Lynemore Wind Farm

Environmental Impact Assessment (EIA) Report

Appendix 7.4: Habitats Regulations Appraisal - Ornithology

CONTENTS

1 INTRODUCTION

1.1.1 This Appendix accompanies **Chapter 7: Ornithology** of the Lynemore Wind Farm (the Proposed Development) Environmental Impact Assessment Report (EIAR). It should also be read in conjunction with **Technical Appendix 7.1: Ornithology Baseline Report**.

1.1.2 Under the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (the Habitats Regulations), any development that may have a likely significant effect (LSE) on a European site (in the case of ornithological features these comprise Special Protection Areas (SPAs) as well as Ramsar Sites with ornithological interests (Ramsar Sites having been given the same protection)) requires an Appropriate Assessment (AA) to be carried out by the relevant competent authority, to determine whether or not the development would have an adverse effect on the integrity of the designated area(s), either alone or in combination with other projects.

1.1.3 Before an AA is initiated, a screening process is undertaken to determine whether any of the predicted impacts of the development would result in a LSE. This Screening Assessment ('Stage 1') is presented, to provide information to the competent authority to allow them to reach a decision on whether or not the Proposed Development would have a LSE on any internationally designated sites and therefore whether an AA is required. Where a LSE cannot be ruled out, information to inform the AA is provided ('Stage 2').

1.1.4 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'.

1.1.5 This Technical Appendix only covers internationally designated sites with ornithological qualifying features.

1.1.6 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 AND ROUTES TO IMPACT

2.1 Statutory Sites and Qualifying Features

2.1.1 Statutory sites of international importance have been identified for consideration based on potential connectivity to the Proposed Development, as determined by core foraging ranges presented in guidance (SNH, 2016)[1]. A search area around the Site[2] of 10 km has been used for all designated areas with ornithological interests, with this extended out to 20 km for designated areas with wintering geese as a qualifying interest due to the larger foraging distances of some goose species (15-20 km for greylag goose and pink-footed goose).

2.1.2 The designated areas identified are detailed in **Table 2.1**, along with the qualifying features for which they are designated. In the case of Ramsar sites, only ornithological qualifying features are listed. All ornithological qualifying interests are listed for completeness, including for those designated areas identified for their wintering goose interest (those more than 10 km from the Site).

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

[2] 'The Site' is that area encompassed by the red line boundary shown on Figure 7.1 and in which the Proposed Development would be located.

Table 2.1: Internationally designated areas with ornithological interests

Location	Designation	Distance/Direction from Site	Qualifying Ornithological Interests
Loch Ashie	SPA	8.7 km, northwest	Slavonian grebe (passage (post-breeding))
Loch Ruthven	SPA	9.4 km, southwest	Slavonian grebe (breeding)
	Ramsar	9.4 km, southwest	Slavonian grebe (breeding)
Inner Moray Firth	SPA	11.9 km, north	Breeding • Common tern • Osprey Non-breeding • Waterfowl assemblage • Bar-tailed godwit • Cormorant • Curlew • Goldeneye • Goosander • Greylag goose • Oystercatcher • Red-breasted merganser • Redshank • Scaup • Teal • Wigeon
	Ramsar	11.9 km, north	Non-breeding • Waterfowl assemblage • Greylag goose • Redshank • Red-breasted merganser • Bar-tailed godwit

2.2 Conservation Objectives

2.2.1 The conservation objectives for Loch Ashie SPA[3], Loch Ruthven SPA[4] and Inner Moray Firth SPA[5] are the same and can be summarised as:

- to avoid deterioration to the habitats of the qualifying species, or significant disturbance to the qualifying species, thus maintaining integrity of the site; and
- to 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 site;
  - the distribution of the species within the site;
  - the distribution and extent of habitats supporting the species;

[3] Available from: https://www.nature.scot/sites/default/files/special-protection-area/8525/conservation-objectives.pdf (Accessed March 2025).
[4] Available from: https://www.nature.scot/sites/default/files/special-protection-area/8538/conservation-objectives.pdf (Accessed March 2025).
[5] Available from: https://www.nature.scot/sites/default/files/special-protection-area/8515/conservation-objectives.pdf (Accessed March 2025).

- o the structure, function and supporting processes of habitats supporting the species; and
- o no significant disturbance to the species.

2.2.2 Due to the separation distance, and lack of hydrological connectivity, between the Site and the identified designated areas there would be no impacts on the habitats and processes contained within the designated areas as a result of the Proposed Development. There would also be no disturbance to the qualifying features whilst they are within the boundary of the designated areas, given the distance from the Site. Thus, there would also be no impact on the distribution of qualifying species within the designated areas.

