
Deucheran Hill 2 Wind Farm

Appendix 8.5: Habitats Regulations Appraisal - Ornithology



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1 INTRODUCTION

1.1 Background

- 1.1.1 This appendix has been prepared to accompany **Volume 1, Chapter 8: Ornithology** of the Environmental Impact Assessment Report (EIAR) for Deucheran Hill 2 Wind Farm (the ‘Proposed Development’). Further relevant information is also available in **Volume 3, Appendix 8.1: Ornithology**.
- 1.1.2 This appendix has been produced to inform a Habitats Regulations Appraisal (HRA) with respect to whether the Proposed Development has potential to cause likely significant effects (LSE) on any European sites of nature conservation importance and if so whether those effects could result in any adverse effects on the integrity of those European sites.

1.2 Overview of the Proposed Development

- 1.2.1 The Proposed Development site (‘the Application Site Boundary, as shown in **Volume 2a, Figure 4.1 Proposed Site Layout**’) lies approximately 7 km north-west of Carradale on the Kintyre Peninsula, Argyll and Bute, and comprises of the existing Deucheran Hill Wind Farm and associated surrounding forestry as well as a section of the Kintyre Way to the west which connects to the A83 at Killeen.
- 1.2.2 The original Deucheran Hill Wind Farm, which has been operational since December 2001, comprises of 9 turbines with a maximum tip height of 93 m. Deucheran Hill Wind Farm is due to be decommissioned in 2026 and the Proposed Development would be a repowering of this project.
- 1.2.3 For the purpose of this assessment the Application Site Boundary comprises the wind farm site (hereafter ‘the Proposed Wind Farm Development Area’) and the ‘Existing access track’ in order to make distinction between the distances of these separate features from the relevant European designated sites and the activities associated with them which could give rise to LSE upon them and/or their qualifying features. The different parts of the Application Site Boundary are shown in **Volume 2a, Figure 4.1 Proposed Site Layout**.
- 1.2.4 A detailed description of all infrastructure and works required for the Proposed Development is provided in **Volume 1, Chapter 4: Project Description** of the EIAR. The Proposed Development comprises the following key elements:
- Up to 14 wind turbines with a mixed tip height of up to 220 m (current candidate turbine model specifications have hub heights of up to 135 m and rotor diameters of up to 170 m);
 - 220 m tip height: T2, T3, and T13;
 - 200 m tip height: T1, T4, T8 and T10;
 - 180 m tip height: T5, T6, T7, T9, T11, T12 and T14.
 - Turbine foundations and hardstandings;
 - External transformer housing;
 - Crane pads;
 - Access tracks;
 - Underground electricity cables;
 - Permanent anemometry mast;

- Temporary borrow pits;
- Temporary construction and storage compounds; and ancillary infrastructure;
- Temporary batching plant;
- Site signage;
- Onsite substation and control building;
- Office and welfare facilities;
- Habitat management areas;
- Temporary construction gatehouse; and
- Waste water and drainage attenuation measures (as required).

1.2.5 Crane pads would be left in-situ following erection of turbines to allow for maintenance and replacement of parts as necessary during the lifetime of the Proposed Development. Temporary hardstand areas will be reinstated.

1.2.6 The lifespan of the Proposed Development is proposed to be 40 years, after this time the Proposed Development will be decommissioned.

1.3 Overview of Habitats Regulations Appraisal

1.3.1 Under the Conservation (Natural Habitats, &c.) Regulations 1994, (the Habitats Regulations), any development that may have a likely significant effect (LSE) on a European site (Special Protection Area (SPA) or Special Area of Conservation (SAC)), either alone or in combination with other projects, requires an Appropriate Assessment (AA) to be carried out by the relevant competent authority, to determine whether or not the proposed project would have an adverse effect on the integrity of the relevant designated area(s). Additionally, National Planning Framework 4 (NPF4¹) provides the same level of protection to proposed SPAs (pSPAs), candidate SACs (cSACs) and Wetlands of International Importance (Ramsar Sites, designated under the Ramsar Convention (1979)) as those afforded to SPAs and SACs. Note updated Scottish Government policy also meant that Ramsar sites are subject to AA in Scotland (Scottish Government, 2025)². Therefore, any sites with such designation also require consideration for AA.

1.3.2 The Habitats Regulations have been amended in Scotland as a result of the UK leaving the EU.

1.3.3 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the 2019 Regulations) states that SACs and SPAs in the UK no longer form part of the (European) Natura 2000 network. The 2019 Regulations have created a National Site Network in both terrestrial and marine environs in the UK. The National Site Network includes existing SACs and SPAs, as well as new SACs and SPAs designated under the 2019 Regulations. Under the Habitats Regulations, incorporating these amendments, the requirements of the Habitats and Birds Directives, under which European/international sites are designated and protected, must continue to be applied. For the purpose of this Technical Appendix, the term 'European/international sites' includes all sites within the new National Site Network as well as Ramsar sites.

