

Appendix 9E
Wintering Birds Report

[THIS PAGE INTENTIONALLY LEFT BLANK]

Wintering Bird Report

Appendix 9E
Tynagh Power Station - Tynagh North OCGT Proposed
Development

EP Energy Developments Ltd

August 2023

Quality information

Prepared by	Checked by	Verified by	Approved by
Paul Donaghey Consultant Ecologist	Erfan Fadaei Senior Ecologist	Paul Lynas Associate Director (Ecology)	Peter O'Connor Associate Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	August 2023	Final	PL	Paul Lynas	AD

Distribution List

# Hard Copies	PDF Required	Association / Company Name
No	Yes	EPUKI

Prepared for:

EP Energy Developments Limited

Prepared by:

AECOM Limited
9th Floor, The Clarence West Building
2 Clarence Street West
Belfast BT2 7GP
United Kingdom

T: +44 28 9060 7200
aecom.com

© 2023 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1.	Introduction.....	1
1.1	Background.....	1
1.2	Survey Aims.....	1
1.3	Quality Assurance	1
2.	Legislation	2
3.	Methods	2
3.1	Field Survey.....	2
3.2	Survey Personnel.....	3
3.3	Limitations.....	3
4.	Results	3
4.1	Survey Conditions	3
4.2	Wintering Bird Survey.....	4
4.3	Summary of Birds Surveys	7
4.3.1	Bird Numbers and Species	7
4.4	Roosts	7
4.5	Other Bird Activity.....	7
5.	Discussion of Potential Impacts	8
5.1	Species Occurring	8
5.2	Construction Phase Impacts	8
5.3	Operation Phase Impacts	8
5.4	Conclusion.....	9
6.	Summary.....	10
7.	References	10

Tables

Table 4.1: Field Survey Details.	3
Table 4.2: Species Recorded during Survey.	5

1. Introduction

1.1 Background

AECOM was instructed by EP Energy Developments Ltd to carry out an assessment of wintering birds within and adjoining lands associated with the Proposed Development. The Proposed Development consists of a new open cycle gas turbine (OCGT) plant and ancillary connection infrastructure and all associated ancillary development, site works and services ('the Proposed Development' 'Tynagh North') on land to the north of Tynagh Power Station in Derryfrench, Loughrea, Co. Galway. Full details of the Proposed Development are presented in the planning application and EIAR.

The Site is bordered to east by the former Tynagh Mine complex and to the south by the Tynagh combined cycle gas turbine (CCGT) Power Station. Sperrin Galvanisers Ltd., an Integrated Pollution Prevention and Control (IPPC) licensed facility, is located adjacent to the south-west of the Site (for details of the existing Site and Existing Conditions please refer to Chapter 4, EIAR Volume I).

In addition to the existing Tynagh Power Station, a planning application Ref. 21/2192 (submitted as an application to Galway County Council in November 2021, subsequently appealed and approved by ABP under Ref. PL07.313538, and referred to in the EIAR as 'Approved Development Ref: 21/2192') is a separate 299MW OCGT development and project to that of the Proposed Development which is for a 350MW facility. Approved Development Ref: 21/2192 is to be located to the south of the Proposed Development, primarily to the west of the existing Tynagh Power Station.

The study area consists of the Site and all the lands immediately adjacent to them that could be observed from the lands owned by and under the control of EP Energy Developments. All of the study area was not, nor did it have to be accessed by foot, but was observed at distance. The study area included the majority of all the visible wetland habitats to the east, and south-east such as the former mine lagoon and former mine tailings ponds.

This report should be read in conjunction with the Biodiversity Chapter (Chapter 9, EIAR Volume I).

1.2 Survey Aims

The aims of the surveys were to:

- Record birds within the study area, and detail their number and species present;
- Note individual species activity and record notes on their habitat use within the study area;
- Identify any constraints relating to bird activity relevant to the Proposed Development; and,
- Identify appropriate mitigation measures, if relevant, should potential impacts be detected.