2.2.3 Therefore, the potential routes to impact that require consideration are only those that could occur to a qualifying feature whilst it is outside the designated area and in the vicinity of the Proposed Development, i.e., i) if the area in the vicinity of the Proposed Development is regularly used by a qualifying feature, this species may be subject to disturbance, ii) if the area in the vicinity of the Proposed Development is regularly used by a qualifying feature, this species may be impacted by habitat losses; or iii) if a feature regularly flies over the Proposed Development whilst passing to/from the designated area there may be potential for collision, thus impacting the species' population.

3 STAGE 1: SCREENING FOR LSE

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 the qualifying features of the designated area:

- Connectivity between the Proposed Development and the designated area;
- Route to impact between the Proposed Development and the 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 area. If, however, the potential for a LSE is concluded, the process moves on to Stage 2.

3.2 Loch Ashie SPA and Loch Ruthven SPA and Ramsar Site

3.2.1 Loch Ruthven provides a breeding site for Slavonian grebe and Loch Ashie provides a moult site where Slavonian grebes gather post-breeding. Both SPAs are located approximately 9 km from the Site.

3.2.2 The vicinity of the Proposed Development does not contain habitat suitable for Slavonian grebe to breed, moult or otherwise support this species. Impacts on Slavonian grebe would therefore only occur if birds associated with the designated areas regularly pass over the Site, leading to potential collision mortality.

3.2.3 Once grebes associated with Loch Ruthven arrive on the loch in the breeding season they can be expected to remain on this loch until breeding ends, and once grebes arrive at Loch Ashie post-breeding they can be expected to remain on this loch until their moult is complete, i.e., there would not be regular commuting flights in/out of the designated areas. The Site is not located between Loch Ruthven and Loch Ashie.

3.2.4 During consultation, NatureScot agreed that the Proposed Development was unlikely to be located on the flightpath of Slavonian grebes associated with Loch Ashie and Loch Ruthven SPAs (see Table 7.1 in **Chapter 7: Ornithology**). It is considered most likely that birds would arrive and depart at the SPAs using the most direct route to/from the inner Moray Firth, which is provided by the natural corridor provided by Strath Nairn and which is located to the north and west of the hill ground on which the Proposed Development would be sited.

3.2.5 This is backed up by the baseline data, with no records of Slavonian grebe obtained during the flight activity surveys.

3.2.6 It can be concluded that there is no connectivity between the Proposed Development and the areas designated for Slavonian grebe.

3.2.7 For impacts resulting from the Proposed Development, it can be concluded that there would be no LSE on the Slavonian grebe of Loch Ashie SPA (post-breeding population) or Loch Ruthven SPA and Ramsar site (breeding population).

3.2.8 Loch Ashie SPA and Loch Ruthven SPA and Ramsar site do not progress to Stage 2: Appropriate Assessment.

3.3 Inner Moray Firth SPA and Ramsar Site

3.3.1 The Inner Moray Firth SPA and Ramsar site comprises intertidal flats, saltmarsh and sand dunes in the Beauly Firth and Inverness Firth. The SPA and Ramsar site is located a minimum of approximately 12 km to the north of the Site.

3.3.2 There is the potential for connectivity between the Inner Moray Firth designated area and the Site in relation to greylag geese, which have a core foraging range of 15-20 km. The Site does not support habitat suitable for foraging or roosting non-breeding greylag geese, but there is potential for regular passage across the Site during daily commuting flights to/from the designated area. Through consultation (see Table 7.1 in **Chapter 7: Ornithology**), NatureScot stated that a shadow HRA would be required in relation to this qualifying feature of the Inner Moray Firth SPA.

3.3.3 For the other qualifying features of the Inner Moray Firth SPA and Ramsar site it can be concluded that there would be no connectivity with the Proposed Development. The majority of listed features are associated with coastal, inter-tidal or estuarine habitats during the time period for which they are designated, and the Site clearly holds no suitable habitat for these species; or the listed features have a core foraging range that is less than the distance between the designated area and the Site. On this basis, it can safely be concluded that there would be no route to impact for common tern, osprey, bar-tailed godwit, cormorant, curlew, goldeneye, goosander, oystercatcher, red-breasted merganser, redshank, scaup, teal and wigeon. These qualifying features are not considered further.

3.3.4 A LSE on greylag goose has not been ruled out. Therefore, for this qualifying interest only, Inner Moray Firth SPA and Ramsar site progresses to Stage 2: Appropriate Assessment.

