

Oweninny Wind Farm Phase 3

Environmental Impact Assessment Report

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**Appendix 8.5 Bird Monitoring Programme**

# Bord na Móna

Oweninny Wind Farm Phase 3  
Bird Monitoring Programme



**PROJECT NAME: Oweninny Wind Farm Phase 3**

**REPORT NAME: Bird Monitoring Programme**

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## Table of Contents

1.0 INTRODUCTION .....	1
1.1 Objectives .....	2
2.0 METHODOLOGY .....	2
2.1 Pre-Construction Bird Monitoring .....	2
2.2 Post-Construction Bird Monitoring .....	3
2.2.1 Vantage Point surveys (Flight Activity Surveys) .....	3
2.2.2 Breeding Bird Surveys.....	3
2.2.3 Winter Bird Surveys (Monthly Wildfowl Census).....	3
2.2.4 Hen Harrier Roost Survey.....	4
2.2.5 Fatality Monitoring.....	4
3.0 Reporting .....	4

## Table of Tables

Table 1-1: Kars Recorded Within the Study Area of the Proposed Development....	1
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## 1.0 INTRODUCTION

This Bird Monitoring Programme has been prepared by Tobin Consulting Engineers for the proposed Oweninny Phase 3 wind farm, Co. Mayo. This document provides a timeframe and monitoring schedule for the bird population of the study area during the construction and post-construction phase of the project.

Breeding and wintering bird surveys were undertaken during the between period April 2019 to September 2022. These surveys were in line with SNH guidance entitled “Recommended bird survey methods to inform impact assessment of onshore wind farms” (SNH, 2017<sup>1</sup>). Full details of all bird usage within the study area for the proposed development can be seen in Chapter 8 (Ornithology) and Appendix 8.1 of this EIAR. The Key Avian Receptors (KARs) identified for this proposed development can be seen in table xxx and will be subject to the various proposed bird monitoring measures outlined in this document.

Table 1-1: Kars Recorded Within the Study Area of the Proposed Development.

Species	BTO Codes	Species	BTO Codes
Hen Harrier ( <i>Circus cyaneus</i> )	HH	Cormorant ( <i>Phalacrocorax carbo</i> )	CA
Kestrel ( <i>Falco tinnunculus</i> )	K.	Grey Heron ( <i>Ardea cinerea</i> )	H.
Merlin ( <i>Falco columbarius</i> )	ML	Sparrowhawk ( <i>Accipiter nisus</i> )	SH
Peregrine ( <i>Falco peregrinus</i> )	PE	Dunlin ( <i>Calidris alpina</i> )	DN
Golden Plover ( <i>Pluvialis apricaria</i> )	GP	Redshank ( <i>Tringa totanus</i> )	RK
Snipe ( <i>Gallinago gallinago</i> )	SN	Greenshank ( <i>Tringa nebularia</i> )	GK
Red Grouse ( <i>Lagopus lagopus</i> )	RG	Ringed Plover ( <i>Charadrius hiaticula</i> )	RP
Whooper Swan ( <i>Cygnus cygnus</i> )	WS	Common Sandpiper ( <i>Actitis hypoleucos</i> )	CS
Mute Swan ( <i>Cygnus olor</i> )	MS	Lesser Black-backed Gull ( <i>Larus fuscus</i> )	LB
Mallard ( <i>Anas platyrhynchos</i> )	MA	Common Gull ( <i>Larus canus</i> )	CM
Teal ( <i>Anas crecca</i> )	T	Great Black-backed Gull ( <i>Larus marinus</i> )	GB
Tufted Duck ( <i>Aythya fuligula</i> )	TU	Meadow Pipit ( <i>Anthus pratensis</i> )	MP
Little Grebe ( <i>Tachybaptus ruficollis</i> )	LG	Grey Wagtail ( <i>Motacilla cinerea</i> )	GL

Note: **Bold** are Key Target Species.

