



Code: UKCAL-CWF-CON-EIA-RPT-00008-1007

Volume 8 Additional Information

Appendix 7: Ornithology HRA Screening (Caledonia OWF)

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Code	UKCAL-CWF-CON-EIA-RPT-00008-1007
Revision	Issued
Date	30 September 2025

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Acronyms and Abbreviations

CRM	Collision Risk Modelling
DE	Design Envelope
EIAR	Environmental Impact Assessment Report
HRA	Habitats Regulations Appraisal
HVAC	High Voltage Alternating Current
INTOG	Innovation and Targeted Oil and Gas
MD-LOT	Marine Directorate – Licensing Operations Team
MD-SEDD	Marine Directorate – Science Evidence Data and Digital
MPA	Marine Protected Area
NAF	Nocturnal Activity Factor
NETS	National Electricity Transmission System
OECC	Offshore Export Cable Corridor
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SMP	Sectoral Marine Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WTG	Wind Turbine Generator

1 Introduction

1.1 Background

1.1.1.1 This appendix presents the updated Habitats Regulations Appraisal (HRA) Screening Report for the Caledonia Offshore Wind Farm (OWF), referred to as the Proposed Development (Offshore), and forms part of the addendum submitted in response to the Marine Directorate – Licensing Operations Team (MD-LOT) request for Additional Information (received 17 July 2025).

1.1.1.2 Background to the Proposed Development (Offshore) and the consent applications for Caledonia North and Caledonia South are presented within the original consent application (Volume 1, Chapter 5: Proposed Development Phasing) and summarised within the covering addendum document (Volume 8: Caledonia Offshore Wind Farm EIAR and HRA Addendum).

1.2 Purpose of the Report

1.2.1.1 Following submission of the Caledonia North and Caledonia South consent applications, including supporting documents and the consultation comments, MD-LOT requested additional information from the Applicant. The additional information was requested in order to provide clarity on a number of queries in relation to assessments on offshore and intertidal ornithology.

1.2.1.2 Based on NatureScot's representation (dated 27 March 2025), MD-LOT requested the following additional information (dated 17 July 2025) with regards to HRA Screening:

"As detailed in the RIAA Part 3, section 9.1.1.4, the Applicant has used the geometric centre as a screening distance. This is incorrect and should only be used at the apportioning stage as it ensures there is even apportionment across sites, as explained in our Interim Guidance on Apportioning. It should not be applied as a form of screening"; and

"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."

- 1.2.1.3 As such, the purpose of this updated HRA Screening Report is to present updates made to the HRA screening process in line with NatureScot representation to inform the HRA process for the Proposed Development (Offshore). HRA screening has been undertaken separately for Caledonia North (Volume 8, Appendix 8: Caledonia North HRA Screening Report) and Caledonia South (Volume 8, Appendix 9: Caledonia South HRA Screening Report).
- 1.2.1.4 The report provides information to support the screening of the offshore elements associated with the Proposed Development (Offshore) as undertaken by the competent authority, in this case MD-LOT (MS-LOT at the time of the original HRA Screening Report submitted during Scoping) on behalf of the Scottish Ministers. The aim of the screening exercise is to test whether no likely significant effect (LSE) on European sites (UK National Site Network) and Ramsar sites of nature conservation importance (as designated under the Ramsar Convention), either alone or in-combination with other plans or projects, can be demonstrated. This step in the process and associated reporting requirements are further described in the following sections.
- 1.2.1.5 The updated screening outcomes presented within this report were presented to NatureScot via email on 17 July 2025, who confirmed that the findings of the updated HRA screening for the Proposed Development (Offshore) were appropriate via email on 07 August 2025.

2 Screening for the Proposed Development (Offshore)

2.1 Approach to Caledonia North, Caledonia South and Proposed Development (Offshore)

- 2.1.1.1 Discrete screening exercises have been undertaken for Caledonia North, Caledonia South and the Proposed Development (Offshore), using the methods detailed in the following sections. This document deals with screening for the Proposed Development (Offshore) to ensure that the interaction between two aspects of the project are considered together, with the screening processes for Caledonia North (Volume 8, Appendix 8) and Caledonia South (Volume 8, Appendix 9) presented in separate documents.
- 2.1.1.2 It is highlighted that the number of Wind Turbine Generators (WTGs) as part of the Proposed Development (Offshore), and thus assuming the development of both Caledonia North and Caledonia South, will not exceed 140 (noting this is less than the sum of maximum number of WTGs per application).

