

7. ORNITHOLOGY

7.1 Introduction

This chapter of the rEIAR assesses the likely significant impacts of the Existing Development on ornithological receptors. It assesses the effects of all works completed to date at the Meenbog Wind Farm. Particular attention has been paid to bird species with national and international protection under the Irish Wildlife Acts (as amended) and the European Union (EU) Birds Directive (2009/147/EC).

As detailed in Section 1.1.1 in Chapter 1 of this rEIAR, the various development components are described and assessed using the following references: 'Subject Development', 'Existing Development', 'Prospective Development', 'Permitted Development', 'Site', 'Wind Farm Site', 'Grid Connection Site', 'BMEP Site', 'Grid Connection', 'November 2020 Peat Slide', '2017 EIAR' and 'proposed turbines' or 'proposed turbine locations'.

This chapter is structured as follows:

- › The **Introduction** provides a description of the Existing Development, the relevant legislation, guidance and policy context, and a statement of authority.
- › The **Methodology** section provides information on the ornithological surveys and impact assessment methodology used to inform a robust assessment of the impacts of the Existing Development on birds.
- › The **Baseline Ornithological Conditions** section provides information about the existing bird population at the Wind Farm Site and hinterland.
- › The **Receptor Evaluation** section identifies key ornithological receptors (KORs) and determines their sensitivity.
- › The **Impact Assessment** section assesses the impact of the Existing Development on birds, encompassing all works carried out at the Wind Farm Site and Grid Connection Site since November 2019 to date, including direct habitat loss and disturbance/displacement.
- › The **Mitigation and Best Practice Measures** section describes mitigation and proposed habitat enhancement measures to ameliorate the identified impacts and considers the residual effects.
- › The **Cumulative Effects** section fully assesses potential cumulative effects of the Existing Development with other projects, including in-cumulation effects with the Prospective Development and transboundary effects.
- › The **Conclusion** provides a summary statement on the overall significance of predicted effects on birds.

7.1.1 Description of the Existing Development

The Existing Development refers to all works carried out to date for the Meenbog Wind Farm. A full description of the Existing Development is provided in Chapter 4 of this rEIAR.

The Site refers to the planning application site boundary for the Subject Development as illustrated in red on Figure 1-1 of this rEIAR. It comprises the Wind Farm Site, Grid Connection Site, and BMEP Site combined and measures approximately 1,018 hectares (ha). Please note that no activities associated with the Existing Development occurred within the BMEP Site and therefore this site is not discussed further in this rEIAR. All works associated with the Existing Development occurred within the Wind Farm Site and the Grid Connection Site which are briefly described below. The Wind Farm Site and the Grid Connection Site have a combined area of 901 ha.

The Wind Farm Site is approximately 892 ha in extent and refers to the area of the Site surrounding the wind turbines and associated infrastructure (including the onsite 110kV substation) from the wind farm site entrance off the N15 National Road. The Wind Farm Site is located within a rural, agricultural setting in County Donegal approximately 8 km southwest of the twin towns of Ballybofey and Stranorlar and approximately 12 km northeast of Donegal Town at its nearest point. The Grid Connection Site has an area of 9 ha and extends southwest from the Wind Farm Site for approximately 6 km along the N15 National Road towards Donegal Town before exiting the N15 National Road to the southeast and following Local Roads, adjacent agricultural land and private access track to the Clogher 110kV substation.

Construction work on the Existing Development commenced in November 2019. Although some construction activities have occurred on a sporadic basis throughout the period from November 2019 to the present, the vast majority of construction activities occurred during the 12-month period from November 2019 to November 2020. The following is a brief timeline of construction activities associated with the Existing Development:

- **November 2019 – November 2020:** Construction was ongoing until it was halted due to the November 2020 Peat Slide. Approximately 90% of groundworks were completed during this period and a large majority of deliveries to the site occurred during this period.
- **November 2020 – July 2022:** Works on the electricity substation and associated underground cabling connection to the grid continued until the second quarter of 2021. Peat slide remediation works were carried out at the Wind Farm Site at the instruction of Donegal County Council under Section 12 of the Local Government (Water Pollution) Act, 1977. Following extensive investigation, the EPA confirmed their satisfaction that the site was stable and that works could recommence. On 7 July 2022, the DCC Environment Section issued a letter confirming their satisfaction with the peat slide remediation works and closing the Section 12 notices issued.
- **July 2022 – December 2022:** Construction temporarily resumed, during which some additional works were carried out on site roads, internal site ducting, hardstanding areas, borrow pits, and peat cells.

7.1.2

Legislation, Guidance and Policy Context

This rEIAR is prepared in accordance with the requirements of EU Environmental Impact Assessment Directive 2014/52/EU. The following key legislative provisions are applicable to habitats and fauna in Ireland:

- The Wildlife Act 1976. This Act was revised in October 2022 to present amendments since enactment.
- 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 following treaties are applicable to habitats and fauna in Ireland:

- 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.

In the absence of specific national ornithological survey guidance for Ireland, the following guidance documents published by NatureScot have been followed to inform this assessment:

- › SNH (2009). Monitoring the impact of onshore wind farms on birds. Scottish Natural Heritage, Inverness, Scotland. Available at: <https://www.nature.scot/sites/default/files/2025-05/guidance-note-monitoring-the-impact-of-onshore-windfarms-on-birds.pdf>
- › SNH (2016). Assessing connectivity with Special Protection Areas (SPAs). Scottish Natural Heritage, Inverness, Scotland. Available at: <https://www.nature.scot/sites/default/files/2022-12/Assessing%20connectivity%20with%20special%20protection%20areas.pdf>
- › SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage, Inverness, Scotland.
- › NatureScot (2024). Guidance on using an updated collision risk model to assess bird collision risk at onshore wind farms. NatureScot, Inverness, Scotland. Available at: <https://www.nature.scot/doc/guidance-using-updated-collision-risk-model-assess-bird-collision-risk-onshore-wind-farms>
- › NatureScot (2025). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage, Inverness, Scotland. Available at: <https://www.nature.scot/doc/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms>
- › NatureScot (2025a). Assessing the cumulative impacts of onshore wind farms on birds. NatureScot, Inverness, Scotland. Available at: <https://www.nature.scot/doc/guidance-assessing-cumulative-impacts-onshore-wind-farms-birds>
- › NatureScot (2025b). Assessing the significance of impacts on bird populations from onshore wind farms that do not affect protected areas. NatureScot, Inverness, Scotland. Available at: <https://www.nature.scot/doc/guidance-note-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect>

The following Irish guidance documents were also consulted:

- › Percival, S.M. (2003). Birds and wind farms in Ireland: A review of potential issues and impact assessment. Ecology Consulting, Durham, UK. Available at: https://tethys.pnnl.gov/sites/default/files/publications/Percival_2003.pdf [Accessed 06/01/2026]
- › McGuinness, D., Muldoon, C., Tierney, N., Cummins, S., Murray, A., Egan, S. and Crowe, O. (2015). Bird Sensitivity Mapping for Wind Energy Developments and Associated Infrastructure in the Republic of Ireland. BirdWatch Ireland, Wicklow, Ireland. Available at: https://BirdWatchireland.ie/app/uploads/2019/09/BWI-Bird-Wind-Energy-devt-Sensitivity-Mapping-Guidance_document.pdf [Accessed 06/01/2026]
- › Gilbert, G., Stanbury, A. and Lewis, A. (2021). Birds of Conservation Concern in Ireland 4: 2020-2026. *Irish Birds*, 43:1-22. Available at: <https://BirdWatchireland.ie/birds-of-conservation-concern-in-ireland/> [Accessed 06/01/2026]

Furthermore, this assessment has been prepared with respect to the various planning policies and strategy guidance documents listed below and as detailed in Section 1.2 in Chapter 1 of this EIAR:

- › European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites. Publications Office of the European Union, Luxembourg.
- › European Commission (2020). Guidance document on wind energy developments and EU nature legislation. Publications Office of the European Union, Luxembourg.
- › Planning and Development Acts 2000 (as amended).
- › NRA (2009). Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority, Ireland.
- › EPA, 2022. Guidelines on the information to be contained in Environmental Impact Statement reports. Environmental Protection Agency, Johnstown Castle Estate, Wexford.
- › DoHPLG (2018). Guidelines for planning authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department of Housing, Planning and Local Government, Government of Ireland, Dublin.
- › County Donegal Development Plan 2024-2030 (2024). Donegal County Council.

