

## Technical Appendix 8.4: Information to Inform a Habitats Regulations Appraisal

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## Technical Appendix 8.4: Information to Inform a Habitats Regulations Appraisal

### Introduction

This Technical Appendix has been prepared to accompany **Chapter 8: Ornithology** of the Environmental Impact Assessment (EIA) Report for the proposed Appin Wind Farm (hereafter referred to as 'the Proposed Development'). Further relevant information is also available in **Technical Appendix 8.1**.

Under the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (the Habitats Regulations), any development that may have a likely significant effect (LSE) on an internationally designated 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, to determine whether or not the development would have an adverse effect on the integrity of the relevant designated area(s).

National Planning Framework 4 (NPF4) provides the same level of protection to Wetlands of International Importance (designated under the Ramsar Convention (1979)) to that afforded to SPAs and SACs. Therefore, sites with this designation, referred to hereafter as Ramsar sites, also require consideration for AA.

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 in this document, to provide information to the competent authority<sup>1</sup> to allow them to reach a decision on whether or not the development would have a LSE on any internationally designated sites and therefore whether an AA is required. Should the potential for a LSE be concluded, the process moves on to 'Stage 2' (AA).

The two-stage process is referred to as a Habitats Regulations Appraisal (HRA). Only the competent authority can undertake HRA. Thus, this document is classed as providing 'Information to inform the HRA'.

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

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.

### Designated Sites for Consideration

#### Statutory Sites

Two statutory sites of international importance have been identified for consideration, using a search area around the Site 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 two designated areas located within 20 km of the Site were stated by NatureScot (in Scoping Opinion dated April 2022 (see Table 8.1 in **Chapter 8: Ornithology**)) as requiring inclusion within a standalone HRA document.

The protected sites identified are detailed in **Table 1**, along with the qualifying features for which they are designated. Note that for applicable Ramsar sites only ornithological interests are listed in the table.

**Table 1 – Internationally Designated Areas Within 20 km of the Site (Ornithological Qualifying Features)**

| European Designated Site                           | Distance and Direction from Site   | Ornithological Qualifying Interests  |
|--|------------------------------------|--|
| Muirkirk and North Lowther Uplands SPA             | 14.3 km to north                   | Breeding: <ul style="list-style-type: none"> <li>• Golden plover;</li> <li>• Hen harrier;</li> <li>• Merlin;</li> <li>• Peregrine; and</li> <li>• Short-eared owl.</li> </ul> Non-breeding: <ul style="list-style-type: none"> <li>• Hen harrier.</li> </ul> |
| Loch Ken and River Dee Marshes SPA and Ramsar site | 19.9 km to south-west <sup>2</sup> | Non-breeding: <ul style="list-style-type: none"> <li>• Greenland white-fronted goose; and</li> <li>• Greylag goose.</li> </ul>   |

Note that the Loch Ken and River Dee Marshes SPA and Loch Ken and River Dee Marshes Ramsar site encompass the same land area and have the same listed ornithological interests, and so they are treated together hereafter, and duplicate assessments are not undertaken.

<sup>1</sup> In this case Dumfries and Galloway Council.

<sup>2</sup> 16.3 km to south of Access Route (existing track).

### Conservation Objectives

SPAs in Scotland have standard Conservation Objectives and these can be summarised as follows for both Muirkirk and North Lowther Uplands SPA and Loch Ken and River Dee Marshes SPA/ Ramsar site:

- 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.

## Stage 1: Screening for Likely Significant Effect

### Overview

Stage 1: Screening for LSE is undertaken to remove any proposals, or components of proposals, that do not require consideration under Stage 2 (AA).

This Screening section considers two important aspects for the Proposed Development:

- connectivity between the Proposed Development and the designated area (and its qualifying features where these occur outside the boundary of the designated area); and
- route to impact between the Proposed Development and the designated area (and its qualifying features).

If it can be clearly demonstrated that there is no connectivity and/or no route to impact, the conclusion will be that there is no LSE on the designated areas. If, however, it is concluded that there is the potential for a LSE, an AA is required (with information to inform the HRA provided).

### Appraisal of Connectivity

Foraging ranges for relevant ornithological features are presented in **Table 2** (taken from NatureScot guidance (SNH, 2016)). This guidance states "*in most cases core range should be used when determining whether there is connectivity between the proposal and the qualifying interests*".

Note that NatureScot guidance does not include a foraging range for hen harrier in the non-breeding season. There is little available literature as to an appropriate range to use for this season, but O'Donohue (2020) considered pressures on roosts to apply if within 9 km, and so this distance is presented in the table.

