							
East Caithness Cliffs SPA	Guillemot	Distributional responses	117.79 - 209.20 (124.19 – 222.16)	0.059 - 0.105	Y	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.
	Razorbill	Distributional responses	12.66 - 21.75 (12.00 – 20.66)	0.031 - 0.054	Y	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.
	Kittiwake	Distributional responses and collision combined	15.00 - 17.98 (15.88 – 19.05)	0.031 - 0.037	Y	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.
North Caithness Cliffs SPA	Guillemot	Distributional responses	17.20 - 32.68 (16.13 – 31.64)	0.028 - 0.053	Y	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.
	Razorbill	Distributional responses	1.43 - 2.46 (1.84 – 3.14)	0.012 - 0.020	Y (for the upper end of the Guidance Approach only)	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7 for the upper end of the Guidance Approach only.
	Puffin	Distributional responses	0.86 - 1.45 (0.99 – 1.66)	0.013 - 0.021	Y (for the upper end of the Guidance Approach only)	N	As presented, annual impacts are predicted to decrease by less than 0.5 of a single bird. This level of decrease does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Troup, Pennan and Lion's Heads SPA	Guillemot	Distributional responses	18.59 - 34.05 (18.45 – 34.37)	0.039 - 0.071	Y	N	As presented, annual impacts are predicted to decrease by less than 0.5 of a single bird. This level of decrease does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
	Razorbill	Distributional responses	1.74 - 2.99 (1.95 – 3.34)	0.020 - 0.034	Y	N	As presented, annual impacts are predicted to decrease by less than 0.5 of a single bird. This level of decrease does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application

Designated Site	Species	Impact	Annual Apportioned Predicted Mortality*	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**	Outcome
							Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
	Kittiwake	Distributional responses and collision combined	6.55 - 7.85 (6.48 – 7.77)	0.024 - 0.029	Y	N	As presented, annual impacts are predicted to decrease by less than 0.5 of a single bird. This level of decrease does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Copinsay SPA	Guillemot	Distributional responses	0.25 - 0.50 (2.10 – 4.34)	0.019 - 0.038	Y (for the upper end of the Guidance Approach only)	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7 for the upper end of the Guidance Approach only.
	Great black-backed gull***	Collision	0.07 (0.07)	0.074	Y	N (requested within NatureScot representations)	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.
Hoy SPA	Guillemot	Distributional responses	2.81 - 5.73 (2.88 – 6.04)	0.017 - 0.035	Y (for the upper end of the Guidance Approach only)	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
	Puffin	Distributional responses	0.19 - 0.37 (0.16 – 0.32)	0.027 - 0.052	Y	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Buchan Ness to Collieston Coast SPA	Guillemot	Distributional responses	6.41 - 13.31 (Not assessed previously)	0.016 - 0.033	Y (for the upper end of the Guidance Approach only)	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7 for the upper end of the Guidance Approach only.
Rousay SPA	Guillemot	Distributional responses	0.83 - 1.90 (0.89 – 2.08)	0.011 - 0.024	Y (for the upper end of the Guidance Approach only)	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Marwick Head SPA	Guillemot	Distributional responses	1.47 - 3.27	0.011 - 0.026	Y (for the upper end of the	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent

Designated Site	Species	Impact	Annual Apportioned Predicted Mortality*	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02)	Impact Change Threshold Reached for Undertaking PVA (0.5 of a Bird)**	Outcome
			(1.55 – 3.55)		Guidance Approach only)		a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Calf of Eday SPA	Guillemot	Distributional responses	0.80 - 1.82 (0.85 – 1.98)	0.011 - 0.025	Y (for the upper end of the Guidance Approach only)	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
West Westray SPA	Guillemot	Distributional responses	4.23 - 9.87 (4.25 – 10.17)	0.010 - 0.023	Y (for the upper end of the Guidance Approach only)	N	As presented, annual impacts are predicted to increase by less than 0.5 of a single bird. This level of increase does not represent a material change; thus, the conclusions made within the RIAA remain the same (no potential for an AEoSI; Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4)).
Sule Skerry and Sule Stack SPA	Guillemot	Distributional responses	1.25 - 3.01 (Not assessed previously)	0.009 - 0.021	Y (for the upper end of the Guidance Approach only)	Y	PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7 for the upper end of the Guidance Approach only.

* Values presented in brackets present the annual apportioned predicted mortality for the Proposed Development (Offshore) submitted at application. These values are only presented for scenarios where the threshold is reached for undertaking PVA.

** As agreed in consultation with NatureScot (consultation meetings dated 04 June 2025 and 07 August 2025, and via email on 18 August 2025) HRA-level PVA is only required to be re-run as part of assessment updates where the difference in the annual apportioned predicted mortality to an SPA between submission impacts and updated impacts are greater than 0.5 of a bird (including increases and decreases).

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, annual apportioned predicted mortalities presented are for the non-breeding season only.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and the impact change threshold is reached for undertaking PVA (changes of 0.5 of a bird; marked by Y in the table) indicate the sites and features taken through for PVA (i.e., where both columns are marked with a Y). Where the threshold is not reached for undertaking PVA (≤0.02; marked as N in the table) the impact change threshold is marked as N/A as no PVA is required for these scenarios.

5.5 Potential In-Combination Impacts

5.5.1 Summary

5.5.1.1 Potential impacts have been assessed for the Proposed Development (Offshore) in-combination with other plans and projects for distributional responses, collision, and distributional responses and collision combined, using the Applicant Approach (Table 5-9 to Table 5-14) and the Guidance Approach (Table 5-15 to Table 5-20).

5.5.1.2 Two in-combination effects totals are presented where applicable for the sites and features screened in for in-combination assessments, as follows:

- All projects where information is available (plus the Proposed Development (Offshore)):
  - Applicant Approach; Table 5-9 (distributional responses), Table 5-10 (collision) and Table 5-11 (distributional responses and collision combined)
  - Guidance Approach; Table 5-15 (distributional responses), Table 5-16 (collision) and Table 5-17 (distributional responses and collision combined)
- All projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) (in this instance commitment to compensation refers to projects which have been awarded consent on the basis that any and all adverse effects on seabirds would be fully compensated):
  - Applicant Approach; Table 5-12 (distributional responses), Table 5-13 (collision) and Table 5-14 (distributional responses and collision combined)
  - Guidance Approach; Table 5-18 (distributional responses), Table 5-19 (collision) and Table 5-20 (distributional responses and collision combined).

5.5.1.3 It is important to note that as discussed in consultation with NatureScot (07 August 2025), all in-combination assessment outcomes are based on the second scenario outlined above (i.e., all projects excluding consented projects that have made a commitment to compensation, plus the Proposed Development (Offshore)). This is a precautionary approach which is deemed to overestimate actual impacts because unconsented projects which have submitted RIAAs where AEoSI is predicted have not been excluded, despite those projects being expected to compensate for their predicted impacts.

5.5.1.4 Potential impacts from the Proposed Development (Offshore) in-combination with other plans and projects has been assessed for features

of designated sites when the contribution from the Proposed Development (Offshore) alone is an annual mortality greater than 0.2 (in line with NatureScot advice given to previous projects such as Cenos OWF) and where impacts exceeded the threshold for assessment (0.02 percentage point change in adult survival rate) (in line with NatureScot Guidance Note 11; NatureScot, 2023[8]).

5.5.1.5 As with Proposed Development (Offshore) alone impacts, where no differences exist between Guidance and Applicant Approaches to assessments, these are presented under the Guidance approach to avoid repetition. Additionally, where no differences exist between the two in-combination effect totals outlined above (i.e., the all project approach where information is available and the all project approach excluding consented projects that have made a commitment to compensation), these are presented under the all project approach.

5.5.2 In-combination Impacts using Applicant Approach

Table 5-9: In-combination impacts from distributional response for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Guillemot	6.1	346.315	199,966	12,197.90	0.173	Y	38.09	Y
Razorbill	10.5	63.46	40,373	4,239.15	0.257	Y	3.79	Y
North Caithness Cliffs SPA								
Guillemot	6.1	27.58	62,102	3,788.24	0.044	Y	6.45	Y
Razorbill	10.5	5.47	12,329	1,294.58	0.144	Y	0.43	Y
Puffin**	9.4	8.64	6,766	636.00	0.128	Y	0.10	N
Troup, Pennan and Lion's Heads SPA								
Guillemot	6.1	49.02	47,719	2,910.84	0.103	Y	6.44	Y
Razorbill	10.5	6.45	8,801	924.11	0.173	Y	0.52	Y
Copinsay SPA								
Guillemot	6.1	2.72	1,312	80.02	0.207	Y	0.10	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Hoy SPA								
Guillemot	6.1	1.90	16,345	997.06	0.012	N	1.22	Y
Puffin**	9.4	1.00	722	67.87	0.139	Y	0.08	N
Buchan Ness to Collieston Coast SPA								
Guillemot	6.1	77.60	40,763	2,486.53	0.190	Y	2.88	Y
Rousay SPA								
Guillemot	6.1	0.64	7,921	483.17	0.008	N	0.44	Y
Marwick Head SPA								
Guillemot	6.1	1.53	12,800	780.78	0.012	N	0.75	Y
Calf of Eday SPA								
Guillemot	6.1	0.53	7,402	451.53	0.007	N	0.42	Y
West Westray SPA								
Guillemot	6.1	3.76	43,035	2,625.14	0.009	N	2.35	Y
Razorbill	10.5	1.68	3,103	325.86	0.154	Y	0.04	N
Cape Wrath SPA								
Puffin**	9.4	0.06	428	40.23	0.014	N	0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Puffin**	9.4	4.34	95,484	8975.50	0.005	N	0.39	Y
Gannet	8.1	4.91	15,648	1,267.49	0.031	Y	0.19	N
Guillemot	6.1	22.46	14,284	871.32	0.157	N	0.73	Y
Fair Isle SPA								
Razorbill	10.5	2.55	2,580	270.90	0.199	Y	0.04	N
Puffin**	9.4	6.86	13,332	1,253.21	0.051	Y	0.29	Y
Gannet	8.1	3.43	11,184	905.90	0.031	Y	0.16	N
Guillemot	6.1	2.97	24,515	1,495.42	0.012	N	1.20	Y
Foula SPA								
Puffin**	9.4	6.21	12,702	1,193.99	0.049	Y	0.48	Y
North Rona and Sula Sgeir SPA								
Puffin**	9.4	0.02	5,668	532.79	<0.001	N	0.01	N
Gannet	8.1	2.03	18,990	1,538.19	0.011	N	0.09	N
Forth Islands SPA								
Gannet	8.1	148.92	162,000	13,122.00	0.092	Y	1.77	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Puffin**	9.4	105.19	117,960	11,088.24	0.089	Y	4.74	Y
Noss SPA								
Puffin**	9.4	0.22	1,194	112.24	0.019	N	0.02	N
Gannet	8.1	10.32	24,670	1,998.27	0.039	Y	0.20	Y
Hermaness, Saxa Vord and Valla Field SPA								
Gannet	8.1	20.98	39,606	3,208.09	0.042	Y	0.30	Y
Flamborough and Filey Coast SPA								
Gannet***	8.1	80.20	31,588	2,558.63	0.254	Y	0.11	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the North East and East Ornithology Group (NEEOG). This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** The Applicant has decided to include the Year 1 August count in the non-breeding season rather than during the breeding season. This is due to the Year 1 August abundance from the baseline DAS being considered to reflect migration rather than individuals present in the breeding season.