<sup>1</sup> Scottish Natural Heritage, 2017. Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind Farms. Scottish Natural Heritage



## 1.1 Objectives

Monitoring objectives will include the following:

- To ensure any required pre-commencement/ pre-construction phase monitoring is scheduled to ensure any impacts on breeding lapwing in particular, are avoided.
- To record usage of the site by birds and interaction with operating turbines during the post-construction phase of the development.
- To monitor short-term and long-term effects on bird populations with a particular emphasis on wintering and breeding birds deemed to be of high conservation concern (Annex I; EU Birds Directive and BoCCI red list species).
- To undertake collision monitoring and corpse searches for potential bird fatalities as a result of collision with turbine blades.
- To record usage of the enhancement area by key ornithological receptors and in particular breeding ground nesting waders.
- Report on findings of post construction monitoring at the end of each monitoring year (Year 1, 2, 3, 5, 10 and 15 of the lifetime of the wind farm).

## 2.0 METHODOLOGY

### 2.1 Pre-Construction Bird Monitoring

It is proposed that construction works will commence outside the bird nesting season (1st of March to 31st of August inclusive) to avoid the most sensitive time of the year for most bird species with the potential to use the site and its environs.

Any requirement for construction works to run into subsequent breeding seasons following commencement of works will be subject to pre-construction bird surveys in the form of breeding bird transect surveys following methodologies outlined in Gilbert *et. al* (1998)<sup>2</sup> and Brown & Shepherd (1993)<sup>3</sup>.

This construction phase monitoring, if required, will involve surveying onsite and to a 500m radius of the proposed development boundary. Monitoring will be undertaken by a suitably qualified ornithologist. The survey period will include four visits between April and July. If breeding activity is identified, the nest sites will be located, and no works shall be undertaken within a 500m buffer. No works within the buffer zone shall be permitted until it can be demonstrated that the species is no longer reliant on the nesting areas.

All site staff and subcontractors will be made aware of any restrictions to be imposed by means of a toolbox talk and a map of the 'no-work zone' will be made available to all construction staff. The restricted area will also be marked off using hazard-tape fencing to alert all personnel on site to the suspension of works within that area.

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<sup>2</sup> Gilbert, G., Gibbons, D & Evans, J. (1998). Bird Monitoring Methods. RSPB, Sandy

<sup>3</sup> Brown, A. F. and Shepherd, K. B. (1993) *A method for censusing upland breeding waders*. Bird Study, 40, pp. 189-195.



## 2.2 Post-Construction Bird Monitoring

Post-construction monitoring will employ survey methodologies in line with those recommended in SNH (2009)<sup>4</sup>. It is proposed to undertake monitoring in the years 1, 2, 3, 5, 10 and 15, following construction. The following survey will be utilised to monitor birds within the proposed development site, following construction: vantage point surveys, breeding bird surveys, winter surveys and a programme of regular corpse searching of birds that may potentially collide with operating turbines during the operational phase of the wind farm project.

### 2.2.1 Vantage Point surveys (Flight Activity Surveys)

A flight activity survey is to be undertaken using vantage points surveys. Vantage point surveys will be undertaken monthly during operational years 1, 2, 3, 5, 10 and 15 of the lifetimes of the wind farm. The methodology for vantage point surveys will follow guidelines outlined in SNH (2017) and SNH (2009). Vantage points will be undertaken from the same locations used during pre-planning surveys which informed this EIA. The locations of which can be seen in Chapter 8 or Appendix 8.4.

Behavioural changes to the wind farm will also be noted using categories of bird interactions with operational wind farms, in line with terminology outlined by Meredith *et al.*, (2002)<sup>5</sup>. A report will be submitted to the NPWS and consenting planning authority at the end of each monitoring year

### 2.2.2 Breeding Bird Surveys

A selection of breeding bird surveys (Breeding raptor [including Merlin], Breeding Woodcock, Breeding Red Grouse and Breeding Gull and wader surveys), which have been outlined in in chapter 8 (section 8.6.5), are to be undertaken during years 1, 2, 3, 5, 10 and 15. This frequency aims to assess any displacement effects such as those recorded on breeding birds. A report will be submitted to the NPWS and consenting planning authority at the end of each monitoring year.