- › Department of the Environment, Heritage and Local Government (2006). Wind Energy Development Guidelines for Planning Authorities. Department of the Environment, Heritage and Local Government, Government of Ireland, Dublin.

7.1.3 Statement of Authority

This chapter has been prepared by Susan Doyle (Ph.D.), Senior Ornithologist at MKO, and reviewed by Pádraig Cregg (M.Sc.), Principal Ornithologist. Both are suitably qualified ornithologists with experience in completing avifaunal assessments and competent experts for the purposes of the preparation of this rEIAR. This chapter has been informed by the peer-review conducted by Tom Gittings (Ph.D., MCIEEM) for the Prospective Development (see Appendix 7-1).

Susan has seven years' experience in ecological consultancy and specialises in ornithological consulting, including Environmental Impact Assessments and operational monitoring. In addition to consultancy, Susan gained experience through her involvement in several bird conservation projects, including protected seabirds, waders and waterfowl, as well as research into Arctic birds, satellite telemetry in migrant birds, breeding hen harrier and avian diseases in Ireland, providing her with extensive experience in a wide variety of bird survey methods, data management and reporting.

Pádraig has over thirteen years' experience of working in environmental consultancies. In his role with MKO, he acts as technical advisor for the ornithology team helping to take projects through their full lifecycle, from site selection through survey design, constraints studies, impact assessment and lodgement of the planning application. He is responsible for training the ornithology team regarding emerging guidance, legislation, policies, initiatives, industry best practices, and emerging trends.

The scope of works and survey methodology was devised by Pádraig Cregg and is fully compliant with recent NatureScot guidance (SNH, 2017), which was revised in NatureScot (2025).

7.2 Methodology

7.2.1 Desk Study

A comprehensive desk study was undertaken to search for any relevant information on species of conservation concern that may use the Wind Farm Site and Grid Connection Site. The assessment included a thorough review of the available ornithological data including:

- › Designated sites within the Likely Zone of Influence of the Site. The Zone of Influence is defined in the accompanying remedial Natura Impact Statement (rNIS) and Chapter 6 of this rEIAR.
- › Bird atlases.
- › Bird sensitivity mapping tool.
- › Online web-mappers from the National Biodiversity Data Centre.
- › Irish Wetland Bird Survey data.
- › Review of specially requested records from the National Parks and Wildlife Service Rare and Protected Species Database.
- › The 2017 EIAR, which is available in the public domain on the An Coimisiún Pleanála website at <https://www.pleanala.ie/en-ie/case/300460> (case reference: PA05E.300460) and associated construction phase monitoring.

7.2.2 Scoping and Consultation

Scoping and consultation was undertaken with the relevant statutory and non-statutory organisations to inform the current assessment. Full details can be found in Chapter 2 of this rEIAR. Table 7-1 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 rEIAR. The recommendations of the consultees have informed the rEIAR preparation process and the contents of this chapter; Chapter 2 describes where the comments raised in the scoping responses received have been addressed.

Table 7-1 Consultation responses relevant to ornithology

No	Consultee	Response
Republic of Ireland		
01	An Taisce	No response received at the time of writing.
02	BirdWatch Ireland	No response received at the time of writing.
03	Department of Agriculture, Food and the Marine	Response received on 26 th of September 2025. No issues raised in relation to birds.
04	Department of Climate, Energy and the Environment	No response received at the time of writing.
05	Donegal County Council - Environment Section	No response received at the time of writing.
06	Irish Peatland Conservation Council	Response received on 17 th of September 2025. No issues raised in relation to the Existing Development and birds.
07	Irish Raptor Study Group	No response received at the time of writing. Separate requests were issued for a meeting to discuss the project and no response was received at the time of writing.
08	Irish Red Grouse Association - Conservation Trust	No response received at the time of writing.
09	Irish Wildlife Trust	Response received on 29 th of September 2025. The Irish Wildlife Trust did not have the capacity to respond to consultation but would endeavour to respond if possible. No further correspondence was received.
10	The Heritage Council	No response received at the time of writing.
Northern Ireland		
11	Department of Agriculture, Environment and Rural Affairs (DAERA)	Response received on 3 rd of October 2025. No issues raised in relation to birds.
12	Royal Society for the Protection of Birds (RSPB)	Response received on 24th of October 2025. Due to limited capacity and high workload, the response refers back to the RSPB's responses submitted in relation to the 2017 EIAR (ABP-300460-17) (correspondence dated 27th of January 2017 and 5th of February 2018). The recommendations in relation to the 2017 EIAR are summarised below. <i>Correspondence dated 27th of January 2017:</i> Survey/Desktop study recommendations - Advise that the Northern Ireland Environmental Agency should be contacted regarding nature

No	Consultee	Response
		conservation designations, Area Plans and Natura 2000 sites. • A full habitat survey should be carried out as part of the assessment. • A full bird survey should be carried out at appropriate times of the year, employing stated methodologies and using a reputable ecological contractor. The surveys should cover not only the development site but also areas near the site that may be affected, either directly or indirectly, by the development. • Approved methodologies must be employed, to ensure that the EIA gleans all the information necessary in order that an informed view as to the existing nature conservation interest of the site can be reached. • The following survey methods are therefore recommended for this site for at least one full year of survey. Depending on the outcomes of these surveys, another year may be required and should be planned for within the project timeline: ○ A modified Common Bird Census (CBC) or a Brown & Shepherd (B&S) survey including non-wader observations, over the development site plus 500metre (m) buffer. These can both be done using transects to ensure even coverage, over three visits in specified date windows between mid-March to mid-July. ○ Winter surveys using a B&S type survey (i.e. timed visits to specified area), repeated once per month between Oct - March inclusive, and again over the development site plus 500m buffer. ○ Vantage point (VP) surveys conforming to Scottish Natural Heritage (SNH) guidelines and targeting raptors i.e. buzzards, that may be using the site/buffer should be considered. It is recommended any surveyor (s) involved has experience of VP work and application of collision risk methodology. ○ VP surveys conforming to SNH guidelines and targeting migratory waterfowl should be considered. We recommend any surveyor (s) involved has experience of VP work for swans/geese. • All reports, field maps and field forms should be retained, even after a development proposal has gained consent, and should be viewed as being in the public domain. • The most up to date guidance available from SNH on surveys, monitoring and assessing the effects of windfarms, and peer-reviewed papers discussing

No	Consultee	Response
		breeding bird distribution and foraging raptor activity on existing windfarms, as well as a report on both spatial and temporal disturbance levels to certain upland species were provided. - The cumulative impacts of this proposal with any nearby windfarms or other plans or projects, should also be assessed. 2. Analysis - The ES must provide an assessment of the possible impacts of the development on the interests described by the surveys. These possible impacts should include inter alia direct impacts, effects due to disturbance and indirect impacts. - The direct, physical impacts on the development should be addressed, including: - collision risk, - direct land-take by structures including masts, buildings, roads, tracks, fences and drainage ditches, - disruption of hydrology, in terms of saturation on the down-slope sides of roads, tracks and drying-out on the up-slope sides, - the creation of sumps through built development, with consequent saturation and desiccation effects, and - works associated with the construction of the development, including vegetation and soil/peat removal and storage, borrow pits, temporary compounds etc. - The RSPB's concern centres on whether disturbance factors would result in birds being forced to relocate to sub-optimal habitats. Indirect impacts may include: - agricultural intensification arising from the increased accessibility of the development site and surrounding areas to stock due to construction of roads and tracks, and - increased public disturbance due to the presence of those who wish the view the turbines from close up, and by virtue of increased accessibility. 3. Mitigation, enhancement and monitoring - The broad headings under which the RSPB would be keen to discuss mitigation (without prejudice) would be: - institution of agricultural management and access regimes which favour important bird species through habitat management and possibly habitat creation, - time-related restrictions on construction in relation to nesting periods,

