# 21. TERRESTRIAL ORNITHOLOGY

## 21.1 Introduction

This chapter assesses the likely significant effects that the Onshore Site may have on avian receptors. Particular attention has been paid to species of ornithological importance. These include species with national and international protection under the Wildlife Acts 1979-2021 and the EU Birds Directive 2009/147/EC among other relevant legislation. Where potential effects are identified, mitigation is described and residual impacts on avian receptors are assessed.

This chapter is supported by Technical Appendices 21-1 to 21-4, which contain data from the surveys undertaken including full details of the survey times, weather conditions, and other relevant information together with the bird records themselves. The Onshore Site, Environmental Impact Assessment Report (EIAR) Site Boundary, and areas surveyed are provided in Figures 21-1 to 21-3.

This chapter is structured as follows:

- The Introduction provides a description of the Onshore Site and the relevant legislation, guidance and policy context.
- The Assessment Approach and Methodology section is a comprehensive description of the ornithological surveys and impact assessment methodology used to inform a robust assessment of potential impacts of the Onshore Site on birds.
- The Baseline Ornithological Conditions section describes the existing bird population at the Onshore Site.
- The Receptor Evaluation section identifies key ornithological receptors and determines their sensitivity towards likely significant effects.
- The Potential Impacts section details the impact assessment (including direct habitat loss and disturbance/displacement. Impacts are described with regard to each phase of the Onshore Site: construction, operation and maintenance, and decommissioning.
- The Mitigation and Best Practice Measures section describes proposed mitigation and best practice measures to avoid or mitigate the identified effects.
- The Monitoring section outlines a schedule for monitoring birds during each phase of the Onshore Site if planning permission is granted: commencement and construction, operation and maintenance, and decommissioning.
- The Residual Effects section considers the implications of the proposed mitigation, best practice, enhancement measures and monitoring.
- Finally, the Cumulative Effects section fully assesses the potential cumulative effects of the Onshore Site in combination with other projects.
- The Conclusion provides a summary statement on the overall significance of predicted effects on birds.

As detailed in Section 1.1.1 of Chapter 1, for the purposes of this EIAR, the various Project components are described and assessed using the following references: 'Onshore Landfall Location' (OLL), 'Onshore Grid Connection' (OGC), and 'Onshore Compensation Compound' (OCC).

Where the 'Onshore Site' is referred to, this includes the OLL, OGC, and OCC. Further references in relation to details on the Onshore Site include:

- The 'OLL' - The location where the Offshore Export Cable (OEC) will be brought ashore and meet the Transition Joint Bay (TJB).
- The 'OGC' – cable that transports electricity from the OLL to the OCC, and from the OCC to the existing Moneypoint 220kV Substation.
- The 'OCC' - onshore substation infrastructure including associated buildings and compounds; and

The following list defines the meaning of the technical terms used in this chapter:

- "Cumulative Study Area" (CSA) for individual ornithological receptors refers to the zone within which potential effects are anticipated. CSAs were assigned, further details can be found in Section 21.3.2 following the best available guidance (SNH 2016 and McGuinness et al. 2015).
- "Key Ornithological Receptor" (KOR) is defined as a species occurring within the Cumulative Study Area of the development upon which likely significant effects are considered possible and assessed.

## 21.1.1 Description of the Project

A full description of the Onshore Site is provided in Chapter 5: Project Description of this EIAR. In brief, the OEC will come ashore at the OLL in the townland of Killard, Co. Clare and run underground predominantly in the road network. A proposed OCC will be built as part of the Project and will connect to the national grid via the existing Moneypoint 220kV Substation, Co. Clare.

## 21.1.2 Legislation, Guidance and Policy Context

This EIAR is prepared in accordance with the requirements of the EIA Directive. The following are the key legislative provisions applicable to habitats and fauna in Ireland:

- The Wildlife Act 1976 as amended.
- The Birds Directive (EU Directive 2009/147/EC on the conservation of wild birds)
- The European Communities (Birds and Natural Habitats) Regulations 2011, as amended (S.I. no. 477 of 2011). These regulations transpose the EU Birds Directive into Irish law.
- The International Convention on Wetlands of International Importance (the Ramsar Convention), 1971. This convention protects 45 wetland sites of significant value for nature in Ireland.
- Planning and Development Acts 2000 (as amended).

The following Guidance documents were also consulted:

- Clare County Development Plan 2023-2029
- EPA (2022). Guidelines on the information to be contained in Environmental Impact Statement reports. Environmental Protection Agency, Johnstown Castle Estate, Wexford
- European Commission (2017). Environmental Impacts Assessment of Projects. Guidance on the preparation of the Environmental Impact Assessment Report.
- CIEEM (2017) Guideline for Ecological Report Writing
- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal (CIEEM, 2018)
- EirGrid (2012). Ecology guidelines for electricity transmission projects. A standard approach to ecological impact assessment of high voltage transmission projects.
- NRA (2009). Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority, Ireland.
- Birds of Conservation Concern in Ireland 2020-2026 (Gilbert, G. Stanbury, A. and Lewis, L. (2021).
- DoHPLG (2018). Guidelines for planning authorities and An Bord Pleanála (ABP) on carrying out Environmental Impact Assessment. Department of Housing, Planning and Local Government, Government of Ireland, Dublin.
- Ireland 4th National Biodiversity Action plan 2023-2030

## 21.1.3 Statement of Authority and Competence

This ornithology chapter has been prepared by Tom Rea (BSc.), Project Ornithologist of MKO and reviewed by Padraig Cregg (BSc., MSc.) Principal Ornithologist. Both are suitably qualified ornithologists with experience in completing avifaunal assessments and competent experts for the purposes of the preparation of this EIAR. The scope of works and survey methodology was devised by Padraig Cregg. Field surveys were undertaken by Jonah Gaine (BSc.) and Tom Rea (BSc.). Surveyors are suitably qualified competent experts for the purposes of undertaking the required surveys.

*Table 21-1 Project team qualifications and training.*

| Staff | Role | Qualifications and Experience |
|---|---|---|
| Padraig Cregg (B.Sc., M.Sc.) | Principal Ornithologist | BSc (Hons) in Zoology and Masters in Evolutionary and Behavioural Ecology<br><br>Padraig is a Principal Ornithologist with MKO and has over eleven years of experience working in environmental consultancies. Padraig's key strengths and areas of expertise are in ornithology and ecology surveying and in writing Natura Impact Statements (NIS) and the Biodiversity chapter of Environmental Impact Assessment Reports (EIAR) to accompany planning applications. Since joining MKO Padraig has been involved in survey design, execution, project management and the impact assessment of over 40 proposed wind farm developments. He has played a key role in project managing these planning applications through the statutory planning system, with more projects in the pipeline |
| Tom Rea (B.Sc.) | Project Ornithologist | BSc in Freshwater and Marine Biology<br><br>Tom is a Project Ornithologist with MKO and has over nine years of experience working in environmental consultancies. Tom has previously worked as an ornithologist and benthic ecologist with Aquafact International. Tom's key strengths and areas of expertise are in ornithology and ecology surveying and in writing reports for a range of terrestrial wind farm developments and waterbird projects. |
| Jonah Gaine (B.Sc.) | Practioner Ornitoholgist | BSc (Hons) in Field Biology and Wildlife Tourism<br><br>Since joining MKO, Jonah has been involved in carrying out ornithological surveys for a variety of development projects such as wind farms and greenways. Within MKO Jonah plays a role in conducting ornithological field surveys, collecting and managing scientific data from field surveys, writing interim and end of season reports. |

# 21.2 Assessment Approach and Methodology

## 21.2.1 Desk Study

A comprehensive desk study was undertaken to search for any relevant information on species of conservation concern that may potentially make use of the Onshore Ornithology Study Area. The study area for the desk study includes all avian records for the land that overlapped with the Onshore Site, that was hectads Q95, Q96 and R05. Where information was not available to this resolution, county level information was reviewed. The assessment included a thorough review of the available ornithological data including:

- Review of online web-mappers: National Parks and Wildlife Service (NPWS), National Biodiversity Data Centre (NBDC), Irish Wetland Bird Survey I-WeBS.
- Review of Bird Atlases: (Sharrock, 1976; Lack, 1986; Gibbons et al., 1993; Balmer et al., 2013).
- Review of Birds of Conservation Concern (BoCCI) in Ireland 2020-2026 (Gilbert, G. Stanbury, A. and Lewis, L., 2021).
- Review of specially requested records from the NPWS Rare and Protected Species Database.
- Review of EIAs and / or AAs undertaken by ABP or the Local Authority associated with nearby onshore developments.

## 21.2.2 Consultation

### 21.2.2.1 Scoping and Consultation

Consultation was undertaken with the relevant statutory and non-statutory organisations as part of the EIAR scoping to inform the current assessment. Full details can be found in Section 2.5 of Chapter 2 Background and Planning Policy. Table 21-2 provides a list of the organisations consulted with regard to ornithology during the scoping process and notes where scoping responses were received.

Copies of all scoping responses are included in Appendix 2-2 of this EIAR. The recommendations of the consultees have informed the EIAR preparation process and the contents of this chapter. Chapter 2 describes where the comments raised in the scoping responses received have been addressed in this assessment.

In addition to being issued the Scoping Document for the Project in September 2023, the NPWS were also consulted directly in relation to terrestrial birds associated with the Onshore Site. A response to this engagement from NPWS indicated the presence of historical peregrine falcon nest sites in hectads Q96 and Q97. Further details can be found below in Section 21.5.2 of this chapter. There were no further responses from consultees relevant to avian receptors.

*Table 21-2 Consultation Responses*

| No. | Consultee | Response | Comment |
|---|---|---|---|
| 01 | An Taisce - National Trust for Ireland | No Response | N/A |
| 02 | BirdWatch Ireland | No Response | N/A |
| 03 | Clare County Council - Environment Department | 1/09/2023 | No reference to terrestrial ornithology |

| No. | Consultee | Response | Comment |
|---|---|---|---|
| 04 | Environmental Protection Agency (EPA) | 26/09/2023 | No reference to terrestrial ornithology. |
| 05 | Golden Eagle Trust | No Response | N/A |
| 06 | Irish Red Grouse Association | 20/10/2023 | IRGCT suggested that funds should be put in place to achieve a net biodiversity gain during and after the development of sites such as the Project. |
| 07 | Irish Raptor Study Group | No Response | N/A |
| 08 | Irish Wildlife Trust | No Response | N/A |
| 09 | National Parks and Wildlife Service | 13/01/2024 | For further detail see Section 21.3 |

## 21.2.3 Identification of Target Species and Key Ornithological Receptors (KORs)

Following a comprehensive desk study, initial site visits and consultation, a list of "target species" likely to occur in the CSA of the Onshore Site was compiled. Bird surveys conducted in the Onshore Site were then specifically designed to survey for these target species. The target species list was drawn from:

- Species listed on Annex I of the EU Birds Directive.
- Special Conservation Interests (SCI) of Special Protection Areas (SPA) within the Cumulative Study Area(CSA) (as per Section 21.3.1).
- Red listed Birds of Conservation Concern in Ireland (BoCCI).
- Raptors and species that are particularly sensitive to impacts from the type of development located within the Onshore Site.

Following analysis of field survey data (described below), a precautionary screening approach was followed to identify KORs: the list of target species observed during surveys (see Appendix 21-1) was refined to KORs, excluding those for which pathways for a significant effect could not be identified.

## 21.2.4 Field Surveys

The survey effort included intertidal surveys, targeting key species within the OLL, breeding bird surveys and Hen Harrier Winter Roost Surveys at sensitive sites along the OGC. Field surveys were undertaken during the survey period May 2023 – March 2024, consisting of one breeding season (May – September) and one non-breeding season (October – March). All surveys carried out during the breeding season covered suitable habitat for all potential breeding species including key waterbird and raptor species. Based on the results of the desk study and reconnaissance site visits, the assemblage of bird species in the Onshore Site and the likely importance of the Onshore Site for these species was ascertained. Then, adopting a precautionary approach, a site-specific scope for ornithological surveys was devised with reference to relevant best practice guidance. The survey scope included two distinct elements, the coastal surveying of the OLL and terrestrial surveys of the OGC and the OCC. The data provided in the field surveys is robust and allows clear, precise and definitive conclusions to be made on the avian receptors identified within the Onshore Site. This data was collected according to industry

best practices and is of a standard to accurately inform the assessment of the impacts of the Onshore Site and likely significant effects on bird populations in the receiving environment.

#### 21.2.4.1.1 *Intertidal Bird Surveys*

To ensure all tidal states are surveyed at the OLL, visits were scheduled to overlap with the high and low tides in alternate months. Intertidal bird surveys were undertaken between May 2023 and March 2024. The survey methodology followed that of Lewis and Tierney (2014).

The survey area was divided into four broad habitat zones (subtidal, intertidal, supratidal and terrestrial) for recording waterbirds in the field and analysing their distribution patterns. The definitions of these zones follow Lewis and Tierney (2014) and are reproduced in Table 21-3 below.

Table 21-3 Description of habitat zones

| Habitat zone | Description |
|---|---|
| Subtidal | Refers to areas that are covered by seawater during counts. During low tide counts it will include offshore water, tidal channels and creeks as well as tidal rivers. |
| Intertidal | Refers to the area uncovered by the tide and most likely dominated by mudflats and sandflats. It may also include areas of rocky shoreline, areas of mixed sediment and gravel/pebbles or shingle and gravel shores. |
| Supratidal | This category pertains to the shore area and habitats immediately marginal to and above the mean high-water mark. The supratidal section is an integral part of the shoreline. This broad habitat also includes areas of saltmarsh where the saltmarsh is contiguous with coastal habitats lying above. Note that patches of lower saltmarsh (e.g., Spartina sp.) surrounded by intertidal flats, were included in the intertidal category. |
| Terrestrial | Used where birds were recorded within habitats close to the shoreline but were above the intertidal and supratidal levels. Includes aquatic habitats that are not tidal that occur within the study area (i.e., brackish lagoons, freshwater lakes). |

A summary of the methods used is given here with a full description being found within Lewis and Tierney (2014).

Waterbirds were counted within two hours on either side of low/high tide (max. period four hours total) on the 'look-see' basis (Bibby et al., 2000) and the positions of major flocks were also recorded on field maps. The number of each species recorded in each subsite was recorded with numbers divided into the four broad habitat zones and also divided between birds that are foraging and birds that are roosting, breeding or engaging in other behaviour (such as preening, bathing, etc.). Significant flocks were recorded, with surveyors being asked to use their judgment to decide what might constitute a significant flock for each species, as prescribed in Lewis and Tierney (2012). Activities that could potentially cause disturbance to waterbirds, and the occurrence of birds of prey, were recorded following the methodology in Lewis and Tierney (2014). Figure 21-1 shows the transect routes.

#### 21.2.4.1.2 Breeding Bird Surveys

Breeding walkover surveys were undertaken to determine possible, probable or confirmed breeding bird activity along the linear Onshore Site, (where access allowed). The survey transects included the margins of the OCC. Surveying was focused on sensitive sites, including breeding raptor habitat. The methodology was based on an adapted O'Brien and Smith (1992) and Gilbert *et al.* (1998), combined with Common Bird Census methods (British Trust for Ornithology, 2021) for dense habitats. Transect routes were walked across different habitat complexes within the survey area where access was allowed. In practice, the OGC route was walked and using binoculars and the surroundings were periodically scanned, for target species. All target species were mapped and breeding status was assigned following British Trust for Ornithology (BTO) breeding status codes (https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence). In addition, the presence of any non-target species was recorded to inform the evaluation of supporting habitat.

Breeding walkover surveys were conducted over nine visits during the core breeding season months May to July 2023. Survey effort is presented in Appendix 21-2, including full details of dates, times and weather conditions for each survey. Figure 21-2 shows the transect routes.

#### 21.2.4.1.3 Hen Harrier Winter Roost Surveys

Hen harrier roost surveys were undertaken in areas of suitable hen harrier habitat at the Onshore Site. These surveys aimed to identify active winter hen harrier roosts near or within the Onshore Site. Survey methodology followed Gilbert *et al.* (1998) and O'Donoghue (2019). Roost watches of 2-3 hours were conducted at three hen harrier vantage point locations from dusk until the last visible light during which all hen harrier observations were recorded and mapped.

Each hen harrier vantage point was surveyed once per month during the winter season between October and March inclusive (in winter 2023/24). Survey effort is presented in Appendix 21-2, including full details of dates, times and weather conditions. Figure 21-3 shows the hen harrier vantage point locations.