1.3 Quality Assurance

This project has been completed in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, its quality as well as covering all aspects of environmental and Health and Safety management. All staff members are committed to establishing and maintaining our accreditation to the relevant international standards namely BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

2. Legislation

The following international legislation has regard to protecting wildlife and habitat, specifically bird communities and their habitats in an Irish context:

- Directive 2009/147/EC, 92/43/EC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive);
- 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the Conservation of Wild Birds (the Birds Directive);
- The International Convention on Wetlands of International Importance 1971 (Ramsar Convention); and
- Wildlife Act 1976 to 2018, as amended by the Wildlife (Amendment) Act 2000 (hereafter referred to as the 'Wildlife Acts').

All bird species are protected under the Wildlife Acts from offences including intentional killing or injury, and disturbance during the breeding season (to include eggs, young, and nests, which are also protected).

Articles 3 – 9 of the Habitats Directive (92/43/EEC) provide the EU legislative framework of protecting rare and endangered species of flora and fauna, and habitats. Annex I of the Directive lists habitat types whose conservation requires the designation of Special Areas of Conservation (SAC). Priority habitats, such as active raised bogs, which are in danger of disappearing within the EU territory are also listed in Annex I. Annex II of the Directive lists animal and plant species (e.g. Marsh Fritillary, Atlantic Salmon) whose conservation also requires the designation of SAC. Annex IV lists animal and plant species in need of strict protection (e.g. lesser horseshoe bat and otter) and Annex V lists animal and plant species whose taking in the wild and exploitation may be subject to management measures.

Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Birds Directive) has been substantially amended several times. In the interests of clarity and rationality the said Directive was codified in 2009 and is now cited as Directive 2009/147/EC. The Directive instructs Member States to take measures to maintain populations of all bird species naturally occurring in the wild state in the EU (Article 2). Such measures may include the maintenance and/or re-establishment of habitats in order to sustain these bird populations (Article 3). A subset of bird species has been identified in the Directive and are listed in Annex I as requiring special conservation measures in relation to their habitats. These species have been listed on account of inter alia: their risk of extinction; vulnerability to specific changes in their habitat; and/or due to their relatively small population size or restricted distribution. Special Protection Areas (SPA) are identified and classified for these Annex I listed species and for regularly occurring migratory species, paying particular attention to the protection of wetlands (Article 4).

3. Methods

3.1 Field Survey

The survey method followed was derived from that of the Wetland Bird Survey (WeBS) as outlined by the British Trust for Ornithology (BTO) on its website. The method employed, based on look-see methods described by Bibby *et al.* (2000), has been adapted for use at waterbodies and coastlines across the UK as part of the national waterbird monitoring scheme.

The surveyor stood at two vantage points, one overlooking the former mine tailings pond and one overlooking the former mine lagoon (the larger, deeper southern-most lagoon), and slowly scanned the survey area, comprising the water bodies themselves and associated vegetation, within and surrounding them. Opticron (ES 80 GA ED v3) telescope and Opticron MG 10x42 or Leica Ultravid BR 10x42 binoculars were used to identify species. The bird species present, their abundance, and activity were recorded during each survey visit.

3.2 Survey Personnel

The surveys were planned by Dr Paul Lynas and conducted by Paul Lynas, Alison Donnelly and Laura Cappelli. Peadar Charles accompanied the surveyor on 02 November 2022 as an assistant. Surveyor experience is provided in EIAR Appendix 9B (refer to EIAR Volume II).

3.3 Limitations

Wintering bird surveys are carried out during months where days are short and light levels are generally low, potentially limiting the survey window. No other constraints that would limit the findings of this report were identified.

4. Results

4.1 Survey Conditions

Twelve survey visits were carried out in total over two winter periods, 2021/22 and 2022/23. All visits were carried out during suitable light levels and weather conditions for bird survey. Further details of these visits, including dates, weather and survey personnel are presented in

Table 4.1.

Table 4.1: Field Survey Details.