4 STAGE 2: SHADOW APPROPRIATE ASSESSMENT

Inner Moray Firth SPA and Ramsar Site

4.1 Introduction

4.1.1 Based on the assessment carried out at Stage 1: Screening, one designated area is identified as requiring AA: Inner Moray Firth SPA and Ramsar site. Screening has further identified that for this designated area the potential for an adverse effect relates only to one qualifying feature: greylag goose (non-breeding).

4.1.2 The shadow AA presented here provides information to the competent authority so that they can ascertain whether the Proposed Development, either alone or in combination with other projects, would have an impact on greylag goose such that this would have an adverse effect on the integrity of the Inner Moray Firth SPA and Ramsar site.

4.1.3 The following conservation objectives are assessed to determine potential adverse effects on the integrity of the greylag goose population associated with the designated area, as set out in **Section 2.2**:

- to avoid significant disturbance to the species;
- to maintain the distribution and extent of habitats supporting the species; and
- to maintain the population as a viable component of the designated site.

4.2 Greylag Goose Status

4.2.1 The Inner Moray Firth SPA citation[6] states that the SPA regularly supports 2,651 individuals of greylag geese (3% of the Iceland/UK/Ireland biogeographic population), based on peak winter mean counts from the period 1992/92 to 1996/97. The same population estimate is given in the citation for the Ramsar site[7].

4.2.2 The wintering population of Icelandic greylag geese has undergone a modest increase since site designation, whilst the Scottish breeding population has increased greatly since that time (Bainbridge, 2017)[8]. This may not be evidenced in the number of greylag geese regularly using the designated area, however, as many greylag geese now remain on Orkney through the winter rather than moving south into mainland Scotland (Mitchell *et al*., 2010)[9]. No recent counts for the Inner Moray Firth SPA could be found.

4.2.3 Greylag geese associated with the Inner Moray Firth SPA and Ramsar site roost on intertidal flats and saltmarsh within the designated area but forage in agricultural land outside the site boundary (Mitchell, 2012[10]).

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[6] Available from: https://www.nature.scot/sites/default/files/special-protection-area/8515/spa-citation.pdf (Accessed March 2025).

[7] Available from: https://www.nature.scot/sites/default/files/ramsar-site/8430/ramsar-site-citation.pdf (Accessed March 2025).

[8] Bainbridge, I. (2017). Goose management in Scotland: an overview. *Ambio* 46 (Suppl 2), pp224–230.

[9] Mitchell, C., Colhoun, K., Fox, F.D. and Griffin, L. (2010). Trends in goose numbers wintering in Britain & Ireland 1995-2008. *Ornis Svecica* 20(3), pp128-143.

[10] Mitchell, C. (2012). *Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland*. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report. WWT Slimbridge.

4.3 Assessment Against Relevant Conservation Objectives

Avoidance of Significant Disturbance

4.3.1 Mitchell (2012)[10] mapped foraging areas used by SPA geese and found that for the Inner Moray Firth SPA the most used foraging areas lie close to the SPA, especially the coastal plain northeast of Inverness and around the Beauly Firth. These core foraging areas lie more than 15 km from the Site.

4.3.2 However, Mitchell (2012) also noted that suitable agricultural land close to Loch Moy may also be used, though this is a discrete outlier to the main foraging areas along the coastal plain. Usage of these fields is less regular, and the Moy area is not a key foraging site. The nearest area of favourable foraging habitat (large, open fields) close to Loch Moy, is approximately 650 m from the northern edge of the Site, with the A9 trunk road and several houses in between.

4.3.3 Goodship and Furness (2022)[11] consider greylag geese as having a degree of tolerance to disturbance, with a minimum buffer zone of 200-600 m recommended around works to prevent disturbance. As the minimum distance between potential foraging areas and the nearest part of the Site is greater than 600 m, any birds using this foraging area would not be impacted by disturbance or displacement as a result of the Proposed Development.

4.3.4 The Site itself does not offer suitable foraging habitat for wintering greylag geese and no geese were recorded using the Site during baseline surveys.

4.3.5 It can therefore be concluded that there would be no route to impact from disturbance or displacement as a result of the Proposed Development, for greylag goose associated with the Inner Moray Firth SPA and Ramsar site.

Maintenance of Supporting Habitat

4.3.6 The vicinity of the Proposed Development does not offer suitable foraging (or roosting) habitat for wintering greylag geese. Furthermore, no greylag geese were recorded using the Site during baseline surveys.

4.3.7 As has been established above, there are no known foraging areas within close proximity of the Site such that displacement may occur as result of the Proposed Development. Thus, there would be no direct, or indirect, losses to available foraging habitat.