493000
494000
495000
496000
669000
668000
667000
666000
N
0
1
Kilometres

SCEIRDE ROCKS WINDFARM
Feirm Ghaoithe Charraigeacha Sceirde

## LEGEND

Indicative Boundary
Survey Transect
Project EIAR Site Boundary



PROJECT TITLE

# Sceirde Rocks

MAP TITLE

## Intertidal Bird Survey Map

| VER | REMARKS | DATE | Drawn | Approved |
|---|---|---|---|---|
| V1 | | 05/12/2024 | TR | |
| | | | | |
| | | | | |

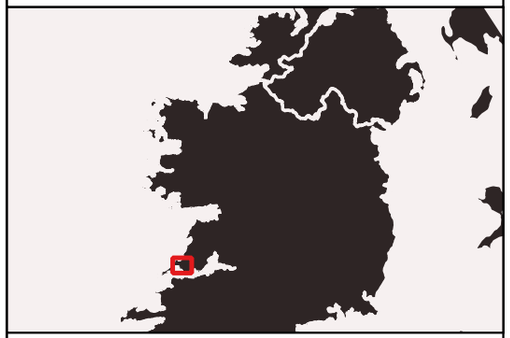
DRAWING NO

## Figure 21-1

| SCALE | PAPER SIZE | DATUM | PROJECTION |
|---|---|---|---|
| 1:15,000 | A4 | IRENET95 | Transverse Mercator |

496000
504000
664000
656000
N

SCEIRDE ROCKS WINDFARM
Feirm Ghaoithe Charraigeacha Sceirde



## LEGEND

Indicative Boundary

Survey Transect

Project EIAR Site Boundary

0 1 2 km

Kilometres



PROJECT TITLE

**Sceirde Rocks**

MAP TITLE

**Breeding Bird Survey Map**

| VER | REMARKS | DATE | Drawn | Approved |
|---|---|---|---|---|
| V2 | | 16/12/2024 | AMcM | |
| | | | | |
| | | | | |

DRAWING NO

**Fig.21-2**

| SCALE | PAPER SIZE | DATUM | PROJECTION |
|---|---|---|---|
| 1:80,000 | A4 | IRENET95 | Transverse Mercator |

492000
495000
498000
666000
663000
660000

HHVP1
HHVP2
HHVP1a
V1

SCEIRDE ROCKS WINDFARM
Feirm Ghaoithe Charraigeacha Sceirde

## LEGEND

Indicative Boundary

Vantage Point Location

Project EIAR Site Boundary

0 1
Kilometres



PROJECT TITLE

**Sceirde Rocks**

MAP TITLE

**Hen Harrier Roost Survey Map**

| VER | REMARKS | DATE | Drawn | Approved |
|---|---|---|---|---|
| V1 | | 05/12/2024 | TR | |
| | | | | |
| | | | | |

DRAWING NO

**Fig.21-3**

| SCALE | PAPER SIZE | DATUM | PROJECTION |
|---|---|---|---|
| 1:35,000 | A4 | IRENET95 | Transverse Mercator |

## 21.2.5 Receptor Evaluation and Impact Assessment

### 21.2.5.1 Potential Impacts Associated with the Onshore Site

The principal impacts from the Onshore Site are expected to last for the duration of construction activities. Details of the construction of the Project can be found in Chapter 5: Project Description, and in the Onshore Construction Environmental Management Plan (Onshore CEMP) (Appendix 5-16). Operational phase impacts will be minimal.

The duration of construction activities is 3-4 years, as per the Onshore CEMP. The OEC connects to the Onshore Site at the OLL. The OLL is located in terrestrial habitats (grassland) behind the shoreline, the OEC travels underground via a directionally drilled trench to the Landfall location. No above-ground/open trench will be excavated in the beach/rocky shoreline. As each section of the Onshore Site is installed, the land will be re-instated, as per Section 6.2 of Appendix 5-17: Onshore Grid Construction Methodology. The process intends to minimise the duration that an area is exposed to construction works.

Operation and maintenance phase impacts will be limited due to the intention to reinstate the lands excavated during the construction phase. Furthermore, there is no potential for the installed underground infrastructure to result in operation and maintenance phase impacts. Collision risk can be similarly ruled out as the OGC will run entirely underground (where no collisions could occur). No overhead lines will be used.

Onshore Sites present three potential risks to birds, as discussed below.

- **Direct** habitat loss due to onshore infrastructure.
- Disturbance and/or displacement (sometimes called indirect habitat loss) if birds avoid the Onshore Site and its surrounding area due to construction works.
- Operational phase disturbance and/or displacement is likely to be restricted to the OCC and involve an increase in human activity during general maintenance works and associated lighting during periods of low light.

For each of these risks, the detailed knowledge of bird distribution and abundance within and surrounding the Onshore Site has been used to predict the potential impacts of the Onshore Site and the likely significant effect on birds. These effects are also assessed cumulatively with other projects. The geographical framework and description of impacts are described below.

### 21.2.5.2 Geographical Framework

Guidance on Ecological Impact Assessment (CIEEM, 2019) recommends categories of ornithological value that relate to a geographical framework (e.g. international through to local). This EIAR utilises the geographical framework described in 'Guidelines for Assessment of Ecological Impact of National Road Schemes' (NRA, 2009). The following geographic frame of reference should be used when determining the value of a bird population:

- International Importance
- National Importance
- County Importance
- Local Importance (Higher Value)
- Local Importance (Lower Value)

Locally Important (Lower Value) receptors are habitats and species that are widespread and of low ecological significance and important only in the local area. In contrast, Internationally Important sites are designated for conservation as part of the Natura 2000 Network (Special Area of Conservation or

Special Protection Area) or provide the best examples of habitats or internationally important populations of protected flora and fauna.

### 21.2.5.3 Description of Effects

The likely significant effects on bird populations resulting from the development at the Onshore Site are quantified in accordance with the assessment criteria contained in the '*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*' published by the EPA in May 2022 (hereafter referred to as EPA Guidelines).

Table 21-4 below (taken from Table 3.4 of the EPA Guidelines) presents the glossary of impacts as published in the EPA guidance documents. Standard definitions are provided in this glossary, which permit the evaluation and classification of the quality, significance, duration, and type of impacts associated with a Project on the receiving environment. The use of pre-existing standardised terms for the classification of impacts ensures that the EIA employs a systematic approach, which can be replicated across all disciplines covered in this EIAR. The consistent application of terminology throughout this EIAR facilitates the assessment of the Project on the receiving environment

*Table 21-4 Impact Classification Terminology (EPA, 2022)*

| Impact Characteristic | Term | Description |
|---|---|---|
| **Quality** | Positive | A change which improves the quality of the environment |
| | Neutral | No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error. |
| | Negative | A change which reduces the quality of the environment |
| | | |
| **Significance** | Imperceptible | An effect capable of measurement but without significant consequences |
| | Not significant | An effect which causes noticeable changes in the character of the environment but without significant consequences. |
| | Slight | An effect which causes noticeable changes in the character of the environment without affecting its sensitivities |
| | Moderate | An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends |

| Impact Characteristic | Term | Description |
|---|---|---|
| | Significant | An effect, which by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment |
| | Very significant | An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the environment |
| | Profound | An effect which obliterates sensitive characteristics |
| | | |
| **Extent & Context** | Extent | Describe the size of the area, number of sites and the proportion of a population affected by an effect |
| | Context | Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions |
| | | |
| **Probability** | Likely | Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented |
| | Unlikely | Effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented |
| | | |
| **Duration and Frequency** | Momentary | Effects lasting from seconds to minutes |
| | Brief | Effects lasting less than a day |
| | Temporary | Effects lasting less than a year |
| | Short-term | Effects lasting one to seven years |

| Impact Characteristic | Term | Description |
|---|---|---|
| | Medium-term | Effects lasting seven to fifteen years |
| | Long-term | Effects lasting fifteen to sixty years |
| | Permanent | Effect lasting over sixty years |
| | Reversible | Effects that can be undone, for example through remediation or restoration |
| | Frequency | Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually) |
| | | |
| **Type** | Indirect | Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway |
| | Cumulative | The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects. |
| | 'Do Nothing' | The environment as it would be in the future should the subject project not be carried out |
| | 'Worst Case' | The effects arising from a project in the case where mitigation measures substantially fail |
| | Indeterminable | When the full consequences of a change in the environment cannot be described |
| | Irreversible | When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost |

| Impact Characteristic | Term | Description |
|---|---|---|
| | Residual | Degree of environmental change that will occur after the proposed mitigation measures have taken effect |
| | Synergistic | Where the resultant effect is of greater significance than the sum of its constituents |

## 21.2.6 Assessment Justification

### 21.2.6.1 Survey Data

The surveys undertaken provide the information necessary to allow a complete, comprehensive and robust assessment of the potential impacts of the Onshore Site on avian receptors. A comprehensive suite of bird surveys was undertaken at the Onshore Site between May 2023 and March 2024. Results are derived from a continuous year of surveying at the Onshore Site and hinterland, undertaken in line with best practice. The results are analysed to inform the impact assessment.

### 21.2.6.2 Mitigation

The development has been designed to specifically avoid, reduce and minimise impacts on all avian receptors, e.g. underground cable rather than overhead powerline and following existing roads and tracks where practicable. Where potential impacts on KORs are predicted, mitigation has been prescribed to avoid, reduce and remove such impacts. Proposed best practice design and mitigation measures are specifically set out and are realistic in terms of cost and practicality. They are in line with best practice and are established and proven measures which will effectively address the effects on the identified KORs. As such, the potential impacts of the Onshore Site have been considered and assessed to ensure that all impacts on KORs are adequately addressed and no significant residual effects are likely to remain following the implementation of mitigation measures and best practices (refer to Section 21.6 for further details).

### 21.2.6.3 Consideration of Potential Limitations

The information provided in this EIAR chapter accurately and comprehensively describes the baseline environment and provides an informed prediction of the likely impacts of the Project. It also prescribes mitigation as necessary and describes the predicted residual effects. Furthermore, the desk study, surveys, analysis and reporting have been undertaken in accordance with the appropriate guidelines. Two very minor limitations in the survey occurred. These were as follows:

- Breeding walkover surveys, which are typically undertaken from April, were not begun until May 2023. This is a minor limitation, owing to the low sensitivity of the bird species encountered.
- In addition, during the walkover surveys a small section of the OGC, was not surveyed. In particular, a short section of the OGC (c. 400m) near the Moneypoint 220kV Substation borders the River Shannon and River Fergus Estuaries SPA.

In summary, no significant limitations in the scope, scale or context of the assessment have been identified.

# 21.3 Baseline Ornithological Conditions

## 21.3.1 Designated Sites within the Likely CSA of the Development

A screening assessment and Natura Impact Statement (NIS) were prepared to provide the competent authority with the information necessary to complete an Appropriate Assessment for the Onshore Site in compliance with Article 6(3) of the EU Habitats Directive (92/43/EEC). According to the EPA Guidelines "*A biodiversity section of an EIAR ... should not repeat the detailed assessment of potential effects on European sites contained in documentation prepared as part of the Appropriate Assessment process, but it should refer to the findings of that separate assessment*". Therefore, this section provides a summary of the key findings regarding SPAs. For a detailed assessment of any potential effects on SPAs, refer to the Appropriate Assessment and NIS.

Sites designated for nature conservation within the potential CSA of the Onshore Site were identified using GIS software. The CSA is derived utilising a precautionary approach. Initially, designated sites within a 15km radius of the proposed works are identified. Then designated sites located outside the 15km buffer zone are accounted for and assessed for pathways for impacts. In this case, no potential for direct or indirect impacts for species listed as SCIs of SPAs more than 15km from the Onshore Site was identified.

In addition (and in the absence of any specific European or Irish guidance), the guidance document 'Assessing Connectivity with Special Protection Areas' (SNH, 2016) was consulted. This document provides guidance on identifying of connectivity between the Onshore Site and SPAs. It considers the distances some species may travel beyond the boundary of their SPAs and outlines dispersal and foraging ranges. Potential effects on wetlands and supporting habitats associated with SPAs and potential indirect pathways in the form of surface water pollution are considered in the Appropriate Assessment and NIS and summarised below.

Two SPAs were located approximately 735m and 5m from the Onshore Site. The SPAs are listed and summarised in Table 21-5. Apart from designated sites which are encompassed by these SPAs, no other nationally designated sites of ornithological significance occur within the potential CSA.

*Table 21-5 Identified pathways for adverse effects on SPAs*

| European Site | Relevant qualifying feature | Pathway for adverse effect |
|---|---|---|
| River Shannon and River Fergus Estuaries SPA (004077) | › [A017] Cormorant (*Phalacrocorax carbo*)<br>› [A038] Whopper Swan (*Cygnus cygnus*)<br>› [A046] Light-bellied Brent Goose (*Branta bernicla hrota*)<br>› [A048] Shelduck (*Tadorna tadorna*)<br>› [A050] Widgeon (*Anas Penelope*)<br>› [A052] Teal (*Anas crecca*)<br>› [A054] Pintail (*Anas acuta*)<br>› [A056] Shoveler (*Anas clypeata*)<br>› [A062] Scaup (*Aythya marila*)<br>› [A137] Ringed Plover (*Charadrius hiaticula*)<br>› [A140] Golden Plover (*Pluvialis apricaria*)<br>› [A141] Grey Plover (*Pluvialis squatarola*)<br>› [A142] Lapwing (*Vanellus vanellus*)<br>› [A143] Knot (*Calidris canutus*)<br>› [A149] Dunlin (*Calidris alpina*)<br>› [A156] Black-tailed Godwit (*Limosa limosa*)<br>› [A157] Bar-tailed Godwit (*Limosa lapponica*)<br>› [A160] Curlew (*Numenius arquata*)<br>› [A162] Redshank (*Tringa tetanus*)<br>› [A164] Greenshank (*Tringa nebularia*)<br>› [A179] Black-headed Gull (*Chroicocephalus ridibundus*) | › Deterioration of water quality via the direct or indirect runoff or spillage of pollutants during construction due to the Onshore Site being adjacent to this SPA, and that it crosses seven mapped watercourses which discharge downstream into this SPA.<br><br>› Disturbance to SCI species which may be foraging, commuting or breeding in suitable habitat adjacent to the Onshore Site during construction. |
| | › [A999] Wetlands | › Deterioration of water quality within the SPA arising from the runoff of pollutants into surface water systems during the construction phases of the Onshore Site. |
| Mid-Clare Coast SPA (004182) | › Cormorant (*Phalacrocorax carbo*) [A017]<br>› Barnacle Goose (*Branta leucopsis*) [A045]<br>› Ringed Plover (*Charadrius hiaticula*) [A137]<br>› Sanderling (*Calidris alba*) [A144]<br>› Purple Sandpiper (*Calidris maritima*) [A148]<br>› Dunlin (*Calidris alpina alpina*) [A149]<br>› Turnstone (*Arenaria interpres*) [A169]<br>› Wetlands and waterbirds [A999] | › Deterioration of water quality within the SPA arising from the runoff of pollutants into surface water systems during the construction phases of the Onshore Site.<br><br>› Deterioration of water quality within the SPA arising from the runoff of pollutants into surface water systems during the construction phases of the Onshore Site. |

## 21.3.2 Breeding and Wintering Bird Atlas Records

"Bird Atlas 2007-11: The breeding and wintering birds of Britain and Ireland' (Balmer *et al.*, 2013) is the most recent comprehensive work on wintering and breeding birds in Ireland. Previous bird atlases have been the primary source of information on the distribution and abundance of British and Irish birds prior to Bird Atlas 2007–11. The three previously published atlases were:

- The atlas of breeding birds in Britain and Ireland (Sharrock, 1976)
- The atlas of wintering birds in Britain and Ireland (Lack, 1986)
- The new atlas of breeding birds in Britain and Ireland: 1988-1991. (Gibbons *et al.,* 1993)

The Onshore Site lies within hectads Q96, Q95 and R05. The OGC runs from the OLL at Q96 through Q95 and R05 to the OCC, while the section from the OCC to the Moneypoint 220kV Substation is located within hectad R05. Table 21-6 and Table 21-7 present a list of species of conservation interest recorded from the relevant hectads, with regard to breeding and wintering respectively. Conservation status abbreviations are as follows: Annex 1 of the Birds Directive (BD), Red List Species on the BoCCI (RL), Amber List Species on the BoCCI and Raptor.