No	Consultee	Response
		○ precise location and orientation of built development within the development site, and ○ removal of some tracks/roads after construction. • The RSPB advocates no loss of biodiversity to development through appropriate mitigation and compensation where necessary. • Both mitigation and enhancement may happen on- or off-site • Monitoring should take place for all relevant species found on site (informed by the surveys). The ‘Before After Control Impact’ approach should be used to add rigour to the process. The RSPB is of the opinion that survey and monitoring results should be published, in order to enhance understanding of the relationships between windfarms and biodiversity. <i>Correspondence dated 5th of February 2018</i> • The low number of hen harrier flights recorded across the site and the subsequent low collision risk for the species were noted. However, without prejudice and should approval be granted, it was recommended that the habitat of the proposed areas of tree felling in the vicinity of the turbine locations be managed according to the recommendations in the SNH guidance ‘<i>Wind farm proposals on afforested sites – advice on reducing suitability for hen harrier, merlin and short-eared owl</i>’ to limit the suitability of the Wind Farm Site for hen harrier and thus reduce the risk of collision. • Unavoidable vegetation clearance from within the site footprint should occur outside of the bird breeding season which lasts from 01 March to 31 August to avoid disturbance to nesting birds. • An independent and suitably qualified ornithologist should be present on site if construction works are required from March to August of any year and operate a stop works authority should disturbance to breeding birds be detected. They should submit surveys to the Planning Authority as agreed to prior of any works commencing on site to avoid disturbance to breeding birds. • Prior to the commencement of construction a final Hen Harrier Habitat Enhancement Plan shall be submitted and agreed in writing with the Planning Authority. This plan should also include a comprehensive monitoring programme for the lifetime of the development. • Prior to the commencement of construction a final Post-Construction Bird Monitoring Programme shall be submitted and agreed in writing with the Planning Authority.

7.2.2.1 Meeting with the National Parks and Wildlife Service

A pre-planning meeting was held on the 8th of January 2026 between the project team and representatives of the National Parks and Wildlife Service (NPWS), namely Pat Roberts, Susan Doyle, Pdraig Cregg and Robert Kennedy of MKO, William O'Connor of Planree Ltd, and Eoin Connolly and Miriam Crowley of the NPWS. A summary of the minutes of this meeting are outlined in Chapter 2 of this EIAR. In relation to birds, hen harrier was the main consideration discussed during the meeting, including survey findings to date, the predicted effects of the Existing Development and Prospective Development, and proposed hen harrier habitat enhancement measures.

In response, the NPWS remarked the following main points:

- › The proposal to fell forestry was welcomed and considered an appropriate habitat enhancement measure for the project.
- › It was noted that on sloping ground within the Biodiversity Management Site, the potential for birch woodland to establish and dominate could be quite high. It was suggested that 2-3 key, straightforward indicators should be established to monitor the suitability of the Biodiversity Management Site areas for hen harrier, similar to the 'score card' used for the Hen Harrier Project (<http://www.henharrierproject.ie/> and <http://www.henharrierproject.ie/HHPWGCard.pdf>).
- › It was noted that the application should characterise the rationale for why the chosen Biodiversity Management Site is suitable.
- › In terms of characterising impacts on hen harrier, it was recommended to consult the NPWS High-Likelihood Nesting Area (HLNA) dataset as the project will result in the loss of nesting and foraging habitat for hen harrier.
- › It was emphasised that contextualising the Blue Stack Mountains hen harrier population should be a focus of the application, over and above the national population.

7.2.3 Field Surveys

7.2.3.1 Identification of Target Species

Based on the results of the desk study, consultation and reconnaissance visits, the assemblage of bird species in the Wind Farm Site, Grid Connection Site, and hinterland, and the likely importance of the Wind Farm Site and Grid Connection Site for these species was ascertained. A list of 'target species' likely to occur at the Wind Farm Site, Grid Connection Site, and hinterland was compiled. The 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 zone of likely significant effects.
- › Red-listed Birds of Conservation Concern in Ireland (BoCCI).
- › Raptors and species that are particularly sensitive to wind farm developments.

7.2.3.2 Survey Methodology

Field surveys at the Wind Farm Site, Grid Connection Site, and hinterland were undertaken during the following survey periods:

- › Monthly from October 2013 to September 2014
- › Monthly from April 2015 to September 2017;
- › During the breeding season from April 2019 to July 2023;
- › Monthly from September 2023 to September 2025.

This survey work forms the core dataset for the assessment of impacts on ornithology. This period includes the pre-planning, construction phase and post-construction phase of the Existing Development. The data provided in the field surveys is robust and allows clear, well supported, evidence-based conclusions to be made on ornithological receptors. In the absence of specific national bird survey guidelines, the ornithological surveys were designed and undertaken in full accordance with the guidance document ‘*Survey methods for use in assessing the impacts of onshore windfarms on bird communities*’ from NatureScot (formerly Scottish Natural Heritage [SNH]) outlined in SNH (2014), which was revised in the document ‘*Recommended bird survey methods to inform impact assessment of onshore wind farms*’ from SNH (2017) and again in NatureScot (2025). Surveys remain in accordance with the updated guidance.

The methodologies for the various surveys undertaken are described in full in Chapter 7 and Appendix 7-1 of the accompanying EIAR for the Prospective Development and in Chapter 7 and Appendix 7-2 of the 2017 EIAR. The 2017 EIAR is available in the public domain on the An Coimisiún Pleanála website at <https://www.pleanala.ie/en-ie/case/300460> (case reference: PA05E.300460).

The coverage and survey types varied over different periods and is described in the relevant documentation referenced above. In summary, the surveys undertaken included vantage point surveys, winter walkover (or ‘winter transect’) surveys, breeding walkover (or ‘breeding quadrat/walkover’) surveys, waterbird distribution and abundance (or ‘wetland and waterbird count’) surveys, hen harrier roost surveys, breeding raptor surveys, breeding woodcock surveys, breeding red grouse surveys, connectivity vantage point (also called the ‘Barnesmore Gap commuting/migratory bird vantage point’) surveys, and breeding red-throated diver surveys. A dedicated goshawk survey was conducted on one occasion. In addition, supplemental surveys in the form of nest watch surveys were conducted at four known traditional breeding raptor territories in proximity to the Wind Farm Site.

The Grid Connection Site was surveyed through multidisciplinary walkover surveys. The route was systematically walked, while the surveyor recorded a range of protected species, including birds. These surveys are described in full in Chapter 6 of the 2017 EIAR and in Chapter 6 of this rEIAR.

7.2.4 Receptor Evaluation and Impact Assessment

7.2.4.1 Geographical Context

‘Guidelines for Ecological Impact Assessment in the UK and Ireland’ (CIEEM, 2024) recommends categories of ornithological value that relate to a geographical context (e.g., international through to local). This EIAR utilises the geographical context 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.

7.2.4.2 Identification of Key Ornithological Receptors

Following the analysis of field survey data, a precautionary screening approach was followed to identify KORs. A KOR is defined as a species occurring within the Wind Farm Site, Grid Connection Site, and hinterland upon which potential impacts are anticipated and assessed. The list of target species was refined to KORs, excluding those for which pathways for a significant effect could not be identified. All KORs identified in the 2017 EIAR and the accompanying EIAR for the Prospective Development are considered in this rEIAR.

7.2.4.3 Impacts Associated with the Existing Development

The potential impacts associated with the Existing Development are:

- › **Direct habitat loss** due to construction works associated with the built infrastructure footprint.
- › **Disturbance** (sometimes called indirect habitat loss) if birds avoid the Wind Farm Site (and Grid Connection Site) and its surrounding area due to construction works.

For each of these risks, the detailed knowledge of bird distribution and activity within and surrounding the Wind Farm Site and Grid Connection Site has been used to assess the impacts of the Existing Development on birds.