¹ Available from: <https://www.gov.scot/publications/national-planning-framework-4/documents/> (Accessed April 2026).

² Available from: www.gov.scot/publications/updated-scottish-government-policy-protecting-ramsar-sites/ (Accessed June 2026).

- 1.3.4 Before an AA is initiated, a screening process is undertaken to determine whether any of the predicted impacts of the proposed project would result in an LSE. This Screening Assessment ('Stage 1') is presented in this document, to provide information to the competent authority to allow them to reach a decision on whether or not the project would have an LSE on any internationally designated sites and therefore whether an AA is required. Where an LSE cannot be ruled out, information to inform the AA is also provided in light of the Conservation Objective's for each site ('Stage 2').
- 1.3.5 The two-stage process is referred to as a Habitats Regulations Appraisal (HRA). Only the competent authority can undertake HRA. Thus, Stage 2 is referred to in this document as a 'shadow AA'.
- 1.3.6 This appendix only covers internationally designated sites with ornithological qualifying features.
- 1.3.7 For the purposes of this appraisal, professional judgement based on best available evidence has been used to establish the likelihood of a significant effect and to determine whether a conclusion of no adverse effect on the integrity of any relevant designated sites can be reached.

2 IDENTIFICATION OF DESIGNATED SITES

2.1 Statutory Sites and Qualifying Features

- 2.1.1 Two statutory sites of international importance have been identified for initial assessment, using a search area around the Application Site Boundary of 20 km; this being the maximum distance for which there is considered to be potential for connectivity with ornithological features associated with a designated area (in reference to NatureScot guidance (SNH, 2016)). The European sites identified are detailed in **Table 2.1**, along with the qualifying features for which they are designated whilst their location relative to the Application Site Boundary is shown in **Volume 2a, Figure 8.11: Statutory Designated Sites with Ornithological Interest**. Note that for applicable Ramsar sites only ornithological interests are listed in **Table 2.1**.

Table 2.1: Internationally designated areas with ornithological interests within 20 km of the Application Site Boundary

Designated Site	Distance/Direction from Application Site Boundary	Qualifying Ornithological Interests
Kintyre Goose Roosts SPA & Ramsar Site*	Application Site Boundary: 1.6 km north-west (<i>Loch an Fhraoich</i>) Proposed Wind Farm Development Area: 1.6 km north-west (<i>Loch an Fhraoich</i>) Existing access track: 2.4 km north-east (<i>Loch an Fhraoich</i>)	Non-breeding Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>).
Sound of Gigha SPA	Application Site Boundary: 0.65 km west Proposed Wind Farm Development Area: 5.2 km west Existing access track: 0.65 km west	Non-breeding great northern diver (<i>Gavia immer</i>), Slavonian grebe (<i>Podiceps auritis</i>), common eider (<i>Somateria mollissima</i>) and red-breasted merganser (<i>Mergus serrator</i>).

* Note that Kintyre Goose Roosts SPA and Ramsar site comprises a number of separate components. The two designations are largely consistent in terms of areas with the exception of Rhunanhaorine Point which is part of the SPA but not the Ramsar site. The closest relevant component is referred to in **Table 2.1**.

2.2 Conservation Objectives of the Special Protection Areas

2.2.1 SPAs in Scotland have standard Conservation Objectives and these can be summarised as follows for both Kintyre Goose Roosts SPA³ and Sound of Gigha SPA⁴:

- avoid deterioration to the habitats of the qualifying species, or significant disturbance to the qualifying species, thus maintaining integrity of the designated area; and
- ensure that, for the qualifying features, the following are maintained in the long-term:
 - the population of the species as a viable component of the designated area;
 - the distribution of the species within the designated area;
 - the distribution and extent of habitats supporting the species;
 - the structure, function and supporting processes of habitats supporting the species; and
 - no significant disturbance to the species.

3 STAGE 1: SCREENING FOR LIKELY SIGNIFICANT EFFECTS

3.1 Screening Overview

3.1.1 Stage 1: Screening for LSE is undertaken to remove any proposals, or components of proposals, that do not require consideration under Stage 2 (Appropriate Assessment (in this case a 'shadow AA')). Screening considers three important aspects of the proposal and qualifying features of relevant designated areas:

- Connectivity between the development and each relevant designated area;
- Route to impact between the development and each relevant designated area; and
- Numbers of qualifying features exposed to impact (consequential or inconsequential).