*Table 21-6 Breeding Bird Atlas data. The following applies to conservation status: Annex I of the Birds Directive, Red List species on the BoCCI*

| Species Name | Breeding Atlas 68-72 | | | Breeding Atlas 88-91 | | | Breeding Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Arctic Tern (*Sterna paradisaea*) | Prob | - | - | - | - | - | - | - | - | BD |
| Barn Owl (Tyto alba) | - | Prob | Poss | - | - | - | Poss | Poss - | - | RL |
| Black Guillemot (*Cepphus grille*) | - | - | - | - | - | - | - | - Poss | - | |
| Black-headed Gull (*Larus marinus)* | - | Conf | Conf | Seen | Seen | Seen | - | - | - | AL |
| Buzzard (*Buteo buteo*) | - | - | - | - | - | - | - | - | Poss | |
| Chough (*Pyrrhocorax pyrrhocorax*) | Conf | Poss | - | - | - | - | Prob | - | - | BD |
| Common Gull (*Larus canus*) | - | - | - | - | Seen | Seen | - | - | - | |
| Common Tern (*Sterna hirundo*) | Prob | Conf | - | Seen | - | Seen | - | - | - | BD |
| Coot (*Fulica atra*) | Conf | - | Prob | - | - | - | - | - | - | |
| Cormorant (*Phalacrocorax carbo*) | Conf | Prob | - | Seen | Seen | - | - | - | - | SCI |
| Corncrake (*Crex crex*) | Prob | Prob | Prob | - | - | - | - | - | - | BD |
| Curlew (*Numenius arquata*) | Prob | Prob | Prob | Conf | Seen | Seen | - | - – | - | RL |

| Species Name | Breeding Atlas 68-72 | | | Breeding Atlas 88-91 | | | Breeding Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Dunlin (*Calidris alpina*) | - | - | - | Seen | Seen | - | - | - | - | BD, SCI |
| Eider (*Somateria mollissima*) | - | - | - | - | Seen | - | - | - | - | RL |
| Fulmar (*Fulmarus glacialis*) | Conf | - | - | Conf | - | - | Conf | - | - | AL |
| Gannet (*Morus bassanus*) | | | | - | - | Seen | - | - | - | AL |
| Great Black-backed Gull (*Larus marinus*) | Prob | Prob | - | Seen | Seen | Seen | Prob | Poss | - | |
| Great Crested Grebe (*Podiceps cristatus*) | - | - | - | Conf | - | | - | - | - | AL |
| Grey Heron (*Ardea cinerea*) | Prob | Poss | Conf | Seen | Conf | Seen | Poss | Conf | Poss | |
| Grey Wagtail (*Motacilla cinerea*) | Conf | - | Prob | - | Conf | Conf | - | Conf | Conf | RL |
| Guillemot (*Uria aalge*) | Prob | - | - | Seen | - | - | - | - | - | AL |
| Herring Gull (*Larus argentatus*) | | Prob | Prob | - | Seen | Seen | Poss | - | - | AL |
| Kestrel (*Falco tinnunculus*) | Conf | Conf | Conf | Seen | Seen | Conf | Prob | Poss | Poss | RL |
| Kingfisher (*Alcedo atthis*) | Prob | - | - | - | - | - | - | - | - | BD |
| Kittiwake (*Rissa tridactyla*) | Prob | - | - | Seen | - | - | - | - | - | RL |
| Lapwing (*Vanellus vanellus*) | Poss | - | - | - | Seen | - | - | - – | - | RL |
| Lesser Black-backed Gull (*Larus fuscus*) | - | - | - | - | Seen | Seen | - | - | – | AL |
| Little Grebe (*Tachybaptus ruficollis*) | Prob | - | Conf | - | - | - | - – | - | Poss | |
| Long-eared Owl (*Asio otus*) | - | - | Poss | - | - | - | - | - | Conf | |
| Mallard (*Anas platyrhynchos*) | Conf | Conf | Prob | Conf | Conf | Conf | Conf | Prob | Poss | AL |
| Meadow Pipit (*Anthus pratensis*) | - | Conf | Conf | Conf | Conf | - | Conf | Conf | Conf | RL |

| Species Name | Breeding Atlas 68-72 | | | Breeding Atlas 88-91 | | | Breeding Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Moorhen (*Gallinula chloropus*) | Conf | Conf | Conf | Seen | - | Conf | Poss | Conf | Conf | |
| Mute Swan (*Cygnus olor*) | | Prob | Conf | Conf | - | - | Prob | Poss | - | AL |
| Oystercatcher (*Haematopus ostralegus*) | - | Prob | Prob | Seen | Seen | Seen | - | Poss | - | RL |
| Peregrine Falcon (*Falco peregrinus*) | - | - | - | - | - | - | - | - | Conf | BD |
| Razorbill (*Alca torda*) | Conf | - | - | Seen | - | - | Conf | - | - | RL |
| Redshank (*Tringa totanus*) | Poss | Prob | - | - | Seen | - | - | - | - | RL |
| Red-breasted Merganser (*Mergus serrator*) | - | - | - | - | Seen | | - | - | - | AL |
| Ringed Plover (*Charadrius hiaticula*) | Conf | Conf | - | Seen | Conf | Seen | Prob | Conf | Prob | SCI |
| Sandwich Tern (*Sterna sandvicensis*) | Prob | Conf | - | Seen | Seen | Seen | - | - | - | BD |
| Shag (*Phalacrocorax aristotelis*) | Conf | - | - | - | - | Seen | Conf | - | - | AL |
| Shelduck (*Tadorna tadorna*) | - | Conf | Conf | Conf | Conf | - | - | Conf | Prob | AL |
| Snipe (*Gallinago gallinago*) | Prob | Conf | Prob | Seen | Conf | Conf | Poss | - | Conf | RL |
| Sparrowhawk (*Accipiter nisus*) | Conf | Conf | Conf | - | - | Seen | Poss | Poss | Prob | |
| Stock Dove (*Columba oenas*) | - | - | - | - | - | - | - | Poss - | - | RL |
| Swift (*Apus apus*) | Conf | - | Prob | Seen | Seen | Conf | - | Conf | - | RL |
| Teal (*Anas crecca*) | Conf | - | Conf | - | - | - | - | - | - | AL |
| Tufted Duck (*Aythya fuligula*) | - | - | - | - | - | - | - | - | Poss | AL |
| Woodcock (*Scolopax rusticola*) | - | - | Prob | - | - | - | - | - | Poss - | RL |
| Yellowhammer (*Emberiza citrinella*) | Prob | - | Conf | - | - | - | - | - | - | RL |

*Table 21-7 Wintering Bird Atlas data.*

| Species Name | Wintering Atlas 88-91 | | | Wintering Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Barn Owl (*Tyto alba*) | - | Present | - | Present | - | - | RL |
| Barnacle Goose (*Branta leucopsis*) | - | - | - | Present | - | Present | BD, SCI |
| Bar-tailed Godwit (*Limosa lapponica*) | Present | Present | Present | Present | Present | - | BD |
| Black Guillemot (*Cepphus grille*) | - | Present | - | Present | Present | - | AL |
| Black-headed Gull (*Larus marinus)* | Present | Present | Present | Present | Present | - | AL |
| Black-tailed Godwit (*Limosa limosa*) | - | Present | - | Present | Present | Present | RL |
| Buzzard (*Buteo buteo*) | - | - | - | Present | - | - | |
| Chough (*Pyrrhocorax pyrrhocorax*) | - | - | - | Present | - | - | BD |
| Common Gull (*Larus canus*) | Present | Present | Present | Present | Present | Present | |
| Cormorant (*Phalacrocorax carbo*) | Present | Present | Present | Present | Present | Present | SCI |
| Curlew (*Numenius arquata*) | Present | Present | Present | Present | Present | Present | RL |
| Dark-bellied Brent Goose (*Branta bernicla bernicla*) | - | - | - | - | Present | | AL |
| Dunlin (*Calidris alpina*) | Present | Present | Present | Present | Present | Present | BD, SCI |
| Eider (*Somateria mollissima*) | - | - | - | Present | - | - | RL |
| Fulmar (*Fulmarus glacialis)* | Present | - | - | Present | - | - | AL |
| Gadwall (*Anas strepera*) | - | - | - | Present | - | - | AL |
| Glaucous Gull (*Larus hyperboreus*) | - | - | - | - | Present | - | |
| Golden Plover (*Pluvialis apricaria*) | Present | Present | Present | Present | Present | - | BD |
| Goldeneye (*Bucephala clangula*) | Present | Present | - | - | - | - | RL |
| Great Black-backed Gull (*Larus marinus*) | Present | Present | Present | Present | Present | - | |
| Great Crested Grebe (*Podiceps cristatus*) | - | Present | - | - | Present | Present | AL |
| Great Northern Diver (*Gavia immer*) | Present | Present | - | Present | Present | - | BD |
| Green Sandpiper (*Tringa ochropus*) | - | - | - | - | Present | - | |
| Green-winged Teal (*Anas carolinensis*) | - | Present | - | - | - | - | |

| Species Name | Wintering Atlas 88-91 | | | Wintering Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Greenland White-fronted Goose (*Anser albifrons*) | Present | - | - | Present | - | - | BD |
| Greenshank (*Tringa nebularia*) | Present | Present | Present | Present | Present | Present | |
| Grey Heron (*Ardea cinerea*) | Present | Present | - | Present | Present | Present | |
| Grey Plover | Present | Present | Present | Present | Present | - | RL |
| Grey Wagtail (*Motacilla cinerea*) | Present | Present | Present | Present | Present | Present | RL |
| Greylag Goose (*Anser anser*) | Present | Present | - | Present | - | - | AL |
| Hen Harrier (*Circus cyaneus*) | Present | Present | - | Present | Present | Present | BD |
| Herring Gull (*Larus argentatus*) | Present | Present | Present | Present | Present | - | AL |
| Kestrel (*Falco tinnunculus*) | Present | Present | Present | Present | Present | Present | RL |
| Kingfisher (*Alcedo atthis*) | - | - | - | - | Present | Present | BD |
| Kittiwake (*Rissa tridactyla*) | - | Present | Present | Present | | - | RL |
| Knot (*Calidris canutus*) | - | Present | - | Present | Present | - | RL |
| Lapwing (*Vanellus vanellus*) | Present | Present | Present | Present | Present | Present | RL |
| Lesser Black-backed Gull (*Larus fuscus*) | - | - | Present | Present | - | - | AL |
| Light-bellied Brent Goose (*Branta bernicla hrota*) | - | - | - | - | Present | - | AL |
| Little Egret (*Egretta garzetta*) | - | - | - | Present | Present | Present | BD |
| Little Grebe (*Tachybaptus ruficollis)* | Present | - | Present | Present | Present | Present | |
| Mallard (*Anas platyrhynchos*) | Present | Present | Present | Present | Present | Present | AL |
| Meadow Pipit (*Anthus pratensis*) | Present | Present | Present | Present | Present | Present | RL |
| Meditereanean Gull (*Larus melanocephalus*) | - | - | - | Present | - | - | BD |
| Merlin (*Falco columbarius*) | Present | Present | - | Present | - | - | BD |
| Moorhen (*Gallinula chloropus*) | Present | Present | Present | Present | - | Present | |
| Mute Swan (*Cygnus olor*) | Present | Present | - | Present | Present | - | AL |
| Oystercatcher (*Haematopus ostralegus*) | Present | Present | Present | Present | Present | Present | RL |
| Peregrine Falcon (*Falco peregrinus*) | Present | Present | - | Present | Present | - | BD |
| Pintail (*Anas acuta*) | - | Present | Present | - | - | - | AL |

| Species Name | Wintering Atlas 88-91 | | | Wintering Atlas 07-11 | | | Conservation Status |
|---|---|---|---|---|---|---|---|
| | Q96 | Q95 | R05 | Q96 | Q95 | R05 | |
| Purple Sandpiper | Present | - | - | Present | - | - | SCI |
| Razorbill (*Alca torda*) | - | Present | - | Present | - | - | RL |
| Redshank (*Tringa totanus*) | Present | - | Present | Present | Present | Present | RL |
| Red-breasted Merganser (*Mergus serrator*) | - | - | Present | Present | Present | - | AL |
| Red-throated Diver (*Gavia stellata*) | - | Present | - | - | Present | Present | BD |
| Redwing (*Turdus iliacus*) | Present | Present | Present | Present | Present | Present | RL |
| Ringed Plover (*Charadrius hiaticula*) | Present | Present | - | Present | Present | Present | SCI |
| Sanderling (*Calidris alba*) | - | - | - | Present | - | - | SCI |
| Scaup (*Aythya marila*) | - | - | Present | - | Present | - | RL |
| Shag (*Phalacrocorax aristotelis*) | Present | Present | - | Present | - | Present | AL |
| Shelduck (*Tadorna tadorna*) | - | Present | Present | - | Present | Present | AL |
| Short-eared Owl (*Asio flammeus*) | Present | - | - | - | Present | - | BD |
| Shoveler (*Anas clypeata*) | Present | Present | - | Present | Present | - | RL |
| Slavonian Grebe (*Podiceps auritus*) | - | - | - | - | Present | - | BD |
| Snipe (*Gallinago gallinago*) | Present | Present | Present | Present | Present | Present | RL |
| Sparrowhawk (*Accipiter nisus*) | Present | - | Present | Present | Present | Present | |
| Teal (*Anas crecca*) | Present | Present | Present | Present | Present | Present | AL |
| Tufted Duck (*Aythya fuligula* | | | | Present | - | Present | AL |
| Turnstone (*Arenaria interpres*) | Present | Present | Present | Present | Present | Present | SCI |
| Velvet Scoter (*Melanitta fusca*) | - | - | - | Present | - | - | RL |
| Whooper Swan (*Cygnus cygnus*) | Present | - | Present | Present | Present | Present | BD |
| Wigeon (*Anas penelope*) | Present | Present | Present | Present | Present | Present | AL |
| Woodcock (*Scolopax rusticola*) | - | - | - | Present | Present | Present | RL |
| Yellowhammer (*Emberiza citrinella*) | - | - | - | - | Present | - | RL |

## 21.3.3 National Biodiversity Data Centre Records

The National Biodiversity Data Centre (NBDC) Biodiversity Maps provide records of flora and fauna within 10km hectads across Ireland. Data is available from the map viewer on the NBDC website (https://maps.biodiversityireland.ie/Map). The Onshore Site lies within hectads Q95, Q96 and R05. Table 21-8 lists the bird species have been recorded in these 10km Grids.