7.2.4.4 Description of Impacts

The sensitivity, magnitude and significance of impacts on bird populations resulting from the Existing Development was quantified according to two assessment criteria: Percival (2003) and the Environmental Protection Agency's 'Guidelines on the information to be contained in Environmental Impact Statement reports' (hereafter refer to as 'EPA, 2022'). The two assessment criteria have been used to independently characterise impacts to inform a robust assessment of potential impacts. EPA, 2022 impact assessment criteria has been used for consistency between the Biodiversity and Birds chapters of this rEIAR, while Percival (2003) has also been followed given its specific focus on birds.

7.2.4.4.1 Percival 2003 criteria

The Percival (2003) methodology quantifies the sensitivity of a given species to the development type, the magnitude of the effect and the significance of the potential impact. Table 7-2 (Sensitivity), Table 7-3 (Magnitude of effect) and Table 7-4 (Determination of significance) outline the assessment criteria for each stage.

Table 7-2 Evaluation of sensitivity for birds (from Percival, 2003)

Sensitivity	Determining Factor
Very High	Species that form the cited interest of SPAs and other statutorily protected nature conservation areas. Cited means mentioned in the citation text for the site as a species for which the site is designated.
High	Species that contribute to the integrity of a SPA but which are not cited as a species for which the site is designated. Ecologically sensitive species including the following: divers, common scoter, hen harrier, golden eagle, red necked phalarope, roseate tern and cough. Species present in nationally important numbers (>1% of the Irish population).
Medium	Species listed on Annex I of the EU Birds Directive. Species present in regionally important numbers (>1% county population). Other species on BirdWatch Ireland's Red List of Birds of Conservation Concern.

Sensitivity	Determining Factor
Low	Any other species of conservation interest, including species on BirdWatch Ireland's Amber List of Birds of Conservation Concern, not covered above.

Table 7-3 Determination of magnitude of effects (from Percival, 2003)

Sensitivity	Description
Very High	Total loss or very major alteration to key elements/ features of the baseline conditions, such that the post development character/composition/attributes will be fundamentally changed and may be lost from the site altogether. Guide: < 20% of population / habitat remains.
High	Major loss or major alteration to key elements/features of the baseline (pre-development) conditions such that post development character/composition/attributes will be fundamentally changed. Guide: 20-80% of population/ habitat lost.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of baseline will be partially changed. Guide: 5-20% of population/ habitat lost.
Low	Minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible but underlying character/composition/attributes of baseline condition will be similar to pre-development circumstances/patterns. Guide: 1-5% of population/ habitat lost
Negligible	Very slight change from baseline condition. Change barely distinguishable, approximating to the 'no change' situation. Guide: < 1% population/ habitat lost.

Table 7-4 Significance matrix combining magnitude and sensitivity to assess significance (from Percival, 2003)

Significance		Sensitivity			
		Very High	High	Medium	Low
Magnitude	Very High	Very High	Very High	High	Medium
	High	Very High	Very High	Medium	Low
	Medium	Very High	High	Low	Very Low
	Low	Medium	Low	Low	Very Low
	Negligible	Low	Very Low	Very Low	Very Low

7.2.4.4.2 EPA, 2022 Criteria

EPA, 2022 criteria use the following terms to describe the quality of the effect:

- **Positive** - a change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
- **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 (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).

The significance of the effect is quantified as:

- **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 that is consistent with existing and emerging baseline trends.
- **Significant** - an effect which, by its character, magnitude, duration or intensity significantly 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.

The duration of effects can be:

- **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 1 to 7 years.
- **Medium term** – effects lasting 7 to 15 years.
- **Long term** – effects lasting 15 to 60 years.
- **Permanent** – effects lasting over 60 years.
- **Reversible** – effects that can be undone (e.g. through remediation or restoration).

The frequency of effects (i.e.. how often the effect will occur) can be:

- **Once, rarely, occasionally, frequently or constantly**
- **Hourly, daily, weekly, monthly or annually**

The probability of the effect may be:

- **Likely** – the effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
- **Unlikely** – the effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

The effects may also be described in relation to their extent and context. Extent describes the population affected by an effect, while context relates the effect to the established baseline conditions.

7.2.4.5 Cumulative Assessment

As per NatureScot guidance ‘*Assessing the cumulative impacts of onshore wind farms on birds*’ (NatureScot, 2025a), cumulative effects arising from two or more developments may be:

- **Additive** a multiple independent additive model;
- **Antagonistic** the sum of impacts are less than in a multiple independent additive model;
- **Synergistic** the cumulative impact is greater than the sum of the multiple individual effects.

NatureScot guidance (2025a) was consulted while undertaking a cumulative impact assessment. This guidance emphasises that its priority is to ‘maintain the conservation status of the species’ population at

the national scale.’ However, it is acknowledged that consideration should also be allowed for impacts at the regional level ‘where regional impacts have national implications (for example where a specific region holds the majority of the national population).’ Following this, the cumulative assessment has been carried out at the geographical scale of the importance rating of the KOR. For the purposes of this cumulative assessment, the regional/county scale is considered to be a 25km radius of the proposed turbine locations and the local scale is considered to be a 5km radius.

Assessment material was compiled for other plans and projects within 25km of the proposed turbine locations, as described in Chapter 2 of this EIAR. The material was gathered through a search of relevant online Planning Registers, reviews of relevant EIS/EIAR documents, planning application details and planning drawings. These are then considered for cumulative effects with the Existing Development.

7.2.5 Assessment Justification

7.2.5.1 Survey Data

A comprehensive suite of bird surveys was undertaken between October 2013 and September 2025. The results of these surveys at the Wind Farm Site, Grid Connection Site, and hinterland, undertaken in line with NatureScot guidance, are analysed to inform this assessment. As such, the surveys undertaken provide the information necessary to allow a comprehensive and robust assessment of the impacts of the Existing Development on ornithological receptors.

7.2.5.2 Mitigation

Where impacts on KORs are identified, mitigation measures have been prescribed to reduce such impacts. Mitigation measures are specifically set out and are realistic in terms of cost and practicality. They have been subject to detailed design and their successful implementation will address the effects on the identified KORs. As such, the impacts of the Existing Development 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 (refer to Section 7.6 for further details).

7.2.5.3 Limitations

The information provided in this chapter accurately and comprehensively describes the baseline environment and provides an informed assessment of the impacts of the Existing Development. It also prescribes mitigation as necessary and describes the residual effects. Furthermore, the desk study, surveys, analysis and reporting have been undertaken in accordance with the appropriate guidelines. Any specific limitations associated with individual survey types are discussed in Chapter 7 of the 2017 EIAR and in Chapter 7 of the accompanying EIAR for the Prospective Development. However, no significant limitations in the scope, scale or context of the assessment have been identified.

7.3 Baseline Ornithological Conditions

7.3.1 Designated Sites

A remedial screening assessment and rNIS were prepared to provide the competent authority with the information necessary to complete an Appropriate Assessment for the Existing Development in compliance with Article 6(3) of the EU Habitats Directive (92/43/EEC). According to EPA, 2022 ‘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 impacts on SPAs, refer to the remedial Appropriate Assessment Screening Report and rNIS which has been prepared for the Existing Development, including detailed screening rationale for each SPA. It also includes a detailed screening of Croaghonagh Bog Special Area of Conservation, in which Greenland white-fronted goose, merlin, red grouse, curlew and kestrel have been recorded.

The rNIS accompanies this planning application. It concluded that no potential for likely significant effects was identified for any SPAs.

7.3.2

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 Wind Farm Site and Grid Connection Stie lie entirely within hectad H08. Table 7-5 and Table 7-6 present a list of species of conservation interest recorded from the relevant hectads, with regard to breeding and wintering respectively.