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.								

Table 5-10: In-combination impacts from collision for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA in-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	5.96	15,648	1,267.49	0.038	Y	0.11	N
Fair Isle SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	0.99	11,184	905.90	0.009	N	0.08	N
North Rona and Sula Sgeir SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	0.48	18,990	1,538.19	0.003	N	0.05	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA in-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Forth Islands SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	158.58	162,000	13,122.00	0.098	Y	0.89	Y
Noss SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.92	24,670	1,998.27	0.012	N	0.10	N
Hermaness, Saxa Vord and Valla Field SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	5.65	39,606	3,208.09	0.013	N	0.13	N
Flamborough and Filey Coast SPA								
Gannet (Applicant	8.1	59.36	31,588	2,558.63	0.188	Y	0.03	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA in-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Approach to macro-avoidance)**								

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.

Table 5-11: In-combination impacts from distributional responses and collision combined for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	10.87	15,648	1,267.49	0.069	Y	0.30	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	24.65	15,648	1,267.49	0.158	Y	0.55	Y
Fair Isle SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	4.42	11,184	905.90	0.039	Y	0.24	Y
Gannet (Guidance Approach to	8.1	5.33	11,184	905.90	0.048	Y	0.41	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
North Rona and Sula Sgeir SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.51	18,990	1,538.19	0.013	N	0.15	N
Gannet (Guidance Approach to macro-avoidance)	8.1	3.17	18,990	1,538.19	0.017	N	0.26	Y
Forth Islands SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	307.49	162,000	13,122.00	0.190	Y	2.66	Y
Gannet (Guidance Approach to	8.1	648.70	162,000	13,122.00	0.400	Y	4.33	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Noss SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	13.24	24,670	1,998.27	0.054	Y	0.30	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	15.18	24,670	1,998.27	0.062	Y	0.48	Y
Hermaness, Saxa Vord and Valla Field SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	27.43	39,606	3,208.09	0.069	Y	0.43	Y
Gannet (Guidance Approach to	8.1	29.83	39,606	3,208.09	0.075	Y	0.58	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Flamborough and Filey Coast SPA								
Gannet (Applicant Approach to macro-avoidance)**	8.1	139.56	31,588	2,558.63	0.442	Y	0.14	N
Gannet (Guidance Approach to macro-avoidance)**	8.1	273.09	31,588	2,558.63	0.865	Y	0.14	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y).								

Table 5-12: In-combination impacts from distributional response for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Guillemot	6.1	310.45	199,966	12,197.90	0.155	Y	38.09	Y
Razorbill	10.5	56.95	40,373	4,239.15	0.241	Y	3.79	Y
North Caithness Cliffs SPA								
Guillemot	6.1	22.09	62,102	3,788.24	0.036	Y	6.45	Y
Razorbill	10.5	4.64	12,329	1,294.58	0.138	Y	0.43	Y
Puffin**	9.4	8.48	6,766	636.00	0.125	Y	0.10	N
Troup, Pennan and Lion's Heads SPA								
Guillemot	6.1	23.51	47,719	2,910.84	0.049	Y	6.44	Y
Razorbill	10.5	5.01	8,801	924.11	0.157	Y	0.52	Y
Copinsay SPA								
Guillemot	6.1	0.10	1,312	80.02	0.008	N	0.10	N
Hoy SPA								
Guillemot	6.1	1.61	16,345	997.06	0.010	N	1.22	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Puffin**	9.4	0.74	722	67.87	0.102	Y	0.08	N
Buchan Ness to Collieston Coast SPA								
Guillemot	6.1	23.30	40,763	2,486.54	0.057	Y	2.88	Y
Rousay SPA								
Guillemot	6.1	0.44	7,921	483.17	0.006	N	0.44	Y
Marwick Head SPA								
Guillemot	6.1	1.14	12,800	780.78	0.009	N	0.75	Y
Calf of Eday SPA								
Guillemot	6.1	0.42	7,402	451.53	0.006	N	0.42	Y
West Westray SPA								
Guillemot	6.1	2.86	43,035	2,625.14	0.007	N	2.35	Y
Razorbill	10.5	1.44	3,103.44	325.86	0.146	Y	0.04	N
Cape Wrath SPA								
Puffin**	9.4	0.05	428	40.23	0.011	N	<0.01	N
Sule Skerry and Sule Stack SPA								
Puffin**	9.4	3.12	95,484	8,975.50	0.003	N	0.39	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet	8.1	1.52	15,648	1,267.49	0.010	N	0.19	N
Guillemot	6.1	1.05	14,284	871.32	0.007	N	0.73	Y
Fair Isle SPA								
Razorbill	10.5	2.16	2,580	270.90	0.184	Y	0.04	N
Puffin**	9.4	4.88	13,332	1,253.21	0.037	Y	0.29	Y
Gannet	8.1	3.02	11,184	905.90	0.027	Y	0.16	N
Guillemot	6.1	1.20	24,515	1,495.42	0.005	N	1.20	Y
Foula SPA								
Puffin**	9.4	4.52	12,702	1,193.99	0.036	Y	0.48	Y
North Rona and Sula Sgeir SPA								
Puffin**	9.4	0.02	5,668	532.79	<0.001	N	0.01	N
Gannet	8.1	1.64	18,990	1,538.19	0.009	N	0.09	N
Forth Islands SPA								
Gannet	8.1	113.06	162,000	13,122.00	0.070	Y	1.77	Y
Puffin**	9.4	83.47	117,960	11,088.24	0.071	Y	4.74	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Noss SPA								
Puffin**	9.4	0.16	1,194	112.24	0.014	N	0.02	N
Gannet	8.1	9.28	24,670	1,998.27	0.038	Y	0.20	Y
Hermaness, Saxa Vord and Valla Field SPA								
Gannet	8.1	19.60	39,606	3,208.09	0.049	Y	0.30	Y
Flamborough and Filey Coast SPA								
Gannet***	8.1	79.29	31,588	2,558.63	0.251	Y	0.11	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander for guillemot, razorbill, puffin and gannet.

** The Applicant has decided to include the Year 1 August count in the non-breeding season rather than during the breeding season. This is due to the Year 1 August abundance from the baseline DAS being considered to reflect migration rather than individuals present in the breeding season.

*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.								

Table 5-13: In-combination impacts from collision for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	0.48	15,648	1,267.49	0.003	N	0.11	N
Fair Isle SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	0.90	11,184	905.90	0.008	N	0.08	N
North Rona and Sula Sgeir SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	0.39	18,990	1,538.19	0.002	N	0.05	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Forth Islands SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	124.28	162,000	13,122.00	0.077	Y	0.89	Y
Noss SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.54	24,670	1,998.27	0.010	N	0.10	N
Hermaness, Saxa Vord and Valla Field SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	5.06	39,606	3,208.09	0.013	N	0.13	N
Flamborough and Filey Coast SPA								
Gannet (Applicant	8.1	58.77	31,588	2,558.63	0.186	Y	0.03	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Approach to macro-avoidance)**								

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander for gannet.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e. where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.

Table 5-14: In-combination impacts from distributional response and collision combined for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) when considering the 'Applicant Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.00	15,648	1,267.49	0.013	N	0.30	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	3.08	15,648	1,267.49	<0.020	N	0.55	Y
Fair Isle SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	3.93	11,184	905.90	0.035	Y	0.24	Y
Gannet (Guidance Approach to	8.1	4.71	11,184	905.90	0.042	Y	0.41	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
North Rona and Sula Sgeir SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.03	18,990	1,538.19	0.011	N	0.15	N
Gannet (Guidance Approach to macro-avoidance)	8.1	2.54	18,990	1,538.19	0.013	N	0.26	Y
Forth Islands SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	237.34	162,000	13,122.00	0.147	Y	2.66	Y
Gannet (Guidance Approach to	8.1	500.13	162,000	13,122.00	0.309	Y	4.33	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Noss SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	11.82	24,670	1,998.27	0.048	Y	0.30	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	13.10	24,670	1,998.27	0.053	Y	0.48	Y
Hermaness, Saxa Vord and Valla Field SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	24.66	39,606	3,208.09	0.062	Y	0.43	Y
Gannet (Guidance Approach to	8.1	26.15	39,606	3,208.09	0.066	Y	0.58	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Flamborough and Filey Coast SPA								
Gannet (Applicant Approach to macro-avoidance)**	8.1	138.07	31,588	2,558.63	0.437	Y	0.14	N
Gannet (Guidance Approach to macro-avoidance)**	8.1	270.37	31,588	2,558.63	0.856	Y	0.14	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 8 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander gannet.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y).								