*Table 21-8 National Biodiversity Data Centre records*

| Common Name | NBDC Dataset |
|---|---|
| American Golden Plover | Rare Birds of Ireland |
| Arctic Skua | Birds of Ireland |
| Arctic Tern | Birds of Ireland |
| Barn Owl | Birds of Ireland |
| Barn Swallow | Birds of Ireland |
| Barnacle Goose | Birds of Ireland |
| Bar-tailed Godwit | Birds of Ireland |
| Black-headed Gull | Birds of Ireland |
| Black-legged Kittiwake | Birds of Ireland |
| Black-winged Stilt | Rare Birds of Ireland |
| Brent Goose | Birds of Ireland |
| Cackling Goose | Rare Birds of Ireland |
| Canada Goose | Rare Birds of Ireland |
| Common Tern | Birds of Ireland |
| Cuckoo | Birds of Ireland |
| Curlew | Birds of Ireland |
| Goldfinch | Birds of Ireland |
| Great Spotted Woodpecker | Rare Birds of Ireland |
| Greenshank | Birds of Ireland |
| Grey Heron | Birds of Ireland |
| Grey Plover | Birds of Ireland |
| Hen Harrier | Birds of Ireland |
| Hobby | Rare Birds of Ireland |
| Hooded Crow | Birds of Ireland |
| House Sparrow | Birds of Ireland |
| Kestrel | Birds of Ireland |
| Kingfisher | Birds of Ireland |
| Lapwing | Birds of Ireland |
| Lesser Yellowlegs | Rare Birds of Ireland |
| Little Egret | Birds of Ireland |

| Common Name | NBDC Dataset |
|---|---|
| Little Gull | Birds of Ireland |
| Long-billed Dowitcher | Rare Birds of Ireland |
| Long-eared Owl | Birds of Ireland |
| Meadow Pipet | Birds of Ireland |
| Oystercatcher | Birds of Ireland |
| Peregrine Falcon | Birds of Ireland |
| Pheasant | Birds of Ireland |
| Pied Wagtail | Birds of Ireland |
| Raven | Birds of Ireland |
| Red Knot | Birds of Ireland |
| Red-throated Diver | Birds of Ireland |
| Redshank | Birds of Ireland |
| Redwing | Birds of Ireland |
| Ringed Plover | Birds of Ireland |
| Ruddy Shelduck | Rare Birds of Ireland |
| Semipalmated Sandpiper | Rare Birds of Ireland |
| Shelduck | Birds of Ireland |
| Short-eared owl | Birds of Ireland |
| Spoonbill | Rare Birds of Ireland |
| Spotted Crake | Rare Birds of Ireland |
| Spotted Sandpiper | Rare Birds of Ireland |
| Stonechat | Birds of Ireland |
| Surf Scoter | Rare Birds of Ireland |
| Water Rail | Birds of Ireland |
| Wheatear | Birds of Ireland |
| Whimbrel | Birds of Ireland |
| White-rumped Sandpiper | Rare Birds of Ireland |
| Woodcock | Birds of Ireland |
| Wren | Birds of Ireland |

### 21.3.4 Irish Wetland Bird Survey Records

The Irish Wetland Bird Survey (IWeBS), coordinated by BirdWatch Ireland, monitors wintering waterbird populations at their wetland sites across Ireland. IWeBS site locations are available at https://birdwatchireland.ie/our-work/. Datasets for the following sites were sourced from http://www.birdwatchireland.ie and reviewed:

### Clare I-WeBS Sites

- Ballyallia Lake
- Ballycar Lough
- Carran Ploje
- Castlelough
- Corofin Wetlands
- Dromore Lakes (Clare)
- Farrihy Lough
- Inagh River
- Knockaunroe/Rinnamona
- Liscannor Bay (Liscannor – Rinanoughter)
- Lough Atorick
- Lough Girroge
- Lough Graney
- Lough O'Grady
- Mid-Clare Coast (Mal Bay – Doonbeg Bay)
- Poulataggle
- Pouleenacoona
- River Shannon (Lower)
- River Shannon (Lower) Aerial
- Scariff area
- Shannon & Fergus Estuary
- Shannon & Fergus Estuary Aerial
- Southeast Clare Lakes
- Tullaher Lough
- Turloughmore (Clare)

## 21.3.5 Rare and Protected Species Dataset

An information request was sent to NPWS requesting records from the Rare and Protected Species Database. The following records were obtained from the NPWS on the 23rd of January 2024:

### Peregrine Falcon

NPWS holds the following data on peregrine falcon nest sites at hectads Q96 and R05 as recorded during the five-year National surveys:

- Hectad Q96: one occupied nest site (known in 2002)
- Hectad R05: two occupied nest sites (not known in 2002)

These are relevant to the OLL which lies within hectad Q96, the OGC, hectads Q96 and R05, and the OCC which also lies within R05.

## 21.3.6 Field Survey Results

The target species recorded within the potential CSA of the Onshore Site during field surveys are listed in Table 21-9, along with a summary of breeding and roosting status. The following sections describe the records of each target species under the individual survey headings.

*Table 21-9 provides a list of target species recorded in the Potential CSA of the Project, along with a summary of breeding and roosting status based on the results of surveys.*

| Species | Overall breeding status | Overall wintering status |
|---|---|---|
| Chough | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Cory's Shearwater | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Dunlin | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Golden Plover | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Great Northern Diver | **Does not breed in Ireland**. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Hen Harrier | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Kingfisher | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Little Egret | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Peregrine Falcon | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Sandwich Tern | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Bar-tailed Godwit | **Does not breed in Ireland** | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Black-headed Gull | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Cormorant | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |

| Species | Overall breeding status | Overall wintering status |
|---|---|---|
| Curlew | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Greenshank | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Purple Sandpiper | **Does not breed in Ireland**. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Redshank | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Ringed Plover | **Confirmed Breeding**. There was a breeding territory identified within the 500m of the Onshore Site. There was evidence observed in May and June 2023 of at least one breeding pair within 500m of the OLL | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Sanderling | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Shelduck | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Turnstone | **Does not breed in Ireland.** | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Common Snipe | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Kestrel | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Kittiwake | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Oystercatcher | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was infrequent roosting with one flock of 28 birds observed roosting within the Onshore Site. |

| Species | Overall breeding status | Overall wintering status |
|---|---|---|
| Razorbill | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Buzzard | **Non-breeding**. There was no evidence of breeding at the Onshore Site during surveys. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |
| Sparrowhawk | **Confirmed Breeding**. There was a breeding territory identified within 15m of the OGC. A fledgling begging call was recorded and on another occasion an adult was observed carrying prey towards the same location. | **No regularly used roosts identified.** There was no evidence of roosting at the Onshore Site during surveys. |

A list of all bird species recorded during surveys is provided in Appendix 21-1. Appendix 21-3 presents results summary tables including:

- Summary of breeding walkover survey records
- Summary of Intertidal Bird survey records
- Summary of hen harrier roost survey records
- Summary of non-target species recorded

#### 21.3.6.1 Chough

Chough was recorded in the breeding and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

##### Intertidal Bird Survey

There was one observation of three birds roosting in the breeding season approximately 1km west of the OLL. There were two observations within 500m of OLL during the breeding season. A flock of six birds was observed travelling over exposed rocky shores within 125m of the OLL and eight birds foraging approximately 470m from the OLL.

#### 21.3.6.2 Cory's Shearwater

Cory's Shearwater was recorded in the breeding season. Raw survey data and figures are provided in Appendix 21-4.

##### Intertidal Bird Survey

There was a single observation in September 2023 of a flock of ten birds foraging over water approximately 1km from the OLL.

#### 21.3.6.3 Dunlin

Dunlin was recorded in the breeding and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Dunlin were observed on average once every c. 5 hours of intertidal surveys, with an average flock size of 13 birds and a peak count of 40 individuals. There were two observations of between three and four birds during the breeding season and seven observations in the winter 2023/24 season. All birds were roosting or foraging in the intertidal and supratidal zones and terrestrial habitat. One bird was observed circling and a flock of 20 birds was observed roosting within the OLL.

### 21.3.6.4 Golden Plover

Golden plover was recorded in the winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Golden plover were infrequently recorded, the species was observed on average once every c. 16 hours of intertidal surveys, with an average flock size of 26 birds and a peak count of 70 individuals. A flock of four birds was observed foraging within 500m of the OLL.

### 21.3.6.5 Great Northern Diver

Great Northern Diver was recorded in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Great northern diver were infrequently recorded, the species was observed on average once every c. 16 hours of intertidal surveys. All observations were of individuals foraging in the subtidal zone approximately 1km from the OLL.

### 21.3.6.6 Hen Harrier

Hen Harrier was recorded in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Hen Harrier Roost Survey

There were eleven observations of hen harrier within a 2km area to the west of the OGC during the winter 2023/24 season. The species was observed on average once every c. 3 hours of hen harrier roost surveys. All observations were of individuals either hunting or commuting, seven of which were within 500m of the Onshore Site. The majority of the dusk survey observations occurred within suitable roosting habitat. However, no roost was identified during the surveys.

### 21.3.6.7 Kingfisher

Kingfisher was observed in the breeding 2023 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There was one observation of an individual foraging in the intertidal zone approximately 900m from the OLL.

### 21.3.6.8 Little Egret

Little egret was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Little egret were infrequently recorded, the species was observed on average once every c. 16 hours during intertidal surveys. There were two observations of birds commuting over water and another foraging in terrestrial habitat. All observations were of individual birds within 300m of the OLL.

### 21.3.6.9 Peregrine Falcon

Peregrine Falcon was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There were two observations of individuals hunting during intertidal bird surveys. One bird was observed hunting on the rocky shoreline within 100m of the OLL.

### 21.3.6.10 Sandwich Tern

Sandwich tern was observed in the breeding season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Sandwich tern were infrequently recorded, the species was observed on average once every 6 hours of intertidal surveys, with an average flock size of five birds and a peak count of nine individuals. Three birds were observed commuting within 200m of the OLL.

### 21.3.6.11 Bar-tailed Godwit

Bar-tailed godwit was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There was one observation of a flock of ten birds during intertidal bird surveys. The birds were observed foraging in the intertidal zone approximately 925m from the OLL.

### 21.3.6.12 Black-headed Gull

Black-headed gull was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Black-headed gull were infrequently recorded, the species was observed on average once every c. 10 hours of intertidal surveys, with an average flock size of 13 birds and a peak count of 48 individuals. Two birds were observed commuting over open water approximately 250m from the OLL. All other observations were of birds foraging or roosting in the intertidal, supratidal zones and terrestrial habitats greater than 780m from the OLL.

### 21.3.6.13 Brent Goose

Brent Goose was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There was one observation of brent goose in February 2024. A flock of 39 birds was observed foraging in terrestrial habitat approximately 630m from the OLL.

### 21.3.6.14 Cormorant

Cormorant was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Cormorant were observed on average once every hour of intertidal surveys, with an average flock size of six birds and a peak count of 25 individuals. The majority of observations were of birds commuting over open water and exposed rocky shores between 70 and 300 meters from the OLL. There were 23 observations of birds commuting, roosting or foraging within 500m of the OLL.

### 21.3.6.15 Curlew

Curlew was observed in the breeding 2023 and Winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Curlew were observed on average once every c. 2 hours of intertidal surveys, with an average flock size of eight birds and a peak count of 40 individuals. Most observations were of birds roosting or foraging in the intertidal and supratidal zones and in terrestrial habitats. There were seven observations of between five and 25 birds foraging in an intertidal area within 200m of the OLL. Additionally, a flock of five birds were recorded foraging in terrestrial habitat at the OLL.

### 21.3.6.16 Greenshank

Greenshank was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Greenshank were infrequently recorded; the species was observed on average once every c. 8 hours of intertidal surveys. All observations were of individuals commuting or foraging in the winter season 2023/24. One bird was observed commuting over rocky shores approximately 120m from the OLL.

### 21.3.6.17 Purple Sandpiper

Purple sandpiper was observed in winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There was one observation of a purple sandpiper during intertidal bird surveys. An individual was observed roosting less than 10m from the OLL.

### 21.3.6.18 Redshank

Redshank was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Redshank were infrequently recorded, the species was observed on average once every c. 3 hours of intertidal bird surveys, with an average flock size of two birds and a peak count of four individuals. All birds were observed in the intertidal zone and terrestrial habitat greater than 740m from the OLL.

### 21.3.6.19 Ringed Plover

Ringed plover was observed in breeding 2023 and Winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Ringed plover were observed on average once every c. 3 hours of intertidal surveys, with an average flock size of nine birds and a peak count of 45 individuals. There were four observations within 500m of the OLL. A flock of ten birds was observed commuting over exposed rocky shores approximately 230m from the OLL. There was evidence of breeding observed in May and June 2023. With at least one breeding pair recorded within 500m of the OLL. All other birds were roosting or foraging in intertidal, supratidal zones and terrestrial habitat.

### 21.3.6.20 Sanderling

Sanderling was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There were two observations of sanderling during intertidal bird surveys. There were observations of an individual and a flock of fifteen birds foraging in the intertidal zone 950m from the OLL.

### 21.3.6.21 Shelduck

Shelduck was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There was one observation of shelduck during intertidal bird surveys. Two birds were observed commuting over the rocky shoreline approximately 50m from the OLL.

### 21.3.6.22 Turnstone

Turnstone was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Turnstone were infrequently recorded, the species was observed on average once every c. 7 hours of intertidal surveys, with an average flock size of three birds and a peak count of five individuals. There were two observations of two and five birds foraging within 150m the OLL.

## 21.3.6.23 Common Snipe

Snipe was observed in the winter 2023/24 season. Raw survey data and figures are provided in Appendix 21-4.

### Intertidal Bird Survey

Snipe were observed on average once times every 2 hours of intertidal bird surveys, with an average flock size of three birds and a peak count of nine individuals. There were four observations of between one and four birds foraging on or within 330m of the OLL.

### Incidental Observations

There was one incidental observation of an individual commuting within 200m of the OGC during hen harrier roost surveys in the winter 2023/24 season.

## 21.3.6.24 Kestrel

Kestrel was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

### Intertidal Bird Survey

Kestrel were infrequently recorded, the species was observed on average once every c. 24 hours of intertidal surveys, with a peak count of two individuals hunting. There was observation of an individual hunting approximately 40m of the OGC in the winter 2023/24 season.

### Breeding Walkover Survey

Kestrel were infrequently recorded, the species was observed on average once every c. 9 hours of breeding walkover surveys, all observations were of individuals hunting. There were two observations of individuals on or within 500m of the OGC. One was approximately 1.7km inland from OCC with the second only 35m from the OCC. Both were travelling within or towards suitable breeding habitat.

### Incidental Observations

There was one incidental observation of an individual hunting approximately 2km from the OGC during hen harrier roost surveys in the winter 2023/24 season.

## 21.3.6.25 Kittiwake

Kittiwake was observed in the breeding 2023 and winter 2023/24 seasons. Raw survey data and figures are provided in Appendix 21-4.

### Intertidal Bird Survey

Kittiwake were infrequently recorded, the species was observed on average once every c. 16 hours of intertidal surveys, with an average flock size of three birds and a peak count of five individuals. Two observations were of birds commuting over open water between approximately 130m and 210m of the OLL. The third observation was of an injured bird in a terrestrial habitat approximately 240m from the OLL. Healthy birds would not be expected to be recorded in terrestrial habitats.

### 21.3.6.26 Oystercatcher

Oystercatcher was observed in the breeding and winter seasons. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

Oystercatcher were frequently recorded, the species was observed on average once every c. 2 hours, with an average flock size of eleven birds and a peak count of 47 individuals. There were eleven observations on or within 500m of the OLL, birds were roosting or foraging in the intertidal or supratidal zones and terrestrial habitat. Eight of these observations, with a maximum count of 28 individuals, were foraging in an intertidal area on and within 160m of the OLL.

### 21.3.6.27 Razorbill

Razorbill was observed in the breeding 2023 season. Raw survey data and figures are provided in Appendix 21-4.

#### Intertidal Bird Survey

There were two observations of between one and four birds foraging over open water approximately 520m from the OLL.

### 21.3.6.28 Buzzard

Buzzard was observed in the breeding 2023 season. Raw survey data and figures are provided in Appendix 21-4.

#### Breeding Walkover Survey

Buzzard were infrequently recorded, the species was observed on average once every c. 9 hours of breeding walkover surveys, and all observations were of individuals hunting. Four observations on or within 500m of the OGC were located within a 2km section approximately 5km west of the OCC.

### 21.3.6.29 Sparrowhawk

Sparrowhawk was observed in the breeding season. As a species which is at risk of persecution the location of breeding territory is not made publicly available. Raw survey data and figures are redacted in Appendix 21-4 but can be requested if needed.

#### Breeding Walkover Survey

There were two observations of individuals during breeding walkover surveys. An adult was observed carrying prey and in addition, there was a record of a fledgling calling (food begging call). These observations were located in the same area between 15m and 80m of the OGC. These observations confirm the presence of breeding sparrowhawk.

## 21.3.7 Passerines (Red-listed)

The BoCCI Red-listed species meadow pipit, at the OCC, and grey wagtail, at the OGC, were both recorded on one occasion each during the surveys undertaken at the Onshore Site.

## 21.4 Receptor Evaluation

### 21.4.1 Determination of Population Importance

A determination of population importance for birds within the likely CSA is provided below, following criteria described in Section 21.2.5. Estimates of national population sizes were obtained from the most recent national surveys by Burke *et al.* (2018), Lewis *et al.* (2019a), Crowe *et al.* (2014) and Lewis *et al.* (2019b), or Ireland's Article 12 Reporting 2013-2018 (EU, 2022), depending on what literature was available. Estimates for mean county population sizes were obtained from species-specific surveys, a review of IWeBS sites within County Clare[1], or derived from national estimates, according to what literature was available.

Following NRA (2009), a population of National Importance is a regularly occurring population that exceeds 1% of the national population. Similarly, a population of County Importance is a regularly occurring population that exceeds 1% of the county population. Locally Important (Higher Value) populations are resident or regularly occurring species of conservation concern of importance at the local level, while Locally Important (Lower Value) populations are resident or regularly occurring species of some local importance.

#### 21.4.1.1 Chough

The national population of chough is estimated to be 839 breeding pairs (NPWS Article 12 Reporting). The majority of breeding is confined to the west coast and in particular to the southwest. Therefore, a regularly occurring population of eight breeding pairs is required for classification as National Importance.

Chough was observed four times during the breeding season and once during the winter season. Only two observations were within 500m of the OLL, between six and eight birds commuting or foraging. Following a precautionary approach, this population is considered of County Importance.