2.2 Selection of Sites and Qualifying Features

- 2.2.1.1 Initial site selection for offshore and intertidal ornithology identified all European and national site network sites (SPAs and Ramsar sites) with designated ornithology features (both breeding/non-breeding seabirds and waterbirds) located within a range defined by the criteria outlined in Table 2-1.
- 2.2.1.2 The bird species likely to occur within the Proposed Development (Offshore) boundaries, including the Caledonia OWF (i.e., array area) and Offshore Export Cable Corridor (OECC), can be grouped into a series of categories for this high-level screening process. This categorisation is based on biological relationships related to breeding biology, feeding, habitat use and migratory pathways. The categories are:
- Breeding seabirds;
 - Breeding waterbirds;
 - Non-breeding seabirds; and
 - Wintering waterbirds.

Table 2-1: Screening site selection criteria for offshore and intertidal ornithology.

Criteria	Definition	Relevant Distance/Range to Determine Connectivity with Qualifying Features
Criteria 1A	European and Ramsar sites which have physical overlap with the Caledonia OWF.	Overlap between designated site and the Caledonia OWF
Criteria 1B	European and Ramsar sites which have physical overlap with Caledonia OECC.	Overlap between designated site and Caledonia OECC
Criteria 2	<p>European and Ramsar sites that occur within a defined range of effect (in this case mean of the maximum foraging range +1 Standard Deviation, hereafter referred to as MMFR+1SD), the Proposed Development (Offshore) using a two-step approach to screening as outlined by NatureScot within a consultation workshop on 04 June 2025. Firstly, using the distance of each colony from the Proposed Development (Offshore) measured as the straight line distance from the nearest edge of the Caledonia OWF (i.e., the Array Area) to the nearest edge of the colony. Secondly, using the distance of each colony from the Proposed Development (Offshore) measured as the distance from the nearest edge of the Caledonia OWF to the nearest edge of the colony, taking the shortest at sea distance route (i.e., around land distance) possible (in line with approaches described in NatureScot 2018 Interim Guidance to apportioning of predicted impacts). This second step takes into account species that are known to avoid commuting over land.</p> <p>This criterion only identifies sites with receptors that are interest features in the breeding season since it is only at that part of the year that a numeric range can be stated based on foraging distances from the designated site. Consequently, only breeding features of relevant SPAs/Ramsars are listed in Table 2-2.</p>	MMFR+1SD, Woodward <i>et al.</i> (2019 ¹) provides the most up-to-date collation of seabird foraging ranges based on multiple individuals from numerous study colonies. Table 2-2 provides an overview of Woodward <i>et al.</i> (2019 ¹) foraging ranges.

Criteria	Definition	Relevant Distance/Range to Determine Connectivity with Qualifying Features
Criteria 3	European and Ramsar sites which occur within range of the maximum expected extent of displacement/disturbance due to Proposed Development (Offshore) activities .	Intertidal: 0.5km Offshore: 4km (seaducks) 10km (divers) (ranges based on advice from Joint Statutory Nature Conservation Bodies, 2022 ²)
Criteria 4	Designated sites for breeding and non-breeding interest features that might pass through the Caledonia OWF on migration or in winter. Relevant breeding SPAs for each species from colonies located along the North-eastern seaboard of the UK and non-breeding SPA features that are located within the migratory pathways identified by Wright <i>et al.</i> (2012 ³) and other relevant information sources). These SPAs (and Ramsar sites where relevant) have been carried forward to the determination of no LSE stage if a pathway has been identified.	North-eastern seaboard of the UK. Those located within the migratory pathways identified by Wright <i>et al.</i> (2012 ³), etc.

Table 2-2: Mean-maximum foraging range, standard deviation and mean-maximum foraging range +1SD of UK breeding seabird species used to screen against Criterion 2 (Woodward *et al.*, 2019).