Table 7-5 Breeding Bird Atlas data for hectad H08

Species	Breeding Atlas 1968-1972	Breeding Atlas 1988-1991	Breeding Atlas 2007-2011
Black-headed gull	confirmed	-	-
Buzzard	-	-	possible
Common gull	confirmed	seen	-
Common Sandpiper	confirmed	breeding	possible
Corncrake	probable	-	-
Curlew	confirmed	breeding	-
Dipper	confirmed	-	confirmed
Dunlin	probable	-	-
Golden Plover	confirmed	breeding	probable
Grey Wagtail	confirmed	breeding	probable
Hen Harrier	possible	-	confirmed
Kestrel	confirmed	breeding	possible
Kingfisher	possible	-	-
Lapwing	confirmed	-	-
Mallard	confirmed	breeding	probable
Meadow Pipit	confirmed	breeding	confirmed
Moorhen	confirmed	-	-

Species	Breeding Atlas 1968-1972	Breeding Atlas 1988-1991	Breeding Atlas 2007-2011
Peregrine Falcon	-	-	possible
Red Grouse	confirmed	breeding	probable
Swift	possible	-	-
Teal	probable	breeding	possible
Twite	possible	-	-
Whinchat	confirmed	breeding	-
Woodcock	possible	breeding	-
Yellowhammer	confirmed	-	-

Table 7-6 Wintering Bird Atlas data for hectad H08

Species	Wintering Atlas 1981-1984	Wintering Atlas 2007-2011
Black-headed Gull	present	-
Buzzard	-	present
Common Sandpiper	present	-
Cormorant	present	present
Curlew	present	-
Golden Plover	present	present
Goldeneye	present	-
Greenland White-fronted Goose	present	-
Grey Heron	present	-
Grey Wagtail	present	-
Hen Harrier	present	-
Kestrel	present	present
Lapwing	present	-
Mallard	present	present
Meadow Pipit	present	present
Moorhen	present	-
Mute Swan	present	-
Pochard	present	-
Red Grouse	present	present
Redwing	-	present
Snipe	present	-
Sparrowhawk	present	present

Species	Wintering Atlas 1981-1984	Wintering Atlas 2007-2011
Teal	present	present
Whooper Swan	present	-
Woodcock	present	present

7.3.3 Bird Sensitivity Mapping Tool

A Bird Sensitivity Mapping Tool for wind energy development was developed by BirdWatch Ireland to provide a measured spatial indication of where protected birds are likely to be sensitive to wind energy developments. The tool can be accessed via the National Biodiversity Data Centre Website (www.biodiversityireland.ie) and is accompanied by a guidance document (McGuinness *et al.*, 2015). The criteria for estimating a zone of sensitivity (i.e., 'low', 'medium', 'high' and 'highest') is based on a review of the behavioural, ecological and distributional data available for each species.

The Wind Farm Site is largely located within areas of low bird sensitivity to wind energy developments, with small areas in the northwesternmost areas located within areas of medium sensitivity. Additionally, areas of the main existing access road are located within an area of high sensitivity. The Grid Connection Site is also within areas of high sensitivity, medium and low bird sensitivity to wind energy developments along the N15 National Road.

7.3.4 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 Wind Farm Site and Grid Connection Site lie entirely within hectad H08. Table 7-7 lists species of conservation interest that have been recorded in this 10km Grid.

Table 7-7 National Biodiversity Data Centre records

Species	NBDC Dataset
Black-headed Gull	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Buzzard	Birds of Ireland
Common Gull	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Common Sandpiper	Bird Atlas 2007 - 2011
Cormorant	Bird Atlas 2007 - 2011
Corncrake	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Curlew	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Dipper	Bird Atlas 2007 - 2011
Dunlin	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Golden Eagle	Birds of Ireland
Golden Plover	Birds of Ireland
Goldeneye	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Grey Heron	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Grey Wagtail	eBIRD Bird Records for Ireland

Species	NBDC Dataset
Hen Harrier	Birds of Ireland
Herring Gull	eBIRD Bird Records for Ireland
Kestrel	Birds of Ireland
Kingfisher	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Lapwing	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Mallard	eBIRD Bird Records for Ireland
Meadow Pipit	eBIRD Bird Records for Ireland
Moorhen	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Mute Swan	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Peregrine	Bird Atlas 2007 - 2011
Pied Wagtail	eBIRD Bird Records for Ireland
Pochard	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Red Grouse	Birds of Ireland
Redwing	Bird Atlas 2007 - 2011
Snipe	Birds of Ireland
Sparrowhawk	Birds of Ireland
Swift	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Teal	Birds of Ireland
Twite	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.
Whinchat	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
White-fronted Goose	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Whooper Swan	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.
Woodcock	Birds of Ireland
Yellowhammer	Birds of Ireland

7.3.5 Irish Wetland Bird Survey Records

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

- › Ballyness Bay
- › Clooney Lough
- › Culdaff
- › Donegal Bay
- › Dunfanaghy Estuary
- › Dunfanaghy New Lake
- › Killybegs Harbour
- › Kiltorris Lough
- › Lough Fern

- › Lough Swilly
- › Maghera Lake
- › Rosapenna Lough
- › Sheskinmore Lough
- › Trawbreaga Bay

7.3.6 Rare and Protected Species Dataset

An information request was sent to the NPWS requesting records from the Rare and Protected Species Database. The following records were obtained from the NPWS on the 11th of August 2025.

A follow-up request was sent to the NPWS on the 13th of February 2026 seeking access to the NPWS High-Likelihood Nesting Area (HLNA) dataset, as recommended during the pre-planning meeting with the NPWS held in January 2026 (see full details in Section 7.2.2.1 of Chapter 7 of the accompanying EIAR for the Prospective Development). No response has been received to date.

Greenland White-fronted Goose

The NPWS provided 102 records of Greenland white-fronted goose in hectad H08. All records are dated from between the years 1982 and 1991, and are of the Pettigo Plateau flock. Pettigo Plateau is now designated as an SPA for the species, and is located approximately 6.4km south of the Grid Connection and approximately 9.0km from the nearest proposed turbine location. No observations of the species were recorded within the Wind Farm Site or Grid Connection Site.

Curlew

One record of a nest location or estimated centre of territory was recorded in hectad H08 in 2017. No further information was provided.

Hen Harrier

Hen harrier were confirmed as breeding within the hectad H08 during the National Hen Harrier Surveys in both 2010 and 2015.

Peregrine Falcon

One occupied nest site was recorded within the hectad H08 during the 2017 National Peregrine Survey. This nest site was also known from the previous National Survey in 2002.

7.3.7 Field Survey Results

All results for all field surveys are described in the 2017 EIAR and the accompanying EIAR for the Prospective Development. Detailed species accounts are provided in Chapter 7 of the 2017 EIAR and in Chapter 7 of the accompanying EIAR for the Prospective Development. A list of all bird species recorded during surveys is provided in Appendix 7-1 of the 2017 EIAR and Appendix 7-2 of the accompanying EIAR for the Prospective Development. A summary of the results for each survey type is presented in Appendix 7-3 of the 2017 EIAR and Appendix 7-3 of the accompanying EIAR for the Prospective Development. Finally, raw survey data and maps are provided in Appendix 7-4 of the 2017 EIAR and in Appendix 7-4 and Appendix 7-5 of the accompanying EIAR for the Prospective Development.

In addition to the above, incidental records of target species collected from surveys during the breeding season from April 2019 to July 2023 are presented in Table 7-8. These were: grey wagtail, golden plover, meadow pipit, red grouse, ring ouzel, swift and snipe.