5.5.3 In-combination impacts using Guidance Approach

Table 5-15: In-combination impacts from distributional responses for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	69.29 - 207.87	48,958	7,147.87	0.142 - 0.425	Y	1.49 - 4.48	Y
Guillemot	6.1	898.30 - 1,729.44	199,966	12,197.90	0.449 - 0.865	Y	117.79 - 209.20	Y
Razorbill	10.5	142.00 - 294.30	40,372.86	4,239.15	0.452 - 0.829	Y	12.66 - 21.75	Y
North Caithness Cliffs SPA								
Kittiwake	14.6	10.55 - 31.65	18,608	2,716.77	0.057 - 0.170	Y	0.20 - 0.61	Y
Guillemot	6.1	68.79 - 134.98	62,102	3,788.24	0.111 - 0.217	Y	17.20 - 32.68	Y
Razorbill	10.5	8.42 – 21.56	12,329	1,294.58	0.168 - 0.275	Y	1.43 - 2.46	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Puffin**	9.4	31.00 - 52.07	6,766	636.00	0.458 - 0.770	Y	0.86 - 1.45	Y
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	18.56 - 55.67	27,344	3,992.22	0.068 - 0.204	Y	0.65 - 1.96	Y
Guillemot	6.1	93.51 - 211.17	47,719	2,910.84	0.196 - 0.443	Y	18.59 - 34.05	Y
Razorbill	10.5	11.16 - 26.63	8,801	924.11	0.227 - 0.403	Y	1.74 - 2.99	Y
Copinsay SPA								
Kittiwake	14.6	0.61 - 1.84	670	97.82	0.092 - 0.275	Y	0.01 - 0.02	N
Guillemot	6.1	4.37 - 10.90	1,312	80.02	0.333 - 0.831	Y	0.25 - 0.50	Y
Hoy SPA								
Kittiwake	14.6	0.38 - 1.14	608	88.77	0.063 - 0.188	Y	0.01 - 0.02	N
Guillemot	6.1	4.41 - 8.97	16,345	997.06	0.027 - 0.055	Y	2.81 - 5.73	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Puffin**	9.4	1.37 - 3.76	722	67.87	0.190 - 0.520	Y	0.19 - 0.37	Y
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	16.66 - 49.97	27,094	3,955.72	0.061 - 0.184	Y	0.23 - 0.70	Y
Guillemot	6.1	148.58 – 334.84	40,763	2,486.54	0.365 - 0.821	Y	6.41 - 13.31	Y
Rousay SPA								
Kittiwake	14.6	1.53 - 4.59	962	140.45	0.159 - 0.477	Y	0.01 - 0.02	N
Guillemot	6.1	1.06 - 2.59	7,921	483.17	0.013 - 0.033	Y	0.83 - 1.90	Y
Marwick Head SPA								
Kittiwake	14.6	0.52 - 1.57	2,878	420.19	0.018 - 0.055	Y	0.01 - 0.04	N
Guillemot	6.1	3.04 - 6.70	12,800	780.78	0.024 - 0.052	Y	1.47 - 3.27	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Calf of Eday SPA								
Kittiwake	14.6	0.65 - 1.95	324	47.30	0.201 - 0.603	Y	<0.01 - 0.01	N
Guillemot	6.1	0.93 - 2.21	7,402	451.53	0.013 - 0.030	Y	0.80 - 1.82	Y
West Westray SPA								
Kittiwake	14.6	10.54 - 31.62	8,004	1,168.58	0.132 - 0.395	Y	0.05 - 0.16	N
Guillemot	6.1	6.23 - 15.27	43,035	2,625.14	0.014 - 0.035	Y	4.23 - 9.87	Y
Razorbill	10.5	2.39 - 6.42	3,103	325.86	0.177 - 0.307	Y	0.10 - 0.20	Y
Fowlsheugh SPA								
Kittiwake	14.6	30.60 - 91.79	40,156	5,862.78	0.076 - 0.229	Y	0.17 - 0.51	Y
Cape Wrath SPA								
Kittiwake	14.6	0.60 - 1.80	6,656	971.78	0.009 - 0.027	Y	0.02 - 0.05	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Puffin**	9.4	0.23 - 0.39	428	40.23	0.054 - 0.090	Y	0.03- 0.05	N
Sule Skerry and Sule Stack SPA								
Puffin**	9.4	18.02 - 30.20	95,484	8,975.50	0.019 - 0.032	Y	4.04 - 6.74	Y
Gannet	8.1	4.91 – 14.73	15,648	1,267.49	0.031 - 0.094	Y	0.19 - 0.57	Y
Guillemot	6.1	78.58 – 132.48	14,284	871.32	0.550 - 0.927	Y	1.25 - 3.01	Y
Fair Isle SPA								
Kittiwake	14.6	0.67 - 2.01	896	130.82	0.075 - 0.225	Y	<0.01 - 0.01	N
Razorbill	10.5	3.09 - 9.20	2,580	270.90	0.220 - 0.457	Y	0.08 - 0.17	N
Puffin**	9.4	18.15 - 34.74	13,332	1,253.21	0.136 - 0.261	Y	1.03 - 1.86	Y
Gannet	8.1	3.43 – 10.28	11,184	905.90	0.031 - 0.092	Y	0.16 - 0.47	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Guillemot	6.1	4.67 – 11.80	24,515	1,495.42	0.019 - 0.048	Y	1.96 - 4.85	Y
Sumburgh Head SPA								
Kittiwake	14.6	0.19 - 0.56	691	100.89	0.027 - 0.081	Y	<0.1	N
Handa SPA								
Kittiwake	14.6	0.77 - 2.31	9,178	1,339.99	0.008 - 0.025	Y	0.02 - 0.05	N
Foula SPA								
Kittiwake	14.6	0.28 - 0.85	1,193	174.18	0.024 - 0.071	Y	<0.01 - 0.01	N
Puffin**	9.4	7.58 - 22.09	12,702	1,193.99	0.060 - 0.174	Y	0.67 - 1.43	Y
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	0.02 - 0.06	1,424	207.90	0.001 - 0.004	N	<0.1	N
Puffin**	9.4	0.11 - 0.20	5,668	532.79	0.002 - 0.004	N	0.10 - 0.17	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet	8.1	2.03 – 6.10	18,990	1,538.19	0.011 - 0.032	Y	0.09 - 0.28	Y
Forth Islands SPA								
Kittiwake	14.6	11.98 - 35.95	14,216	2,075.54	0.084 - 0.253	Y	0.04 - 0.11	N
Gannet	8.1	148.92 – 446.76	162,000	13,122.00	0.092 - 0.275	Y	1.77 - 5.30	Y
Puffin**	9.4	244.88 - 495.28	117,960	11,088.24	0.208 - 0.420	Y	9.70 - 19.03	Y
Noss SPA								
Kittiwake	14.6	0.44 - 1.31	154	22.48	0.283 - 0.848	Y	<0.01	N
Puffin**	9.4	0.25 - 0.76	1,194	112.24	0.021 - 0.064	Y	0.03 - 0.05	N
Gannet	8.1	10.32 – 30.95	24,670	1,998.27	0.042 - 0.125	Y	0.20 - 0.61	Y
St Abbs Head to Fast Castle SPA								
Kittiwake	14.6	35.96 - 107.88	11,992	1,750.83	0.300 - 0.900	Y	0.03 - 0.08	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
The Shaint Isles SPA								
Kittiwake	14.6	0.01 - 0.03	2,318	338.43	<0.001 - 0.001	N	<0.01 - 0.01	N
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	0.33 - 1.00	378	55.19	0.089 - 0.266	Y	<0.01	N
Gannet	8.1	21.78 – 65.34	39,606	3,208.09	0.055 - 0.165	Y	0.30 - 0.90	Y
Farne Islands SPA								
Kittiwake***	14.6	6.52 - 19.57	5,790	845.34	0.113 - 0.338	Y	0.01 - 0.02	N
Flamborough and Filey Coast SPA								
Gannet***	8.1	80.20 - 240.60	31,588	2,558.63	0.254 - 0.762	Y	0.11 - 0.32	Y

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** The mean seasonal peaks for puffin have been presented with the August count included in the breeding season as per the Guidance Approach.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality. Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.								

Table 5-16: In-combination impacts from collision for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	217.40	48,958	7,147.87	0.444	Y	13.50	Y
Great black-backed gull**	11.5	15.17	532	61.18	2.851	Y	0.06	N
Herring gull**	16.6	19.84	6,600	1,095.60	0.301	Y	0.04	N
North Caithness Cliffs SPA								
Kittiwake	14.6	54.22	18,608	2,716.77	0.291	Y	1.85	Y
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	142.79	27,344	3,992.22	0.522	Y	5.90	Y
Herring gull**	16.6	1.36	1,108	183.93	0.122	Y	0.02	N
Copinsay SPA								
Kittiwake	14.6	2.97	670	97.82	0.443	Y	0.07	N
Great black-backed gull**	16.6	4.42	97	11.16	4.558	Y	0.07	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Hoy SPA								
Kittiwake	14.6	1.90	608	88.77	0.313	Y	0.06	N
Great black-backed gull**	11.5	1.48	775	89.13	0.191	Y	0.02	N
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	92.83	27,094	3,955.72	0.343	Y	2.10	Y
Herring gull**	16.6	6.14	4,536	752.98	0.135	Y	0.04	N
Rousay SPA								
Kittiwake	14.6	7.51	962	140.45	0.781	Y	0.07	N
Marwick Head SPA								
Kittiwake	14.6	2.79	2,878	420.19	0.097	Y	0.13	N
Calf of Eday SPA								
Kittiwake	14.6	3.19	324	47.30	0.984	Y	0.03	N
West Westray SPA								
Kittiwake	14.6	51.61	8,004	1,168.58	0.645	Y	0.49	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Fowlsheugh SPA								
Kittiwake	14.6	171.12	40,156	5,862.78	0.426	Y	1.55	Y
Cape Wrath SPA								
Kittiwake	14.6	3.13	6,656	971.78	0.047	Y	0.14	N
Sule Skerry and Sule Stack SPA								
Gannet (Guidance Approach to macro-avoidance)	8.1	19.74	15,648	1,267.49	0.126	Y	0.36	Y
Fair Isle SPA								
Kittiwake	14.6	3.30	896	130.82	0.369	Y	0.03	N
Gannet (Guidance Approach to macro-avoidance)	8.1	1.90	11,184	905.90	0.017	N	0.26	Y
Sumburgh Head SPA								
Kittiwake	14.6	0.93	691	100.89	0.134	Y	0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Foula SPA								
Kittiwake	14.6	1.40	1,193	174.18	0.117	Y	0.02	N
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	0.10	1,424	207.90	0.007	N	0.01	N
Gannet (Guidance Approach to macro-avoidance)	8.1	1.14	18,990	1,538.19	0.006	N	0.17	N
Forth Islands SPA								
Kittiwake	14.6	52.46	14,216	2,075.54	0.369	Y	0.32	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	499.79	162,000	13,122.00	0.309	Y	2.56	Y
Noss SPA								
Kittiwake	14.6	2.14	154	22.48	1.387	Y	0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)	8.1	4.86	24,670	1,998.27	<0.020	N	0.27	Y
St Abb's Head to Fast Castle SPA								
Kittiwake	14.6	231.30	11,992	1,750.83	1.929	Y	0.24	Y
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	1.64	378	55.19	0.434	Y	0.01	N
Gannet (Guidance Approach to macro-avoidance)	8.1	8.05	39,606	3,208.09	0.020	Y	0.28	Y
Handa SPA								
Kittiwake	14.6	0.74	9,178	1,339.99	0.008	N	0.14	N
Shiant Isles SPA								
Kittiwake	14.6	0.06	2,318	338.43	0.002	N	0.02	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Farne Islands SPA								
Kittiwake**	14.6	37.36	5,790	845.34	0.645	Y	0.07	N
Flamborough and Filey Coast SPA								
Gannet (Guidance Approach to macro-avoidance)**	8.1	192.89	31,588	2,558.63	0.611	Y	0.03	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.