Species	Mean-max Foraging Range (km)	Standard Deviation (km)	Mean-max +1SD (km)
Arctic tern	25.7	14.8	40.5
Arctic skua*	62.5	17.7	80.2
Atlantic puffin	137.1	128.3	265.4
Black-headed gull	18.5	-	18.5
Kittiwake	156.1	144.5	300.6
Common eider	21.5	-	21.5
Common guillemot	73.2 (55.5)**	80.5 (39.7)**	153.7 (95.2)**
Common gull	50	-	50
Common tern	18.0	8.9	26.9
Cormorant	25.6	8.3	33.9
European shag	13.2	10.5	23.7
European storm-petrel	336	-	336
Great black-backed gull	73	-	73
Great skua	443.3	487.9	931.2
Herring gull	58.8	26.8	85.6
Lesser black-backed gull	127	109	236
Little tern	5	-	5
Manx shearwater	1,346.8	1,018.7	2,365.5
Mediterranean gull	20	-	20
Northern fulmar	542.3	657.9	1,200.2
Northern gannet ***	315.2	194.2	509.4
Razorbill	88.7 (73.8)**	75.9 (48.4)**	164.6 (122.2)**
Red-throated diver	9	-	9
Roseate tern	12.6	10.6	23.2
Sandwich tern	34.3	23.2	57.5

Species	Mean-max Foraging Range (km)	Standard Deviation (km)	Mean-max +1SD (km)
<p>* Arctic skua foraging range is taken from Thaxter <i>et al.</i> (2012⁴).</p> <p>** Distances in brackets exclude data from Fair Isle where foraging range may have been unusually high as a result of reduced prey availability during the study year. (Woodward <i>et al.</i>, 2019¹). These foraging ranges were used for sites south of the Pentland Firth for guillemot and razorbill as per the NatureScot Guidance Note 3 (NatureScot, 2023⁵).</p> <p>*** In line with NatureScot Guidance Note 3, site specific maximum foraging ranges were used to screen in connectivity to Forth Islands SPA, Grassholm SPA and St Kilda SPA. Forth Islands SPA and St Kilda SPA were within site specific maximum foraging ranges. As such Forth Islands has been assessed for gannet; however, St Kilda SPA was screened out due to the lack of expected connectivity when considering tracking data and literature evidence (as outlined within Application Document 13: Caledonia North Report to Inform Appropriate Assessment and Application Document 14: Caledonia South Report to Inform Appropriate Assessment).</p>			

2.3 Screening Distances

2.3.1.1 Table 2-3 presents a comparison of the two-step approach to screening as outlined by NatureScot within a consultation workshop on 04 June 2025:

- Step 1: using the **straight-line distance** of each site from the Proposed Development (Offshore) measured as the distance from the nearest edge of the Caledonia OWF (i.e., Array Area) to the nearest edge of the site; and
- Step 2: using the distance of each site from the Proposed Development (Offshore) measured as the distance from the nearest edge of the Caledonia OWF to the nearest edge of the site, taking the shortest at sea distance route possible (i.e., **around land distance**).

2.4 Screening Outcomes

2.4.1.1 Table 2-4 presents the updated ornithology screening outcomes for the Proposed Development (Offshore) in line with Step 2 of the HRA screening process outlined above (i.e., around land distances measured as the distance from the nearest edge of the Caledonia OWF to the nearest edge of the site). These updated screening outcomes are presented alongside the original screening. Potential effects that will be re-assessed are also outlined (Table 2-4).

Table 2-3: Comparison of screening of SPA and Ramsar sites within straight line and around land distance to the Caledonia OWF.