Table 7-8 Incidental records of target species April 2019 to July 2023

Location	Date	Time	Species	Number	Habitat and activity	Surveyor
Known Raptor Nest site Visit; PE1	14/05/2020	13:35	Grey Wagtail	2	pair along river	RV
Known Raptor Nest site Visit; PE1	20/05/2020	13:55	Grey Wagtail	2	present	RV
Hen Harrier Nest Visit; HH1	14/06/2020	06:40	Grey Wagtail	12	several family groups	RV
Peregrine Nest Visit; PE1	24/06/2020	17:30	Grey Wagtail	2	feeding, along river side	RV
Hen Harrier Nest Visit; HH2	12/07/2020	05:55	Grey Wagtail	1	flyover	RV
Peregrine Nest Visit; PE1	21/07/2020	10:30	Grey Wagtail	2	pair along river	RV
Peregrine Nest Visit; PE1	23/07/2020	05:25	Grey Wagtail	2	pair along river	RV
Merlin Nest Visit; ML1	31/05/2021	14:30	Grey Wagtail	1	present	CD
Breeding Raptor Survey; VP June	27/07/2021	13:20	Grey Wagtail	1	wet grassland; travelling	LD
Breeding Raptor Survey; HH2	05/05/2022	05:55	Grey Wagtail	2	recently-felled woodland; displaying, a pair between vantage point and road	RV
Breeding Raptor Survey; PE1	07/05/2022	05:40	Grey Wagtail	2	eroding/upland rivers; displaying, a pair along the river by vantage point	RV
Breeding Raptor Survey; HH2	15/05/2022	07:10	Grey Wagtail	2	recently-felled woodland; displaying, pair feed around vantage point throughout	RV
Breeding Raptor Survey; PE1	16/05/2022	15:05	Grey Wagtail	2	eroding/upland rivers; displaying, pair along the river by vantage point throughout	RV
Breeding Raptor Survey; Flooded turbine base, on the way to turbine	20/06/2022	14:20	Grey Wagtail	2	lakes and ponds; flying	RV
Breeding Raptor Survey; HH2	23/04/2023	17:30	Grey Wagtail	1	recently-felled woodland; flying, flew over during mini vantage point	RV
Breeding Raptor Survey; Lough Mourne	03/05/2023	09:01	Grey Wagtail	1	lakes and ponds, wet grassland and scrub; travelling, near the edge of the lough on the way to the vantage point.	LD
Breeding Raptor Survey; PE1	03/05/2023	09:04	Grey Wagtail	1	lakes and ponds; travelling, along the lowerymore river	LD
Breeding Raptor Survey; PE1	04/05/2023	08:58	Grey Wagtail	2	lakes and ponds; foraging, pair now present	LD
Breeding Raptor Survey; PE1	04/05/2023	09:12	Grey Wagtail	2	lakes and ponds; travelling, pair observed again	LD
Breeding Raptor Survey; HH2	24/05/2023	13:14	Grey Wagtail	2	recently-felled woodland; breeding, pair around ditches	RV
Breeding Raptor Survey; HH2	27/05/2023	13:14	Grey Wagtail	2	recently-felled woodland; breeding, pair around water filled ditches carrying food	RV

Location	Date	Time	Species	Number	Habitat and activity	Surveyor
Breeding Raptor Survey; HH1	05/07/2023	09:42	Grey Wagtail	1	wet grassland and lakes and ponds; travelling, by the small pool	LD
Breeding Raptor Survey; HH1	11/07/2023	12:02	Grey Wagtail	1	lakes and ponds, wet grassland and scrub; travelling, seen once by the pool	LD
Breeding Raptor Survey; HH1	24/07/2023	08:56	Grey Wagtail	1	wet grassland and lakes and ponds; foraging, seen here by the pool.	LD
Hen Harrier Nest Visit; Meenreagh Bridge at HH1	13/04/2019	14:13	Golden Plover	108	improved grassland; foraging offsite, photo taken between walkover and hh1 nest visit, h144855	SF
Hen Harrier Nest Visit; HH1	08/06/2020	17:10	Golden Plover	3	not recorded; 3 very high waders flying south.	RV
Breeding Raptor Survey; ML1	18/04/2023	09:48	Golden Plover	2	wet grassland and dry siliceous heath; calling, heard whilst walking a transect, minimum two golden plover present	LD
Breeding Raptor Survey; ML1	18/04/2023	09:53	Golden Plover	2	wet grassland and dry siliceous heath; calling, heard again, but still not seen.	LD
Breeding Hen Harrier Survey; Meenbog	28/04/2019	09:11	Meadow Pipit	1	cutover bog; present	SF
Historic Hen Harrier Nest Site Visit; Killeter HH2	22/05/2019	05:30	Meadow Pipit	2	perched	SF
Historic Hen Harrier Nest Site Visit; Killeter HH2	22/05/2019	05:30	Meadow Pipit	2	flying, calling	SF
Breeding Walkover Survey; Meenbog forest plantation	27/05/2019	05:47	Meadow Pipit	1	conifer plantation; perched	SF
Breeding Walkover Survey; Meenbog forest plantation	27/05/2019	06:34	Meadow Pipit	1	conifer plantation; calling	SF
Breeding Walkover Survey; Meenbog upland open area	28/05/2019	09:11	Meadow Pipit	4	conifer plantation; flying, calling	SF
Peregrine Nest Visit; Barnesmore	27/06/2019	08:00	Meadow Pipit	3	flying, fly by	SF
Known Raptor Nest site Visit; PE1	14/05/2020	13:35	Meadow Pipit	10	at least 10 calling and displaying around vantage point, nesting layby	RV
Known Raptor Nest site Visit; HH2	15/05/2020	17:15	Meadow Pipit	10	not recorded; many pairs surrounding the vantage point in clearfell	RV
Known Raptor Nest site Visit; ML1	20/05/2020	13:55	Meadow Pipit	5	a nest found beside vantage point	RV
Known Raptor Nest site Visit; PE1	20/05/2020	13:55	Meadow Pipit	10	several birds, no sign of nesting pair	RV
Hen Harrier Nest Visit; HH2	10/06/2020	16:55	Meadow Pipit	10	present	RV
Merlin Nest Visit; ML1	12/06/2020	17:05	Meadow Pipit	5	present	RV
Hen Harrier Nest Visit; HH1	14/06/2020	06:40	Meadow Pipit	18	displaying, singing	RV

Location	Date	Time	Species	Number	Habitat and activity	Surveyor
Hen Harrier Nest Visit; HH1	21/06/2020	14:45	Meadow Pipit	3	display flight	RV
Peregrine Nest Visit; PE1	24/06/2020	17:30	Meadow Pipit	6	calling, displaying	RV
Hen Harrier Nest Visit; HH2	25/06/2020	18:00	Meadow Pipit	10	present	RV
Merlin Nest Visit; ML1	26/06/2020	05:55	Meadow Pipit	13	adults and juveniles	RV
Hen Harrier Nest Visit; HH2	12/07/2020	05:55	Meadow Pipit	12	constant, at least 12	RV
Hen Harrier Nest Visit; HH1	12/07/2020	10:00	Meadow Pipit	5	several flyovers	RV
Merlin Nest Visit; ML1	20/07/2020	05:50	Meadow Pipit	20	flying, at least 20	RV
Peregrine Nest Visit; PE1	23/07/2020	05:25	Meadow Pipit	5	calling, feeding , along river side	RV
Merlin Nest Visit; ML1	31/05/2021	16:48	Meadow Pipit	1	upland blanket bog; present	CD
Merlin Nest Visit; ML1	31/05/2021	18:59	Meadow Pipit	1	upland blanket bog; present	CD
Breeding Raptor Survey; Fifth Corgary	14/07/2021	17:00	Meadow Pipit	6	wet grassland; display flight and/or travelling	LD
Breeding Raptor Survey; VP June	27/07/2021	08:00	Meadow Pipit	5	wet grassland; display flight and/or travelling	LD
Breeding Raptor Survey; VP Fifth Corgary	27/07/2021	11:00	Meadow Pipit	6	wet grassland; display flight and/or travelling	LD
Breeding Raptor Survey; HH2	05/05/2022	05:55	Meadow Pipit	17	recently-felled woodland; displaying, at least 6 displaying pairs around vantage point	RV
Breeding Raptor Survey; HH1	06/05/2022	14:35	Meadow Pipit	6	conifer plantation; displaying, at least 3 pairs around vantage point	RV
Breeding Raptor Survey; HH1	06/05/2022	14:35	Meadow Pipit	2	conifer plantation; displaying, a pair feeding and displaying along the track to vantage point	RV
Breeding Raptor Survey; PE1	07/05/2022	05:40	Meadow Pipit	12	improved agricultural grassland; displaying, at least 5 pairs along the river	RV
Breeding Raptor Survey; ML1	11/05/2022	14:20	Meadow Pipit	12	cutover bog; displaying, at least 4 pairs around the vantage point	RV
Breeding Raptor Survey; HH2	15/05/2022	07:10	Meadow Pipit	13	recently-felled woodland; displaying, at least 6 pairs around vantage point, singing and displaying	RV
Breeding Raptor Survey; PE1	16/05/2022	15:05	Meadow Pipit	14	improved agricultural grassland; displaying, at least 5 pairs around the vantage point along river	RV
Breeding Raptor Survey; HH1	20/06/2022	14:20	Meadow Pipit	6	upland blanket bog and conifer plantation; singing/displaying, 3 pairs displaying around vantage point	RV
Breeding Raptor Survey; PE1	21/06/2022	05:25	Meadow Pipit	8	improved agricultural grassland; displaying, at least 4 pairs along the river	RV