Date	Survey start and end times		Start and end temperature (°C)		Start and end wind and direction		Cloud cover start and end		Precipitation	Visibility	Personnel
28/10/2021	11:00	14:00	11	11	Light air, East	Light air, East	Overcast	Overcast	Rain	Good	Alison Donnelly (AD), Laura Cappelli (LC)
30/11/2021	12:00	14:00	11	11	Gentle breeze, West	Gentle breeze, South west	Overcast	Overcast	Dry	Good	AD, LC
21/12/2021	12:30	14:30	7	7	Light breeze, South	Light breeze, South	Overcast	Overcast	Dry	Good	AD, LC
21/01/2022	12:30	14:30	8	8	Light breeze, North west	Light breeze, North west	Overcast	Overcast	Dry	Good	AD, LC
11/02/2022	11:45	13:05	6	6	Gentle breeze, North west	Gentle breeze, North west	Cloudy	Cloudy	Dry	Excellent	AD, LC
21/03/2022	14:25	14:00	11	11	Gentle breeze, West	Gentle breeze, North west	Partly cloudy	Partly cloudy	Dry	Good	AD, LC
14/10/2022	11:20	14:20	12	12	Light breeze, South west	Light breeze, South	Partly cloudy	Partly cloudy	Dry	Excellent	AD, LC
02/11/2022	13:50	15:15	8	9	Gentle breeze, North west	Gentle breeze, North west	Overcast	Overcast	Drizzle	Good	AD, Peadar Charles
08/12/2022	11:00	13:45	3	3	Light breeze,	Light breeze,	Partly cloudy	Partly cloudy	Dry	Good	AD

					South west	South west						
31/01/2023	13.00	15.00	9	9	Light breeze, East	Light breeze, East	Bright and clear	Bright and clear	Dry	Excellent	Paul Lynas (PL), LC	
16/02/2023	11.20	13.20	9	9	Light air	Light air	Overcast	Overcast	Dry	Excellent	PL, LC	
10/03/2023	13.25	15.20	5	5	Light air, North	Light air, North	Bright and clear	Bright and clear	Dry	Good	AD, LC	

4.2 Wintering Bird Survey

Across all surveys, a total of 14 species of birds were recorded within the study area and are listed in Table 4.2. The number of each species on each survey is listed with their BTO code and their conservation status in Ireland (Gilbert *et al.*, 2021). Additional details such as whether the species is a selection feature of the closest European protected sites, Slieve Aughty Mountains SPA, Lough Rea SPA or Middle Shannon Callows SPA or appears on the IUCN Red list with Near Threatened Status (NT) (IUCN, 2019) and Annex I of the Birds Directive (Ann I) are also included.

Table 4.2: Species Recorded during Survey.

Species			Count by Month (Presence / Absence)												Relevant Notes		
BTO code	Common Name	Scientific Name	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	QI SPA	Other Designations	Irish Red List Status
BH	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0	0	0	0	0	10	0	1	0	1	0	0	Middle Shannon Callows SPA		Amber
CA	Cormorant	<i>Phalacrocorax carbo</i>	0	0	0	0	0	0	0	0	1	0	0	0	Lough Derg (Shannon) SPA		Amber
CM	Common Gull	<i>Larus canus</i>	1	0	0	0	0	2	0	0	0	0	0	0			Amber
GP	Golden Plover	<i>Pluvialis apricaria</i>	47	0	0	0	0	0	0	0	0	0	0	0	Middle Shannon Callows SPA	Ann I	Red
GB	Great Black-backed gull	<i>Larus marinus</i>	0	0	0	0	0	0	0	0	0	2	2	0			Green
K.	Kestrel	<i>Falco tinnunculus</i>	1	0	0	0	0	1	0	0	0	0	0	0			Red
L.	Lapwing	<i>Vanellus vanellus</i>	85	0	0	0	0	0	0	0	0	0	2	0	Middle Shannon Callows SPA	NT	Red
LB	Lesser Black-backed Gull	<i>Larus fuscus</i>	0	0	0	0	0	7	55	6	0	0	0	0			Amber

Species			Count by Month (Presence / Absence)												Relevant Notes		
BTO code	Common Name	Scientific Name	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	QI SPA	Other Designations	Irish Red List Status
MA	Mallard	<i>Anas platyrhynchos</i>	0	0	0	0	0	2	0	0	0	0	0	0			Amber
PE	Peregrine	<i>Falco peregrinus</i>	0	0	1	0	2	0	1	0	1	2	1	0		Ann I	Green
RP	Ringed plover	<i>Charadrius hiaticula</i>	0	0	0	0	0	0	0	2	0	0	2	0			Amber
SN	Snipe	<i>Gallinago gallinago</i>	21	0	0	0	0	0	0	0	0	0	0	0			Red
T.	Teal	<i>Anas crecca</i>	4	0	0	0	0	0	0	0	0	0	0	0			Amber
WN	Wigeon	<i>Mareca penelope</i>	0	0	5	0	13	0	0	0	0	0	0	0	Middle Shannon Callows SPA		Amber
Total count:			159	0	6	0	15	22	56	7	2	5	7	0			
Total species present per survey:			6	0	2	0	2	5	2	2	1	3	4	0			