3.1.2 If it can be clearly demonstrated that there is no connectivity, no route to impact or an inconsequential number of qualifying features would be impacted, it can be concluded that there is no LSE on the designated site. If, however, the potential for a LSE is concluded, the process moves on to Stage 2 (AA).

3.2 Qualifying Features with Connectivity to the Site

Kintyre Goose Roosts SPA and Ramsar Site

3.2.1 The Kintyre Goose Roosts SPA comprises a series of hill lochs (Loch Garasdale, Loch an Fhraoich, Loch Lussa, Tangy Loch and Black Loch) and an area of grassland and heath at Rhunahaorine Point on the Kintyre peninsula, in south-west Scotland. The Kintyre Goose Roost Ramsar site includes all the lochs designated under the SPA but does not include the grassland area of Rhunahaorine Point.

³ Kintyre Goose Roosts SPA Conservation Objectives. Available from: <https://sitelink.nature.scot/site/8518https://www.nature.scot/sites/default/files/special-protection-area/8505/conservation-objectives.pdf> (Accessed June 2026)

⁴ Sound of Gigha SPA Conservation Objectives. Available from: <https://sitelink.nature.scot/site/10486> (Accessed June 2026)

- 3.2.2 The SPA and Ramsar site is designated for its internationally important wintering population of Greenland white-fronted geese which roost on the various lochs included in the SPA and on the grassland and heath at Rhunahaorine Point. Outside the SPA and Ramsar site, the geese may use several other roosts on Kintyre, but their use is more sporadic.
- 3.2.3 There are two main populations associated with the Kintyre Goose Roosts SPA; one which feeds on improved agricultural land around Rhunahaorine Point with significant roosts on Rhunahaorine Point, Loch an Fhraoich and Loch Garasdale, with the nearest of these SPA features (Loch an Fhraoich) located 1.6 km to the north-west of the Proposed Wind Farm Development Area; and another which feeds on improved agricultural land in the Laggan area with significant roosts on Loch Lussa, Tangy Loch and Black Loch, all of which are located over 10 km south of the Proposed Wind Farm Development Area.
- 3.2.4 As all bird features of the Kintyre Goose Roost Ramsar site are also qualifying interest features of the Kintyre Goose Roost SPA, effects on these features are considered together.

Sound of Gigha SPA

- 3.2.5 The Sound of Gigha SPA lies off the west coast of the Kintyre Peninsula and is centred around the island of Gigha. It extends from Machrihanish Bay in the south to the entrance of Loch Caolisport off Knapdale to the north, including West Loch Tarbert. The area has a complex bathymetry and varies greatly in exposure to prevailing winds and Atlantic waves. There are many rocks and skerries as well as small, sheltered bays around Gigha itself and Gigha Sound is scoured by north-south channels. Offshore, the sediments are a mixture of mud, sand and gravel while the very sheltered waters of West Loch Tarbert overlie soft mud sediment. This complexity in physical conditions provides for a locally diverse range of habitats and associated marine fauna which in turn support notable populations of wintering waterfowl including the internationally and nationally important wintering populations of great northern diver, Slavonian grebe, common eider and red-breasted merganser which it supports.

3.3 Consultation

- 3.3.1 In their response to the EIA Scoping Report for the Proposed Development⁵ (see **Volume 1, Chapter 8: Ornithology, Table 8.1**), NatureScot identified that the Proposed Development had the potential to have a LSE on wintering Greenland white-fronted geese associated with the Kintyre Goose Roosts SPA (and Ramsar Site) and therefore an HRA would be required under the Habitats Regulations. NatureScot's concerns particularly related to the potential disturbance of SPA-affiliated geese which might use Loch na Naich which is located approximately 80 m at its nearest point from the Existing access track from pedestrian and vehicle movements during the construction, operation and decommissioning phases.
- 3.3.2 NatureScot advised that use of roost lochs by Greenland white-fronted geese within the Kintyre Goose Roosts SPA varies, both between and within winters, and geese may also move to undesignated lochs in the wider local area, such as Loch na Naich which the geese have been known to use historically (although there is no mention of Loch na Naich on the Greenland white-fronted goose study's Site Inventory account for Rhunahaorine⁶).
- 3.3.3 Note, the baseline winter walkover surveys for the Proposed Development did not record any Greenland white-fronted geese using Loch na Naich. These winter walkover surveys captured times around the dusk and dawn periods across the non-breeding season (September to February, inclusive)

⁵ NatureScot EIA Scoping Response, dated 27 November 2024 (see **Volume 1, Chapter 8, Table 8.1**).

