

7. ORNITHOLOGY

7.1 Introduction

MWP were commissioned by SSE Renewables Ireland Limited to prepare a **Bird Impact Assessment Report** (BIAR) for the Glenora Wind Farm project (the “Proposed Development”) which has been included as **Appendix 7-1** of this EIAR. As summary of scope of the BIAR, the legislation and guidance followed and the findings of the BIAR have been included in this section of the EIAR.

The Proposed Development is described in detail in Chapter 4 of this EIAR.

Malachy Walsh and Partners (MWP) Engineering and Environmental Consultants have been undertaking ornithological surveys at the site on behalf of the Applicant on a monthly basis between April 2019 and March 2023.

The BIAR describes the ornithology (avian ecology) of the Proposed Development site in County Mayo. The aim of the impact assessment is to assess whether the project is likely to result in significant effects on bird species considered to comprise avian receptors of the Proposed Development. Where potential impacts are identified, mitigation measures have been developed to avoid or reduce significant effects. The impact assessment is based on a desktop study including published literature, and on ornithological surveys completed consecutively at the study area over the four-year period from April 2019 to March 2023, inclusive.

The BIAR includes descriptions and results of all bird surveys undertaken by MWP during this timeframe, comprising the following survey periods:

- > Summer 2019
- > Winter 2019/2020
- > Summer 2020
- > Winter 2020/2021
- > Summer 2021
- > Winter 2021/2022
- > Summer 2022
- > Winter 2022/2023

Relevant mapping, including the study area and site boundary, was provided by the applicant at the outset and throughout the project.

The ornithological study area was defined as the project site and surrounds, extending away from the project site as necessary, to account for birds potentially affected by the Proposed Development.

Areas designated for nature conservation under the EU Habitats Directive and the EU Birds Directive (otherwise known as European Sites) have been considered in a standalone Screening for Appropriate Assessment report and Natura Impact Statement (NIS) report, both prepared by MKO and included as part of this planning application.

7.1.1 Scope of the Assessment

The BIAR comprises an ecological impact assessment of the Proposed Development focusing on avian (bird) species potentially affected by the project. The process will determine whether the site’s avian fauna will be subject to impacts arising from the Proposed Development and will then characterise these impacts and their effects in terms of significance.

The BIAR is set out as follows:

- Section 2 describes the methodology used to collect information on the avian features of the proposed wind farm site and surrounds (features may comprise species or protected sites of ornithological interest).
- Sections 3.2 to 3.4 describe the avian features considered to be within the Zone of Influence (ZOI) of the proposed wind farm development.
- Section 3.5 identifies and selects those features considered to comprise receptors upon which impacts ensuing from the proposed wind farm development are likely. These are referred to as Important Ecological Features (IEFs).
- Section 4 identifies the potential direct, indirect and cumulative impacts of the proposed wind farm development that are probable or likely to occur during its lifetime and assesses whether said impacts are likely to result in significant direct, indirect or cumulative effects upon the IEFs.
- Section 5, where necessary, proposes mitigation and monitoring measures to remove or reduce those impacts.
- Section 6 assesses the residual ecological effects of the proposed wind farm development (those remaining after mitigation).

The ‘zone of influence’ (ZOI) for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities (CIEEM, 2019). The ZOI of the Proposed Development was established using professional judgement and relevant information including details of the project’s extent and characteristics, the desk study and field survey results, Scottish Natural Heritage (SNH) (2016) guidance for establishing connectivity with Special Protection Areas (SPAs), and CIEEM (2019) and EPA (2022) guidance. The ZOI differs between different ecological receptors and is generally considered to extend out to a 500 m distance around the Proposed Development site, out to a maximum of 2 km in the case of some species.

Features of avian significance occurring or likely to occur within the ZOI of the Proposed Development were considered as potential IEFs. These are the important features that could potentially be affected by the project and should be subject to detailed assessment (CIEEM, 2019). IEFs were considered to be bird species identified as important based on results of the ornithological surveys completed at the site over the three-year survey period (October 2019 – September 2022, inclusive), as well as designated sites for nature conservation which support important bird populations.

The BIAR quantifies any potential impacts relating to these IEFs and identifies any measures required to avoid, reduce and mitigate likely significant effects. Identification of effects and prescribed mitigation has been derived following a collaborative approach working with a multi-disciplinary team including ornithologists, ecologists, and project engineers. The results of the ornithological surveys have been utilised to inform the design of the project, thereby minimising potential effects on avian ecology and sensitive habitats.

The information provided in the BIAR describes the baseline ornithological environment; provides an accurate prediction of the potential impacts on identified IEFs from the Proposed Development; prescribes mitigation where necessary; and describes the residual effects on avian ecology.