Location	Date	Time	Species	Number	Habitat and activity	Surveyor
Breeding Raptor Survey; HH2	23/06/2022	13:30	Meadow Pipit	12	recently-felled woodland; displaying, at least 6 pairs around vantage point, some juveniles also	RV
Breeding Raptor Survey; ML1	29/06/2022	11:55	Meadow Pipit	50	upland blanket bog; displaying, feeding, 3 pairs close to vantage point, at least 50 on walk across site, several small flocks	RV
Breeding Raptor Survey; HH2	23/04/2023	19:00	Meadow Pipit	28	recently-felled woodland and conifer plantation; breeding, 14 probably territories of meadow pipit marked on map with x	RV
Breeding Raptor Survey; HH1	25/04/2023	20:00	Meadow Pipit	12	cutover bog, upland blanket bog and scrub; breeding, 5-6 pairs marked with an x on map	RV
Breeding Raptor Survey; ML1	21/05/2023	14:30	Meadow Pipit	18	upland blanket bog; breeding, at least 9 pairs of meadow pipit along slope by both vantage points	RV
Breeding Raptor Survey; HH2	24/05/2023	13:14	Meadow Pipit	28	recently-felled woodland; breeding, at least 14 pairs of meadow pipit around site	RV
Breeding Raptor Survey; HH2	27/05/2023	17:50	Meadow Pipit	18	recently-felled woodland and conifer plantation; breeding, at least 9 pairs of meadow pipit around vantage point	RV
Breeding Raptor Survey; HH2	25/06/2023	09:12	Meadow Pipit	25	upland blanket bog and immature woodland; displaying, provisioning, 25 plus, some small flocks and many juveniles	RV
Breeding Raptor Survey; HH2	25/06/2023	12:30	Meadow Pipit	15	immature woodland and recently-felled woodland; provisioning/displaying, several pairs and fledged young around vantage point	RV
Breeding Raptor Survey; HH2	11/07/2023	18:30	Meadow Pipit	75	not recorded; feeding, minimum 75 counted during the walk, some feeding flocks indicated on map, lots of juveniles about	RV
Breeding Raptor Survey; ML1	20/04/2019	07:41	Red Grouse	1	not recorded; calling	SF
Breeding Raptor Survey; ML1	20/04/2019	09:11	Red Grouse	1	conifer plantation; calling only, 54.44.45n 07.56.32w cashelnavean turn back at stream	SF
Breeding Raptor Survey; ML1	18/04/2023	11:41	Ring Ouzel	1	wet grassland, dry siliceous heath and lakes and ponds; calling, possible ring ouzel heard on the hillside, although way off and windy	LD
Merlin Nest Visit; ML1	20/07/2020	05:50	Swift	1	woodland and scrub; present	RV
Breeding Hen Harrier Survey; Meenbog	28/04/2019	12:56	Snipe	1	conifer plantation; calling, clearfell area 54.43.19n 07.53.08w	SF
Peregrine Nest Visit; PE1	16/05/2019	07:55	Snipe	1	conifer plantation; flying	SF
Peregrine Nest Visit; PE1	14/05/2020	15:54	Snipe	1	grassland and marsh; male singing for 120 seconds during a brief drizzly spell., singing from western slope	RV

Location	Date	Time	Species	Number	Habitat and activity	Surveyor
Merlin Nest Visit; ML1	14/05/2020	18:20	Snipe	1	grassland and marsh; male, displaying, heard not seen	RV
Merlin Nest Visit; ML1	20/07/2020	05:50	Snipe	2	not recorded; drumming, one close to merlin nest, one along roadside walking back to car	RV
Breeding Raptor Survey; ML1	20/07/2020	07:52	Snipe	1	wet grassland; calling, calling, but was not seen	RV
Breeding Raptor Survey; ML1	20/07/2020	07:54	Snipe	1	wet grassland; calling, calling, but was not seen	RV
Breeding Raptor Survey; PE1	12/07/2023	07:52	Snipe	1	wet grassland; travelling, snipe calling in flight from the grassland	LD
Breeding Raptor Survey; PE1	17/07/2023	10:16	Snipe	1	wet grassland; travelling, snipe heard calling in flight following a shower	LD

7.4 Receptor Evaluation

7.4.1 Determination of Population Importance

A determination of population importance for target species is provided in Chapter 7 of the 2017 EIAR and Chapter 7 of the accompanying EIAR for the Prospective Development. Population importance was determined following the criteria described in Section 7.2.4. Estimates of national population sizes were obtained from national surveys or Ireland's Article 12 Reporting 2008-2012 and 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 I-WeBS sites within County Donegal¹, 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.

7.4.2 Identification of Key Ornithological Receptors

The rationale for including or excluding each target species recorded during field surveys as a KOR is provided in Chapter 7 of the 2017 EIAR and Chapter 7 of the accompanying EIAR for the Prospective Development. The status, population importance evaluation following NRA (2009) and a detailed explanation for inclusion/exclusion as a KOR is provided.

All KORs identified in the 2017 EIAR and the accompanying EIAR for the Prospective Development are considered in this rEIAR. No pathways for direct or indirect effects were identified for the remaining target species. The KORs, and their conservation status or sensitive species group, are:

- Golden Eagle (Annex I & Raptor & Red List [breeding])
- Hen Harrier (Annex I & Raptor)
- White-tailed Eagle (Annex I & Raptor & Red List [breeding])
- Golden Plover (Annex I & Red List [breeding & wintering])

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

- › Merlin (Annex I & Raptor)
- › Peregrine Falcon (Annex I & Raptor)
- › Whooper Swan (Annex I)
- › Kestrel (Red List [breeding] & Raptor)
- › Red Grouse (Red List [breeding])
- › Snipe (Red List [breeding & wintering])
- › Woodcock (Red List [breeding])
- › Buzzard (Raptor)
- › Long-eared Owl (Raptor)
- › Sparrowhawk (Raptor)

7.4.3 Sensitivity Determination

Criteria developed by Percival (2003) for assessing bird sensitivity within a site is presented in Table 7-2 (Section 7.2.4). The sensitivity of the KORs, as per Percival (2003), are listed below, including the rationale for their respective sensitivity classification.

High Sensitivity KORs are:

- › Golden eagle (ecologically sensitive species, population of National Importance)
- › Hen harrier (ecologically sensitive species, breeding population of National Importance)
- › White-tailed eagle (population of National Importance)

Medium Sensitivity KORs are:

- › Golden plover (Annex I, population of County Importance)
- › Merlin (Annex I, population of County Importance)
- › Peregrine falcon (Annex I, population of County Importance)
- › Whooper swan (Annex I, population of County Importance)
- › Kestrel (BoCCI Red Listed)
- › Red grouse (BoCCI Red Listed)
- › Snipe (BoCCI Red Listed, population of County Importance)
- › Woodcock (BoCCI Red Listed)
- › Long-eared owl (population of County Importance)

Low Sensitivity KORs are:

- › Buzzard (conservation interest)
- › Sparrowhawk (conservation interest)

7.5 Impact Assessment

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

- › Assessment of ‘Do nothing’ scenario;
- › Assessment of the effects of the Existing Development (wind farm infrastructure) during and following construction;
- › Assessment of the effects associated with the Grid Connection;
- › Assessment of the effects on designated sites.

7.5.1 ‘Do-Nothing’ Scenario

The ‘Do-Nothing’ alternative is an alternative scenario to retaining and regularising the Existing Development. In this scenario, the Existing Development will remain in-situ as an unauthorised and partially completed wind farm, which is, in effect, the “Do-Nothing” alternative insofar as it represents the current situation as at the date of the application for Substitute Consent.