⁶ Greenland white-fronted goose study website, Site Inventory account for Rhunahaorine. Available at: <https://greenlandwhitefront.org/gb-site-inventory/south-argyll/67-rhunahaorine-kintyre-strathclyde-region/>. (Accessed June 2026)

in 2021/22 and 2022/23, so included times when geese would be expected to have been recorded if they were using the loch.

- 3.3.4 NatureScot went on to recommend that such impacts could be minimised or even avoided, by restricting vehicle and pedestrian movements past or within 600 m either side of Loch na Naich during the period from one hour before sunset to one hour after sunrise during the wintering period when Greenland white-fronted geese were present (October - March inclusive).
- 3.3.5 NatureScot also acknowledged the relative proximity of the Proposed Development to Sound of Gigha SPA, but with a separation distance of 5 km from the Proposed Wind Farm Development Area, it was advised that it was unlikely to have a significant effect on any of the SPA's qualifying interests and as such, an AA was not required with respect to the Sound of Gigha SPA. However, this conclusion did not take account of the fact that the entrance of the Existing access track (and laydown area by the A83) is located approximately 650 m from the SPA. Therefore, there is a possibility that disturbance from pedestrian and vehicle movements during the construction, operation and decommissioning phases could have an LSE on the Sound of Gigha SPA and its qualifying interests.

3.4 Baseline Information Regarding Relevant SPA/Ramsar Site Qualifying Species

- 3.4.1 Full details of the desk studies and field surveys undertaken to inform the ornithology chapter of the EIAR and this HRA are provided in **Volume 3, Appendix 8.1: Ornithology** and **Appendix 8.4: Confidential Ornithology**. The following provides summarised overviews of the desk studies and field surveys undertaken and the results obtained in relation to qualifying features of the Kintyre Goose Roosts SPA/Ramsar Site and the Sound of Gigha SPA.

Desk Study

- 3.4.2 An initial review of existing ornithological information was undertaken at the beginning of the field survey programme in order to provide a preliminary overview of likely bird species and populations in proximity to the Proposed Wind Farm Development Area.
- 3.4.3 The desk study also included a review of statutory designated sites in proximity to the Application Site Boundary and consultation with specialist recording groups for existing ornithological records including the Argyll Raptor Study Group (ARSG) and the Royal Society for the Protection off Birds (RSPB). Further desk study including review of publicly available ornithology information from existing or proposed wind farms in close proximity to the Proposed Wind Farm Development Area was also carried out over the course of the field surveys.
- 3.4.4 No information or relevant records were received relating to the qualifying features of either Kintyre Goose Roosts SPA/Ramsar site and the Sound of Gigha SPA through the desk study.

Field Surveys

- 3.4.5 The following field surveys were carried out over a two-year period between March 2021 and February 2023 covering the Proposed Wind Farm Development Area and appropriate surrounding buffers in order to inform the design and assessment of the Proposed Development:
- VP flight activity surveys;
 - Moorland Breeding Bird Survey (MBBS);
 - Annex 1 and Schedule 1 breeding raptor and owl searches;
 - Breeding black grouse searches;

- Breeding diver searches; and
- Winter walkover surveys.

- 3.4.6 There were additional bird surveys in May to July 2024 along the Existing access track, and targeted diver and eagle surveys in 2025.
- 3.4.7 Surveys were undertaken in accordance with NatureScot guidance applicable at the time (SNH, 2017) (note, this guidance has been subsequently updated in 2025 (NatureScot, 2025), but this has had no implications on the scope of target species or methodology followed for the Proposed Development).
- 3.4.8 There were no records relating to the qualifying features of either Kintyre Goose Roosts SPA/Ramsar site and the Sound of Gigha SPA throughout the two-year survey programme.

3.5 Potential Impacts

- 3.5.1 The Application Site Boundary does not overlap with either the Kintyre Goose Roosts SPA/Ramsar site or Sound of Gigha SPA and so no direct impacts on either designated site will occur. Furthermore, since the desk study and field surveys found no evidence that the qualifying species of Kintyre Goose Roosts SPA/Ramsar site or Sound of Gigha SPA use any of the habitats located within the Application Site Boundary (or survey areas adopted out from the Application Site Boundary) no potential impacts on supporting habitats outwith these designated sites are predicted.
- 3.5.2 Potential impacts on the qualifying features of Kintyre Goose Roosts SPA/Ramsar site or Sound of Gigha SPA outside of these two designated sites are considered to comprise of:
- Disturbance and displacement of birds from supporting habitats (equivalent to indirect habitat loss) by construction and decommissioning works and operation;
 - Accidental mortality due to collision with the Proposed Development; and
 - Potential barrier effects as a result of the presence of the Proposed Development.
- 3.5.3 All other impacts arising from the Proposed Development are not anticipated to result in likely significant effects due to the lack of connectivity and/or distance such that there is no pathway of effect between the European sites and the Proposed Development.