Table 5-17: In-combination impacts from distributional response and collision combined for all projects where information is available (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	286.69 - 425.27	48,958	7,147.87	0.586 - 0.869	Y	15.00 – 17.98	Y
North Caithness Cliffs SPA								
Kittiwake	14.6	64.78 - 85.88	18,608	2,716.77	0.348 - 0.462	Y	2.05 - 2.46	Y
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	161.34 - 198.46	27,344	3,992.22	0.590 - 0.726	Y	6.55 - 7.85	Y
Copinsay SPA								
Kittiwake	14.6	3.58 - 4.81	670	97.82	0.535 - 0.718	Y	0.08 - 0.10	N
Hoy SPA								
Kittiwake	14.6	2.28 - 3.05	608	88.77	0.376 - 0.501	Y	0.06 - 0.08	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	109.48 - 142.80	27,094	3,955.72	0.404 - 0.527	Y	2.33 - 2.80	Y
Rousay SPA								
Kittiwake	14.6	9.04 - 12.10	962	140.45	0.939 - 1.257	Y	0.08 - 0.09	N
Marwick Head SPA								
Kittiwake	14.6	3.32 - 4.36	2,878	420.19	0.115 - 0.152	Y	0.15 - 0.17	N
Calf of Eday SPA								
Kittiwake	14.6	3.84 - 5.14	324	47.30	1.185 - 1.587	Y	0.03 - 0.04	N
West Westray SPA								
Kittiwake	14.6	62.15 - 83.23	8,004	1,168.58	0.777 - 1.040	Y	0.54 - 0.65	Y
Fowlsheugh SPA								
Kittiwake	14.6	201.71 - 262.91	40,156	5,862.78	0.502 - 0.655	Y	1.72 - 2.06	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Cape Wrath SPA								
Kittiwake	14.6	3.73 - 4.93	6,656	971.78	0.056 - 0.074	Y	0.16 - 0.19	N
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	10.87 – 20.69	15,648	1,267.49	0.069 - 0.132	Y	0.30 – 0.68	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	24.65 – 34.47	15,648	1,267.49	0.158 - 0.220	Y	0.55 - 0.93	Y
Fair Isle SPA								
Kittiwake	14.6	3.97 - 5.32	896	130.82	0.444 - 0.593	Y	0.04	N
Gannet (Applicant Approach to	8.1	4.42 – 11.27	11,184	905.90	0.039 - 0.101	Y	0.24 – 0.56	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Gannet (Guidance Approach to macro-avoidance)	8.1	5.33 – 12.19	11,184	905.90	0.048 - 0.109	Y	0.41 - 0.73	Y
Sumburgh Head SPA								
Kittiwake	14.6	1.11 - 1.49	691	100.89	0.161 - 0.215	Y	0.01 - 0.02	N
Foula SPA								
Kittiwake	14.6	1.68 - 2.25	1,193	174.18	0.141 - 0.189	Y	0.02	N
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	0.12 - 0.16	1,424	207.90	0.008 - 0.011	N	0.02	N
Gannet (Applicant Approach to macro-avoidance)	8.1	2.51 – 6.58	18,990	1,538.19	0.013 - 0.035	Y	0.15 – 0.33	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)	8.1	3.17 – 7.24	18,990	1,538.19	0.017 - 0.038	Y	0.26 - 0.45	Y
Forth Islands SPA								
Kittiwake	14.6	64.44 - 88.40	14,216	2,075.54	0.453 - 0.622	Y	0.35 - 0.42	Y
Gannet (Applicant Approach to macro-avoidance)	8.1	307.49 – 605.33	162,000	13,122.00	0.190 - 0.374	Y	4.33 - 7.86	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	648.70 – 946.54	162,000	13,122.00	0.400 - 0.584	Y	2.66 – 6.19	Y
Noss SPA								
Kittiwake	14.6	2.57 - 3.44	154	22.48	1.669 - 2.235	Y	0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Applicant Approach to macro-avoidance)	8.1	13.24 – 33.87	24,670	1,998.27	0.054 - 0.137	Y	0.30 – 0.71	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	15.18 – 35.81	24,670	1,998.27	0.062 - 0.145	Y	0.48 - 0.88	Y
St Abb's Head to Fast Castle SPA								
Kittiwake	14.6	267.26 - 339.18	11,992	1,750.83	2.229 - 2.828	Y	0.26 - 0.31	Y
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	1.98 - 2.65	378	55.19	0.523 - 0.700	Y	0.01	N
Gannet (Applicant Approach to macro-avoidance)	8.1	27.43 – 70.99	39,606	3,208.09	0.069 - 0.179	Y	0.43 – 1.03	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)	8.1	29.83 – 73.39	39,606	3,208.09	0.075 - 0.185	Y	0.58 - 1.18	Y
Handa SPA								
Kittiwake	14.6	1.51 - 3.05	9,178	1,339.99	0.016 - 0.033	Y	0.15 - 0.18	N
Shiant Isles SPA								
Kittiwake	14.6	0.07 - 0.09	2,318	338.43	0.003 - 0.004	N	0.02 - 0.03	N
Farne Islands SPA								
Kittiwake**	14.6	43.89 – 46.29	5,790	845.34	0.758 - 0.800	Y	0.07 - 0.09	N
Flamborough and Filey Coast SPA								
Gannet (Applicant Approach to macro-avoidance)**	8.1	139.56 - 299.96	31,588	2,558.63	0.442 - 0.950	Y	0.14 -0.35	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)**	8.1	273.09 - 433.49	31,588	2,558.63	0.865 - 1.372	Y	0.14 -0.35	Y

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y).

Table 5-18: In-combination impacts from distributional response for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	37.24 - 111.72	48,958	7,147.87	0.076 - 0.228	Y	1.49 - 4.48	Y
Guillemot	6.1	840.05 - 1,585.12	199,966	12,197.90	0.420 - 0.793	Y	117.79 - 209.20	Y
Razorbill	10.5	131.55 - 268.21	40,372.86	4,239.15	0.426 - 0.764	Y	12.66 - 21.75	Y
North Caithness Cliffs SPA								
Kittiwake	14.6	2.19 - 6.57	18,608	2,716.77	0.012 - 0.035	Y	0.20 - 0.61	Y
Guillemot	6.1	60.11 - 113.12	62,102	3,788.24	0.097 - 0.182	Y	17.20 - 32.68	Y
Razorbill	10.5	8.86 - 21.16	12,329.34	1,294.58	0.172 - 0.272	Y	1.43 - 2.46	Y
Puffin**	9.4	30.61 - 51.32	6,766	636.00	0.452 - 0.758	Y	0.86 - 1.45	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	5.53 - 16.58	27,344	3,992.22	0.020 - 0.061	Y	0.65 - 1.96	Y
Guillemot	6.1	46.68 - 103.10	47,719	2,910.84	0.098 - 0.216	Y	18.59 - 34.05	Y
Razorbill	10.5	7.80 - 19.83	8,801	924.11	0.189 - 0.325	Y	1.74 - 2.99	Y
Copinsay SPA								
Kittiwake	14.6	0.08 - 0.23	670	97.82	0.012 - 0.035	Y	0.01 - 0.02	N
Guillemot	6.1	0.25 - 0.50	1,312	80.02	0.019 - 0.038	Y	0.25 - 0.50	Y
Hoy SPA								
Kittiwake	14.6	0.04 - 0.13	608	88.77	0.007 - 0.022	Y	0.01 - 0.02	N
Guillemot	6.1	4.06 - 7.92	16,345	997.06	0.025 - 0.048	Y	2.81 - 5.73	Y
Puffin**	9.4	1.04 - 2.80	722	67.87	0.145 - 0.387	Y	0.19 - 0.37	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	2.41 - 7.23	27,094	3,955.72	0.009 - 0.027	Y	0.23 - 0.70	Y
Guillemot	6.1	35.80 – 91.72	40,763	2,486.54	0.088 - 0.225	Y	6.41 - 13.31	Y
Rousay SPA								
Kittiwake	14.6	0.16 - 0.49	962	140.45	0.017 - 0.051	Y	0.01 - 0.02	N
Guillemot	6.1	0.83 - 1.90	7,921	483.17	0.011 - 0.024	Y	0.83 - 1.90	Y
Marwick Head SPA								
Kittiwake	14.6	0.07 - 0.21	2,878	420.19	0.002 - 0.007	N	0.01 - 0.04	N
Guillemot	6.1	2.58 - 5.32	12,800	780.78	0.020 - 0.042	Y	1.47 - 3.27	Y
Calf of Eday SPA								
Kittiwake	14.6	0.07 - 0.21	324	47.30	0.022 - 0.066	Y	<0.01 - 0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Guillemot	6.1	0.80 - 1.82	7,402	451.53	0.011 - 0.025	Y	0.80 - 1.82	Y
West Westray SPA								
Kittiwake	14.6	1.21 - 3.64	8,004	1,168.58	0.015 - 0.045	Y	0.05 - 0.16	N
Guillemot	6.1	5.14 - 12.00	43,035	2,625.14	0.012 - 0.028	Y	4.23 - 9.87	Y
Razorbill	10.5	2.09 - 5.55	3,103.44	325.86	0.167 - 0.279	Y	0.10 - 0.20	Y
Fowlsheugh SPA								
Kittiwake	14.6	13.07 – 39.20	40,156	5,862.78	0.033 – 0.098	Y	0.17 - 0.51	Y
Cape Wrath SPA								
Kittiwake	14.6	0.09 - 0.27	6,656	971.78	0.001 - 0.004	N	0.02 - 0.05	N
Puffin**	9.4	0.18 - 0.30	428	40.23	0.042 - 0.071	Y	0.03 - 0.05	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sule Skerry and Sule Stack SPA								
Puffin**	9.4	13.72 - 22.99	95,484	8,975.50	0.014 - 0.024	Y	4.04 - 6.74	Y
Gannet	8.1	1.52 – 4.56	15,648	1,267.49	0.010 - 0.029	Y	0.19 - 0.57	Y
Guillemot	6.1	2.19 – 4.71	14,284	871.32	0.015 - 0.033	Y	1.25 - 3.01	Y
Fair Isle SPA								
Kittiwake	14.6	0.08 - 0.23	896	130.82	0.008 - 0.025	Y	<0.01 - 0.01	N
Razorbill	10.5	2.63 - 7.82	2,580	270.90	0.202 - 0.403	Y	0.08 - 0.17	N
Puffin**	9.4	12.93 - 24.78	13,332	1,253.21	0.097 - 0.186	Y	1.03 - 1.86	Y
Gannet	8.1	3.02 – 9.07	11,184	905.90	0.027 - 0.081	Y	0.16 - 0.47	Y
Guillemot	6.1	1.96 - 4.85	24,515	1,495.42	0.008 - <0.020	N	1.96 - 4.85	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Sumburgh Head SPA								
Kittiwake	14.6	0.02 - 0.06	691	100.89	0.003 - 0.009	N	<0.01	N
Foula SPA								
Kittiwake	14.6	0.03 - 0.09	1,193	174.18	0.003 – 0.008	N	<0.01 - 0.01	N
Puffin**	9.4	5.52 - 15.98	12,702	1,193.99	0.043 - 0.126	Y	0.67 – 1.43	Y
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	<0.01 - 0.01	1,424	207.90	<0.001 - 0.001	N	<0.01	N
Puffin**	9.4	0.11 - 0.19	5,668	532.79	0.002 - 0.003	N	0.10 - 0.17	N
Gannet	8.1	1.64 – 4.92	18,990	1,538.19	0.009 - 0.026	Y	0.09 - 0.28	Y
Forth Islands SPA								
Kittiwake	14.6	6.36 - 19.08	14,216	2,075.54	0.045 - 0.134	Y	0.04 - 0.11	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet	8.1	113.06 – 339.17	162,000	13,122.00	0.070 - 0.209	Y	1.77 - 5.30	Y
Puffin**	9.4	203.68 - 401.95	117,960	11,088.24	0.173 - 0.341	Y	9.70 – 19.03	Y
Noss SPA								
Kittiwake	14.6	0.05 - 0.14	154	22.48	0.029 - 0.088	Y	<0.01	N
Puffin**	9.4	0.18 - 0.55	1,194	112.24	0.015 - 0.046	Y	0.03 – 0.05	N
Gannet	8.1	9.28 – 27.85	24,670	1,998.27	0.036- 0.107	Y	0.20 - 0.61	Y
St Abb's Head to Fast Castle SPA								
Kittiwake	14.6	3.84 - 11.51	11,992	1,750.83	0.038 - 0.113	Y	0.03 - 0.08	N
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	0.03 - 0.10	378	55.19	0.009 - 0.028	Y	<0.01	N
Gannet	8.1	19.60 – 58.80	39,606	3,208.09	0.049 - 0.148	Y	0.30 - 0.90	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Handa SPA								
Kittiwake	14.6	0.02 - 0.05	9,178	1,339.99	<0.001 - 0.001	N	0.02 - 0.05	N
Shiant Isles SPA								
Kittiwake	14.6	<0.01 - 0.01	2,318	338.43	<0.001	N	<0.01 - 0.01	N
Farne Islands SPA								
Kittiwake***	14.6	0.73 - 2.20	5,790	845.34	0.013 - 0.038	Y	0.01 - 0.02	N
Flamborough and Filey Coast SPA								
Gannet***	8.1	79.29 - 237.88	31,588	2,558.63	0.251 - 0.753	Y	0.11 - 0.32	Y

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 8 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander for guillemot, razorbill, puffin and gannet. For kittiwake the same Scottish projects have been excluded, while all English projects have been excluded since these projects do not assess distributional response.