#### 21.4.1.2 Cory's Shearwater

There was a single observation during surveys of a flock of ten birds approximately 1km from the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.3 Dunlin

The national wintering population of dunlin is estimated to be 37,409 birds (Burke et al., 2018), and the county wintering population is estimated to be 722 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 374 birds is required for classification as National Importance and seven birds for classification as County Importance.

Dunlin was observed twice within 500m of the OLL during the winter season. One bird was observed circling and a flock of 20 birds was observed roosting all within the OLL. There were additional observations in the wider surroundings. Following a precautionary approach, this population is considered of County Importance.

[1] *Please note that these figures are estimates based on the best available information and should be interpreted with a degree of caution.*

#### 21.4.1.4 Golden Plover

The national wintering population of golden plover is estimated to be 80,707 birds (Burke et al., 2018), and the county population is estimated to be 502 (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 807 birds is required for classification as National Importance and of five birds for classification as County Importance.

Golden plover was observed infrequently during the winter season, with one observation of four birds foraging within 500m of the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.5 Great Northern Diver

The national wintering population of great northern diver is estimated to be 2,128 birds (Burke et al., 2018), and the county population is estimated to be 12 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 21 birds is required for classification as National Importance and of one bird for classification as County Importance.

Individual great northern diver were recorded in the subtidal zone approximately 1km from the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.6 Hen Harrier

The national breeding population of hen harrier is estimated to be 108-157 pairs (Ruddock et al., 2016) and the national wintering population is estimated to be 373 birds (NPWS Article 12 Reporting). Therefore, a regularly occurring population of one breeding pair or three wintering birds is required for classification as National Importance. In the absence of reliable county population estimates, any records of hen harrier that are not of National Importance are treated as County Importance.

Hen harrier was occasionally observed hunting during the winter 2023/24 season. At least one individual bird was recorded. Thus, hen harrier in the winter season is considered to be a population of County Importance.

#### 21.4.1.7 Kingfisher

The national breeding population of kingfisher is estimated to be 368-1,031 pairs (NPWS Article 12 Reporting). Therefore, a regularly occurring breeding population of four pairs is required for classification as National Importance. In the absence of county population estimates, and following the precautionary principle, regular records of kingfisher are treated as County Importance. The kingfisher was only observed once during the breeding 2023 season of an individual 900m from the Onshore Site. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.8 Little Egret

The national breeding population of little egret is estimated to be 323-645 pairs (NPWS Article 12 Reporting). The national wintering population of little egret is estimated to be 1,274 birds (Burke et al., 2018). Therefore, a regularly occurring population of three breeding pairs or 13 wintering birds is required for classification as National Importance. The county wintering population is estimated to be 26 birds (IWeBS mean count for the period 2015/16 – 2020/21). Following a precautionary approach one breeding pair or one wintering bird is classified as County Importance.

Little egret was observed on a single occasion during the winter season, with one bird observed commuting within 500m of the OLL. There were two observations of individuals within 500m of the

OLL during the breeding season. Thus, following a precautionary approach these birds are considered to be associated with a population of County Importance.

#### 21.4.1.9 Peregrine Falcon

The national breeding population of peregrine falcon is estimated to be 425 pairs (National Breeding Peregrine Survey 2017). Therefore, a regularly occurring breeding population of four pairs is required for classification as National Importance. In the absence of county population estimates, and following the precautionary principle, regular records of wintering peregrine falcon are treated as County Importance.

Peregrine was observed on two occasions during the winter season bird with one bird commuting within 80m of the OLL. A second observation was a bird hunting approximately 720m from the OLL. Thus, following a precautionary approach, these birds are considered to be associated with a population of County Importance.

#### 21.4.1.10 Sandwich Tern

The national breeding population of sandwich tern numbers is estimated to be 2,519 pairs (Cummins, S., Lauder, C, Lauder, A & Tierney, T. D. (2019)). The national wintering population of sandwich tern is estimated to be 28,300 birds (Burke et al., 2018) and the county wintering population is estimated to be four birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 25 pairs is required for classification as National Importance and of one bird for classification as County Importance.

Sandwich tern were observed on four occasions in two days during the breeding season, two observations of three and nine birds respectively were recorded within 500m of the OLL. Thus, based on the irregularity of observations these birds are considered to be associated with a population of no greater than Local Importance (higher value).

#### 21.4.1.11 Bar-tailed Godwit

The national wintering population of bar-tailed godwit is estimated to be 13,385 birds (Burke et al., 2018), and the county population is estimated to be 102 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 13 birds is required for classification as National Importance and of one bird for classification as County Importance.

There was a single observation during all surveys of a flock of ten birds approximately 925m from the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.12 Black-headed Gull

The national breeding population of black-headed gull is estimated to be 7,810 pairs (NPWS Article 12 Reporting), and the county population is estimated to be 1,166 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 78 pairs is required for classification as National Importance and of 11 birds for classification as County Importance.

Black-headed gull was observed commuting once within 500m of the OLL, two birds were observed. There were no further observations within 500m of the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

### 21.4.1.13 Brent Goose

The national wintering population of brent goose is estimated to be 30,295 birds (NPWS Article 12 Reporting).

A flock of 39 birds (significantly below national importance thresholds) were observed once during winter surveys approximately 630m from the OLL. Therefore, based on the low numbers and irregularity of observations there is no population of ecological significance using the Onshore Site.

### 21.4.1.14 Cormorant

The national breeding population of cormorant is estimated to be 839 pairs (NPWS Article 12 Reporting). The national wintering population of cormorant is estimated to be 7,967 birds (Burke et al., 2018), and the county population is estimated to be 695 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of eight breeding pairs is required for classification as National Importance and of six birds for classification as County Importance.

Cormorant was observed in low numbers on 23 occasions within 500m of the OLL during the breeding season, and there was no evidence of breeding activity. Of the 23 observations within 500m of the OLL only two reached the threshold for County Importance. The birds are classed as of Local Importance (Higher Level).

### 21.4.1.15 Curlew

The national breeding population of curlew is estimated to be 105-119 pairs, and the county population is estimated to be 5 pairs (Colhoun et al., 2022). The national wintering population of curlew is estimated to be 28,300 birds (Burke et al., 2018) and the county wintering population is estimated to be 446 birds (IWeBS mean count for the period 2016/17 – 2020/21). As the breeding population is declining significantly in Ireland, on a precautionary basis, a regularly occurring population of one breeding pair is required for classification as National Importance, and thus as County Importance also. A regularly occurring population of 283 wintering birds is required for classification as National Importance and of 2 wintering birds for classification as County Importance.

Curlew was observed 20 times during the breeding season, twelve of which were within 500m of the OLL, maximum count of 25 birds. There was no evidence of breeding activity. Curlew was observed only three times within 500m of the OLL during the winter season, maximum count of 24 birds. Thus, these observations are considered to relate to a population of County Importance.

### 21.4.1.16 Greenshank

The national wintering population of greenshank is estimated to be 1,208 birds (Burke et al., 2018), and the county population is estimated to be 13 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 12 birds is required for classification as National Importance and of one bird for classification as County Importance.

Greenshank was observed only once within 500m of the OLL, one bird during the winter season. Therefore, based on the irregularity of observations there is no population of ecological significance using the Onshore Site.

### 21.4.1.17 Purple Sandpiper

The national wintering population of purple sandpiper is estimated to be 465 birds (Burke et al., 2018), and the county population is estimated to be 14 birds (IWeBS mean count for the period 2016/17 –

2020/21). Therefore, a regularly occurring population of 4 birds is required for classification as National Importance and of one bird for classification as County Importance.

There was one observation of an individual within 500m of the OLL during winter surveys. Therefore, based on the irregularity of observations there is no population of ecological significance using the Onshore Site.

#### 21.4.1.18 Redshank

The national breeding population of redshank is estimated to be 250 pairs (NPWS Article 12 Reporting). The national wintering population of redshank is estimated to be 16,812 birds (Burke et al., 2018), and the county population is estimated to be 170 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of two breeding pairs is required for classification as National Importance and of one bird for classification as County Importance Therefore, a regularly occurring population of 16 birds is required for classification as National Importance and of one bird for classification as County Importance.

Redshank were not observed within 500m of the OLL during surveys. Therefore, based on the irregularity of observation there is no population of ecological significance using the Onshore Site.

#### 21.4.1.19 Ringed Plover

The national breeding population of ringed plover is estimated to be 1,045 pairs (NPWS Article 12 Reporting). The national wintering population of ringed plover is estimated to be 10,545 birds (Burke et al., 2018), and the county population is estimated to be 295 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of ten breeding pairs is required for classification as National Importance and of two birds for classification as County Importance.

Ringed plover was observed five times within 500m of the OLL during the breeding season, two of these observations indicate breeding within the area. Thus, these observations are considered to relate to a population of County Importance.

#### 21.4.1.20 Sanderling

The national wintering population of sanderling is estimated to be 7,572 birds (Burke et al., 2018), and the county population is estimated to be 17 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 75 birds is required for classification as National Importance and of one bird for classification as County Importance.

Sanderling was observed two times approximately 950m from of the OLL, with a maximum count of 15 birds. Therefore, based on the irregularity and location of observations there is no population of ecological significance using the Onshore Site.

#### 21.4.1.21 Shelduck

The national breeding population of shelduck is estimated to be 958 pairs (NPWS Article 12 Reporting). The national wintering population of shelduck is estimated to be 6,378 birds (Burke et al., 2018), and the county population is estimated to be 100 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of nine breeding pairs is required for classification as National Importance and of one bird for classification as County Importance.

There was one observation of shelduck within 500m of the OLL, two birds were observed commuting over rocky shore. As there was only a single observation of this species within 500m of the Onshore Site

there is no regularly occurring population present. Therefore, there is no population of ecological significance using the Onshore Site.

#### 21.4.1.22 Turnstone

The national wintering population of turnstone is estimated to be 6,296 birds (Burke et al., 2018), and the county population is estimated to be 45 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of six birds is required for classification as National Importance and of one bird for classification as County Importance.

Turnstone was observed two times within 500m of the OLL, with a maximum count of five birds. Thus, these observations are considered to relate to a population of Local Importance (higher value).

#### 21.4.1.23 Common Snipe

The national population of snipe is estimated to be 8,550 birds (NPWS Article 12 Reporting). In the absence of more detailed county-level information, the county breeding population is estimated to be 164 pairs, assuming an even spatial distribution across the 26 counties of Ireland (i.e. national population divided by 26). The county wintering population is estimated to be 55 birds (IWeBS mean count for the period 2016/17 – 2020/21), although this may be an underestimate due to the cryptic nature of this species. Therefore, a regularly occurring population of 86 birds is required for classification as National Importance and of one bird for classification as County Importance.

Snipe was observed on five occasions on or within 500m of the Onshore Site, with a maximum count of four birds. Additionally, there was a single observation of an individual during winter surveys within 200m of the OGC. Thus, these observations are considered to relate to a population of County Importance.

#### 21.4.1.24 Kestrel

The national population of kestrel is estimated to be 13,500 birds (Lewis et al., 2019). In the absence of more detailed county-level information, the county population is estimated to be 519 birds, assuming an even spatial distribution of birds across the 26 counties of Ireland (i.e. national population divided by 26). Therefore, a regularly occurring population of 135 birds is required for classification as National Importance and of 5 birds for classification as County Importance.

Kestrel was observed on four occasions on or within 500m of the Onshore Site, with a maximum count of two birds. All observations were along the OGC. Thus, on a precautionary basis, this species is considered to be a population of Local Importance (higher value).

#### 21.4.1.25 Kittiwake

The national breeding population of kittiwake is estimated to be 24,728 pairs (NPWS Article 12 Reporting). In the absence of more detailed county-level information, the county breeding population is estimated to be 1,766 pairs, assuming an even spatial distribution of birds across 14 counties of Ireland covered by these data. As this species breeds only in coastal habitat only counties with a coastline have been included. Therefore, a regularly occurring population of 247 pairs is required for classification as National Importance and of 17 pairs for classification as County Importance.

Kittiwake was observed three times within 500m of the OLL during the breeding season, the maximum count of five birds, and there was no evidence of breeding activity. Therefore, based on the low numbers and irregularity of observations there is no population of ecological significance using the Onshore Site.

### 21.4.1.26 Oystercatcher

The national wintering population of oystercatcher is estimated to be 42,875 birds (Burke et al., 2018), and the county population is estimated to be 93 birds (IWeBS mean count for the period 2016/17 – 2020/21). Therefore, a regularly occurring population of 428 birds is required for classification as National Importance and of one bird for classification as County Importance.

Oystercatcher were observed eleven times within 500m of the OLL, with a maximum count of 28 birds Thus, these observations are considered to relate to a population of County Importance.

### 21.4.1.27 Razorbill

The national breeding population of kittiwake is estimated to be 33,689 pairs (NPWS Article 12 Reporting). In the absence of more detailed county-level information, the county breeding population is estimated to be 2,406 pairs, assuming an even spatial distribution of birds across 14 counties of Ireland covered by these data. As this species breeds only in coastal habitat only counties with a coastline have been included. Therefore, a regularly occurring population of 336 pairs is required for classification as National Importance and of 24 pairs for classification as County Importance.

Razorbill was observed two times in low numbers during the breeding season, neither observation was within 500m of the OLL. Therefore, there is no population of ecological significance using the Onshore Site.

### 21.4.1.28 Buzzard

The national population of buzzard is estimated to be 1,938 breeding pairs (NPWS Article 12 Reporting). In the absence of more detailed county-level information, the county population is estimated to be 75 breeding pairs, assuming an even spatial distribution across the 26 counties of Ireland (i.e. national population divided by 26). Buzzard is a Green Listed BoCCI species, indicating it is of lower conservation priority.

There were four observations of buzzard hunting in the same area within were 500m of the OGC during breeding surveys. No evidence of breeding territories was observed during surveys at the Onshore Site. Thus, on a precautionary basis, this species is considered a population of Local Importance (higher value).

### 21.4.1.29 Sparrowhawk

The national population of sparrowhawk is estimated to be 11,859 birds (Lewis et al., 2019). In the absence of more detailed county-level information, the county population is estimated to be 456 birds, assuming an even spatial distribution across the 26 counties of Ireland. Sparrowhawk is a Green Listed BoCCI species, indicating it is of lower conservation priority.

A breeding territory was identified within 80m of the Onshore Site. Thus, on a precautionary basis, this species is considered a population of Local Importance (higher value).

## 21.4.2 Identification of Key Ornithological Receptors

Table 21-10 outlines the rationale for including or excluding each target species recorded during field surveys as a KOR. The conservation status, population importance evaluation following NRA (2009) and a detailed explanation for inclusion/exclusion as a KOR is provided. The sensitivity of species included as KORs are then evaluated in the following section.