3.6 Determination of Likely Significant Effects

- 3.6.1 The assessment and conclusions with regards to LSEs on the relevant European sites identified in **Table 2.1** and their relevant qualifying features has been carried out taking account of the potential impacts of the Proposed Development, the location of the European sites under consideration and (where known) the distribution of their associated qualifying features relative to the Application Site Boundary. The assessment of LSEs is presented below in **Table 3.1**.

3.7 Summary

- 3.7.1 Two internationally designated areas with ornithological interests have been identified within 20 km of the Application Site Boundary: Kintyre Goose Roosts SPA and Ramsar site and Sound of Gigha SPA.
- 3.7.2 As detailed in **Table 3.1**, it has been concluded that no LSE would occur on the qualifying ornithological features of the Sound of Gigha SPA as a result of impacts associated with the Proposed Development during its construction, operation and decommissioning phases. This can be concluded for the Proposed Development on its own and in combination with other projects. Sound of Gigha SPA can therefore be screened out of further assessment.

- 3.7.3 For impacts resulting from the Proposed Development it has been concluded that there is a potential for a LSE on Greenland white-fronted geese associated with Kintyre Goose Roosts SPA and Ramsar site as a result of potential disturbance and displacement of birds which may roost on Loch na Naich which is located (at its nearest point) approximately 80 m from the Existing access track during the construction, operation and decommissioning phases. **As the Proposed Development is not directly connected with or necessary to the nature conservation of Kintyre Goose Roosts SPA and Ramsar site, this designated site and its associated Greenland white-fronted goose population progress to Stage 2: Shadow Appropriate Assessment in order to determine whether the identified LSEs will give rise to adverse effects on the integrity of this European site in light of their Conservation Objectives.**

Table 3.1: Assessment of Likely Significant Effects

Designated Site	Qualifying Feature	Relevant Effect	Assessment of LSE	Conclusion of LSE
Kintyre Goose Roosts SPA/ Ramsar site	Greenland white-fronted goose (wintering)	Disturbance and displacement of birds from supporting habitat as a result of disturbance from human activities during construction, operation or decommissioning (indirect habitat loss).	The Proposed Development does not overlap with the SPA/ Ramsar site and the Application Site Boundary is located over 1.5 km away from the nearest component of the designated site at Loch an Fhraoich. However, the Existing access track passes within approximately 80 m of Loch na Naich (at its closest point) which, although not part of the SPA/ Ramsar site, NatureScot has advised that the Loch na Naich has been known to be used historically by Greenland white-fronted geese associated with the SPA/ Ramsar site. Therefore, there is potential for disturbance of SPA affiliated geese from pedestrian and vehicle movements along this access track particularly during construction but also during the operation and decommissioning phases.	LSE
		Injury or mortality of individuals through collision with the Proposed Development's turbines.	As noted in Section 3.2 , the Greenland white-fronted geese associated with the Kintyre Goose Roosts SPA and Ramsar site are closely affiliated with a series of hill lochs and lowland grassland areas to the north/northwest and south of the Application Site Boundary. Of these, the closest roost site to the Application Site Boundary is Loch an Fhraoich, which is located over 1.5 km north-west of the Proposed Wind Farm Development Area, with associated birds typically foraging at Rhunahaorine Point located further to the west. Based on the location of these roosting and foraging areas relative to the Proposed Wind Farm Development Area, there is no expectation that birds would fly through the Proposed Wind Farm Development Area in order to access these areas and there are no other recognised roosting or foraging areas on the opposite (south and east) side of the Proposed Wind Farm Development Area ⁶ . Furthermore, no Greenland white-fronted geese were recorded during any of the baseline surveys undertaken to inform the ornithology chapter of the EIAR and although NatureScot have advised that geese affiliated with the SPA/Ramsar site may occasionally use Loch na Naich to roost, they would not have to fly through the Proposed Wind Farm Development Area in order to access this loch from the recognised foraging ground at Rhunahaorine Point. Therefore, the Proposed Development is not expected to pose a risk of injury or mortality to any of these species, and consequently, no LSEs are predicted.	No LSE
		Potential barrier effects as a result of the Proposed Development.	As noted in Section 3.2 and above in relation to injury or mortality, the Greenland white-fronted geese associated with the Kintyre Goose Roosts SPA and Ramsar site are most closely associated with hill lochs and lowland grassland foraging areas to the north/northwest and south of the Application Site Boundary and the Proposed Wind Farm Development Area is not located between these, or any other roosting and foraging areas where the wind farm may pose a barrier to their access of them. Furthermore, no Greenland white-fronted geese were recorded during any of the baseline surveys undertaken to inform the ornithology chapter of the EIAR and although NatureScot has advised that geese affiliated with the SPA/Ramsar site may occasionally use Loch na Naich to roost, they would not have to fly through the Proposed Wind Farm Development Area in order to access this loch from the recognised foraging ground	No LSE