4.3.8 It can therefore be concluded that there would be no route to impact from habitat losses as a result of the Proposed Development, for greylag goose associated with the Inner Moray Firth SPA and Ramsar site.

Maintenance of Viable Population

4.3.9 The Proposed Development could lead to a decline of the non-breeding greylag goose population associated with the designated area if increased mortality as a result of the Proposed Development (collision impact) is sufficient to cause a reduction in numbers. A decline in the population would require a high level of additional mortality, which would only be predicted where large numbers of geese regularly fly at potential collision height through the proposed turbine area. Such a scenario could occur if the Proposed Development was located between the roost sites of the designated area and key foraging areas that are accessed during daily commuting flights.

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[11] Goodship, N.M. and Furness, R.W. (MacArthur Green) (2022). *Disturbance distances review: an updated literature review of disturbance distances of selected bird species*. NatureScot Research Report 1283.

4.3.10 Mapping of SPA geese (Mitchell, 2012)[10] has shown that the nearest known feeding area identified near Moy is located to the north of the Proposed Development, and birds would not pass over the Site to commute between there and the Inner Moray Firth SPA and Ramsar site.

4.3.11 Additionally, the Site's upland location in hills connected to the Monadhliath Mountains, which extend to the south and southwest of the Site, mean that there are no other suitable foraging areas (typically low-lying agricultural land) to the south of the Proposed Development and within 20 km (core foraging range) of the SPA. Thus, the Site is not located in an area that would have regular greylag goose commuting flights passing across it.

4.3.12 That there are no regular flights by greylag geese is evidenced in the baseline survey data, with only one flight (of two birds) recorded in two years of flight activity surveys. This record came from mid-March and may have represented locally breeding birds rather than birds associated with the wintering population of the designated area.

4.3.13 Given the extremely low flight activity recorded for greylag goose, collision risk modelling (CRM) was not undertaken for this species as it did not meet the threshold for undertaking this analysis (three or more flights or 10 or more individuals). However, even without quantifying the level of additional mortality as a result of collision, the risk would clearly be tiny and indiscernible at all population scales.

4.3.14 The 'inconsequential' number of individuals potentially exposed to collision risks means that it can be concluded that the non-breeding population of greylag geese associated with the Inner Moray Firth SPA and Ramsar site would be maintained.

In-combination Impacts

4.3.15 As no route to impact has been concluded for disturbance and loss of habitat in relation to the Proposed Development on its own, there is no requirement to assess potential impacts in-combination with other relevant projects.

4.3.16 Regarding collision, the infinitesimally small (essentially zero) additional mortality resulting from the Proposed Development on its own, means that the Proposed Development would effectively not contribute to any in-combination collision impacts. An in-combination assessment has, therefore, not been undertaken.

4.4 Summary

4.4.1 It can be concluded that the Proposed Development, both on its own and in combination with other projects, would not have an adverse effect on the integrity of the Moray & Nairn Coast SPA and Ramsar site.

5 CONCLUSION

5.1.1 Two internationally designated areas with ornithological interests have been identified within 10 km of the Site, Loch Ashie SPA and Loch Ruthven SPA and Ramsar site. Both designated areas have been determined as having no connectivity with the Site. No LSE on their qualifying feature (Slavonian grebe) has therefore been concluded. AA is not required for Loch Ashie SPA nor for Loch Ruthven SPA and Ramsar site.

5.1.2 One internationally designated area with wintering geese as a qualifying feature has been identified with 20 km of the Site, namely Inner Moray Firth SPA and Ramsar site. The following qualifying interests of Inner Moray Firth SPA and Ramsar site were determined as having no connectivity with the Site: common tern (breeding), osprey (breeding), bar-tailed godwit (non-breeding), cormorant (non-breeding), curlew (non-breeding), goldeneye (non-breeding), goosander (non-breeding), oystercatcher (non-breeding), red-breasted merganser (non-breeding), redshank (non-breeding), scaup (non-breeding), teal (non-breeding) and wigeon (non-breeding).

5.1.3 A potential for a LSE on greylag goose was concluded from screening and so Inner Moray Firth SPA and Ramsar site progressed to Stage 2: Appropriate Assessment (greylag goose only).

5.1.4 A shadow AA has been provided and this concluded that for the Proposed Development alone, and in combination with other relevant projects, there would not be an adverse effect on the integrity of Inner Moray Firth SPA and Ramsar site.

5.1.5 The information in this document provides a basis for the competent authority to complete the formal HRA.