*Table 21-10 Receptor evaluation and selection criteria rational*

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Chough | Annex I Birds Directive | **All Seasons**<br><br>County Importance | Chough was recorded using habitats within 500m of the Onshore Site twice during the breeding season. On a precautionary basis, the potential for habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Cory's Shearwater | Annex I Birds Directive | **Breeding**<br><br>No population of ecological significance recorded | There was a single observation during all breeding surveys of a flock of ten birds approximately 1km from the OLL. No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Dunlin | Annex I Birds Directive & SCI of River Shannon and River Fergus Estuaries SPA and Mid-Clare Coast SPA. | **Wintering**<br><br>Local Importance (higher value) | Dunlin was utilising habitats within the Onshore Site on two occasions during the wintering season. Between one and 20 birds was observed circling or roosting within the OLL. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Golden Plover | Annex I Birds Directive & SCI of River Shannon and River Fergus Estuaries SPA & Red List. | **All Seasons**<br><br>No population of ecological significance recorded | Golden plover were only observed on one occasion within 500m of the OLL. No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Great Northern Diver | Annex I Birds Directive | **Wintering**<br><br>No population of ecological significance recorded | Great northern diver were observed in the subtidal zone approximately 1km from the OLL. Therefore, no population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Hen Harrier | Annex I Birds Directive | **Wintering**<br><br>County Importance | Hen harrier were observed 11 times within the same area along the OGC during hen harrier roost surveys. Seven of these observations were of birds within 500m of the Onshore Site. The potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Kingfisher | Annex I Birds Directive | **Breeding**<br><br>No population of ecological significance recorded | Kingfisher was observed in the subtidal zone approximately 1km from the OLL. Therefore, no population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement | **No** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| | | | are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | |
| Little Egret | Annex I Birds Directive | **All Seasons**<br><br>County Importance | Little egret was observed using habitats within 500m of the Onshore Site during the breeding and wintering seasons. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Peregrine Falcon | Annex I Birds Directive | **Wintering**<br><br>County Importance | There was one observation of an individual within 500m of the Onshore Site during the wintering season. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Sandwich Tern | Annex I Birds Directive | **Breeding**<br><br>Local Importance (higher value) | Sandwich tern was observed within 500m of the Onshore Site during the breeding season. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Bar-tailed Godwit | Annex I Birds Directive & SCI of River Shannon and River Fergus Estuaries SPA & Red List. | **Wintering**<br><br>No population of ecological significance recorded | There was a single observation of ten birds 925m from the Onshore Site. Therefore, no population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Black-headed Gull | SCI of River Shannon and River Fergus Estuaries SPA. | **Wintering**<br><br>No population of ecological significance recorded | There was a single observation within 500m of the Onshore Site, one count of two birds, during all surveys. No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Brent Goose | SCI of River Shannon and River Fergus Estuaries SPA. | **Wintering**<br><br>No population of ecological significance recorded | There was a single observation of 39 brent geese 630m from the Onshore Site. Therefore, no population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Cormorant | SCI of River Shannon and River Fergus Estuaries SPA. | **All Seasons**<br><br>County Importance | Cormorant were regularly observed within 500m of the Onshore Site during the breeding season. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Curlew | SCI of River Shannon and River Fergus Estuaries SPA & Red List | **All Seasons**<br><br>County Importance | Curlew were utilising habitat within 500m of the Onshore Site during the breeding and wintering seasons. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Greenshank | SCI of River Shannon and River Fergus Estuaries SPA | **Wintering**<br><br>No population of ecological significance recorded | No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Purple Sandpiper | SCI of Mid-Clare Coast SPA & Red List. | **Wintering**<br><br>No population of ecological significance recorded | No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Redshank | SCI of River Shannon and River Fergus Estuaries SPA & Red List. | **Wintering**<br><br>No population of ecological significance recorded | No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Ringed Plover | SCI of River Shannon and River Fergus Estuaries SPA & SCI of Mid-Clare Coast SPA. | **All Seasons**<br><br>County Importance | Ringed plover was observed utilising habitat within 500m of the Onshore Site during the breeding and wintering seasons. There was evidence of at least one breeding pair within 500m of the Onshore Site. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Sanderling | SCI of Mid-Clare Coast SPA | **Wintering**<br><br>No population of ecological significance recorded | Sanderling was observed two times approximately 950m from of the OLL. Therefore, no population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Shelduck | SCI of River Shannon and River Fergus Estuaries SPA | **Wintering**<br><br>No population of ecological significance recorded | Shelduck was observed on one occasion commuting within 500m of the Onshore Site during the wintering season. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Turnstone | SCI of Mid-Clare Coast SPA.SCI of River Shannon and River Fergus Estuaries SPA. | **All Seasons**<br><br>County Importance | Turnstone was observed on two occasions utilising habitat within 500m of the Onshore Site during the breeding and wintering seasons. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Common Snipe | Red List. | **Wintering**<br><br>County Importance | Snipe was observed five times foraging or commuting on or within 500m of the OLL. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Kestrel | Red List & Raptor. | **All Seasons**<br><br>Local Importance (higher value) | Kestrel were observed on four occasions on or within 500m of the Onshore Site, with a maximum count of two birds. All observations were along the OGC. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Kittiwake | Annex I Birds Directive & SCI of River Shannon and River Fergus Estuaries SPA & Red List. | **All Seasons**<br><br>No population of ecological significance recorded | Kittiwake were observed only three times in low numbers within 500m of the Onshore Site. Two of these were of birds commuting over open water. As such, the potential for direct habitat loss and disturbance/displacement are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |
| Oystercatcher | Red List | **All Seasons**<br><br>County Importance | Oystercatcher was observed on 11 occasions foraging on or within 500m of the Onshore Site during the breeding and wintering seasons. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Razorbill | Red List. | **Breeding**<br><br>No population of ecological significance recorded | No population of ecological significance was recorded utilising the Onshore Site during the extensive suite of surveys conducted. As such, the potential for direct habitat loss, disturbance/displacement and collision risk are limited and there is no evidence to suggest that the Onshore Site is of significance to this species. | **No** |

| Species | Conservation Status | NRA Evaluation | Rationale for inclusion/exclusion as KOR | KOR |
|---|---|---|---|---|
| Buzzard | Raptor | **Breeding**<br><br>Local Importance (higher value) | Buzzard were observed on four occasions utilising habitat on or within 500m of the Onshore Site. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |
| Sparrowhawk | Raptor | **Breeding**<br><br>Local Importance (higher value) | A breeding territory was identified within 80m of the Onshore Site. On a precautionary basis, the potential for direct habitat loss cannot be excluded. As such, an assessment of habitat loss is required, e.g. physical habitat loss and indirectly through disturbance/displacement. | **Yes** |

## 21.5 Potential Impacts

All elements of the Onshore Site have been considered in assessing impacts on KORs. This section is structured as follows:

- Assessment of 'Do nothing' Effect
- Assessment of impacts in relation to KORs during construction and operation and maintenance
- Assessment of impacts in relation to KORs during decommissioning
- Assessment of impacts on designated areas

### 21.5.1 Do-Nothing Effect

If the Project for which this EIAR has been prepared was not to proceed, the Onshore Site would continue to be managed under the various current management practices. These include such habitats as the public road and agricultural/amenity grassland. The vast majority of the OEC and OGC is contained within public roads, which are of no ecological value. It is assumed that the character of the bird community, including the KORs identified, will remain much as it is described in the baseline ornithological conditions.

### 21.5.2 Effects on Key Ornithological Receptors during Construction, Operation and Maintenance, and Decommissioning

As outlined in Section 21.2.5.1, activities associated with the construction phase have the greater potential to give rise to potentially significant effects. The duration of onshore construction activities is 3-4 years, as per the Onshore CEMP included in Appendix 5-16. There are three key elements of the Onshore Site for consideration: the OLL, the OGC, and the OCC.

- The OEC connects to the Onshore Site at the OLL via a directionally drilled trench to the OLL. The OLL is located in terrestrial habitats (grassland) behind the shoreline. No above-ground/open trench will be excavated in the beach/rocky shoreline. Taking a precautionary approach there is potential for the drilling and associated vibration to cause disturbance in the habitats directly above the underground trench.
- The first stage of the trenching works involves the trench extent being saw cut along the road surface with excavation works taken place thereafter, usually two crews would be able to complete approximately 240m per day (120m per day per crew). This process intends to minimise the duration that an area is exposed to construction works, along this route.
- Following excavation of the trench section, a concrete bedding layer of Cement Bound Granular Material Type B (CBGMB) is placed on the base of the trench. The ducting can then be placed within the trench section. Once the ducts are in place, appropriate engineered backfill or imported stone material is placed over the concrete surround. Following this, the trench is to receive a temporary surface reinstatement as agreed with Clare County Council. Once the OGC is completed, the surfaces are to receive asphalt surface layers to Clare County Council Standards. When the trench backfilling process is completed, the works are repeated along the following 120m sections of the route until installation works are complete. The vast majority of the linear OGC and OEC is contained within public roads, which are of no ecological value. There is, therefore, no additional physical habitat loss predicted within the road carriageway. Where the route crosses agricultural/amenity grassland,

an access track will be constructed over or adjacent to the cable route to facilitate potential future maintenance and repairs. Following construction works the land will be largely re-instated to the previous conditions as per the Onshore CEMP included in Appendix 5-16. Construction works will have the potential to cause disturbance in nearby habitats.

- The OCC will be constructed throughout the 3-4 year construction phase. There will be a physical loss of habitat to the footprint of the OCC and disturbance of nearby habitats associated with construction works.

As outlined in Section 21.2.5.1, there is minimal potential for likely significant effects during the operation and maintenance phase. Following construction works, the excavated land will be reinstated except for a small number of access tracks on private land. Operational phase disturbance and/or displacement are likely to be largely restricted to the OCC and involve an increase in human activity during general maintenance works and associated lighting during periods of low light. Similarly but more infrequently, there may be cause to undertake maintenance or repair works on underground cable sections.

The majority of the key ornithological receptors were restricted to specific areas of the Onshore Site, wading species for example were primarily recorded along the shore adjacent to the OLL. As a result, impacts, for the majority of species, are predicted to occur locally where a given species was recorded.

A short section of the OGC (c. 400m) near the Moneypoint 220kV Substation borders the River Shannon and River Fergus Estuaries SPA, there is the potential for disturbance impacts associated with construction works within the adjacent estuarine habitat. In particular, this impact is likely for wintering waterbirds, including SCI's from the SPA. Temporal restrictions on construction activity will be employed to avoid impacts. Please see Section 21.6.2.1 for further discussion.

During decommissioning the joint bays will be opened up and the cables will be cut. Once cut, the cables are pulled through the ducting and removed. The joint bays are then backfilled and reinstated to the relevant road standards, or to original condition for those located on private lands. Onshore access tracks within private lands will remain insitu and can be provided for alternative future use by the landowners. The above ground components of the OCC building and compound will be removed fully from the Onshore Site. For the underground components, such as the foundations and non-electrical infrastructure, the Best Environmentally Practicable Option (BEPO) is for these to remain in situ.

The tables in the following sections describe potential effects on KORs that may occur during the construction, operation and maintenance, and decommissioning of the Onshore Site. The magnitude and significance of these effects are then defined according to the EPA Guidelines criteria.

### 21.5.2.1 Chough (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Chough were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Of the two observations one involved birds commuting in short grassland along the coastline within 125m of the OLL and eight birds foraging within 470m of the OLL. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, and this will be a long-term effect. However, as the area is quite small and the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | **Likely long-term slight negative effect, which is Not Significant** |
| Disturbance | As previously outlined, chough were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur, e.g. disturbance associated with construction works, drilling etc.<br><br>In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Of the two observations one involved birds commuting in short grassland along the coastline within 125m of the OLL and eight birds foraging within 470m of the OLL. There is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the grassland foraging habitat that will be impacted is small relative to its availability along the West Clare coastline, particularly to the | **Likely short-term slight negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be largely restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | **Likely long-term not significant negative effect, which is Not Significant** |

### 21.5.2.2 Dunlin (All Seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Dunlin were only recorded at the OLL. It is, therefore, reasonable to conclude that this is the only location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Of the two observations, one involved a bird commuting over short grassland along the coastline within the OLL and 20 birds foraging within the OLL. As outlined in Section 21.2.5.1 there will be no excavation along the shoreline. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, this will have a long-term effect. However, as the area | **Likely long-term slight negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | itself is small and the habitat is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | |
| Disturbance | As previously outlined, Dunlin were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur. In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. There is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the grassland foraging habitat that will be impacted is small relative to its availability along the West Clare coastline, particularly to the southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. Furthermore, dunlin are classed as a low-sensitivity species and are not particularly sensitive to noise stimuli as per Cutts (2013). No significant effects are predicted. | **Likely short-term slight negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location. Therefore, displacement and barrier effect are not anticipated. No significant effect is predicted. | **No Effect** |

### 21.5.2.3 Hen Harrier (Winter)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>The vast majority of the linear Onshore Site is contained within public roads, which is of no ecological value to this species. There is, therefore, no additional physical habitat loss predicted within the road carriageway. The only sections of the Onshore Site that overlap with semi-natural/non-built habitats are the OLL, OCC and the 1,140m of the underground cable route that crosses agricultural grassland near OLL, Kilrush golf course and grassland near the Moneypoint Power Station, as per Figure 21-2. Of these locations, hen harrier were only recorded inland along the OGC. As provided in Figure 21-4-6 and Table 21-4-6 in Appendix 21-4, activity was restricted to a specific area. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were seven observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. All observations were of individuals commuting or hunting over blanket bog, cut-over bog and agricultural grassland. As the Onshore Site will be contained within public roads at this location, there will be no direct or physical loss of habitat, as such no significant effects are predicted. | **Likely short-term not significant negative effect, which is Not Significant** |
| Disturbance | As previously outlined, hen harrier were only recorded inland at a distinct location along the OGC. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur. In 94.5 hours of surveying, there were only seven observations of this species within 500m of the Onshore Site, this is a low rate of occurrence All observations were of individuals and no breeding or roosting activity was recorded. There is the potential for short-term disturbance effects at this location during construction works. | **Likely short-term slight negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | However, these effects are unlikely to be significant owing to the short-term nature of the works (i.e. the time of trenching works will be one day per 240m section on average) and given the bog and grassland foraging habitat will not directly be impacted. No significant effects are predicted. | |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be largely restricted to the OCC. Therefore, displacement and barrier effect are not anticipated. No significant effect is predicted. | **No Effect** |

### 21.5.2.4 Little Egret (All Seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Little egret were only recorded at the OLL. It is, therefore, reasonable to conclude that this is the key location with the potential for significant effects to occur.<br><br>In 94.5 hours of surveying, there were only three observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Of the three observations, two involved a bird commuting over open water along the coastline within 300m of the OLL. Additionally, one bird was observed foraging on the shoreline in the supratidal zone within 200m of the OLL. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB. While this habitat will be reinstated it may not return to its original condition, new access | **Likely long-term slight negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | tracks will also be retained after construction, this will be a long-term effect. As the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | |
| Disturbance | In 94.5 hours of surveying, there were only three observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Of the three observations two involved a bird commuting over open water along the coastline within 300m of the OLL. Additionally, one bird was observed foraging on the shoreline in the supratidal zone within 200m of the OLL. There is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the grassland foraging habitat that will be effects is small relative to its availability along the West Clare coastline, particularly to the southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | **Likely short-term slight negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase effects. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. Therefore, displacement and barrier effect are not anticipated. No significant effect is predicted. | **No Effect** |

### 21.5.2.5 Peregrine (Wintering)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Peregrine were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there was only one observation of this species within 500m of the Onshore Site, this is a low rate of occurrence. An individual was observed hunting over exposed rocky shore and agricultural grassland approximately 80m from the OLL. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB and two Landfall Settlement Ponds. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, this will have a long-term impact. However, as the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | **Likely long-term not significant negative effect, which is Not Significant** |
| Disturbance | In 94.5 hours of surveying, there was only one observation of this species within 500m of the Onshore Site, this is a low rate of occurrence. An individual was observed hunting over exposed rocky shore and agricultural grassland approximately 80m of the OLL. There is the potential for only slight short-term disturbance impacts at this location during construction works. No significant effects are predicted. | **Likely short-term slight negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance | **No Effect** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | and/or displacement are likely to be restricted to the OCC. Therefore, displacement and barrier effect are not anticipated. No significant effect is predicted. | |

