

# MONA OFFSHORE WIND PROJECT

## Barn Owl Clarification Note

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Image of an offshore wind farm

**MONA OFFSHORE WIND PROJECT**

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**MONA OFFSHORE WIND PROJECT**

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**Contents**

**1 BARN OWL CLARIFICATION NOTE ..... 4**

1.1 Introduction ..... 4

1.2 Response..... 4

1.2.1 Background ..... 4

1.2.2 Legislation relevant to barn owls ..... 4

1.2.3 Barn owl ecology ..... 4

1.2.4 Approach taken in the Mona Offshore Wind Project Application ..... 5

1.2.5 Surveys undertaken for the Awel Y Mor Application ..... 9

1.2.6 Conclusion..... 10

## Glossary

Term	Meaning
Applicant	Mona Offshore Wind Limited.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Mona Offshore Wind Project	The Mona Offshore Wind Project is comprised of both the generation assets, offshore and onshore transmission assets, and associated activities.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects.

## Acronyms

Acronym	Description
BTO	British Trust for Ornithology
DCO	Development Consent Order
CIEEM	Chartered Institute of Ecology and Environment Management
ExA	Examining Authority
GLRA	Ground Level Roost Assessment
NRW	Natural Resources Wales
PRA	Preliminary Roost Assessment

## Units

Unit	Description
ha	hectares
km	kilometres

# 1 Barn Owl Clarification Note

## 1.1 Introduction

- 1.1.1.1 This document has been prepared in response to a question raised by the Examining Authority (ExA) during Issue Specific Hearing 2 Onshore and Offshore Environmental Matters and dDCO, which was held on 18 July 2024 in respect of the Mona Offshore Wind Project.
- 1.1.1.2 The question requested further clarification on how barn owls have been considered in the Development Consent Order (DCO) Application.

## 1.2 Response

### 1.2.1 Background

- 1.2.1.1 The purpose of the document is to clarify how the Mona Offshore Wind Project has considered potential impacts to barn owls. The ExA's question follows on from the Relevant Representation from Natural Resources Wales (NRW) which raised a concern that no surveys were undertaken as part of the environmental impact assessment to identify the use of the onshore corridor for breeding and/or foraging barn owls. The Applicant's response to NRW's Relevant Representation is provided in PDA-008.
- 1.2.1.2 This document summarises the approach taken in Volume 3, Chapter 4: Onshore and Intertidal Ornithology (APP-067) to explain why the information provided in the DCO Application adequately considers barn owls.

### 1.2.2 Legislation relevant to barn owls

- 1.2.2.1 Barn owl are listed on Schedule 1 of the Wildlife and Countryside Act, 1981 (the Act). This means that in addition to the protections offered by the Act, it is also an offence to disturb barn owl, intentionally or recklessly, while they are nest building, or a bird is in, on or near a nest containing eggs or young. It is also an offence to disturb the dependent young of the species.

### 1.2.3 Barn owl ecology

- 1.2.3.1 Barn owls generally start breeding during their second calendar year. Once fledged it can be very difficult to distinguish young birds from older individuals in the field.
- 1.2.3.2 The courtship of barn owls usually begins in March with the peak egg laying period taking place between early April and late May. Infrequently, pairs that have an early clutch of eggs may have a second clutch as late as August. Fledging of young tends to take place between mid-June to early August.
- 1.2.3.3 A variety of open farmland habitats may be used by barn owl for foraging and their home ranges are not necessarily exclusive. During non-breeding times of year ranges have been found to extend up to 5 km but 3 km is more usual. During the breeding season the foraging range is much smaller, usually extending 1 km from the nest (Taylor, 2003). Barn owl are generally a sedentary species and maintain a similar home range across successive generations showing a high level of fidelity to breeding sites (Hardey et al., 2013; Shawyer, 2011). Occasionally, individuals may display short distance migration, for example moving from high to lower ground during extreme weather.

## MONA OFFSHORE WIND PROJECT

- 1.2.3.4 The habitat included within home ranges generally includes areas of rough and tussocky grassland. Askew (2006) found that barn owl in England, Scotland and Wales required varying amounts of rough grassland with 2 km of a nest site: 14-21 ha in arable areas, 31-47 ha in pastoral areas and 17-26 ha in areas of mixed farming.
- 1.2.3.5 Nest sites may be located in large cavities within trees, buildings, bale stacks and rock faces, as well as within nest boxes. The preferred nesting areas have a floor space of at least 0.3 m by 0.3 m (Taylor, 2003). Suitable trees for breeding are usually located towards the edge of woodland blocks (McGhie, 2000).