7.1.2 Legislation and Guidance

The most important legislation underpinning biodiversity and nature conservation in Ireland are the:

- Wildlife Acts 1976 to 2021 (as amended)
- European Union Habitats Directive
- European Union Birds Directive
- European Communities (Birds and Natural Habitats) Regulations 2011 to 2015 (as amended)

- Planning and Development Act (2000) (as amended)
- Planning and Development Regulations 2001 to 2022 (as amended)

The impact assessment was undertaken in accordance with the recent EPA best-practice guidance ‘Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’ (EPA, 2022).

The following other guidance documents and relevant publications were also considered:

- Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species (NatureScot, 2022)
- Birds of Conservation Concern in Ireland 4: 2020 – 2026 (Gilbert et al., 2021)
- Guidance document on wind energy developments and EU nature legislation. Guidance document (European Commission, 2020)
- Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2019)
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009)
- European Commission Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017)
- Best Practice Guidelines for the Irish Wind Energy Industry (Irish Wind Energy Association, 2012)
- Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage (SNH, 2017)
- Assessing Connectivity with Special Protection Areas (SPAs). Scottish Natural Heritage (SNH, 2016)
- Assessing the Cumulative Impact of Onshore Wind Energy Developments. Scottish Natural Heritage (SNH, 2012)
- Assessing Significance of Impacts from Onshore Windfarms on Birds Outwith Designated Areas (SNH, 2006)
- Birds and wind farms in Ireland: a review of potential issues and impact assessment (Percival, S. M., 2003).

7.2

Summary of the Bird Impact Assessment Report

This non-technical summary provides an overview of the potential effects associated with the Proposed Development on ornithological features present at the proposed Glenora Wind Farm development. Field surveys were completed in order to determine the current breeding and non-breeding assemblage within the study area and were undertaken between 2019 and 2023.

The site itself is a commercial conifer plantation and as such does not contain particularly sensitive habitats or key populations of vulnerable bird species, taking account of publicly available bird sensitivity mapping and records, data supplied by NPWS, and the results of the bird surveys undertaken.

The most notable species recorded on site included kestrel, sparrowhawk, hen harrier, peregrine, buzzard, snipe, golden plover, woodcock and whooper swan. Further notable species, such as merlin, red grouse and teal were recorded in the wider environ of the site, within 2 km. Though outside the site, any potential impacts on ornithological interests in proximity to the site must also be considered.

The habitats present on site and/or within the wider environs are potentially suitable for breeding raptor species such as kestrel, sparrowhawk, merlin and buzzard, as well as species of wader such as snipe, golden plover, and woodcock, and gamebirds such as red grouse.

The site itself is not subject to any nature conservation designations. The closest Special Protection Area (SPA) is located approximately 10.3 km from the site. The Glenamoy Bog Complex Special Area of

Conservation (SAC) (000500) is located approximately 150 m north of the wind farm site's northern boundary. This designated site is of importance for breeding merlin and golden plover, among other species. Neither merlin nor golden plover were recorded breeding within the proposed wind farm site.

Potential effects on species were assessed within both an EIA context and an AA context, due to the potential connectivity with birds which are qualifying features of SPAs. There will however be no direct impacts on protected areas such as SPAs and SACs. The NIS concluded that the integrity of the SPAs and SACs will not be adversely affected in view of the sites' conservation objectives.

The ornithological assessment identified habitat loss and disturbance during the construction phase, displacement and collision risk effects during the operational phase, and disturbance effects during the decommissioning phase, as potential impacts.

Unmitigated effects from construction activities on ornithological features were assessed as potentially significant during the breeding season for some birds of prey (sparrowhawk, buzzard, merlin, kestrel) and some upland breeding species (red grouse, golden plover, snipe and woodcock) owing to disturbance.

Unmitigated effects from operational activities on ornithological features were assessed as not significant for the bird of prey species, sparrowhawk and merlin, and the upland species red grouse with regard to potential displacement effects. Unmitigated displacement effects during operation were assessed as slight for hen harrier, buzzard, kestrel, golden plover and snipe.

The collision risks are low to moderate due to several factors related to bird species, numbers, and avoidance behaviour. Impacts due to potential collision risk range from moderate (golden plover and kestrel) to slight (buzzard and snipe) to not significant (sparrowhawk, whooper swan, hen harrier, merlin and peregrine).

The cumulative effect of this development within the County Mayo region was assessed. No significant effects on birds are predicted with regard to cumulative impacts of the site, although there is potential for a cumulative effect with regard to wintering/migrating golden plover when considered with regard to other wind farms in the area and potential cumulative collision risk.

It is anticipated that any potentially adverse effects may be mitigated by design (including micro siting) and mitigation. To that end, a Project Ecologist with appropriate expertise and long-term ornithological experience will oversee pre-construction and construction phase bird surveys at the site, including the monitoring of breeding raptors and upland breeding species. All construction activities will be conducted in accordance with a Construction Environmental Management Plan (CEMP). Bird surveys will continue during the operational phase at locations used pre-construction.

With the avoidance measures (design phase), and full implementation of mitigation measures throughout the construction phase, operational phase, and decommissioning phase of the project, significant residual effects on birds are not expected.