### 21.5.2.6 Sandwich Tern (Breeding)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Sandwich tern were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Both observations involved an individual bird commuting over open water and rocky shore along the coastline within 50m and 500m of the OLL. There will be no direct/physical loss to the rocky shore or marine foraging habitat utilised by this species. As such, no significant effects are predicted. | **No Effect** |
| Disturbance | In 94.5 hours of surveying, there were only two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Both observations involved an individual bird commuting over open water and rocky shore along the coastline within 50m and 500m of the OLL. There is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the low rate of occurrence and the open water foraging habitat will not be impacted. Furthermore, the potentially impacted area is small relative to its availability along the West Clare coastline, particularly to the southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | **Likely short-term not significant negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. There is the potential for short-term disturbance impacts at this location during construction works. However, these impacts are unlikely to be significant given the short-term nature of construction works and the favoured open water habitat that this species was commuting over will not be impacted. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location nor is it likely to occur with any regularity inland. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.7 Cormorant (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Cormorant were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were 23 observations of this species within 500m of the Onshore Site. Most observations were of birds commuting over open water and rocky shore. There was one observation of birds roosting on the rocky shore and one observation of birds foraging in the surf. There will be no direct/physical loss to the rocky shore or marine foraging habitat utilised by this species. As such, no significant effects are predicted. | **No Effect** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Disturbance | In 94.5 hours of surveying, there were 23 observations of this species within 500m of the Onshore Site. Most observations were of birds commuting over open water and rocky shore. There was one observation of birds roosting on rocky shore and one observation of birds foraging in the surf. There is the potential for very minor short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the open water foraging habitat will not be impacted and the rocky shore that this species was utilising is small relative to its availability along the West Clare coastline. The habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | **Likely short-term constant not significant negative effect., which is Not Significant** |
| Operational Phase | | |
| Direct Habitat Loss | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location nor is it likely to occur with any regularity inland. Therefore, displacement and barrier effects are not anticipated. No significant effect is predicted. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.8 Curlew (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Curlew were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were 12 observations of this species on or within 500m of the Onshore Site. All observations were of birds commuting, foraging and roosting at agricultural grassland and rocky shore. There was one observation of five birds foraging on grassland within the Onshore Site. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB and two Landfall Settlement Ponds. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, this will have a long-term impact. However, as the area is small and the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | **Likely long-term slight negative effect, which is Not Significant** |
| Disturbance | In 94.5 hours of surveying, there were 12 observations of this species on or within 500m of the Onshore Site. All observations were of birds commuting, foraging and roosting within agricultural grassland and rocky shore. No evidence of breeding was observed. There was one observation of five birds foraging on grassland within the Onshore Site. Curlew are moderately sensitive to noise stimuli (Cutts, 2013), therefore there is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the grassland foraging habitat that will be impacted is small relative to its availability along the West Clare coastline, particularly to the southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | **Likely short-term slight negative effect, which is Not Significant** |
| **Operational Phase** | | |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be largely reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.9 Ringed Plover (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Construction Phase | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Ringed plover were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were four observations of this species within 500m of the Onshore Site. There was one observation of birds commuting over open water and rocky shore 230m from the Onshore Site. Two breeding pairs were observed at 495m and 515m from the Onshore Site on rocky shore. There will be no direct/physical loss to the rocky shore or marine habitat utilised by this species. As such, no significant effects are predicted. | **No Effect** |
| Disturbance | In 94.5 hours of surveying, there were four observations of this species within 500m of the Onshore Site. There was one observation of birds commuting over open water and rocky shore 230m from the Onshore Site. Two breeding pairs were observed at 495m and 515m from the Onshore Site on rocky shore. There is the potential for short-term disturbance impacts at this location during construction works. | **Likely short-term not significant negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | However, these impacts are unlikely to be significant given the low sensitivity of this species to noise stimuli, rarely showing any sign of disturbance at distances greater than 100m from activity (Cutts, 2013). No significant effects are predicted, particularly given the separation distance between the construction works and areas of ring plover activity. | |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location nor is it likely to occur with any regularity inland. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.10 Turnstone (All seasons)

| Potential effects during the construction and operation and maintenance of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | Turnstone were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were two observations of this species within 500m of the Onshore Site. There were two observations of two and five birds foraging on the rocky shore within 150m of the OLL. There will be no loss to the rocky shore utilised by this species. As such, no significant effects are predicted. | **No Effect** |

| Potential effects during the construction and operation and maintenance of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Disturbance | In 94.5 hours of surveying, there were two observations of this species within 500m of the Onshore Site. There were two observations of two and five birds foraging on the rocky shore within 150m of the OLL. There is the potential for short-term disturbance impacts at this location during construction works.<br><br>However, these impacts are unlikely to be significant given the species is considered of low sensitivity to noise stimuli (Cutts, 2013). Furthermore, the rocky shore habitat itself is not unique to the OLL/wider surroundings or rare locally. No significant effects are predicted. | **Likely Short-term slight negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase effects. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location nor is it likely to occur with any regularity inland. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.11 Common Snipe (Wintering)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Common snipe were recorded at the OLL and along the OGC. It is therefore reasonable to conclude that these are the only locations with the potential for significant impacts to occur. | **Likely long-term slight negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | In 94.5 hours of surveying, there were five observations of this species within 500m of the Onshore Site. There were four observations of between one and four birds foraging on agricultural grassland within 330m of the OLL. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB and two Landfall Settlement Ponds. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, this will have a long-term effect. There is also the potential for habitat loss where the cable route and access tracks cross agricultural grassland. However, as the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. Additionally, there was a single observation of an individual commuting over blanket bog, cut-over bog and agricultural grassland along the OGC (as per Figure 21-4-23 and Table 21-4-3 in Appendix 21-4). As the Onshore Site at this location will be contained within public roads there will be no direct habitat loss to the surrounding area, as such no significant effects are predicted. | |
| Disturbance | In 94.5 hours of surveying, there were five observations of this species within 500m of the Onshore Site. There were four observations of between one and four birds foraging on agricultural grassland within 330m of the OLL. Additionally, there was a single observation of an individual commuting over blanket bog, cut-over bog and agricultural grassland (as per Figure 21-4-23 and Table 21-4-3 in Appendix 21-4). There is the potential for short-term disturbance impacts at these locations during construction works.<br><br>However, these impacts are unlikely to be significant given the grassland foraging habitat that will be impacted is small relative to its availability along the West Clare coastline, particularly to the southwest towards Loop Head. The habitat itself is not unique to the OLL/wider surroundings or rare locally. Agricultural grassland is an abundant habitat locally and throughout the county. No significant effects are predicted. At the OGC these effects are unlikely to be significant owing to the short-term nature of works (one day per 240m section) from excavation to reinstatement) and given the bog and grassland foraging habitat will not directly be impacted. | **Likely short-term constant not significant negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be largely restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | **Likely long-term not significant negative effect, which is Not Significant** |

### 21.5.2.12 Kestrel (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Kestrel were recorded at the OLL and OGC. Please see Figures 21-4-24/25/26 and Tables 21-4-24/25/26, for further location details. It is therefore reasonable to conclude that these are the only locations with the potential for significant impacts to occur.<br><br>In 94.5 hours of surveying, there were three observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. All observations were of birds hunting or commuting over cut-over bog, agricultural grassland or woodland. No evidence of breeding was observed. As the Onshore Site will be contained within public roads where the birds were recorded there will be no direct habitat loss to the surrounding area, as such no significant effects are predicted. Additionally, there was a single observation 515m from the OLL of an individual hunting over grassland and rocky shore. A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB. While this habitat will be reinstated it may not return to its original condition, new access tracks will also be retained after construction, this will have a long-term impact. As the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | **Likely long-term not significant negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Disturbance | In 94.5 hours of surveying, there were three observations of this species within 500m of the Onshore Site. All observations were of birds hunting or commuting over cut-over bog, agricultural grassland or woodland. No evidence of breeding was observed. Additionally, there was a single observation 515m from the OLL of an individual hunting over grassland and rocky shore. There is the potential for short-term disturbance impacts at these locations during construction works.<br><br>However, these impacts are unlikely to be significant given the affected habitats are widespread and as such the predicted short-term disturbance impacts would not result in the loss of a scarce resource. No significant effects are predicted. | **Likely short-term constant not significant negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be largely restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | **Likely long-term not significant negative effect, which is Not Significant** |

### 21.5.2.13 Kittiwake (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Kittiwake were only recorded at the OLL. It is therefore reasonable to conclude that this is the key location with the potential for significant effects to occur.<br><br>In 94.5 hours of surveying, there were three observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. Two observations were of birds commuting over open water within 210m of the OLL. The third observation was of an individual bird on grassland approximately 240m from the OLL. There will be no direct loss to the rocky shore or marine habitat utilised by this species. No significant effects are predicted. | **No Effect** |
| Disturbance | In 94.5 hours of surveying, there were three observations of this species within 500m of the Onshore Site. Two observations were of birds commuting over open water within 210m of the OLL. There is the potential for short-term disturbance impacts at this location during construction works. However, these impacts are unlikely to be significant given the short-term nature of construction works and the favoured open water habitat that this species was commuting over will not be impacted. No significant effects are predicted. | **Likely short-term constant not significant negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. This species was not recorded in this location nor is it likely to occur with any regularity inland. No significant effects are therefore predicted. | **No Effect** |

### 21.5.2.14 Oystercatcher (All seasons)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Oystercatcher were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur. In 94.5 hours of surveying, there were eleven observations of this species within 500m of the Onshore Site. Birds were roosting or foraging in the intertidal or supratidal zones and terrestrial habitat. Eight of these observations, were foraging in an intertidal area on and within 160m of the OLL.<br><br>A very small section of this coastal grassland will be excavated to accommodate the construction of the TJB and two Landfall Settlement Ponds. While this habitat will be reinstated it may not return to its original condition, new access tracks will be also be retained after construction, this will have a long-term impact. However, as the area itself is small and the habitat is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted. | **Likely long-term slight negative effect, which is Not Significant** |
| Disturbance | As previously outlined, oystercatcher were only recorded at the OLL. It is therefore reasonable to conclude that this is the only location with the potential for significant effects to occur. In 94.5 hours of surveying, there were eleven observations of this species within 500m of the Onshore Site. There is the potential for only very minor short-term disturbance impacts at this location during construction works. No significant effects are predicted. | **Likely short-term constant not significant negative effect, which is Not Significant** |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance | **No Effect** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | and/or displacement are likely to be largely restricted to the OCC. This species was not recorded in this location. No significant effects are therefore predicted. | |

### 21.5.2.15 Sparrowhawk (Breeding)

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| **Construction Phase** | | |
| Direct Habitat Loss | No significant effects are predicted for this species based on the following rationale:<br><br>Sparrowhawk were recorded at the OGC and OCC. These observations were located in suitable breeding habitat within approximately 1.3km of each other and between 15m and 80m of the OGC, while one observation was within 35m of the OCC. It is therefore reasonable to conclude that this is the only location with the potential for significant effects to occur.<br><br>In 94.5 hours of surveying, there were two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. There were two observations of individuals, a fledgling and an adult carrying prey, in the same area between 15m and 80m of the OGC confirming the presence of a breeding territory. Figures redacted, see Figure 21-3-6-29 and Tables 21-3-6-297 for further details. The species was observed over agricultural grassland and woodland. There is also the potential for habitat loss where the access tracks cross agricultural grassland. However, as the habitat itself is not unique to the Onshore Site/wider surroundings or rare locally, no significant effects are predicted | **No Effect** |
| Disturbance | In 94.5 hours of surveying, there were two observations of this species within 500m of the Onshore Site, this is a low rate of occurrence. There were two observations confirming the presence of a breeding territory. There is the potential for short-term disturbance impacts at this location during construction works. | **Likely short-term constant not significant negative effect, which is Not Significant** |

| Potential effects during the construction and operation and maintenance phases of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| | However, these impacts are unlikely to be significant given the affected habitats are widespread and as such the predicted short-term disturbance impacts would not result in the loss of a scarce resource. No significant effects are predicted. | |
| **Operational Phase** | | |
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance and Displacement | As outlined in Section 21.2.5.1 there is minimal potential for significant operational phase impacts. Following construction works, the excavated land will be reinstated. Operational phase disturbance and/or displacement are likely to be restricted to the OCC. One observation was within 35m of the OCC. It is therefore reasonable to conclude that this is the only location with the potential for significant impacts to occur.<br><br>However, these impacts are unlikely to be significant given the affected habitats are widespread and as such the predicted short-term disturbance impacts would not result in the loss of a scarce resource. No significant impacts are predicted. | **Likely long-term constant not significant negative effect, which is Not Significant** |

## 21.5.3 Effects on Key Ornithological Receptors during Decommissioning

Potential effects on KORs that may occur during the decommissioning of the Onshore Site are outlined in Section 21.6.2.3. The magnitude and significance of these effects are then defined according to the EPA Guidelines.

| Potential impacts during the decommissioning phase of the Onshore Site | | Significance (EPA Guidelines) |
|---|---|---|
| Direct Habitat Loss | Direct or indirect effects are not anticipated, as there is no additional infrastructure proposed. | **No Effect** |
| Disturbance | As above for the construction phase at the OLL and OCC for each species in Section 21.5.2. | As above for the construction phase for each species in Section 21.5.2 |

## 21.5.4 Effects on Designated Areas

The Onshore Site is not located within the boundaries of any European Sites (see Section 21.3.1). An Appropriate Assessment screening report and a Natura Impact Statement were prepared to provide the information necessary for the competent authority to complete a screening and an Appropriate Assessment for the Project. The AA screening report prepared identified and assessed a potential pathway for indirect effects on the River Shannon and River Fergus Estuaries SPA and the Mid-Clare Coast SPA.

As per the EPA Guidelines *"A biodiversity section of an EIAR, for example, should not repeat the detailed assessment of potential effects on European sites contained in documentation prepared as part of the Appropriate Assessment process, but it should refer to the findings of that separate assessment in the context of likely significant effects on the environment, as required by the EIA Directive"*. This section provides a summary of the key assessment findings with regard to potential impacts on European Sites.

The AA Screening Report for the Onshore Site concluded:

*'The Project alone or in combination with other plans and projects (i.e. Offshore and Onshore plans and projects) has the potential to have LSE on the following European Sites, in light of their conservation objectives and best scientific information (without the application of mitigation). Sites which have been included solely to ensure consistency with the foreshore licensing approach, are marked with an asterix.*

- *Inishmore Island SAC,*
- *Kilkieran Bay and Islands SAC,*
- *Lower River Shannon SAC,*
- *Slyne Head Peninsula SAC,*
- *Slyne Head Islands SAC,*
- *West Connacht Coast SAC,*
- *Galway Bay Complex SAC,*
- *Blasket Islands SAC,*
- *Duvillaun Islands SAC,*
- *Connemara Bog Complex SAC,*
- *Twelve Bens/Garraun Complex SAC,*
- *Maumturk Mountains SAC,*
- *Lough Corrib SAC,*
- *Mweelrea/Sheeffry/Erriff Complex SAC,*
- *Inishmaan Island SAC,*
- *Carrowmore Point to Spanish Point and Islands SAC,*
- *Carrowmore Dunes SAC,*
- *Kilkee Reefs SAC,*
- *Kenmare River SAC*,*
- *Hook Head SAC*,*
- *Belgica Mound Province SAC*,*
- *Roaringwater Bay and Islands SAC*,*
- *Gweedore Bay and Islands SAC*,*
- *Bunduff Lough and Machair/Trawalua/Mullaghmore SAC*,*
- *St John's Point SAC*,*
- *Carnsore Point SAC*,*
- *Blackwater Bank SAC*,*
- *Lough Swilly SAC*,*
- *Codling Fault Zone SAC*,*
- *Rockabill to Dalkey SAC*,*

- *North Channel SAC*,*
- *West Wales Marine / Gorllewin Cymru Foro SAC*,*
- *Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC*,*
- *Mers Celtiques - Talus du golfe de Gascogne SCI*,*
- *North Anglesey Marine / Gogledd Môn Foro SAC*,*
- *Lambay Island SAC*,*
- *Nord Bretagne DH SAC*,*
- *Ouessant-Molène SAC*,*
- *Abers -Côte des legends SAC*,*
- *Chaussée de Sein SAC*,*
- *Côte de Granit rose-Sept-Iles SAC*,*
- *Baie de Morlaix SAC*,*
- *Côtes de Crozon SAC*,*
- *Récifs et landes de la Hague SAC*,*
- *Anse de Vauville SAC*,*
- *Banc et récifs de Surtainville SAC*,*
- *Baie du Mont Saint-Michel SAC*,*
- *Estuaire de la Rance SAC*,*
- *Baie de Lancieux SAC, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC*,*
- *Cap d'Erquy-Cap Fréhel SAC*,*
- *Baie de Saint-Brieuc SAC*,*
- *Tregor Goëlo Es SAC*,*
- *Mid-Clare Coast SPA*
- *Slyne Head to Ardmore Point Islands SPA*
- *Inishmore SPA*
- *Cruagh Island SPA*
- *River Shannon and River Fergus Estuaries SPA*
- *Cliffs of Moher SPA*
- *Illaunonearaun SPA*
- *High Island, Inishark and Duvillaun SPA*
- *Inner Galway Bay SPA*
- *Illaunnanoon SPA*
- *Magharee Islands SPA*
- *Clare Island SPA*
- *Loop Head SPA*
- *Bills Rock SPA*
- *Dingle Peninsula SPA*
- *Duvillaun Islands SPA*
- *Inishglora and InisKeeragh SPA*
- *Blasket Islands SPA*
- *Puffin Islands SPA*
- *Iveragh Peninsula SPA*
- *Skelligs SPA*
- *Stages of Broadhaven SPA*
- *Eirk SPA*
- *The Gearagh SPA*
- *Deenish Island and Scariff Island SPA*
- *Clonakilty SPA*
- *Illanmaster SPA*
- *The Bull and The Cow Rocks SPA*
- *Beara Peninsula SPA*
- *Aughris Head SPA*
- *West Donegal Coast SPA*
- *Tory Island SPA*
- *Horn Head to Fanad Head SPA*