### 1.2.4 Approach taken in the Mona Offshore Wind Project Application

#### Study area

- 1.2.4.1 The onshore ornithology study area as reported in Volume 3, Chapter 4: Onshore and Intertidal Ornithology (APP-067) was designed to characterise the assemblage of bird species using the habitats that will be crossed by the Mona Onshore Development Area. The area encompasses the Mona Onshore Development Area plus a 250 m buffer.
- 1.2.4.2 The 250 m buffer is included to take account of bird interests that may occur adjacent or close to the Mona Onshore Development Area. This distance is based on potential maximum disturbance distances for breeding birds expected to be found in the area (Goodship and Furness, 2022). It should be noted that a minimum protection zone of 175 m is recommended for barn owl around activities involving the use of heavy plant continuously (Shawyer, 2011). Forestry operations may also apply a 250 m buffer to avoid disturbance to barn owl during the breeding period (Goodship and Furness, 2022).

#### Methodology

- 1.2.4.3 To establish a baseline of potential ornithological receptors within the onshore ornithology study area a combination of review of existing data sources and site-specific surveys was undertaken. The methodologies are summarised below; further detail is provided in Volume 3, Chapter 4: Onshore and Intertidal Ornithology (APP-067).

#### Desktop study

- 1.2.4.4 Information on onshore ornithology within the study area was collected through a detailed desktop review of existing studies and datasets. These are summarised at Table 1.1 below. As a Schedule 1 listed species, breeding records of barn owl are of particular interest.

**Table 1.1: Summary of key desktop sources.**

Title	Source	Year	Author
Bird Atlas 2007-11	The British Trust for Ornithology (BTO)	2013	Balmer, D., Gillings, S., Caffrey, B., Swann, B., Downie, I., Fuller, R.
Birds in Wales. Welsh Bird Report 2018.	Welsh Ornithological Society	2019	Welsh Ornithological Society. Edited by Hughes, J.

## MONA OFFSHORE WIND PROJECT

Title	Source	Year	Author
The status of our bird populations: the fifth Birds of Conservation Concern (BOCC) in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain.	British Birds	2021	Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I.
Birds of Conservation Concern Wales 4: the population status of birds in Wales	Milvus	2022	Johnstone, I.G., Hughes, J., Balmer, D., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G., Taylor, R.
The Breeding Bird Survey 2021	BTO	2022	Harris, S.J., Massimino, D., Balmer, D.E., Kelly, L., Noble, D.G., Pearce-Higgins, J.W., Woodcock, P., Wotton, S. and Gillings, S.
Bird records for Mona Onshore Development Area plus 2 km buffer	North Wales Local Environmental Records Centre (LERC) (Cofnod)	2022	N/A
Environmental Statement – Volume 5, Annex 5.8: Breeding Bird Survey Report	Awel y Môr Offshore Wind Farm	2022	SLR Consulting as commissioned by GoBe Consultants on behalf of RWE Renewables UK

1.2.4.5 To assess potential breeding bird species within the onshore ornithology study area, records from Cofnod, the BTO Bird Atlas (Balmer *et al.*, 2013) and the Welsh Ornithological Society (WOS) (Birds in Wales, 2018) were reviewed and a number of species of high conservation status that could potentially breed within the onshore ornithology study area were identified. A full list of these species and their recorded abundances are detailed in Volume 7, Annex 4.3: Onshore ornithology - breeding birds technical report of the Environmental Statement (APP-141).

### Site specific surveys

#### Extended phase 1 habitat survey

1.2.4.6 The extended phase 1 habitat surveys were undertaken between May 2022 and September 2023 to map broad habitat types present and identify potential for protected or notable species within the extended phase 1 habitat survey area. The surveys were undertaken by ecologists suitably experienced in undertaking extended phase 1 habitat surveys and in accordance with the standard methodology set out in the Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey - a technique for environmental audit (JNCC, 2010). All broad habitat types recorded within the extended phase 1 habitat survey area were mapped using the JNCC Phase 1 Habitat Classification scheme, including phase 1 habitat types.

1.2.4.7 In addition to broad habitat types, the extended phase 1 habitat surveys also identified habitats of potential value to legally protected or notable species.