Designated Site	Qualifying Feature	Relevant Effect	Assessment of LSE	Conclusion of LSE
			at Rhunahaorine Point. Therefore, the Proposed Development is not expected to represent a barrier to the movement of Greenland white-fronted geese, and consequently, no LSEs are predicted.	
Sound of Gigha SPA	Great nortner diver, Slavonian grebe, Common eider, Red-breasted merganser (all wintering)	Disturbance and displacement of birds from supporting habitat as a result of disturbance from human activities during construction, operation or decommissioning (indirect habitat loss).	The Proposed Development does not overlap with the SPA, and the Proposed Wind Farm Development Area is located over 5 km away. However, the entrance of the Existing access track (and a laydown area) by the A83 is approximately 650 m from the SPA boundary. As well as the spatial separation (at least c. 650 m) between the location of the entrance of the Existing access track and a laydown area, and the SPA boundary, there is a large expanse of open pasture, and a hedgerow running parallel along the western verge of the A83 between the Application Site Boundary and SPA (only exception is the laydown area which will adjoins the A83 to the west). The hedgerow will provide visual and some noise screening from traffic using the A83 to habitats to the west. Vehicle movements along the A83 and entering the Application Site Boundary via the Existing access track, at least, during construction, may be increased modestly as a result of the Proposed Development. However, it is noted that the Existing access track is already used by large vehicles for the existing Deucheran Hill Wind Farm and for timber harvesting activity, so there is at least a modest baseline level of traffic entering the Application Site Boundary from the A83, and the A83 itself is a regularly used road network. Furthermore, all of the qualifying species associated with the SPA are designated for their wintering populations which are strongly affiliated with its near shore coastal waters and are not expected to utilise any of the terrestrial or inland water habitats associated with the Application Site Boundary, and surrounds (including the fields west of the A83). Therefore, none of these qualifying species of the SPA will be significantly displaced from foraging or resting areas as a result of human activities during construction, operation or decommissioning. Given the above factors, no LSEs are predicted.	No LSE
		Injury or mortality of individuals through collision with the Proposed Development's turbines.	All of the qualifying species associated with the SPA are designated for their wintering populations which are strongly affiliated with its near shore coastal waters and are not expected to fly inland to utilise any of the terrestrial or inland water habitats associated with, or located beyond the Application Site Boundary. Furthermore, none of the SPA qualifying species were recorded during any of the baseline surveys undertaken to inform the ornithology chapter of the EIAR. Therefore, the Proposed Development is not expected to pose a risk of injury or mortality to any of these species, and consequently, no LSEs are predicted.	No LSE
		Potential barrier effects as a result of the Proposed Development.	All of the qualifying species associated with the SPA are designated for their wintering populations which are strongly affiliated with its near shore coastal waters and are not expected to fly inland to utilise any of the terrestrial or inland water habitats associated with, or located beyond the Application Site Boundary. Furthermore, none of the SPA qualifying species were recorded during any of the baseline surveys undertaken to inform the	No LSE

Designated Site	Qualifying Feature	Relevant Effect	Assessment of LSE	Conclusion of LSE
			ornithology chapter of the EIAR. Therefore, the Proposed Development is not expected to represent a barrier to the movement of any of these species, and consequently, no LSEs are predicted.	