Designated Site	Feature(s) to consider for Assessment of No LSE	Foraging Range (MMFR \pm 1 SD)	Distance to Caledonia OWF (km) (straight line, nearest edge to nearest edge)	Straight Line Distance (In/Out)	Distance to the Caledonia OWF (km) (around land, nearest edge to nearest edge)	Around Land Distance (In/Out)
East Caithness Cliffs SPA	Herring gull	85.6	21.3	In	22.1	In
	Great black-backed gull*	73.0	21.3	In	22.1	In
	Guillemot	95.2	21.3	In	22.1	In
	Razorbill	122.2	21.3	In	22.1	In
	Kittiwake	300.6	21.3	In	22.1	In
Moray Firth SPA	Common scoter; Eider; Goldeneye; Great northern diver; Long-tailed duck; Red-breasted merganser; Red-throated diver; Scaup; Slavonian grebe; Velvet scoter; Shag	-	29.4	In	29.9	In
North Caithness Cliffs SPA	Guillemot	95.2	31.2	In	31.3	In
	Razorbill*	122.2	31.2	In	31.3	In
	Puffin*	265.4	31.2	In	31.3	In
	Kittiwake*	300.6	31.2	In	31.3	In
Troup, Pennan and Lon's Heads SPA	Guillemot	95.2	32.3	In	33.1	In
	Razorbill*	122.2	32.3	In	33.1	In
	Herring gull*	85.6	32.3	In	33.1	In
	Kittiwake*	300.6	32.3	In	33.1	In
Pentland Firth Islands SPA	Arctic tern	-	-	-	-	-
Moray and Nairn Coast SPA	Bar-tailed godwit; Greylag goose; Pink-footed goose; Redshank; Dunlin*; Oystercatcher*; Red-breasted merganser*; Wigeon*	-	-	-	-	-
Moray and Nairn Coast Ramsar	Greylag goose; Pink-footed goose; Redshank	-	-	-	-	-
Copinsay SPA	Great black-backed gull*	73	54.7	In	55.6	In
	Guillemot*	153.7	54.7	In	55.6	In
	Kittiwake*	300.6	54.7	In	55.6	In
Hoy SPA	Great skua	-	-	-	-	-
	Great black-backed gull*	73.0	55.6	In	56.5	In
	Guillemot*	153.7	55.6	In	56.5	In

Designated Site	Feature(s) to consider for Assessment of No LSE	Foraging Range (MMFR \pm 1 SD)	Distance to Caledonia OWF (km) (straight line, nearest edge to nearest edge)	Straight Line Distance (In/Out)	Distance to the Caledonia OWF (km) (around land, nearest edge to nearest edge)	Around Land Distance (In/Out)
	Puffin*	265.4	55.6	In	56.5	In
	Kittiwake*	300.6	55.6	In	56.5	In
Buchan Ness to Collieston Coast SPA	Guillemot*	95.2	68.7	In	71.7	In
	Herring gull*	85.6	68.7	In	71.7	In
	Kittiwake*	300.6	68.7	In	71.7	In
Auskerry SPA	European storm-petrel	-	-	-	-	-
Dornoch Firth and Loch Fleet SPA	Bar-tailed godwit; Greylag goose; Osprey; Wigeon	-	-	-	-	-
Dornoch Firth and Loch Fleet Ramsar	Bar-tailed godwit; Greylag goose; Wigeon	-	-	-	-	-
Rousay SPA	Guillemot*	153.2	88.6	In	93.2	In
	Kittiwake*	300.6	88.6	In	93.2	In
Marwick Head SPA	Guillemot	153.7	89.4	In	92.9	In
	Kittiwake*	300.6	89.4	In	92.9	In
Calf of Eday SPA	Guillemot*	153.7	92.4	In	92.4	In
	Kittiwake*	300.6	92.4	In	92.4	In
Cromarty Firth Ramsar	Bar-tailed godwit; Greylag goose; Common tern*; Dunlin*; Knot*; Oystercatcher*; Red-breasted merganser*; Redshank*; Scaup*; Wigeon*	-	-	-	-	-
Cromarty Firth SPA	Bar-tailed godwit; Greylag goose; Whooper swan	-	-	-	-	-
West Westray SPA	Guillemot	153.7	99.7	In	103.3	In
	Razorbill*	164.6	99.7	In	103.3	In
	Kittiwake*	300.6	99.7	In	103.3	In
Inner Moray Firth SPA	Bar-tailed godwit; Greylag goose; Red-breasted merganser; Redshank; Curlew*; Goldeneye*; Oystercatcher*; Scaup*; Teal*; Wigeon*	-	-	-	-	-
Inner Moray Firth Ramsar	Bar-tailed godwit; Greylag goose; Red-breasted merganser; Redshank	-	-	-	-	-