4.3 Summary of Birds Surveys

4.3.1 Bird Numbers and Species

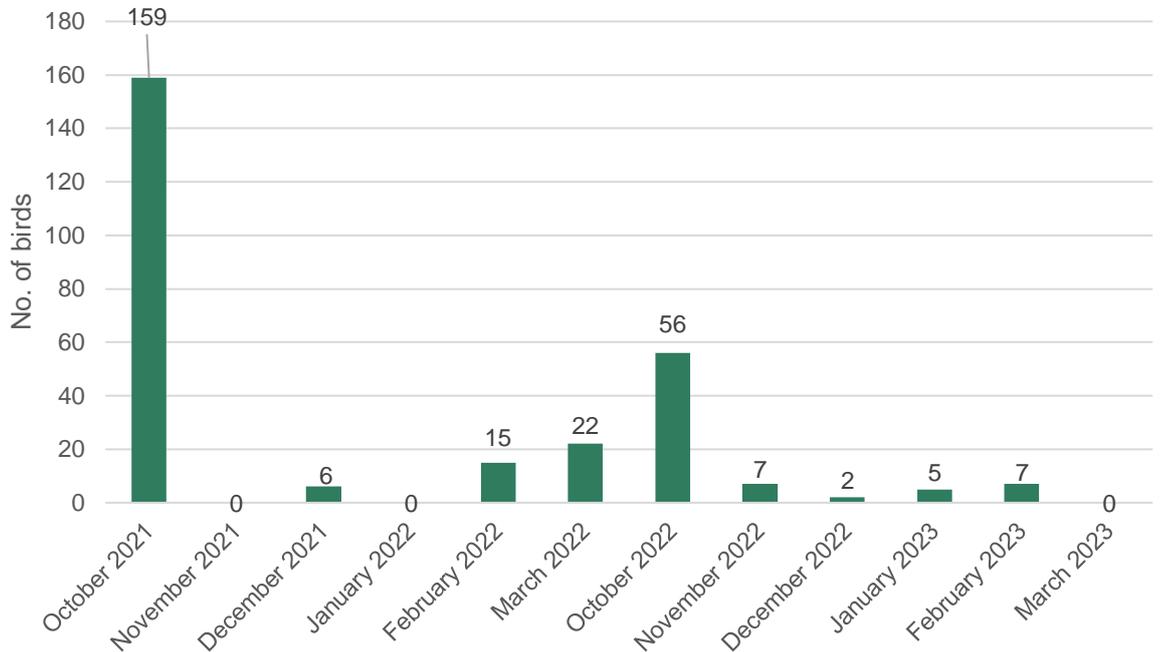


Chart 4.1 shows the total number of birds recorded on each survey. The October 2021 surveys recorded the largest number of individuals with 159 records, primarily due to large flocks of lapwing and golden plover being recorded on that occasion. Following the October 2021 survey, bird numbers recorded on site decreased dramatically with both November 2021, January 2022 and March 2023 survey visits recording no birds within the study area. Bird numbers in October 2022 were slightly higher due to the presence of a flock of 55 lesser black-backed gull loafing at the edge of the tailings pond. Only 21 birds were recorded in total in November and March 2023.

Over all surveys, birds were mainly noted within the former mine tailings pond, feeding, roosting, bathing and loafing, however small flocks of wigeon were recorded in the larger former mine lagoon to the south, and small numbers of birds were recorded flying over the site.