### 2.2.3 Winter Bird Surveys (Monthly Wildfowl Census)

A monthly wildfowl census, of wetlands, lakes, rivers and ephemeral water bodies will be undertaken monthly during the winter period (October to March). Counts will be conducted on the 'look-see' basis (Bibby *et al.* 2000)<sup>6</sup> which involved scanning across the survey area and counting all the birds seen. Information collected will include; numbers of wildfowl or wader species, the presence of marked birds (leg-ringed or neck-collared), weather conditions and habitat types.

This survey is to be conducted during years 1, 2, 3, 5, 10 and 15 post construction to allow for annual variation and cumulative effects. A report will be submitted to the NPWS and consenting planning authority at the end of each monitoring year.

<sup>4</sup> Scottish Natural Heritage, 2009. Monitoring the Impact of Onshore Wind Farms on Birds. Scottish Natural Heritage

<sup>5</sup> Meredith, C., Venosta, M. & Ransom, R. 2002. Cordington Wind Farm Avian Avoidance Behaviour Report 2002. Biosis Research Project.

<sup>6</sup> Bibby, C.J., Burgess, N.D., Hill, D.A. and Mustoe, S.H. (2000). *Bird Census Techniques*. Academic Press



## 2.2.4 Hen Harrier Roost Survey

Monthly Hen Harrier Roost Surveys, following Gilbert *et al.* (1998), is to be conducted during the winter period (October to March) of years 1, 2, 3, 5, 10 and 15. Roost vantage points will be undertaken from the same locations used during pre-planning surveys which informed this EIAR. The locations of which can be seen in Chapter 8. The survey will aim to assess any displacement effects such as on recorded or potential Hen Harrier roosts within 2km of the proposed development. A report will be submitted to the NPWS and consenting planning authority at the end of each monitoring year.

## 2.2.5 Fatality Monitoring

A comprehensive fatality monitoring programme will be undertaken following best practice from SNH (2009) and Duffy and Steward (2008)<sup>7</sup>, a trained dog and handler will be used to locate any bird carcasses; the primary components will include the following:

- Initial carcass removal trials to establish levels of predator removal of possible fatalities. Carcass removal trials shall be continued for the duration of fatality searches;
- Turbine bird fatality searches, using a trained dog and handler, are to be undertaken in a defined search area (minimum radius hub height) and at intervals selected to effectively sample fatality rates based on carcass removal rates. Surveys will be scheduled to coincide with years 1, 2, 3, 5, 10, 15 of the lifetime of the windfarm.
- Recorded fatalities are to be calibrated against known predator removal rates at the site following the initial carcass removal trials, to provide an estimate of overall fatality rates.
- Results of bird casualties will be incorporated into a report which will be submitted to the NPWS and consenting planning authority at the end of each monitoring year.

## 3.0 REPORTING

A report summarising the findings of the bird monitoring surveys will be submitted to the Planning Authority and NPWS where required, within three months of each monitoring year. The report will be submitted by no later than the 31st of March. This will provide details of the various methods employed, the results of field surveys (vantage point watches, fatality, breeding and wintering and hen harrier roost surveys), potential effects/impacts on birds and any recommendations that may inform additional mitigation measures during the operational phase of the wind farm project. Maps outlining flight lines of key target species will be produced using GIS software applications to accompany the final report at the end of each monitoring year.

<sup>7</sup> Duffy, K. & Steward, M. 2008. Turbine Search Methods and Carcass Removal Trials at the Braes of Doune Windfarm. Natural Research Information Note 4. Natural Research Ltd, Banchory, UK