Designated Site	Feature(s) to consider for Assessment of No LSE	Foraging Range (MMFR \pm 1 SD)	Distance to Caledonia OWF (km) (straight line, nearest edge to nearest edge)	Straight Line Distance (In/Out)	Distance to the Caledonia OWF (km) (around land, nearest edge to nearest edge)	Around Land Distance (In/Out)
Fowlsheugh SPA	Razorbill	122.2	118.3	In	137.8	Out
	Kittiwake	300.6	118.3	In	137.8	In
Cape Wrath SPA	Puffin*	265.4	124.5	In	145.1	In
	Kittiwake*	300.6	124.5	In	145.1	In
Sule Skerry and Sule Stack SPA	Gannet	509.4	125.6	In	129.4	In
	Guillemot*	153.7	125.6	In	129.4	In
	Puffin	265.4	125.6	In	129.4	In
	European storm-petrel *	-	-	-	-	-
Fair Isle SPA	Gannet*	509.4	134.5	In	136.3	In
	Guillemot	153.7	134.5	In	136.3	In
	Razorbill*	164.6	134.5	In	136.3	In
	Puffin*	265.4	134.5	In	136.3	In
	Great skua*	-	-	-	-	-
	Kittiwake*	300.6	134.5	In	136.3	In
Sumburgh Head SPA	Kittiwake*	300.6	178.4	In	180.7	In
Foula SPA	Great skua	-	-	-	-	-
	Puffin	265.4	192.3	In	196.7	In
	Kittiwake*	300.6	192.3	In	196.7	In
North Rona and Sula Sgeir SPA	Gannet	509.4	196.6	In	208.2	In
	European storm-petrel	-	-	-	-	-
	Kittiwake*	300.6	196.6	In	208.2	In
	Puffin*	265.4	196.6	In	208.2	In
Mousa SPA	European storm-petrel	-	-	-	-	-
Forth Islands SPA	Gannet	590.0	199.0	In	224.4	In
	Kittiwake*	300.6	199.0	In	224.4	In
	Razorbill*	122.2	199.0	Out	224.4	Out
	Puffin	265.4	199.0	In	224.4	In
Noss SPA	Gannet	509.4	212.4	In	215.4	In
	Great skua	-	-	-	-	-
	Kittiwake*	300.6	212.4	In	215.4	In
	Puffin*	265.4	212.4	In	215.4	In

Designated Site	Feature(s) to consider for Assessment of No LSE	Foraging Range (MMFR \pm 1 SD)	Distance to Caledonia OWF (km) (straight line, nearest edge to nearest edge)	Straight Line Distance (In/Out)	Distance to the Caledonia OWF (km) (around land, nearest edge to nearest edge)	Around Land Distance (In/Out)
St Abb's Head to Fast Castle SPA	Kittiwake*	300.6	229.2	In	250.0	In
Ronas Hill - North Roe and Tingon SPA	Great skua	-	-	-	-	-
Fetlar SPA	Great skua	-	-	-	-	-
Farne Islands SPA	Kittiwake*	300.6	266.3	In	279.2	In
Hermaness, Saxa Vord and Valla Field SPA	Gannet	509.4	277.3	In	287.1	In
	Great skua	-	-	-	-	-
	Kittiwake*	300.6	277.3	In	287.1	In
Flamborough and Filey Coast SPA	Gannet	509.4	436.0	In	451.5	In
Handa SPA	Kittiwake	300.6	142.7	In	182.3	In
	Great skua	-	-	-	-	-
Shiant Isles SPA	Kittiwake	300.6	215.9	In	263.7	In
St Kilda SPA	Great skua	-	-	-	-	-
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	Sandwich tern	-	-	-	-	-
"*" Identifies species which are part of an assemblage feature only. "-" Identifies species for which no updates for assessments are required in line with NatureScot representations (27/03/2025) following the submission of the Caledonia North and Caledonia South applications.						

Table 2-4: Updated screening of SPA and Ramsar sites using around land distances with a pathway of interaction with the Proposed Development (Offshore) (shown alongside original screening submitted). Potential effects that will be re-assessed are also outlined.

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
East Caithness Cliffs SPA	22.1	Herring gull	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase.
	22.1	Great black-backed gull*	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase.
	22.1	Guillemot	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	22.1	Razorbill	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	22.1	Kittiwake	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Moray Firth SPA	29.9	Common scoter; Eider; Goldeneye; Great northern diver; Long-tailed duck; Red-breasted merganser; Red-throated diver; Scaup; Slavonian grebe; Velvet scoter; Shag	In	In	Updated assessment of potential disturbance and displacement from vessels within the Moray Firth SPA during the construction phase and operational phase separately has been undertaken as requested within NatureScot's representation (dated 27 March 2025) (Volume 8, Appendices 19 and 20).
North Caithness Cliffs SPA	31.3	Guillemot	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	31.3	Razorbill*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	31.3	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	31.3	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Troup, Pennan and Lion's Heads SPA	33.1	Guillemot	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	33.1	Razorbill*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	33.1	Herring gull*	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase.
	33.1	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Pentland Firth Islands SPA	37.9	Arctic tern	In	In (no updates to assessment required)	No updates to assessment required.