** The mean seasonal peaks for puffin have been presented with the August count included in the breeding season as per the Guidance Approach.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
*** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality. Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.								

Table 5-19: In-combination impacts from collision for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	181.47	48,958	7,147.87	0.371	Y	13.50	Y
Great black-backed gull**	11.5	15.02	532	61.18	2.823	Y	0.06	N
Herring gull**	16.6	19.84	6,600	1,095.60	0.301	Y	0.04	N
North Caithness Cliffs SPA								
Kittiwake	14.6	40.47	18,608	2,716.77	0.217	Y	1.85	Y
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	108.75	27,344	3,992.22	0.398	Y	5.90	Y
Herring gull**	16.6	1.36	1,108	183.93	0.122	Y	0.02	N
Copinsay SPA								
Kittiwake	14.6	2.18	670	97.82	0.325	Y	0.07	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Great black-backed gull**	11.5	4.35	97	11.16	4.486	Y	0.07	N
Hoy SPA								
Kittiwake	14.6	1.32	608	88.77	0.216	Y	0.06	N
Great black-backed gull**	11.5	1.38	775	89.13	0.178	Y	0.02	N
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	68.85	27,094	3,955.72	0.254	Y	2.10	Y
Herring gull**	16.6	6.14	4,536	752.98	0.135	Y	0.04	N
Rousay SPA								
Kittiwake	14.6	5.60	962	140.45	0.582	Y	0.07	N
Marwick Head SPA								
Kittiwake	14.6	1.97	2,878	420.19	0.068	Y	0.13	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Calf of Eday SPA								
Kittiwake	14.6	2.38	324	47.30	0.735	Y	0.03	N
West Westray SPA								
Kittiwake	14.6	38.60	8,004	1,168.58	0.482	Y	0.49	Y
Fowlsheugh SPA								
Kittiwake	14.6	92.29	40,156	5,862.78	0.230	Y	1.55	Y
Cape Wrath SPA								
Kittiwake	14.6	0.81	6,656	971.78	0.012	N	0.14	N
Sule Skerry and Sule Stack SPA								
Gannet (Guidance Approach to macro-avoidance)	8.1	1.56	15,648	1,267.49	0.010	N	0.36	Y
Fair Isle SPA								
Kittiwake	14.6	2.47	896	130.82	0.276	Y	0.03	N
Gannet (Guidance	8.1	1.69	11,184	905.90	0.015	N	0.26	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Approach to macro-avoidance)								
Sumburgh Head SPA								
Kittiwake	14.6	0.72	691	100.89	0.104	Y	0.01	N
Foula SPA								
Kittiwake	14.6	1.06	1,193	174.18	0.089	Y	0.02	N
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	0.08	1,424	207.90	0.006	N	0.01	N
Gannet (Guidance Approach to macro-avoidance)	8.1	0.90	18,990	1,538.19	0.005	N	0.17	N
Forth Islands SPA								
Kittiwake	14.6	26.58	14,216	2,075.54	0.187	Y	0.32	Y
Gannet (Guidance Approach to	8.1	387.07	162,000	13,122.00	0.239	Y	2.56	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Noss SPA								
Kittiwake	14.6	1.60	154	22.48	1.039	Y	0.01	N
Gannet (Guidance Approach to macro-avoidance)	8.1	3.82	24,670	1,998.27	0.015	N	0.27	Y
St Abb's Head to Fast Castle SPA								
Kittiwake	14.6	23.22	11,992	1,750.83	0.194	Y	0.24	Y
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	1.23	378	55.19	0.326	Y	0.01	N
Gannet (Guidance Approach to macro-avoidance)	8.1	6.55	39,606	3,208.09	0.017	N	0.28	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Handa SPA								
Kittiwake	14.6	0.24	9,178	1,339.99	0.003	N	0.14	N
Shiant Isles SPA								
Kittiwake	14.6	0.05	2,318	338.43	0.002	N	0.02	N
Farne Islands SPA								
Kittiwake**	14.6	16.60	5,790	845.34	0.287	Y	0.07	N
Flamborough and Filey Coast SPA								
Gannet (Guidance Approach to macro-avoidance)**	8.1	191.08	31,588	2,558.63	0.605	Y	0.03	N

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander for gannet. For kittiwake: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, Salamander, East Anglia THREE, East Anglia TWO, East Anglia ONE North, Hornsea Project Four OWF, Hornsea Project Three OWF, SEP & DEP, and Rampion 2 OWF have been excluded. There are no projects excluded for Herring gull since there are currently no Scottish or English projects compensating for this species.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Great black-backed gull in-combination totals are derived from West of Orkney OWF HRA and EIAR including the additional updates since submission with only West of Orkney excluded. ** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality. Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y). Where the threshold for PVA is met for collision or displacement alone for kittiwake and gannet PVA has only been run for these impacts combined.								

Table 5-20: In-combination impacts from distributional response and collision combined for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) when considering the 'Guidance Approach'.

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
East Caithness Cliffs SPA								
Kittiwake	14.6	177.22 - 293.19	48,958	7,147.87	0.362 - 0.599	Y	15.00 - 17.98	Y
North Caithness Cliffs SPA								
Kittiwake	14.6	28.94 - 47.04	18,608	2,716.77	0.156 - 0.253	Y	2.05 - 2.46	Y
Troup, Pennan and Lion's Heads SPA								
Kittiwake	14.6	94.13 - 125.33	27,344	3,992.22	0.344 - 0.458	Y	6.55 - 7.85	Y
Copinsay SPA								
Kittiwake	14.6	1.35 - 2.41	670	97.82	0.202 - 0.359	Y	0.08 - 0.10	N
Hoy SPA								
Kittiwake	14.6	0.82 - 1.45	608	88.77	0.135 - 0.238	Y	0.06 - 0.08	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Buchan Ness to Collieston Coast SPA								
Kittiwake	14.6	54.30 - 76.07	27,094	3,955.72	0.200 - 0.281	Y	2.33 - 2.80	Y
Rousay SPA								
Kittiwake	14.6	3.38 - 6.09	962	140.45	0.351 - 0.634	Y	0.08 - 0.09	N
Marwick Head SPA								
Kittiwake	14.6	1.33 - 2.18	2,878	420.19	0.046 - 0.076	Y	0.15 - 0.17	N
Calf of Eday SPA								
Kittiwake	14.6	1.44 - 2.59	324	47.30	0.445 - 0.800	Y	0.03 - 0.04	N
West Westray SPA								
Kittiwake	14.6	23.51 - 42.24	8,004	1,168.58	0.294 - 0.528	Y	0.54 - 0.65	Y
Fowlsheugh SPA								
Kittiwake	14.6	92.74 - 131.49	40,156	5,862.78	0.231 - 0.327	Y	1.72 - 2.06	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Cape Wrath SPA								
Kittiwake	14.6	0.67 - 1.08	6,656	971.78	0.010 - 0.016	N	0.16 - 0.19	N
Sule Skerry and Sule Stack SPA								
Gannet (Applicant Approach to macro-avoidance)	8.1	2.00 – 5.05	15,648	1,267.49	0.013 - 0.032	N	0.30 – 0.68	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	3.08 – 6.12	15,648	1,267.49	0.020 - 0.039	Y	0.55 - 0.93	Y
Fair Isle SPA								
Kittiwake	14.6	1.50 - 2.70	896	130.82	0.168 - 0.301	Y	0.04	N
Gannet (Applicant Approach to	8.1	3.93 – 9.97	11,184	905.90	0.035 - 0.089	Y	0.24 – 0.56	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
macro-avoidance)								
Gannet (Guidance Approach to macro-avoidance)	8.1	4.71 – 10.76	11,184	905.90	0.042 - 0.096	Y	0.41 - 0.73	Y
Sumburgh Head SPA								
Kittiwake	14.6	0.45 - 0.77	691	100.89	0.065 - 0.112	Y	0.01 - 0.02	N
Foula SPA								
Kittiwake	14.6	0.64 - 1.15	1,193	174.18	0.054 - 0.096	Y	0.02	N
North Rona and Sula Sgeir SPA								
Kittiwake	14.6	0.05 - 0.09	1,424	207.90	0.004 - 0.006	N	0.02	N
Gannet (Applicant Approach to macro-avoidance)	8.1	2.03 – 5.31	18,990	1,538.19	0.011 - 0.028	Y	0.15 – 0.33	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)	8.1	2.54 – 5.82	18,990	1,538.19	0.013 - 0.031	Y	0.26 - 0.45	Y
Forth Islands SPA								
Kittiwake	14.6	28.75 - 45.66	14,216	2,075.54	0.202 - 0.321	Y	0.35 - 0.42	Y
Gannet (Applicant Approach to macro-avoidance)	8.1	237.34 – 463.45	162,000	13,122.00	0.147 - 0.286	Y	4.33 - 7.86	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	500.13 – 726.24	162,000	13,122.00	0.309 - 0.448	Y	2.66 – 6.19	Y
Noss SPA								
Kittiwake	14.6	0.96 - 1.74	154	22.48	0.623 - 1.127	Y	0.01	N