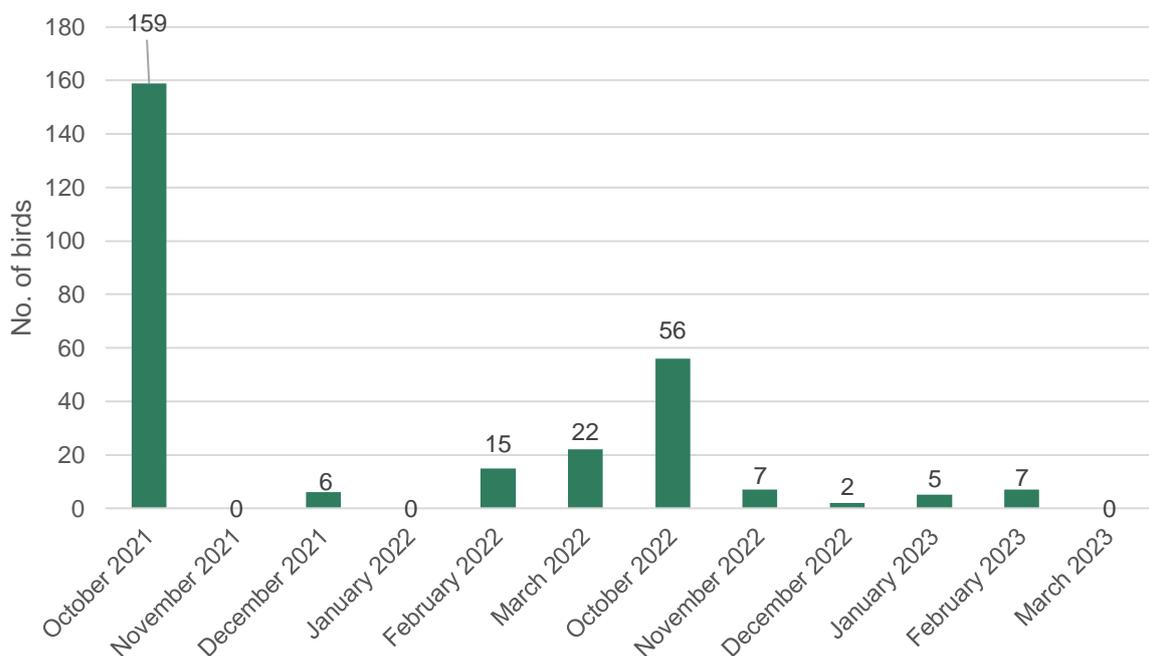


Chart 4.1: Monthly Counts.

4.4 Roosts

During the October 2021 survey, roosting lapwing, teal and snipe were noted at the edge of the northern tailings pond amongst reeds. 85 lapwing, 4 teal and 1 snipe were noted roosting. It should be noted that these individuals were only noted roosting during the October 2021 survey and did not display this behaviour in subsequent surveys.

No other significant roosts were noted within the Zone of Influence (Zoi).

4.5 Other Bird Activity

During the February 2022 survey, evidence of a feeding peregrine was noted near the northern tailings pond vantage point. This evidence consisted of fresh bird carcasses.

5. Discussion of Potential Impacts

5.1 Species Occurring

A number of species recorded in the survey are of conservation concern in Ireland. These include the red-listed golden plover, kestrel, lapwing and snipe (Gilbert *et al.*, 2021). Eight more species recorded are classed as amber-listed (Black-headed gull, common gull, lesser black-backed gull, mallard, ringed plover, teal, wigeon and cormorant) (Gilbert *et al.*, 2021).

Whilst peregrine is green-listed in Ireland, it does appear on Annex I of the Birds Directive meaning its population is considered as being under threat or vulnerable.

Overall, low numbers of birds were recorded on site, totalling 279 individuals across all surveys. The overwhelming majority of those birds were recorded on the single occasion in October 2021 whilst subsequent surveys recorded much fewer bird numbers, if any.

With the exception of the two falcon species, all birds were associated with the wetland habitats. Habitats within the study area comprise two lagoons, areas of reed, and mudflats. These areas provide some foraging habitat as well as shelter and cover for wintering birds. Wader flocks of golden plover, snipe and lapwing were seen to take advantage of this, mainly noted roosting and loafing in the fringe habitats and margins associated with the lagoons, particularly the northern tailings pond where the fringe habitats were more prominent. Ring plover were noted loafing in the open bare ground area, this would be optimal habitat for them where they would spend foraging in the winter and in the breeding season where they nest on the open ground.