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
Moray and Nairn Coast SPA	54.1	Bar-tailed godwit; Greylag goose; Pink-footed goose; Redshank; Dunlin*; Oystercatcher*; Red-breasted merganser*; Wigeon*	In	In (no updates to assessment required)	No updates to assessment required.
Moray and Nairn Coast Ramsar	54.1	Greylag goose; Pink-footed goose; Redshank	In	In (no updates to assessment required)	No updates to assessment required.
Copinsay SPA	55.6	Great black-backed gull*	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase
	55.6	Guillemot*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	55.6	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Hoy SPA	56.5	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
	56.5	Great black-backed gull*	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase
	56.5	Guillemot*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	56.5	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	56.5	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Buchan Ness to Collieston Coast SPA	71.7	Guillemot*	Out	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	71.7	Herring gull*	Out	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for collision risk during the operation and maintenance phase
	71.7	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Auskerry SPA	72.2	European storm-petrel	In	In (no updates to assessment required)	No updates to assessment required.
Dornoch Firth and Loch Fleet SPA	77.4	Bar-tailed godwit; Greylag goose; Osprey; Wigeon	In	In (no updates to assessment required)	No updates to assessment required.

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
Dornoch Firth and Loch Fleet Ramsar	77.4	Bar-tailed godwit; Greylag goose; Wigeon	In	In (no updates to assessment required)	No updates to assessment required.
Rousay SPA	93.2	Guillemot*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	93.2	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Marwick Head SPA	92.9	Guillemot	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	92.9	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Calf of Eday SPA	92.4	Guillemot*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	92.4	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Cromarty Firth Ramsar	101.1	Bar-tailed godwit; Greylag goose; Common tern*; Dunlin*; Knot*; Oystercatcher*; Red-breasted merganser*; Redshank*; Scaup*; Wigeon*	In	In (no updates to assessment required)	No updates to assessment required.
Cromarty Firth SPA	101.1	Bar-tailed godwit; Greylag goose; Whooper swan	In	In (no updates to assessment required)	No updates to assessment required.
West Westray SPA	103.3	Guillemot	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	103.3	Razorbill*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	103.3	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Inner Moray Firth SPA	100.8	Bar-tailed godwit; Greylag goose; Red-breasted merganser; Redshank; Curlew*; Goldeneye*; Oystercatcher*; Scaup*; Teal*; Wigeon*	In	In (no updates to assessment required)	No updates to assessment required.
Inner Moray Firth Ramsar	100.8	Bar-tailed godwit; Greylag goose; Red-breasted merganser; Redshank	In	In (no updates to assessment required)	No updates to assessment required.

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
Fowlsheugh SPA	137.8	Razorbill	In (non-breeding season only)	Out	The Caledonia OWF is outside the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (73.8±48.4km). As such, this species is screened out and no reassessment will be undertaken.
	137.8	Kittiwake	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Cape Wrath SPA	145.1	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	145.1	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Sule Skerry and Sule Stack SPA	129.4	Gannet	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	129.4	Guillemot*	Out	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	129.4	Puffin	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	129.4	European storm-petrel *	In	In (no updates to assessment required)	No updates to assessment required.
Fair Isle SPA	136.3	Gannet*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	136.3	Guillemot	Out	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	136.3	Razorbill*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	136.3	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	136.3	Great skua*	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
	136.3	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Sumburgh Head SPA	180.7	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Foula SPA	196.7	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
					they were content with conclusions made within the assessment and confirmed that no further action was required).
	196.7	Puffin	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
	196.7	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
North Rona and Sula Sgeir SPA	208.2	Gannet	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	208.2	European storm-petrel	In	In (no updates to assessment required)	No updates to assessment required
	208.2	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	208.2	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
Mousa SPA	199.4	European storm-petrel	In	In (no updates to assessment required)	No updates to assessment required
Forth Islands SPA	224.4	Gannet	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	224.4	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	224.4	Razorbill*	In	Out	The Caledonia OWF is outside the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (73.8±48.4km). As such, this species is screened out and no reassessment will be undertaken.
	224.4	Puffin	Out	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.
Noss SPA	215.4	Gannet	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	215.4	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
	215.4	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	215.4	Puffin*	In	In	Reassessment will be undertaken for this species for distributional responses during the operation and maintenance phase.