## Ornithological surveys

- 1.2.4.8 A total of nine breeding bird surveys were undertaken during the 2022 and 2023 breeding bird season across the onshore ornithology study area (see Volume 7, Annex 4.3: Onshore ornithology – breeding birds technical report (APP-141)). Four surveys were undertaken between April 2022 to July 2022 and five surveys were undertaken between March to July 2023. Each breeding bird survey was undertaken once per month over several survey visits. All breeding bird surveys were undertaken in favourable weather conditions, avoiding heavy rain and strong winds (Beaufort wind force of greater than 5). All surveys commenced within half an hour of sunrise and concluded by mid-morning.
- 1.2.4.9 The timing of these breeding bird surveys corresponds to the most suitable time year for conducting observation surveys for breeding barn owl (Shawyer, 2011).
- 1.2.4.10 In addition to breeding bird surveys, two walkover surveys were undertaken between November 2022 and March 2023, monthly nocturnal and diurnal surveys were also undertaken at the landfall. The daytime survey programme began in December 2021 and continued through to November 2023. The nocturnal survey programme was carried out over two core wintering periods, February 2022 to March 2022 and November 2022 to March 2023.
- 1.2.4.11 The walkover surveys followed the so called “look-see” method, as taken from Bibby et al. (2000). The purpose of these surveys was to identify any wintering and migratory birds that may be present in the onshore ornithology study area.
- 1.2.4.12 The intertidal and nearshore ‘through-the-tidal-cycle’ surveys were primarily focused on waterbirds however, notable sightings of non-waterbird species were also recorded. These surveys were based upon the WeBS methodology.

## Aerial tree inspection, ground level roost assessment and preliminary roost assessments of buildings

- 1.2.4.13 As well as specific ornithological surveys, surveys for bat roosts, including aerial tree inspections, ground level roost assessments (GLRAs) and preliminary roost assessments of buildings (PRAs), were carried out across the Mona Onshore Development Area. These surveys were focused on identifying bat roost potential within trees and structures, however incidental sightings of bird nests, or evidence of past nests were also recorded.
- 1.2.4.14 Aerial tree inspections comprised of trained surveyors climbing trees and completing a detailed inspection of all potential bat roost features using an endoscope and torch.
- 1.2.4.15 GLRAs aim to determine whether trees offer suitable roosting for bats. The surveys involved one daytime visit to all accessible land. All trees with a diameter of 0.25 m or above (at breast height) were subject to GLRA by a suitably experienced ecologist. Incidental observations on potential suitability for barn owl nesting were also recorded.
- 1.2.4.16 Buildings or structures, including natural structures (e.g. caves, adits) identified as requiring a PRA were assessed for their potential to support bat roosts. Where possible (and safe), the PRA accessed all areas of buildings or structures, loft spaces. High-powered torches with red filters, binoculars, and endoscopes were used to investigate all accessible areas.



## Survey limitations

### Ornithological surveys

- 1.2.4.17 The breeding bird surveys were undertaken across the Mona Onshore Development Area plus a 250 m buffer. As outlined in Volume 7, Annex 4.3: Onshore ornithology – breeding birds technical report (APP-141) there were some limitations to the survey. These limitations included a slightly delayed start to the surveys in 2022 and some land parcels areas where access was not available for survey every month. However, good coverage of the route was achieved from Public Rights of Way and agreed access to private land. Where access was not secured, the surveyors scanned the route with optics. As such, the survey results were sufficient to inform the assessment.
- 1.2.4.18 No barn owls were recorded during the breeding bird surveys and on this basis, no specific barn owl surveys were undertaken.
- 1.2.4.19 Despite the limitations outlined above it is considered that the methodologies used, and the data collected represents a robust characterisation of the grazed pasture dominated study area. This was agreed through the Evidence Plan process with the Onshore Ecology Expert Working Group.

### Aerial tree inspections, GLRAs and PRAs

- 1.2.4.20 Some of the trees identified within the bat survey area could not be fully inspected. Either access was not granted, or the tree could not be safely reached or climbed.
- 1.2.4.21 Where possible, ground level assessments of trees were undertaken before trees came into full leaf. However, where this was not possible and leaf cover significantly obscured the initial inspection, trees were given a precautionary 'high' suitability grading, triggering the requirement for future tree inspection.

## Results

### Desktop study

- 1.2.4.22 Bird records provided by Cofnod contained one barn owl sighting within 2 km of the Mona Onshore Development Area. This was a sighting of one bird flying from south to north across the A55. The record was noted in April 2018.

### Site specific surveys

#### Extended phase 1 habitat survey

- 1.2.4.23 Dominant habitats within the Mona Onshore Development Area were identified to include improved grassland which is typically enclosed and intensively grazed.
- 1.2.4.24 The Onshore Substation area is dominated by areas of improved grassland used as grazing pasture. This grazing pasture is not optimum barn owl habitat (Shawyer, 2011), which would be rough grassland, but may offer some value as foraging territory.
- 1.2.4.25 Results from the survey are reported in Volume 7, Annex 3.2: Extended phase 1 habitat survey technical report (APP-122).