**Table 2 – Foraging Ranges of Qualifying Ornithological Interests**

| Species  | Foraging Range                                    |
|--|---|
| <b>Breeding Season (foraging range from nest site)</b>       |   |
| Golden plover  | Core range 3 km (maximum range 11 km)             |
| Hen harrier  | Core range 2 km (maximum range 10 km)             |
| Merlin   | Within 5 km                                       |
| Peregrine  | Core range 2 km (maximum recorded distance 18 km) |
| Short-eared owl  | Core range 2 km (maximum range 5 km)              |
| <b>Non-breeding Season (foraging range from night roost)</b> |   |
| Hen harrier  | Within 9 km                                       |
| Greenland white-fronted goose                                | Core range 5-8 km                                 |
| Greylag goose  | Core range 15-20 km                               |

### Muirkirk and North Lowther Uplands SPA

Based on core range of the qualifying interests of the SPA (golden plover, hen harrier, merlin, peregrine, short-eared owl), there would be no connectivity between Muirkirk and North Lowther Uplands SPA and the Proposed Development, which is located over 14 km from the designated area.

However, if maximum range is considered there is potential for connectivity with peregrine associated with the SPA. The distance between the SPA and the Site, which is over seven times the core range, suggests that such connectivity is highly unlikely. Hardey *et al.* (2013) state that peregrines defend territories that are on average 2 km to 9 km in size. A peregrine nesting in the closest part of the SPA to the Site would need to have a territory over 50% larger than the maximum reported average to have connectivity with the Proposed Development.

In an example Habitats Regulations Assessment that considered peregrine (undertaken for a licence application to take peregrines from the wild in England for falconry and aviculture purposes), Natural England (2020) considered 10 km to be an "*appropriate and reasonable distance*" on which to base a Zone of Influence.

Therefore, based on the available evidence, none of the qualifying features of Muirkirk and North Lowther Uplands SPA (golden plover, hen harrier, merlin, peregrine and short-eared owl) are considered to have connectivity with the Proposed Development.

#### Loch Ken and Dee Marshes SPA/ Ramsar Site

Based on core range of the qualifying interests of the SPA, there would be no connectivity between Greenland white-fronted geese associated with Loch Ken and River Dee Marshes SPA/ Ramsar site and the Site, which is located well beyond this species' 5-8 km foraging range.

The Site is located at the very edge of the 15-20 km foraging range for greylag goose, based on the minimum distance between the Site boundary and the boundary of the SPA/ Ramsar site (19.9 km). The Site itself supports no habitat suitable for greylag geese and any flights between the designated area and suitable habitat on the far side of the Site from the designated area (north-east of the Site) would exceed the species' typical foraging range. Mitchell (2012), in a paper that determined the foraging locations of greylag geese associated with SPAs, showed that greylag geese from Loch Ken and River Dee Marshes SPA foraged along the Loch Ken valley (more than 15 km distant) and that no favoured foraging areas are located in the vicinity of the Site.

Therefore, based on the available evidence, neither of the qualifying ornithological features of Loch Ken and River Dee Marshes SPA/ Ramsar site (Greenland white-fronted goose and greylag goose) are considered to have connectivity with the Proposed Development.

#### **Appraisal of Routes to Impact**

Looking at the Conservation Objectives of the SPAs, routes to impact can be ruled out based on the separation distance between the Site and the designated areas; these being over 14 km for Muirkirk and North Lowther Uplands SPA, and almost 20 km for Loch Ken and River Dee Marshes SPA/ Ramsar site. As has been described above, the Site is beyond the distance at which it would be used by the qualifying features of these designated areas. Therefore, the Proposed Development would not impact the population or distribution of the qualifying features, and nor would there be disturbance impacts.

Due to the distance between the Site and both SPAs, there would be also no direct or indirect impacts on the habitats and habitat processes contained within the designated areas. Additionally, there is no hydrological connectivity between the Site and the designated areas, with watercourses on Site flowing south-east as part of the River Nith catchment (and which join the River Nith downstream of any watercourses in the Nith catchment located within the Muirkirk and North Lowther Uplands SPA).

Therefore, no routes to impact are concluded for both Muirkirk and North Lowther Uplands SPA, and Loch Ken and River Dee Marshes SPA/ Ramsar site.

#### **Summary**

Two internationally designated areas with ornithological interests have been identified within 20 km of the Site: Muirkirk and North Lowther Uplands SPA, and Loch Ken and River Dee Marshes SPA/ Ramsar site.

For impacts resulting from the Proposed Development (construction, operation and decommissioning phases) it has been demonstrated that no LSE would occur on the qualifying ornithological features of the two designated areas.

With no connectivity and no route to impact, the conclusion remains the same for both the Proposed Development on its own and in combination with other projects.

With no LSE demonstrated for the Proposed Development, the process does not move on to Stage 2: AA.

**An Appropriate Assessment is not required for either Muirkirk and North Lowther Uplands SPA, nor Loch Ken and River Dee Marshes SPA/ Ramsar site.**

#### **References**

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

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