The low irregular number of birds recorded suggest that the study area provides only sub-optimal habitats, not those on which wintering bird populations are dependent. This may be due to the likely poor quality of habitats available, as a result of the high level of contaminants likely to be in the lagoon and its surroundings from historical mining. This would reduce both the amount of food source available and the attractiveness / suitability of the survey area for wintering bird species. This was evident in the results, with low levels of likely opportunistic usage by gulls and ducks on the lagoons and the use of the surrounding fringe habitats by the typically mobile wader populations. Birds are likely to depend on the surrounding environs further afield instead, such as the Middle Shannon Callows in preference.

Black-headed gull, golden plover, lapwing and wigeon are all qualifying interests of Middle Shannon Callows SPA, where “wetland and waterbirds” are listed as qualifying interests for this SPA. Cormorant is a qualifying interest of Lough Derg (Shannon) SPA. All qualifying interests of these SPA's recorded on site were present in numbers below the 1% international and national thresholds for these species (Burke *et al.* 2018).

5.2 Construction Phase Impacts

The construction phase of the Proposed Development may disturb wintering birds adjacent to the site. Although the wintering birds comprise of a number of Red-listed and Amber-listed species, they are only present irregularly and in low numbers. If birds were to be displaced during the construction phase

of the Proposed Development, only small numbers of individuals and not large concentrations of wintering birds, inconsequential at the population level, would be impacted. Furthermore, birds would only be disturbed during periods of construction activities, i.e. daylight hours. Even if birds are displaced, alternative habitat is present in the wider landscape, including the former Tynagh Mine lagoon to the south of the Site, and Lough Rea and Lough Derg further afield.

The wetland areas currently being used within the former mine are already highly contaminated and further contamination from the site arising through runoff will be minor and will not impact wintering birds. Therefore, impacts are not expected to be significant and mitigation is not required.

5.3 Operation Phase Impacts

There are no potential impacts from the operational phase of the Proposed Development that are predicted to impact wintering birds. Birds within the survey area are already acclimatised to noise and disturbance from the adjoining power station and the industrial Sperrin Galvansing works and as such the addition of an OGCT would have no discernible or predicted effect on the low number of birds currently using those areas.

5.4 Conclusion

Due to the nature and likely impacts from the Proposed Development and based on the low numbers of birds that use the study area, no significant impacts to wintering birds are predicted. There are no likely significant effects anticipated and therefore no mitigation is proposed.

6. Summary

Surveys identified 14 species of bird within the study area. The October 2021 survey recorded the largest number of individuals with 159 records. November 2021, January 2022 and March 2023 surveys recorded no birds, whilst other surveys recorded low numbers of birds, except for October 2022 when a flock of 55 lesser black-backed gulls were recorded.

Birds were mainly recorded within the northern tailings pond where during the October 2021 survey teal, snipe and a large flock of lapwing were recorded roosting. Overall low numbers of birds were recorded within the survey area and bird species were recorded irregularly both in terms of numbers and types of species using the site.

Potential impacts to wintering birds will be from disturbance but will be negligible and only affect small numbers of transient birds. Due to the nature and likely impacts from the Proposed Development and based on the low numbers of birds that use the study area, no significant impacts to wintering birds are predicted. No mitigation is proposed for wintering birds.

7. References

Bibby C., Burgess, N., Hill, D., and Mustoe, S. (2000). *Bird Census Techniques*. 2nd edition. Academic Press.

Burke, B., Lewis, L.J., Fitzgerald, N., Frost, T., Austin, G., & Tierney, D. (2018) Estimates of waterbird numbers wintering in Ireland, 2011/12 – 2015/16. *Irish Birds* 11: 1-12.

CIEEM (2019). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*, version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Cutts, N., A. Phelps, and D. Burdon. (2009). "Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance, Report to Humber INCA." ZBB710-F-2009. Institute of Estuarine and Coastal Studies University of Hull.

EC Directive 2009/147/EC on the Conservation of Wild Birds (The Birds Directive).

Gilbert, G., Stanbury, A. & Lewis, L. (2021) Birds of Conservation Concern in Ireland 2020–2026. *Irish Birds*, 43: 1-122.

IUCN (2019). The IUCN Red List of Threatened Species. Version 2019-1. <http://www.iucnredlist.org>. Downloaded on 21 March 2019.