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Applicant Approach to macro-avoidance)	8.1	11.82 – 30.39	24,670	1,998.27	0.048 - 0.123	Y	0.30 – 0.71	Y
Gannet (Guidance Approach to macro-avoidance)	8.1	13.10 – 31.67	24,670	1,998.27	0.053 - 0.128	Y	0.48 - 0.88	Y
St Abb's Head to Fast Castle SPA								
Kittiwake	14.6	22.45 - 34.73	11,992	1,750.83	0.187 - 0.290	Y	0.26 - 0.31	Y
Hermaness, Saxa Vord and Valla Field SPA								
Kittiwake	14.6	0.74 - 1.33	378	55.19	0.195 - 0.353	Y	0.01	N
Gannet (Applicant Approach to macro-avoidance)	8.1	24.66 – 63.86	39,606	3,208.09	0.062 - 0.161	Y	0.43 – 1.03	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)	8.1	26.15 – 65.35	39,606	3,208.09	0.066 - 0.165	Y	0.58 - 1.18	Y
Handa SPA								
Kittiwake	14.6	0.21 - 0.29	9,178	1,339.99	0.002 - 0.003	N	0.15 - 0.18	N
Shiant Isles SPA								
Kittiwake	14.6	0.04 - 0.06	2,318	338.43	0.002	N	0.02 - 0.03	N
Farne Islands SPA								
Kittiwake**	14.6	15.83 - 17.55	5,790	845.34	0.273 - 0.303	Y	0.07 - 0.09	N
Flamborough and Filey Coast SPA								
Gannet (Applicant Approach to macro-avoidance)**	8.1	138.07 - 296.65	31,588	2,558.63	0.437 - 0.939	Y	0.14 -0.35	Y

Species	Adult Mortality Rate (%) (Horswill and Robinson, 2015[9])	Annual Apportioned Predicted Mortality*	Population Size (Breeding Adults)	Annual Background Mortality	Change in Average Survival Rate (% Point Change)	Threshold Reached for Undertaking PVA (≥0.02 % Point Change)	Proposed Development (Offshore) Alone Annual Contribution to Mortalities	Threshold Reached for Undertaking PVA In-combination (Proposed Development (Offshore) Alone Annual Contribution to Mortalities ≥0.2)
Gannet (Guidance Approach to macro-avoidance)**	8.1	270.37 - 428.96	31,588	2,558.63	0.856 - 1.358	Y	0.14 -0.35	Y

* Annual Apportioned Predicted Mortality was calculated using the updated in-combination totals for seabird species developed by the NEEOG. This dataset was provided to NatureScot on 08 July 2025 for review and NatureScot approval of the use of these values was received via email on 21 August 2025. The following projects have been excluded for the all projects excluding consented projects that have made a commitment to compensation scenario: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, and Salamander for gannet. For kittiwake: Berwick Bank OWF, Green Volt OWF, West of Orkney OWF, Salamander, East Anglia THREE, East Anglia TWO, East Anglia ONE North, Hornsea Project Four OWF, Hornsea Project Three OWF, SEP & DEP, and Rampion 2 OWF have been excluded for collision. For distributional response, the same Scottish projects have been excluded, while all English projects have been excluded since these projects do not assess distributional response.

** Species highlighted have only been assessed during the non-breeding season only (as outlined in Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and in agreement with NatureScot, email received on 07 August 2025). As such, the Proposed Development (Offshore) alone annual contribution to mortalities presented are for the non-breeding season only. The Proposed Development (Offshore) alone annual contribution to mortalities (non-breeding only) were then added to the breeding and non-breeding impacts of other plans and projects to give the annual apportioned predicted mortality.

Note, cells where both the threshold is reached for undertaking PVA (≥0.02; marked as Y in the table) and threshold for undertaking PVA in-combination is reached (project alone annual contribution to mortalities (≥0.2; marked by Y in the table) indicate the sites and features taken through for in-combination PVA (i.e., where both columns are marked with a Y).

5.5.3.1 In-combination assessments undertaken using the Applicant Approach (Table 5-9 to Table 5-14) and the Guidance Approach (Table 5-15 to Table 5-20) are presented for the two in-combination scenarios outlined within paragraph 5.5.1.2.

5.5.3.2 Where assessments undertaken for features and designated sites presented within Table 5-9 to Table 5-20, indicated impacts to be below the guidance threshold recommended for use of in-combination-level PVA (i.e., both the 0.02 percentage point change in adult survival rate and 0.2 project alone annual mortality), it can be concluded that the level of predicted impact from the Proposed Development (Offshore) would not materially contribute to any in-combination effect. **Therefore, the potential for an AEoSI to the conservation objectives of all features and sites considered for the Proposed Development (Offshore) in-combination during the operation and maintenance phase can be ruled out under the Applicant Approach and the Guidance Approach for these scenarios.**

5.5.3.3 Where assessments undertaken for features and designated sites presented within Table 5-9 to Table 5-20 indicated impacts to be above the guidance threshold recommended for use of in-combination-level PVA (i.e., both the 0.02 percentage point change in adult survival rate and 0.2 project alone annual mortality), further assessment of these features and designated sites is undertaken using PVA. In order to avoid repetition PVA outputs are presented within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) and updated assessment outcomes are outlined within Section 7.

5.5.3.4 As discussed in consultation with NatureScot (07 August 2025), all updated in-combination assessment outcomes presented in Section 7 are based on the following in-combination scenario:

- All projects excluding projects that have made a commitment to compensation (plus the Proposed Development (Offshore)), outlined in Table 5-12 to Table 5-14 for the Applicant Approach and Table 5-18 to Table 5-20 for the Guidance Approach.

6 Population Viability Analysis

6.1 Overview

6.1.1.1 Since the submission of the Caledonia North and Caledonia South consent applications, requested updates have been made to HRA screening and apportioning for the Proposed Development (Offshore) (as outlined in Section 1 and detailed within Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)).

6.1.1.2 In line with the Request for Additional Information from MD-LOT (17 July 2025) and NatureScot's representations following submission (letter dated 27 March 2025), updated PVA has been has been carried out based on the following updates (as outlined in Section 1 and detailed within Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)):

- PVA has been undertaken to account for the changes in predicted impacts due to updates made to HRA Screening/HRA apportionment for the Proposed Development (Offshore); and
- Cumulative and in-combination PVA has also been undertaken separately for Caledonia North (Volume 8, Appendix 17: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia North)) and Caledonia South (Volume 8, Appendix 18: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia South)) as requested and updated assessments are presented for the Proposed Development (Offshore) (within Section 7), Caledonia North (Volume 8, Appendix 5: Ornithology Additional Information Report (Caledonia North)) and Caledonia South (Volume 8, Appendix 6: Ornithology Additional Information Report (Caledonia South)).

6.2 PVA Methodology and Results

6.2.1.1 Proposed Development (Offshore) alone PVA scenarios were modelled where impacts exceeded both the threshold for assessment (0.02 percentage point change in adult survival rate) (NatureScot, 2023[8]) and the impact change threshold (where the difference in the impacted adults apportioned to an SPA annually between submission impacts and updated impacts are greater than 0.5 of a bird as agreed in consultation with NatureScot, consultation meetings dated 04 June 2025 and 07 August 2025).

6.2.1.2 In-combination PVA scenarios were modelled where impacts exceeded both the threshold for undertaking PVA (0.02 percentage point change in adult survival rate) in line with NatureScot Guidance Note 11 (NatureScot, 2023[8]) and where the project alone annual contribution to in-combination

mortalities are greater than 0.2 in line with NatureScot advice given to previous projects such as GreenVolt and Cenos OWFs.

6.2.1.3 Three sets of PVA outputs are presented where applicable for each species:

- Proposed Development (Offshore) Alone Applicant Approach and Guidance Approach where relevant;
- In-combination impacts for all projects where information is available (plus the Proposed Development (Offshore)) for the Applicant Approach and Guidance Approach where relevant; and
- In-combination impacts for all projects excluding consented projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) (in this instance commitment to compensation refers to projects which have been awarded consent on the basis that any and all adverse effects on seabirds would be fully compensated) for the Applicant Approach and Guidance Approach where relevant.

6.2.1.4 It is important to note that as discussed in consultation (07 August 2025) all updated in-combination assessment outcomes presented in Section 7 are based on the second scenario outlined above (i.e. all projects excluding projects that have made a commitment to compensation (plus the Proposed Development (Offshore)).

6.2.1.5 Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF) provides further detail on how the PVA analysis was undertaken and presents PVA outputs for features and designated sites where PVA thresholds were met both project alone and in-combination with other plans and projects. Updated assessment outcomes are outlined within Section 7.

7 Conclusion and Summary of Outputs

7.1.1.1 Since the submission of the Caledonia North and Caledonia South consent applications, MD-LOT has requested supplementary information from the Applicant. The Request for Additional Information was to provide clarity on a number of queries in relation to assessments on offshore and intertidal ornithology.

7.1.1.2 In line with the Request for Additional Information from MD-LOT (17 July 2025), NatureScot's representations following submission (letter dated 27 March 2025) and consultation undertaken with NatureScot and MD-LOT since, HRA screening and apportionment has been carried out for the Proposed Development (Offshore) (as outlined in Section 1 and detailed within Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF) and Volume 8, Appendix 10: Ornithology Apportioning Technical Report (Caledonia OWF)):

7.1.1.3 Within this appendix, updated impacts for distributional responses and collision have been assessed (Section 5) for the Proposed Development (Offshore) alone (Section 5.4) and in-combination with other plans and projects (Section 5.5).

7.1.1.4 Sites and features assessed for impacts (outlined within Volume 8, Appendix 7: Ornithology HRA Screening (Caledonia OWF)) from the Proposed Development (Offshore) alone and in-combination with other plans and projects representing the 35-year PVA (Section 6) outputs are summarised in Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF).

7.1.1.5 Updated assessment conclusions for the Proposed Development (Offshore) alone and in-combination with other plans and projects are presented in Table 7-1.

7.1.1.6 It should be noted that following updated HRA screening, apportionment and assessment, no AEoSI is concluded alone or in-combination for puffin at Sule Skerry and Sule Stack SPA (for which AEoSI was concluded in the RIAA). This change is due to the substantial reduction in puffin apportioned to that site under the updated assessments presented in this document.

7.1.1.7 As outlined in Table 7-1, no AEoSI was concluded for all sites designated for offshore and intertidal ornithology for the Proposed Development (Offshore) alone; however, the following sites concluded AEoSI in-combination with other plans and projects:

- **East Caithness Cliffs SPA for guillemot; distributional response effects in-combination with other plans and projects when considering the level of potential effect predicted from the Guidance approach;**
- **East Caithness Cliffs SPA for razorbill; distributional response effects in-combination with other plans and projects when**

considering the level of potential effect predicted from the Guidance approach;

- **East Caithness Cliffs SPA for kittiwake; combined collision risk distributional response effects in-combination with other plans and projects;**
- **North Caithness Cliffs SPA for puffin; distributional response effects in-combination with other plans and projects when considering the level of potential effect predicted from the Guidance approach;**
- **North Caithness Cliffs SPA for kittiwake; combined collision risk distributional response effects in-combination with other plans and projects;**
- **Forth Islands SPA for gannet; combined collision risk and distributional response effects in-combination with other plans and projects;**
- **Buchan Ness to Collieston Coast SPA for kittiwake; combined collision risk and distributional response effects in-combination with other plans and projects (AEoSI could not be ruled out);**
- **Troup, Pennan and Lion's Head SPA for kittiwake; combined collision risk and distributional response effects in-combination with other plans and projects; and**
- **Troup, Pennan and Lion's Head SPA for guillemot; distributional response effects in-combination with other plans and projects when considering the level of potential effect predicted from the Guidance approach.**

Table 7-1: Updated assessment conclusions for the Proposed Development (Offshore) from distributional responses and collision during the operational and maintenance phase to relevant designated sites and features.