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
St Abb's Head to Fast Castle SPA	250.0	Kittiwake*	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Ronas Hill - North Roe and Tingon SPA	256.4	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
Fetlar SPA	267.2	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
Farne Islands SPA	279.2	Kittiwake*	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for distributional responses as well as collision risk during the operation and maintenance phase.
Hermaness, Saxa Vord and Valla Field SPA	287.1	Gannet	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	287.1	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
	287.1	Kittiwake*	In (non-breeding season only)	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
Flamborough and Filey Coast SPA	451.5	Gannet	In (non-breeding season only)	In (non-breeding season only)	Reassessment will be undertaken for this species in the non-breeding season only for distributional responses as well as collision risk during the operation and maintenance phase.
Handa SPA	182.3	Kittiwake	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
	182.3	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).
Shiant Isles SPA	263.7	Kittiwake	In	In	Reassessment will be undertaken for this species for distributional responses as well as collision risk during the operation and maintenance phase.
St Kilda SPA	376.1	Great skua	In (breeding season only)	In (no updates to assessment required)	No updates to assessment required as discussed within consultation with NatureScot (meeting dated 04 June 2025, within which NatureScot stated that they were content with conclusions made within the assessment and confirmed that no further action was required).

Designated Site	Distance to Caledonia OWF (km)	Feature(s) to consider for Assessment of No LSE	Original Screening (In/Out)	Updated Screening (In/Out)	Potential Effects (if Screened In)
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	80.93	Sandwich tern	In	In (no updates to assessment required)	No updates to assessment required
** Identifies species which are part of an assemblage feature only.					

3 Overview

3.1.1.1 This Section provides an overview of the updates made to HRA screening for the Proposed Development (Offshore):

- Table 3-1 outlines all updates made to screening for the Proposed Development (Offshore) following the submission of the original screening as part of the Caledonia North and Caledonia South applications (submitted in November 2024); and
- Table 3-2 presents NatureScot feedback following the submission of Caledonia North and Caledonia South applications outlining additional sites/ species NatureScot requested for the inclusion within updated screening alongside comments regarding how these comments have been taken forwards within the updated screening for the Proposed Development (Offshore).

3.1.1.2 The updated screening outcomes presented within this appendix were presented to NatureScot on 17 July 2025, and NatureScot confirmed that they were content that the updated HRA screening for the Proposed Development (Offshore) was appropriate via email on 07 August 2025

Table 3-1: Overview of all updates made to screening for the Proposed Development (Offshore).

Site	Species	Original screening (In/Out)	Updated screening (In/Out)
Buchan Ness to Collieston Coast SPA	Guillemot	Out	In
	Herring gull	Out	In (non-breeding only)
Fowlsheugh SPA	Razorbill	In (non-breeding only)	Out
Sule Skerry and Sule Stack SPA	Guillemot	Out	In
Fair Isle SPA	Guillemot	Out	In
Forth Islands SPA	Puffin	Out	In
	Razorbill	In	Out

Table 3-2: NatureScot feedback following the submission of Caledonia North and Caledonia South applications outlining additional sites/ species requested for the inclusion within updated screening, alongside Applicant's comments regarding how these comments have been taken forwards within the updated screening for the Proposed Development (Offshore).