4 STAGE 2: SHADOW APPROPRIATE ASSESSMENT

4.1 Introduction

- 4.1.1 Based on the assessment carried out at Stage 1: Screening, one designated area is identified as requiring AA: Kintyre Goose Roosts SPA and Ramsar site, for which the only qualifying interest is the wintering population of Greenland white-fronted geese.
- 4.1.2 The screening process has further identified that the only potentially adverse impact that requires consideration in the AA is disturbance and displacement of birds which may roost on Loch na Naich, located approximately 80 m, at its closest point, from the Application Site Boundary, during the construction, operation and decommissioning phases.
- 4.1.3 This section assesses the impacts of the Proposed Development on the relevant qualifying interest features of Kintyre Goose Roosts SPA and Ramsar site (Greenland white-fronted geese) in relation to the Conservation Objectives for the SPA/Ramsar site, as presented in **Section 2.2**. The aim is to identify whether or not there will be adverse effects on the integrity of the Kintyre Goose Roosts SPA and Ramsar site.
- 4.1.4 On this basis, the following Conservation Objectives of Kintyre Goose Roosts SPA (and Ramsar site) are assessed:
- The distribution and extent of habitats supporting the species; and
 - No significant disturbance to the species.

4.2 Assessment of Effects

- 4.2.1 As stated in **Table 3.1**, whilst the Proposed Wind Farm Development Area is located over 1.5 km away from the nearest component of the Kintyre Goose Roosts SPA and Ramsar site at Loch an Fhraoich, part of the Application Site Boundary, the Existing access track passes within approximately 80 m of Loch na Naich (at its closest point) which, although not part of the SPA/Ramsar site, NatureScot has advised has been known to be used historically by Greenland white-fronted geese associated with the SPA and Ramsar site. Therefore, there is potential for disturbance of SPA affiliated geese from pedestrian and vehicle movements along this access track particularly during construction, but also during the operation and decommissioning phases.
- 4.2.2 As Greenland white-fronted geese only occur in the UK over the winter months (taken to be October to March based on NatureScot's Scoping Response (see **Section 3.3**)) the risk of birds being disturbed and displaced by human activities associated with the Proposed Development is expected to be restricted to this six-month period, inclusive. Furthermore, as Greenland white-fronted geese are only understood to use Loch na Naich as a night time roosting site, the risk of birds being disturbed and displaced by human activities associated with the Proposed Development is further limited to the period between dusk and dawn (including overnight), with birds out on the lowland grassland foraging areas (such as the Rhunahaorine Point) much further afield from the Application Site Boundary during the daytime (see **Volume 2a, Figure 8.11**).
- 4.2.3 There would be traffic movements associated with construction of the Proposed Development accessing the Proposed Wind Farm Development Area using the Existing access track. However, most construction traffic activity is expected to be during daylight hours and as such is not anticipated to cause disturbance to any roosting geese at Loch na Naich. Construction traffic activity is assessed in **Volume 1, Chapter 12: Traffic and Movement** of the EIAR and results outlined in **Volume 3, Appendix 12.5: Estimated Construction Traffic**.

- 4.2.4 During operation, traffic movements are predicted to be limited to occasional light vehicles (LGVs and cars), accessing the Proposed Wind Farm Development Area via the Existing access track, the majority of which are expected to take place during daytime hours. The likely traffic movements during operation are considered to be comparable to the baseline traffic activity being experienced currently with the Existing access track being used by vehicles associated with the existing Deucheran Hill Wind Farm and forestry operations. As such operational traffic movements are not anticipated to cause disturbance to any roosting geese at Loch na Naich.
- 4.2.5 Details of decommissioning works are unknown at this stage but are expected to be similar to, if not slightly shorter and less intensive than those which are predicted for the construction phase.

4.3 Proposed Mitigation

- 4.3.1 NatureScot in their Scoping Response (see **Section 3.3**), recommended some appropriate precautionary mitigation should be implemented to ensure that any Greenland white-fronted geese at Loch na Naich are not disturbed. NatureScot suggested that during the wintering period (October – March), a mitigation measure could be implemented that no vehicle and/or pedestrian movements will take place past Loch na Naich or within 600 m of the loch during the period of one hour before sunset to one hour after sunrise.
- 4.3.2 It is proposed that the restricted period is from the time of sunset to sunrise from October to March, inclusive. Any essential vehicular and/or pedestrian movements associated with the Proposed Development within this restricted period within 600 m of Loch na Naich (for example, works vehicles leaving the Application Site Boundary and needing to move along the Existing access track at sunset; which would be as early as approximately 15:45 hrs in December) would be preceded by a check, from distance using long-range optical equipment, of Loch na Naich by the Environmental Clerk of Works (ECoW), or the appointed experienced ecologist. Essential movements of vehicles/pedestrians within 600 m of Loch na Naich during the restricted period will only be permitted if the ECoW/appointed ecologist has confirmed that movements can proceed without disturbing Greenland white-fronted geese. A ‘no-stop’ policy within 600 m of Loch na Naich would be adopted during the restricted period as a standard measure. Furthermore, no full beams will be used on works vehicles using the Existing access track during the restricted period within 600 m of Loch na Naich.
- 4.3.3 This mitigation would be adhered to at all phases of the Proposed Development (construction, operation and decommissioning). It is understood that visits to the Proposed Development by works vehicles during operation would be irregular and would be timed to daylight hours, particularly during October to March. In the event that any activities are required during the above defined restricted period during operation, an appointed ecologist would check Loch na Naich for roosting geese (and the above mitigation adhered to). Note, exception to the proposed mitigation measures during the sensitive time (within 600 m of Loch na Naich) would be in the event of an emergency, and for example, essential movements of emergency services vehicles along the Existing access track.
- 4.3.4 With this mitigation in place, the Proposed Development is not predicted to affect the two relevant Conservation Objectives listed in Section 4.1: *‘the distribution and extent of habitats supporting the species’* and *‘no significant disturbance to the species’*.
- 4.3.5 **It is therefore concluded that the Proposed Development, on its own, would not have an adverse effect on the overwintering Greenland white-fronted goose population associated with Kintyre Goose Roosts SPA and Ramsar site, and hence the integrity of the designated sites themselves.**