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
HRA Proposed Development (Offshore) Alone				
East Caithness Cliffs SPA	Herring gull	Collision (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Great black-backed gull	Collision (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Guillemot	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4) Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.118% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Razorbill	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4) Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.061% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Kittiwake	Distributional responses and collision combined	No AEoSI	Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.042% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
North Caithness Cliffs SPA	Guillemot	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4) Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.059% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Razorbill	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4) Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.022% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Puffin	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4)

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.035% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Troup, Pennan and Lion's Heads SPA	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Razorbill	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Herring gull	Collision (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Copinsay SPA	Great black-backed gull	Collision (non-breeding season only)	No AEoSI	Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.089% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. As such a level of effect would be indistinguishable from natural fluctuations, no potential for an AEoSI is concluded.
	Guillemot	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.4) Guidance Approach reached the threshold for PVA: PVA outputs predicted a 0.045% reduction in the growth rate annually at most (Volume 8, Appendix 16: Ornithology Population Viability Assessment (PVA) Technical Report (Caledonia OWF)), such a level of impact would have a limited effect on the overall trend or natural fluctuations in the population. Therefore, when considering population trends and the status of the SPA outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4), no potential for an AEoSI is concluded.
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Hoy SPA	Great black-backed gull	Collision (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Buchan Ness to Collieston Coast SPA	Guillemot	Distributional responses	Not assessed previously	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.4) Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below:

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ CGR (reduction in the growth rate annually): 0.036%; ▪ CPS: 1.287%; ▪ The stable population growth rate of 0.0% (mean annual % change since 2000; Burnell *et al*., 2023[1]); and ▪ The favourable maintained condition of the feature.
	Herring gull	Collision (non-breeding season only)	Not assessed previously	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Rousay SPA	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Marwick Head SPA	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Calf of Eday SPA	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
West Westray SPA	Guillemot	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Razorbill	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Fowlsheugh SPA	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Cape Wrath SPA	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Sule Skerry and Sule Stack SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Guillemot	Distributional responses	Not assessed previously	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.4) Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below:

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ CGR (reduction in the growth rate annually): 0.024%; ▪ CPS: 0.854%; ▪ The decrease in population growth rate of up to 1.4% (mean annual % change since 2000; Burnell *et al.*, 2023[1]); and ▪ The favourable maintained condition of the feature.
	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
Fair Isle SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Guillemot	Distributional responses	Not assessed previously	No AEoSI (as outlined in Section 5.4)
	Razorbill	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Sumburgh Head SPA	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Foula SPA	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
North Rona and Sula Sgeir SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
Forth Islands SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Puffin	Distributional responses	Not assessed previously	No AEoSI (as outlined in Section 5.4)
Noss SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Puffin	Distributional responses	No AEoSI	No AEoSI (as outlined in Section 5.4)
St Abb's Head to Fast Castle SPA	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Farne Islands SPA	Kittiwake	Distributional responses and collision combined (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
Hermaness, Saxa Vord and Valla Field SPA	Gannet	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Flamborough and Filey Coast SPA	Gannet	Distributional responses and collision combined (non-breeding season only)	No AEoSI	No AEoSI (as outlined in Section 5.4)
Handa SPA	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
Shiant Isles SPA	Kittiwake	Distributional responses and collision combined	No AEoSI	No AEoSI (as outlined in Section 5.4)
In-combination**				
East Caithness Cliffs SPA	Herring gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Great black-backed gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Guillemot	Distributional responses	**AEoSI when considering the upper range of the Guidance Approach**	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.175%; ▪ CPS: 6.111%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.473% - 0.891%; ▪ CPS: 15.673% - 27.561%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Razorbill	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below:

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ CGR (reduction in the growth rate annually): 0.169%; ▪ CPS: 5.910%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.390% - 0.793%; ▪ CPS: 13.086% - 24.980%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Kittiwake	Distributional responses and collision combined	**AEoSI**	Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.428% - 0.708%; ▪ CPS: 14.304% - 22.547%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
North Caithness Cliffs SPA	Guillemot	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.041%; ▪ CPS: 1.465%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.110% - 0.205%; ▪ CPS: 5.465% - 9.969%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Razorbill	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.046%; ▪ CPS: 1.633%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.070% - 0.181%; ▪ CPS: 2.503% - 6.209%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Puffin	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario.

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.543% - 0.900%; ▪ CPS: 17.844% - 27.749%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is two birds at most (2.05 – 2.46). ▪ CGR (reduction in the growth rate annually): 0.183% - 0.301%; ▪ CPS: 6.412% - 10.314%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The unfavourable condition of the feature.
Troup, Pennan and Lion's Heads SPA	Guillemot	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.055%; ▪ CPS: 1.977%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4). Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.110% - 0.242%; ▪ CPS: 3.867% - 8.386%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The unfavourable recovering condition of the feature.
	Razorbill	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.073%; ▪ CPS: 2.377%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable recovered condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.102% - 0.257%; ▪ CPS: 3.549% - 8.751%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable recovered condition of the feature.
	Herring gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Kittiwake	Distributional responses and collision combined	**AEoSI**	Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.407% - 0.543%; ▪ CPS: 13.646% - 17.817%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ The unfavourable declining condition of the feature.
Copinsay SPA	Great black-backed gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Guillemot	Distributional responses	No AEoSI	Applicant Approach and lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.046%; ▪ CPS: 1.562%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Hoy SPA	Great black-backed gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Guillemot	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.028% - 0.053%; ▪ CPS: 0.982% - 1.926%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Puffin	Distributional responses	No in-combination assessment presented	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.184% - 0.468%; ▪ CPS: 6.250% - 15.347%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Buchan Ness to Collieston Coast SPA	Guillemot	Distributional responses	No in-combination assessment presented	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.064%; ▪ CPS: 2.274%; ▪ When considering the stable population growth rate of 0.0% (mean annual % change since 2000; Burnell *et al.*, 2023[1]); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.99% - 0.253%; ▪ CPS: 4.887% - 12.116%;

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ When considering the stable population growth rate of 0.0% (mean annual % change since 2000; Burnell *et al*., 2023[1]); and ▪ The favourable maintained condition of the feature.
	Herring gull	Collision (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Kittiwake	Distributional responses and collision combined	**AEoSI**	Guidance Approach reached the threshold for PVA: **AEoSI cannot be ruled out** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.237% - 0.332%; ▪ CPS: 8.183% - 11.281%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The unfavourable condition of the feature.
Rousay SPA	Guillemot	Distributional responses	No in-combination assessment presented	Applicant Approach and lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.028%; ▪ CPS: 0.975%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Marwick Head SPA	Guillemot	Distributional responses	No AEoSI	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.022% - 0.047%; ▪ CPS: 0.772% - 1.667%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Calf of Eday SPA	Guillemot	Distributional responses	No in-combination assessment presented	Applicant Approach and lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.028%; ▪ CPS: 1.016%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
West Westray SPA	Guillemot	Distributional responses	No AEoSI	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.032%; ▪ CPS: 1.148%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Razorbill	Distributional responses	No in-combination assessment presented	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.088% - 0.221%; ▪ CPS: 3.319% - 7.544%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	Guidance Approach reached the threshold for PVA: No AEoSI out based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is less than one bird. ▪ CGR (reduction in the growth rate annually): 0.346% - 0.622%; ▪ CPS: 11.787% - 20.151%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
Fowlsheugh SPA	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is two birds at most (1.72 – 2.06). ▪ CGR (reduction in the growth rate annually): 0.273% - 0.386%; ▪ CPS: 9.395% - 13.045%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
Cape Wrath SPA	Puffin	Distributional responses	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Sule Skerry and Sule Stack SPA	Gannet	Distributional responses and collision combined	No in-combination assessment presented	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.048%; ▪ CPS: 1.709%;

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Guillemot	Distributional responses	No in-combination assessment presented	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is three birds at most (1.25 – 3.01). ▪ CGR (reduction in the growth rate annually): 1.042%; ▪ CPS: 41.365%; ▪ When considering population trends outlined in Burnell *et al*., 2023[1]; and ▪ The favourable maintained condition of the feature.
	Puffin	Distributional responses	**AEoSI when considering the Guidance Approach**	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.027%; ▪ CPS: 1.003%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
Fair Isle SPA	Gannet	Distributional responses and collision combined	No in-combination assessment presented	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.040%; ▪ CPS: 1.435%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.050% - 0.102%; ▪ CPS: 1.784% - 3.691%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Guillemot	Distributional responses	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Razorbill	Distributional responses	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Puffin	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.041%; ▪ CPS: 1.538%; and

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4). Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.116% - 0.222%; ▪ CPS: 4.053% - 7.566%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Sumburgh Head SPA	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Foula SPA	Puffin	Distributional responses	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.043%; ▪ CPS: 1.612%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4). Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.054% - 0.146%; ▪ CPS: 1.943% - 5.158%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
North Rona and Sula Sgeir SPA	Gannet	Distributional responses and collision combined	No in-combination assessment presented	Applicant Approach and the lower end of the Guidance Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Upper end of the Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.035%; ▪ CPS: 1.263%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Puffin	Distributional responses	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Forth Islands SPA	Gannet	Distributional responses and collision combined	**AEoSI**	Applicant Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.173%; ▪ CPS: 6.066%;

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
				▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: **AEoSI** based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.366% - 0.531%; ▪ CPS: 12.358% - 17.453%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is less than one bird. ▪ CGR (reduction in the growth rate annually): 0.241% - 0.378%; ▪ CPS: 8.288% - 12.750%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
	Puffin	Distributional responses	No in-combination assessment presented	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.085%; ▪ CPS: 3.000%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.205% - 0.403%; ▪ CPS: 7.0976% - 13.542%; ▪ When considering population trends outlined in Burnell *et al*., 2023[1]; and ▪ The favourable maintained condition of the feature.
Noss SPA	Gannet	Distributional responses and collision combined	No in-combination assessment presented	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.056%; ▪ CPS: 1.959%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.065% - 0.154%; ▪ CPS: 2.283% - 5.372%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
	Puffin	Distributional responses	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)

Designated Site	Species	Impact	Assessment Conclusion at Submission	Updated Assessment Conclusion*
St Abb's Head to Fast Castle SPA	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ The Proposed Development (Offshore) alone annual contribution to mortalities is less than one bird. ▪ CGR (reduction in the growth rate annually): 0.224% - 0.342%; ▪ CPS: 7.690% - 11.582%; and ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
Farne Islands SPA	Kittiwake	Distributional responses and collision combined (non-breeding season only)	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Hermaness, Saxa Vord and Valla Field SPA	Gannet	Distributional responses and collision combined	No AEoSI	Applicant Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.074%; ▪ CPS: 2.640 %; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ CGR (reduction in the growth rate annually): 0.077% - 0.195%; ▪ CPS: 2.718% - 6.803%; ▪ When considering population trends outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4); and ▪ The favourable maintained condition of the feature.
	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Flamborough and Filey Coast SPA	Gannet	Distributional responses and collision combined (non-breeding season only)	No in-combination assessment presented	Applicant Approach: No AEoSI (as outlined in Section 5.5) based on the all projects excluding projects that have made a commitment to compensation in-combination scenario. Guidance Approach reached the threshold for PVA: No AEoSI based on the information outlined below: ▪ The Proposed Development (Offshore) only has the potential for functional linkage to the Flamborough and Filey Coast SPA during the non-breeding season only. As such, this species has only been assessed during the non-breeding season (in agreement with NatureScot, via email dated 07 August 2025); ▪ The Proposed Development (Offshore) alone annual contribution (i.e. during the breeding season only for this assessment) to mortalities is less than one bird (0.14 – 0.35); and ▪ When considering population trends and the condition of the feature outlined in Application Documents 13 and 14: Report to Inform Appropriate Assessment (Part 4).
Handa SPA	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)
Shiant Isles SPA	Kittiwake	Distributional responses and collision combined	No in-combination assessment presented	No AEoSI (as outlined in Section 5.5)

* Information relating to population trends and the status of an SPA is only presented for features of designated sites where this information was not presented within the Caledonia North and Caledonia South consent applications.