- *Saltee Islands SPA*
- *Mingulay and Berneray SPA*
- *Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA*
- *Rum SPA*
- *Seas off St Kilda SPA*
- *St Kilda SPA*
- *Copeland Islands SPA*
- *Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA*
- *Shiant Isles SPA*
- *Flannan Isles SPA*
- *Lambay Island SPA*
- *Ouessant-Molène SPA (France)*
- *Handa SPA*
- *Cape Wrath SPA*
- *Cote de Granit Rose-Sept Iles SPA*
- *Camaret SPA*
- *North Rona and Sula Sgeir SPA*
- *North Caithness Cliffs SPA*
- *Hoy SPA*
- *Cap d'Erquy-Cap Fréhel SPA (France)*
- *Rousay SPA*
- *West Westray SPA*
- *Copinsay SPA*
- *East Caithness Cliffs SPA*
- *Calf of Eday SPA*
- *Iles Houat-Hoedic SPA (France)*
- *Falaise du Bessin Occidental SPA (France)*
- *Seas off Foula SPA*
- *Fair Isle SPA*
- *Littoral seino-marin SPA*
- *Troup, Pennan and Lion's Heads SPA*
- *Foula SPA*
- *Sumburgh Head SPA*
- *Buchan Ness to Collieston Coast SPA*
- *Noss SPA*
- *Hermaness, Saxa Vord and Valla Field SPA*
- *Fetlar SPA*
- *Tullaher Lough and Bog SAC*

*As a result, an Appropriate Assessment is required, and a Natura Impact Statement has been prepared.'*

The NIS for the Onshore Site concluded:

*'This NIS (Volumes 1 and 2) has assessed the impacts of the construction, operations and maintenance and decommissioning of the Project on European Sites and their relevant QI to determine whether the Project will have an adverse effect on the integrity of European Sites, either alone or in combination with other plans or projects and in light of the conservation objectives of the sites. The assessment concluded that there will be no adverse effect on the integrity of the*

- *Inishmore Island SAC,*
- *Kilkieran Bay and Islands SAC,*
- *Lower River Shannon SAC,*
- *Slyne Head Peninsula SAC,*
- *Slyne Head Islands SAC,*
- *West Connacht Coast SAC,*

- *Galway Bay Complex SAC,*
- *Blasket Islands SAC,*
- *Duvillaun Islands SAC,*
- *Connemara Bog Complex SAC,*
- *Twelve Bens/Garraun Complex SAC,*
- *Maumturk Mountains SAC,*
- *Lough Corrib SAC,*
- *Mweelrea/Sheeffry/Erriff Complex SAC,*
- *Inishmaan Island SAC,*
- *Carrowmore Point to Spanish Point and Islands SAC,*
- *Carrowmore Dunes SAC,*
- *Kilkee Reefs SAC,*
- *Kenmare River SAC,*
- *Hook Head SAC,*
- *Belgica Mound Province SAC,*
- *Roaringwater Bay and Islands SAC,*
- *Gweedore Bay and Islands SAC,*
- *Bunduff Lough and Machair/Trawalua/Mullaghmore SAC,*
- *St John's Point SAC,*
- *Carnsore Point SAC,*
- *Blackwater Bank SAC,*
- *Lough Swilly SAC,*
- *Codling Fault Zone SAC,*
- *Rockabill to Dalkey SAC,*
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- *Mers Celtiques - Talus du golfe de Gascogne SCI,*
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- *Lambay Island SAC,*
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- *Ouessant-Molène SAC,*
- *Abers -Côte des legends SAC,*
- *Chaussée de Sein SAC,*
- *Côte de Granit rose-Sept-Iles SAC,*
- *Baie de Morlaix SAC,*
- *Côtes de Crozon SAC,*
- *Récifs et landes de la Hague SAC,*
- *Anse de Vauville SAC,*
- *Banc et récifs de Surtainville SAC,*
- *Baie du Mont Saint-Michel SAC,*
- *Estuaire de la Rance SAC,*
- *Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC,*
- *Cap d'Erquy-Cap Fréhel SAC,*
- *Baie de Saint-Brieuc SAC,*
- *Tregor Goëlo Es SAC,*
- *Mid-Clare Coast SPA*
- *Slyne Head to Ardmore Point Islands SPA*
- *Inishmore SPA*
- *Cruagh Island SPA*
- *River Shannon and River Fergus Estuaries SPA*
- *Cliffs of Moher SPA*
- *Illaunonearaun SPA*
- *High Island, Inishark and Duvillaun SPA*
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- *Illaunnanoon SPA*

- *Magharee Islands SPA*
- *Clare Island SPA*
- *Loop Head SPA*
- *Bills Rock SPA*
- *Dingle Peninsula SPA*
- *Duvillaun Islands SPA*
- *Inishglora and InisKeeragh SPA*
- *Blasket Islands SPA*
- *Puffin Islands SPA*
- *Iveragh Peninsula SPA*
- *Skelligs SPA*
- *Stages of Broadhaven SPA*
- *Eirk SPA*
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- *Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA*
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- *Copeland Islands SPA*
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- *Ouessant-Molène SPA (France)*
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- *Cape Wrath SPA*
- *Cote de Granit Rose-Sept Iles SPA*
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- *North Rona and Sula Sgeir SPA*
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- *Cap d'Erquy-Cap Fréhel SPA (France)*
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- *West Westray SPA*
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- *Iles Houat-Hoedic SPA (France)*
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- *Seas off Foula SPA*
- *Fair Isle SPA*
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- *Troup, Pennan and Lion's Heads SPA*
- *Foula SPA*

- *Sumburgh Head SPA*
- *Buchan Ness to Collieston Coast SPA*
- *Noss SPA*
- *Hermaness, Saxa Vord and Valla Field SPA*
- *Fetlar SPA*
- *Tullaher Lough and Bog SAC*

*either as a result of the Project alone or in combination with other plans or projects, provided that the mitigation listed is adhered to.*

*Therefore, it can be objectively concluded, following an examination, analysis and evaluation of the relevant information, including in particular the nature of predicted impacts from the Project, that the Project, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site in light of its conservation objectives and best scientific information, and there is no reasonable scientific doubt in relation to this conclusion.'*

As such, it can be concluded that the Onshore Site will not have an adverse impact on any European Sites designated for birds, either alone or in combination with other plans or projects.

No proposed National Heritage Area or National Heritage Area within the CSA were considered as ornithological ecological receptors in their own right due to the separation distance from the Onshore Site and the absence of connectivity.

## 21.6 Mitigation and Best Practice Measures

This section describes the measures that are in place to mitigate negative effects associated with the Onshore Site on avian receptors. Effects on avian receptors have been addressed in two ways:

- Design and siting of the infrastructural elements of the Onshore Site.
- Management of the development phases.

### 21.6.1 Design of the Onshore Site

The Project design has followed the basic principles outlined below to avoid the potential for significant effects on avian receptors:

- Selection of the OLL
- The route of the OGC has been selected to utilise built infrastructure for the majority of its length (i.e. cables to be laid within public roads). Cables will be laid underground to avoid effects on roadside hedgerows and disturbance to nesting birds. There is no potential for the installed underground infrastructure to result in operation and maintenance phase impacts.
- Land that is excavated to accommodate the OGC and exporter cables will be reinstated to its previous condition thus limiting lasting impacts. The only minor exception to this is the retention of some access tracks on private land (please see Chapter 5, Figure 5-18).
- The infrastructure involved in transporting the generated electricity does not include overhead powerlines. Collision risk can be thus ruled out as the OGC cable will run entirely underground (where no collisions could occur).

## 21.6.2 Management of the Onshore Site Phases

The following section describes the mitigation and best practice measures to be implemented during each phase of the Onshore Site.

### 21.6.2.1 Construction Phase

- An Onshore CEMP has been prepared and will be in place prior to the start of the construction phase. Full details of the Onshore CEMP are available Appendix 5-16, while details pertinent to birds are summarised below. Work will not commence within the bird nesting season (1st of March to 31st of August inclusive) aside from works in the road network. Any requirement for construction works to run into the subsequent breeding season following commencement will be informed by pre-construction bird surveys.
- The removal of woody vegetation will be undertaken in full compliance with Section 40 of the Wildlife Act 1976 – 2022. Where sections of woody vegetation are removed for the purposes of the junction and road upgrades, these will be replaced with suitable hedge/tree species which are common in the local context.
- During the construction phase, noise limits, noise control measures, hours of operation (i.e. dusk and dawn is high faunal activity time) and selection of plant items will be considered in relation to disturbance of birds. All plant and equipment for use will comply with the European Communities (Noise Emission By Equipment For Use Outdoors) Regulations, 2001, as amended (SI 632/2001). Plant machinery will also be turned off when not in use.
- Silt fences will be installed as an additional water protection measure around existing watercourses. It is noted that watercourses will be protected from sedimentation and pollution in line with measures set out in Chapter 5.
- If winter roosting or breeding activity of birds of high conservation concern is identified, the roost or nest site will be located and no works shall be undertaken within a species-specific disturbance buffer in line with industry best practice (e.g. Goodship and Furness, 2022). No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied.
- An Environmental Clerk of Works and Project Ecologist will be appointed. Duties will include:
    - Organise the undertaking of a pre-construction walkover bird survey to ensure that significant effects on birds will be avoided.
    - Inform and educate on-site personnel of the ornithological and ecological sensitivities within the Onshore Site.
    - Oversee management of ornithological issues during the construction period and advise on ornithological issues as they arise.
    - Provide guidance to contractors to ensure legal compliance with respect to protected species onsite.
    - Liaise with officers of consenting authorities and other relevant bodies with regular updates in relation to construction progress as necessary.

A short section of the cable route, approximately c. 400m, borders the River Shannon and River Fergus Estuaries SPA between the OCC and the Moneypoint Power Station. There is the potential for disturbance impacts associated with construction works within the adjacent estuarine habitat. In particular, this impact is likely for wintering waterbirds, including SCI's from the SPA. Temporal restrictions on construction activity will be employed to avoid impacts. Between October and March, no construction works will be undertaken within 500m of the River Shannon and River Fergus Estuaries SPA adjacent to the Moneypoint Power Station.

### 21.6.2.2 Operational and Maintenance Phase

No significant operation and maintenance phase effects requiring mitigation were identified.

### 21.6.2.3 Decommissioning Phase

The OGC is split into two underground sections: the first runs from the TJB to the OCC, and the second from the OCC to the Moneypoint 220kV Substation. The joint bays will be opened up and the cables will be cut. Once cut, the cables are pulled through the ducting and removed. The joint bays are then backfilled and reinstated to the relevant road standards, or to original condition for those located on private lands. Onshore access tracks within private lands will remain insitu and can be provided for alternative future use by the landowners. The above ground components of the OCC building and compound will be removed fully from the Onshore Site. For the underground components, such as the foundations and non-electrical infrastructure, the Best Environmentally Practicable Option (BEPO) is for these to remain in situ. During the decommissioning phase, disturbance limitation measures will be as per the construction phase described in Section 21.6.2.1.

## 21.7 Residual Effects

The following species were identified as KORs and were subject to detailed impact assessment:

- Chough (All seasons)
- Dunlin (All seasons)
- Hen Harrier (Winter)
- Little Egret (All seasons)
- Peregrine (Wintering)
- Sandwich Tern (Breeding)
- Cormorant (All seasons)
- Curlew (All seasons)
- Ringed Plover (All seasons)
- Turnstone (All seasons)
- Common Snipe (Wintering)
- Kestrel (All seasons)
- Oystercatcher (All seasons)
- Kittiwake (All seasons)
- Sparrowhawk (Breeding)

Following the proposed best practice and mitigation measures as described in Section 21.6, no effect greater than **Slight,** as per the EPA Guidelines, was identified for any KOR. And in particular, the temporal restrictions on construction activity that will be employed ensures there will be no significant effects on the SCI species of the River Shannon and River Fergus Estuaries SPA. In summary, no significant effects are predicted.

## 21.8 Cumulative Effects

The EPA Guidelines notes concerning cumulative effects, “the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects”. A further consideration was the NatureScot guidance “Assessing the Cumulative Impacts of onshore Wind Energy Developments” (SNH, 2012), cumulative effects arising from two or more developments may be:

- **Additive** (a multiple independent additive model)
- **Antagonistic** (the sum of impacts are less that in a multiple independent additive model)

- **Synergistic** (the cumulative impact is greater than the sum of the multiple individual effects)

This guidance document was consulted as this proposal concerns the onshore element of a wind farm application.

This section first identifies other plans and projects in the vicinity of the Onshore Site and then assesses the potential for additive, antagonistic or synergistic impacts to occur.

## 21.8.1 Other Plans and Projects

Assessment material was compiled for relevant developments within the vicinity of the Onshore Site. The material was gathered through a search of relevant online Planning Registers, reviews of relevant EIA documents, planning application details and planning drawings. It served to identify past and future plans and projects, their activities and their environmental impacts. These are then considered for in-combination or cumulative effects with the Onshore Site. All plans and projects reviewed are outlined below.

The following resources were also consulted in the cumulative impact assessment:

- Maritime Area Regulatory Authority (MARA)
- Arterial Drainage Scheme Channels, Arterial Drainage Acts 1945 & 1995, OPW

### 21.8.1.1 Department of Agriculture, Food and the Marine Plans Considered in the Cumulative Impact Assessment

The following plans were considered in the cumulative impact assessment:

- Clare County Development Plan 2023-2029.
- National Biodiversity Action Plan 2017-2021
- Department of Agriculture, Food and the Marine; Forestry Licence Viewer[2]

### 21.8.1.2 Projects Considered in the Cumulative Impact Assessment

The following projects were considered in the cumulative impact assessment.

#### 21.8.1.2.1 *Developments/Land uses*

The review of the County Council planning register identified relevant general development planning applications in the vicinity of the Onshore Site. Most of these relate to the provision and/or alteration of one-off rural housing and agriculture-related structures, as described in Chapter 2 of the EIAR. Owing to the scale and nature of these developments, significant cumulative impacts are not anticipated.

The usage of surrounding land at the Onshore Site is predominantly agricultural in the form of livestock grazing and small-scale domestic turf cutting. These applications and land uses have also been taken into account in this cumulative assessment. Owing to the scale and nature of these activities, significant cumulative impacts are not anticipated.

[2] https://flv.apps.services.agriculture.gov.ie/

## 21.8.2 Assessment of Cumulative Effects

As outlined in Section 21.2.5.1, activities associated with the construction phase have the greater potential to give rise to potentially significant effects. However, construction activities are not predicted to contribute to significant cumulative impacts based on the following rationale.

- The vast majority of the development footprint is located within the existing road carriageway, a habitat of no ecological value.
- The short-term nature of construction works limits the potential for these activities to occur at the same time as other activities that could result in significant cumulative impacts. The duration of onshore construction activities is 3-4 years, as per the Onshore CEMP included in Appendix 5-16. However, the length of time each section is exposed to construction activities will be considerably shorter as it is anticipated that construction activity along the vast majority of the Onshore Site (OGC to the Moneypoint 220kV Substation) will take place sequentially. In total c. 240m of trenching will be undertaken per day. Furthermore, where short-term impacts are anticipated they are predicted to be no greater than Slight as per the EPA Guidelines criteria.

The maintenance works associated with the OCC is the only location where ongoing activities will occur with the potential to cause impacts. Where the route crosses agricultural/amenity grassland, an access track will be constructed over or adjacent to the cable route to facilitate potential future maintenance and repairs. However, maintenance or repair works on underground cable sections are unlikely to occur with any regularity. Notwithstanding this and as outlined in Section 21.2.5.1, there is minimal potential for significant operation and maintenance phase impacts. Following construction works, the excavated land will be reinstated with no plans for further works, e.g. excavation etc. Operation and maintenance phase disturbance and/or displacement are likely to be largely restricted to the OCC and involve an increase in human activity during general maintenance works and associated lighting during periods of low light. However, these activities are predicted to only result in a negligible increase in the typical background activities that occur in an agricultural landscape, e.g. lighting of nearby dwellings and routine farming activities on adjacent agricultural land. No significant cumulative effects are predicted.

In summary no significant cumulative effects are predicted for the 14 KORs identified at the Onshore Site: chough, dunlin, hen harrier, little egret, peregrine, sandwich tern, cormorant, curlew, ringed plover, turnstone, common snipe, kestrel, kittiwake, oystercatcher, sparrowhawk.

# 21.9 Conclusion

Following consideration of the residual effects (post-mitigation), it is concluded that the Onshore Site will not result in any significant effects on any of the identified KORs. No significant effects on receptors of International, National or County Importance were identified. Provided that the Onshore Site is constructed, operated and decommissioned in accordance with the design, best practice mitigation that are described within this application, significant individual or cumulative effects on the identified KORs are not anticipated.