4.4 In-combination Assessment

- 4.4.1 Potential impacts as a result of the Proposed Development must also be investigated alongside the potential impacts of other relevant projects. As the Proposed Development is not anticipated to pose any LSE on the Sound of Gigha SPA or its qualifying interests, it cannot contribute any LSE which could

adversely affect the integrity of the SPA when considered in combination with LSEs from other projects. In-combination effects are therefore not considered for Sound of Gigha SPA, with respect to the Proposed Development.

- 4.4.2 Although no Greenland white-fronted geese were recorded during field surveys (or during the desk study), based on advice from NatureScot, the Proposed Development has been identified to have a potential LSE on Greenland white-fronted geese associated with the Kintyre Goose Roosts SPA and Ramsar site through disturbance and displacement of geese which may roost on Loch na Naich, located approximately 80 m from the Existing access track, at its closest point.
- 4.4.3 With the precautionary implementation of the seasonal and evening to early morning timing restrictions informed by onsite monitoring adapted from a recommendation by NatureScot (including works vehicle movements along the Existing access track), any effects from the Proposed Development are expected to be negated. Consequently, the Proposed Development would not be expected to result in any adverse effects on the Kintyre Goose Roosts SPA and Ramsar site or its associated Greenland white-fronted goose population which may act in-combination with those associated with other projects in the nearby and wider surrounding area. This is particularly given the field surveys and desk study did not reveal Greenland white-fronted geese using Loch na Naich, and thus the proposed mitigation is considered highly precautionary.
- 4.4.4 **It is therefore concluded that the Proposed Development in combination with other projects would not have an adverse effect on the overwintering Greenland white-fronted goose population associated with Kintyre Goose Roosts SPA and Ramsar site, and hence the integrity of the designated sites themselves.**

5 CONCLUSION

- 5.1.1 Two relevant designated areas with ornithological interests were identified for consideration: Kintyre Goose Roosts SPA and Ramsar site and Sound of Gigha SPA.
- 5.1.2 It has been concluded that there would be no LSE on the listed features of Sound of Gigha SPA from the Proposed Development. Therefore, AA is not required for Sound of Gigha SPA.
- 5.1.3 It has been concluded that there was potential for LSE on Greenland white-fronted geese associated with Kintyre Goose Roosts SPA and Ramsar site as a result of disturbance to geese which may roost on Loch na Naich, which is located approximately 80 m from the Existing access track, at its closest point, during the construction, operation and decommissioning phases of the Proposed Development. As such, an AA was required in relation to Kintyre Goose Roosts SPA and Ramsar site and its associated Greenland white-fronted goose population.
- 5.1.4 A shadow AA has been provided and concluded that for the Proposed Development alone, and in combination with other relevant projects, **there would not be an adverse effect on the overwintering Greenland white-fronted goose population associated with Kintyre Goose Roosts SPA and Ramsar site, and hence the integrity of the designated sites themselves.** This is with the implementation of precautionary mitigation adapted from a recommendation from NatureScot.
- 5.1.5 The information in this appendix provides a basis for the competent authority to complete the formal HRA.

6 REFERENCES

SNH (2016). *Assessing connectivity with Special Protection Areas (SPAs)*. Scottish Natural Heritage Guidance: Version 3 - June 2016. Scottish Natural Heritage, now NatureScot, Inverness.

SNH (2017). *Recommended bird survey methods to inform impact assessment of onshore wind farms*. March 2017. Version 2.

NatureScot (2025). *Recommended bird survey methods to inform impact assessment of onshore windfarms*. Updated: March 2025.