** Conclusions for in-combination assessments are based upon the following scenario: All projects excluding projects that have made a commitment to compensation (plus the Proposed Development (Offshore)) (in this instance commitment to compensation refers to projects which have been awarded consent on the basis that any and all adverse effects on seabirds would be fully compensated).

Annex 1 – Seasonal Proposed Development (Offshore) Alone Impacts

Kittiwake

Annex Table 1: Kittiwake project alone impacts for the Proposed Development (Offshore) from distributional responses seasonally when considering the 'Guidance Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)	
	30%; 1%	30%; 3%	30%; 1%	30%; 3%
East Caithness Cliffs SPA	1.41	4.23	0.08	0.25
North Caithness Cliffs SPA	0.18	0.55	0.02	0.06
Troup, Pennan and Lion's Heads SPA	0.62	1.86	0.03	0.09
Copinsay SPA	0.01	0.02	<0.01	<0.01
Hoy SPA	0.01	0.02	<0.01	<0.01
Buchan Ness to Collieston Coast SPA	0.21	0.62	0.03	0.08
Rousay SPA	0.01	0.04	<0.01	0.01
Marwick Head SPA	<0.01	<0.01	<0.01	<0.01
Calf of Eday SPA	<0.01	0.01	<0.01	0.01
West Westray SPA	0.03	0.08	0.03	0.08
Fowlsheugh SPA	0.15	0.45	0.02	0.06
Cape Wrath SPA	0.02	0.05	<0.01	<0.01
Fair Isle SPA	<0.01	0.01	<0.01	<0.01
Sumburgh Head SPA	<0.01	<0.01	<0.01	<0.01
Foula SPA	<0.01	<0.01	<0.01	<0.01
North Rona and Sula Sgeir SPA	<0.01	<0.01	<0.01	<0.01
Forth Islands SPA	0.03	0.09	0.01	0.02
Noss SPA	<0.01	<0.01	<0.01	<0.01
St Abb's Head to Fast Castle SPA	0.02	0.06	0.01	0.02

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)	
	30%; 1%	30%; 3%	30%; 1%	30%; 3%
Hermaness, Saxa Vord and Valla Field SPA	<0.01	<0.01	<0.01	<0.01
Handa SPA	0.02	0.05	<0.01	<0.01
Shiant Isles SPA	<0.01	0.01	<0.01	<0.01
Farne Islands SPA	-	-	0.01	0.02

Annex Table 2: Kittiwake project alone impacts for the Proposed Development (Offshore) from collision seasonally when considering the 'Guidance Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality	Non-breeding Season Apportioned Predicted Mortality
East Caithness Cliffs SPA	12.73	0.77
North Caithness Cliffs SPA	1.66	0.19
Troup, Pennan and Lion's Heads SPA	5.61	0.29
Copinsay SPA	0.06	0.01
Hoy SPA	0.05	0.01
Buchan Ness to Collieston Coast SPA	1.86	0.24
Rousay SPA	0.04	0.03
Marwick Head SPA	0.12	0.01
Calf of Eday SPA	0.01	0.01
West Westray SPA	0.26	0.23
Fowlsheugh SPA	1.37	0.18
Cape Wrath SPA	0.14	<0.01
Fair Isle SPA	0.02	0.01
Sumburgh Head SPA	0.01	<0.01
Foula SPA	0.01	0.01
North Rona and Sula Sgeir SPA	0.01	<0.01
Forth Islands SPA	0.26	0.06
Noss SPA	<0.01	0.01
St Abb's Head to Fast Castle SPA	0.17	0.07
Hermaness, Saxa Vord and Valla Field SPA	<0.1	0.01
Handa SPA	0.14	<0.01
Shiant Isles SPA	0.02	<0.01
Farne Islands SPA	-	0.07

Guillemot

Annex Table 3: Guillemot project alone impacts for the Proposed Development (Offshore) from distributional responses seasonally when considering the 'Guidance Approach' and 'Applicant Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)			Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		
	50%; 1%	60%; 3%	60%; 5%	50%; 1%	60%; 1%	60%; 3%
East Caithness Cliffs SPA	30.04	108.13	180.21	8.05	9.66	28.99
North Caithness Cliffs SPA	3.95	14.20	23.67	2.50	3.00	9.00
Troup, Pennan and Lion's Heads SPA	4.52	16.28	27.13	1.92	2.31	6.92
Copinsay SPA	0.05	0.18	0.31	0.05	0.06	0.19
Hoy SPA	0.56	2.02	3.36	0.66	0.79	2.37
Buchan Ness to Collieston Coast SPA	1.23	4.44	7.40	1.64	1.97	5.91
Rousay SPA	0.13	0.45	0.75	0.32	0.38	1.15
Marwick Head SPA	0.24	0.85	1.42	0.52	0.62	1.86
Calf of Eday SPA	0.12	0.45	0.74	0.30	0.36	1.07
West Westray SPA	0.59	2.12	3.54	1.76	2.11	6.33
Sule Skerry and Sule Stack SPA	0.16	0.56	0.94	0.58	0.69	2.07
Fair Isle SPA	0.22	0.78	1.30	0.99	1.18	3.55

Razorbill

Annex Table 4: Razorbill project alone impacts for the Proposed Development (Offshore) from distributional responses seasonally when considering the 'Guidance Approach' and 'Applicant Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)			Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		
	50%; 1%	60%; 3%	60%; 5%	50%; 1%	60%; 1%	60%; 3%
East Caithness Cliffs SPA	3.38	12.17	20.28	0.41	0.49	1.47
North Caithness Cliffs SPA	0.38	1.36	2.27	0.05	0.06	0.19
Troup, Pennan and Lion's Heads SPA	0.46	1.67	2.79	0.06	0.07	0.20
West Westray SPA	0.02	0.08	0.14	0.02	0.02	0.06
Fair Isle SPA	0.01	0.04	0.07	0.03	0.03	0.10

Puffin

Annex Table 5: Puffin project alone impacts for the Proposed Development (Offshore) from distributional responses seasonally when considering the 'Guidance Approach' and 'Applicant Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)			Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		
	50%; 1%	60%; 3%	60%; 5%	50%; 1%	60%; 1%	60%; 3%
North Caithness Cliffs SPA	0.08	0.85	1.42	0.02	0.01	0.03
Hoy SPA	0.01	0.16	0.26	0.07	0.04	0.11
Cape Wrath SPA	<0.01	0.03	0.05	<0.01	<0.01	<0.01
Sule Skerry and Sule Stack SPA	0.38	4.04	6.73	0.01	<0.01	0.01
Fair Isle SPA	0.09	0.92	1.53	0.21	0.11	0.33
Foula SPA	0.04	0.44	0.73	0.44	0.23	0.70
North Rona and Sula Sgeir SPA	0.01	0.10	0.17	<0.01	<0.01	<0.01
Forth Islands SPA	0.71	7.55	12.58	4.03	2.15	6.45
Noss SPA	<0.01	0.02	0.03	0.02	0.01	0.02

Gannet

Annex Table 6: Gannet project alone impacts for the Proposed Development (Offshore) from distributional responses seasonally when considering the 'Guidance Approach' and 'Applicant Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)		Non-breeding Season Apportioned Predicted Mortality (Displacement Rate; Mortality Rate)	
	70%; 1%	70%; 3%	70%; 1%	70%; 3%
Sule Skerry and Sule Stack SPA	0.19	0.56	<0.01	0.01
Fair Isle SPA	0.13	0.38	0.03	0.09
North Rona and Sula Sgeir SPA	0.08	0.25	0.01	0.03
Forth Islands SPA	1.23	3.70	0.54	1.61
Noss SPA	0.13	0.38	0.08	0.23
Hermaness, Saxa Vord and Valla Field SPA	0.11	0.34	0.19	0.56
Flamborough and Filey Coast SPA	-	-	0.11	0.32

Annex Table 7: Gannet project alone impacts for the Proposed Development (Offshore) from collision seasonally when considering the 'Guidance Approach' and 'Applicant Approach'.

Designated Site	Breeding Season Apportioned Predicted Mortality		Non-breeding Season Apportioned Predicted Mortality	
	Applicant Approach to macro-avoidance	Guidance Approach to macro-avoidance	Applicant Approach to macro-avoidance	Guidance Approach to macro-avoidance
Sule Skerry and Sule Stack SPA	0.11	0.36	<0.01	<0.01
Fair Isle SPA	0.07	0.25	0.01	0.01
North Rona and Sula Sgeir SPA	0.05	0.16	<0.01	<0.01
Forth Islands SPA	0.72	2.39	0.17	0.17
Noss SPA	0.07	0.25	0.02	0.02
Hermaness, Saxa Vord and Valla Field SPA	0.07	0.22	0.06	0.06
Flamborough and Filey Coast SPA	-	-	0.03	0.03

Great Black-backed Gull

Annex Table 8: Great black-backed gull project alone impacts for the Proposed Development (Offshore) from collision seasonally.

Designated Site	Non-breeding Season Apportioned Predicted Mortality
East Caithness Cliffs SPA	0.06
Copinsay SPA	0.07
Hoy SPA	0.02
Note, species assessed for the non-breeding season only, approach agreed with NatureScot via email on 07 August 2025.	

Herring Gull

Annex Table 9: Herring gull project alone impacts for the Proposed Development (Offshore) from collision seasonally.

Designated Site	Non-breeding Season Apportioned Predicted Mortality
East Caithness Cliffs SPA	0.04
Buchan Ness to Collieston Coast SPA	0.04
Troup, Pennan and Lion's Head SPA	0.02
Note, species assessed for the non-breeding season only, approach agreed with NatureScot via email on 07 August 2025.	

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