### Ornithological surveys

- 1.2.4.26 No observations of barn owl were recorded during all breeding bird surveys conducted. One record of barn owl was made in March 2022 during a nocturnal survey of the landfall area. The bird was observed hunting in the strandline close to the landfall area however no observations were recorded within the Mona Onshore Cable Corridor and 400 kV Grid Connection Cable Corridor

### Aerial tree inspection

- 1.2.4.27 A total of 893 aerial tree inspection were undertaken, further details of which are set out in Volume 7, Annex 3.9: Bat roost survey technical report (APP-129, APP-130 and APP131). No records of barn owl nest sites, either in use or evidence of potential use, were made during the aerial tree inspections.

### Ground level roost assessment

- 1.2.4.28 Detailed results of the GLRA are set out in Volume 7, Annex 3.9: Bat roost survey technical report (APP-129, APP-130 and APP-131). A total of 4,890 trees were subjected to GLRA within the bat survey area. Of these five trees were recorded as having suitable roosting or nesting potential for barn owl.

### Preliminary roost assessment

- 1.2.4.29 A total of 24 buildings or structures were subject to PRA, further details of which are provided within Volume 7, Annex 3.9: Bat roost survey technical report (APP-129, APP-130 and APP131). No evidence of resident barn owl was recorded at any of these buildings.

## 1.2.5 Surveys undertaken for the Awel Y Mor Application

- 1.2.5.1 During Issue Specific Hearing 2, the Applicant was asked to consider the barn owl surveys undertaken for the Awel y Môr Offshore Wind Project in relation to the Mona Offshore Wind Project,

### Methodology

- 1.2.5.2 The barn owl surveys conducted for Awel y Môr were based on barn owl survey methodologies (Gilbert et al., 1998; Shawyer, 2011). They comprise an initial preliminary search for potential or active nests and roost sites in April 2021. A follow up inspection was then carried out at identified sites during July 2021.

### Results

#### Site specific survey

- 1.2.5.3 Confirmation of nesting barn owls was identified in a derelict building and within a mature oak tree. Evidence of barn owls using a nest box within 12 months of the conducted surveys was also found. The nest box was located close to the Awel y Môr substation site. The evidence identified included broken egg shells, confirming past breeding at this location (SLR, 2022).
- 1.2.5.4 A review of the survey results indicates that the closest of these records lies to the north of the Mona Onshore Development Area and to the west of the St Asaph Business Park, at a distance greater than the precautionary disturbance buffer for barn owls from the Mona Onshore Development Area.

## 1.2.6 Conclusion

- 1.2.6.1 No barn owl sightings were made during the breeding bird surveys (see paragraph 1.2.4.26) and no barn owl observations were made as incidental records by ecologists conducting other early morning/evening surveys for bats, birds, great crested newts (GCN) etc over the 2023 and 2024 seasons as would be expected if there were barn owls regularly foraging in the local area. It is reasonable to expect that if barn owls were regularly present in this area that they would have been seen by the survey teams.
- 1.2.6.2 A large amount of tree climbing for bat surveys has been undertaken in 2023 and 2024; and although not primarily targeting the identification of barn owl nests, there are similarities in terms of the types and age of trees that provide roosting opportunities for bats, and potential nesting cavities for barn owls. No barn owl nests/ roosts have been identified in any of the trees climbed.
- 1.2.6.3 Even if there were barn owls foraging in the fields crossed by the Mona Onshore Cable, the temporary impacts on low quality habitats would not be expected to significantly affect foraging barn owl (in terms of habitat loss and displacement from foraging areas), given the relatively limited footprint of the scheme in the wider context, and therefore there was no driver to undertake a specific barn owl survey in accordance with Chartered Institute of Ecology and Environment Management (CIEEM) guidance.
- 1.2.6.4 The potential impact of habitat disturbance during construction, operation and maintenance and decommissioning from the Mona Offshore Wind Project on onshore breeding and non-breeding birds was assessed to be minor adverse (as reported in Volume 3, Chapter 4, Onshore and Intertidal Ornithology (APP-067)). The pre-construction surveys for breeding birds (including barn owls), which is a commitment in the Outline Landscape and Ecology Management Plan (APP-208) and secured by the draft development consent order (PDA-003), will be carried out the season prior to construction. If breeding barn owl are found to be present, measures detailed in the Outline Landscape and Ecology Management Plan (APP-208) will be adhered to during construction (e.g. implementation of bird protection zone for schedule 1 species).
- 1.2.6.5 The barn owl surveys undertaken for the Awel y Mor application identified two nest sites close to Rhuddlan which are located some distance from the Mona Onshore Development Area. Evidence of recent nesting activity (within the last 12 months) was identified close to St Asaph, approximately 400 m from the Mona Onshore Development Area and outside the disturbance buffer.