Site	Distance to Caledonia OWF (km)	Foraging range (MMFR+1SD)	Species	Original screening (In/Out)	Updated screening (In/Out)	Applicant's Comment
Buchan Ness to Collieston Coast SPA	71.7	95.2	Guillemot	Out	In	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (55.5±39.7km). As such, guillemot has now been screened in for Buchan Ness to Collieston Coast SPA.
	71.7	85.6	Herring gull	Out	In (non-breeding only)	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (58.8±26.8km). As such, herring gull has been added for Buchan Ness to Collieston Coast SPA during the non-breeding season only (September to March), as no flying herring gull were recorded at the Caledonia OWF during the breeding season.
Copinsay SPA	55.6	73.0	Great black-backed gull	In (non-breeding only)	In (non-breeding only)	This species was previously screened in for the non-breeding season only for Copinsay SPA. This will be kept the same for updated assessments as no great black-backed gull were recorded at the Caledonia OWF during the breeding season.
Hoy SPA	56.5	73.0	Great black-backed gull	In (non-breeding only)	In (non-breeding only)	This species was previously screened in for the non-breeding season only for Hoy SPA. This will be kept the same for updated assessments as no great black-backed gull were recorded at the Caledonia OWF during the breeding season.

Site	Distance to Caledonia OWF (km)	Foraging range (MMFR+1SD)	Species	Original screening (In/Out)	Updated screening (In/Out)	Applicant's Comment
Fowlsheugh SPA	137.8	95.2	Guillemot	Out	Out	The Caledonia OWF is outside the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (55.5±39.7km). As such, guillemot has been screened out for Fowlsheugh SPA.
	137.8	85.6	Herring gull	Out	Out	The Caledonia OWF is outside the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (58.8±26.8km). As such, herring gull has been screened out for Fowlsheugh SPA.
Sule Skerry and Sule Stack SPA	129.4	153.7	Guillemot	Out	In	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (73.2±80.5km). As such, guillemot has now been screened in for Sule Skerry and Sule Stack SPA.
Fair Isle SPA	136.3	153.7	Guillemot	Out	In	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (73.2±80.5km). As such, guillemot has now been screened in for Fair Isle SPA.

Site	Distance to Caledonia OWF (km)	Foraging range (MMFR+1SD)	Species	Original screening (In/Out)	Updated screening (In/Out)	Applicant's Comment
Forth Islands SPA	224.4	236.0	Lesser black-backed gull	Out	Out	Due to low numbers recorded within the 24 months of DAS, these species have been excluded from the Collision Risk Modelling (CRM) assessment (in line with the original assessment). The 24 baseline surveys recorded two flying lesser black-backed gull. As such, lesser black-backed gull has been screened out for all SPAs, this approach approved by NatureScot on 07 August 2025.
	224.4	265.4	Puffin	Out	In	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (119.6±131.2km). As such, puffin has now been screened in for Forth Islands SPA.
Hermaness, Saxa Vord and Valla Field SPA	287.1	300.6	Kittiwake	In (non-breeding only)	In	The Caledonia OWF is within the MMFR+1SD (Woodward <i>et al.</i> , 2019 ¹) for this feature (156.1±144.5km). As such, kittiwake has now been screened in for Hermaness, Saxa Vord and Valla Field SPA for both the breeding and non-breeding season.

References

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² Joint Statutory Nature Conservation Bodies (2022) 'Joint SNCB Interim Displacement Advice Note. Advice on how to present assessment information on the extent and potential consequences of seabird displacement from Offshore Wind Farm (OWF) developments. January 2017 (updated January 2022 to include reference to the Joint SNCB Interim Advice on the Treatment of Displacement for Red-Throated Diver)'. Available at: <https://data.jncc.gov.uk/data/9aecb87c-80c5-4cfb-9102-39f0228dcc9a/joint-sncb-interim-displacement-advice-note-2022.pdf> (Accessed 14/08/2025)

³ Wright, L.J., Ross-Smith, V.H., Massimino, D., Dadam, D., Cook, A.S.C.P. and Burton, N.H.K. (2012) 'Assessing the risk of offshore windfarm development to migratory birds designated as features of UK Special Protection Areas (and other Annex I species)'. Strategic Ornithological Support Services. Project SOSS-05. BTO Research Report No. 592.

⁴ Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W. and Burton, N.H.K. (2012) 'Seabird foraging ranges as a preliminary tool for identifying Marine Protected Areas'. Biological Conservation 156: 53-61.

⁵ NatureScot (2023) 'Guidance Note 3: Guidance to support Offshore Wind applications: Marine Birds - Identifying theoretical connectivity with breeding site Special Protection Areas using breeding season foraging ranges'. Available at: <https://www.nature.scot/doc/guidance-note-3-guidance-support-offshore-wind-applications-marine-birds-identifying-theoretical> (Accessed 14/08/2025).

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