There would be no direct negative environmental effects as a result of implementing the “Do-Nothing” alternative. However, by implementing this ‘Do-Nothing’ alternative, the opportunity to capture a significant part of the country’s renewable energy resource by completing the Meenbog Wind Farm (subject to appropriate planning consents) would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions. The opportunity to generate local employment, local authority development contributions, rates and investment in the local area would also be lost. Furthermore, the opportunity to implement the proposed biodiversity enhancement measures would be lost. Please see Appendix 6-4 Biodiversity Management and Enhancement Plan of the EIAR for details. Under the “Do-Nothing” alternative, the opportunity to put in place the community benefit scheme proposed as part of the Prospective Development would also be lost.

There would be no additional effects on Ornithology associated with the “Do-Nothing” scenario and the effects of the “Do Nothing” scenario would be the same as those of the Existing Development described below.

7.5.2 Effects of the Existing Development

7.5.2.1 Effects Associated with Development of the Existing Development on the Wind Farm Site

The following sections describe the effects on KORs that occurred during and following construction. The magnitude and significance of these effects are then defined according to Percival (2003) and EPA, 2022 criteria. The impact assessment below is supported by survey data from 2015 to 2025. This large data set facilitates a robust assessment of short and long-term effects resulting from the Existing Development on the activity levels, abundance and frequency of occurrence of key ornithological receptors. Please note that approximately 90% of groundworks were completed during November 2019 to November 2020 and a large majority of deliveries to the Wind Farm Site occurred during this period. This core period of construction activity is what is presented in the figures that accompany each species-specific impact assessment. Hereafter referred to as the ‘core construction’ period or activities as relevant. More minor works continued intermittently from November 2020 to July 2020 and July 2022 to December 2022. For further details, please see Section 4.8.1.

7.5.2.1.1 Golden Eagle

Table 7-9 Golden eagle description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Golden eagle were not observed to be using habitats within the Wind Farm Site boundary. The dense commercial forestry plantations throughout the Wind Farm Site do not provide optimal habitat for this species. Following the construction of the Existing Development, the Wind Farm Site has been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants². Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for golden eagle as a result of the Existing Development.	The magnitude of the effect is assessed as Negligible. When a High sensitivity species is cross-referenced with a Negligible impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant .

² The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	Golden eagle are infrequent visitors to the area surrounding the Wind Farm Site, and were not recorded using the Wind Farm Site for hunting or breeding on any occasion. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	Golden eagle are infrequent visitors to the area surrounding the Wind Farm Site, and were not recorded using the Wind Farm Site for hunting or breeding on any occasion. This species was recorded sporadically during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present during some breeding seasons throughout the survey period (2016, 2017, 2020, 2021, 2023 and 2025; see golden eagle activity table below). There were also observations of a pair of golden eagle in the vicinity of Lough Shinnagh, to the south-west of the Wind Farm Site, in August 2014, which are described in the 2017 EIAR. The distribution of golden eagle remained similar across this period: birds tended to be observed in or in proximity to the Barnesmore Gap, west of the Wind Farm Site, with occasional occurrences of birds flying over the western section of the Wind Farm Site. The abundance of golden eagle remained relatively stable across this period (see golden eagle abundance graph below). Overall, at least three separate birds were recorded during surveys (male, female and an immature bird), however, individuals were recorded in most seasons (2016, 2017, 2021, 2023 and 2025) and two birds (male and female) were recorded in 2020. Compared to 2016 and 2017, the frequency of occurrence of golden eagle slightly increased in 2020, 2021 and 2023, but was similar in 2025 (after accounting for variation in survey effort; see golden eagle frequency graph below). Activity remained consistent: birds were observed travelling and	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant .

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	soaring during all seasons in which they were recorded, and occasionally hunting (2023) and resting (2016) see golden eagle activity table below). The core period of construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. The survey data provide no evidence of a meaningful change in golden eagle distribution, activity or abundance during the construction activity, while the frequency increased in 2020/2021/2023 before returning to 2016/2017 levels in 2025. Following the construction of the Existing Development, the Wind Farm Site has been stabilised and there is no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on golden eagle as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-10 Golden eagle activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present			✓		✓		✓	✓		✓				✓
travelling/ soaring			✓		✓		✓	✓		✓				✓
hunting										✓				
Resting/ perched			✓											

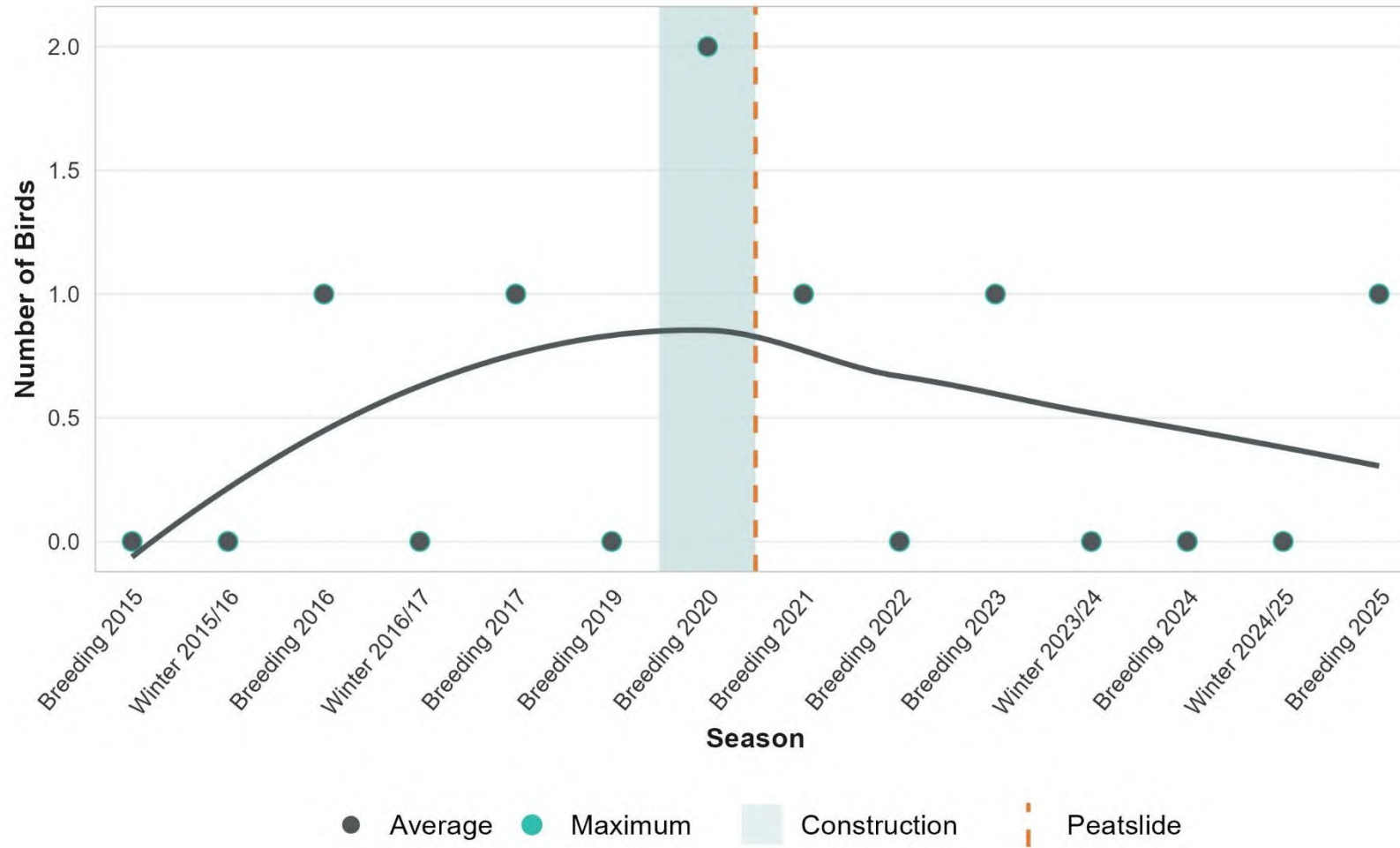


Figure 7-1 Golden eagle abundance

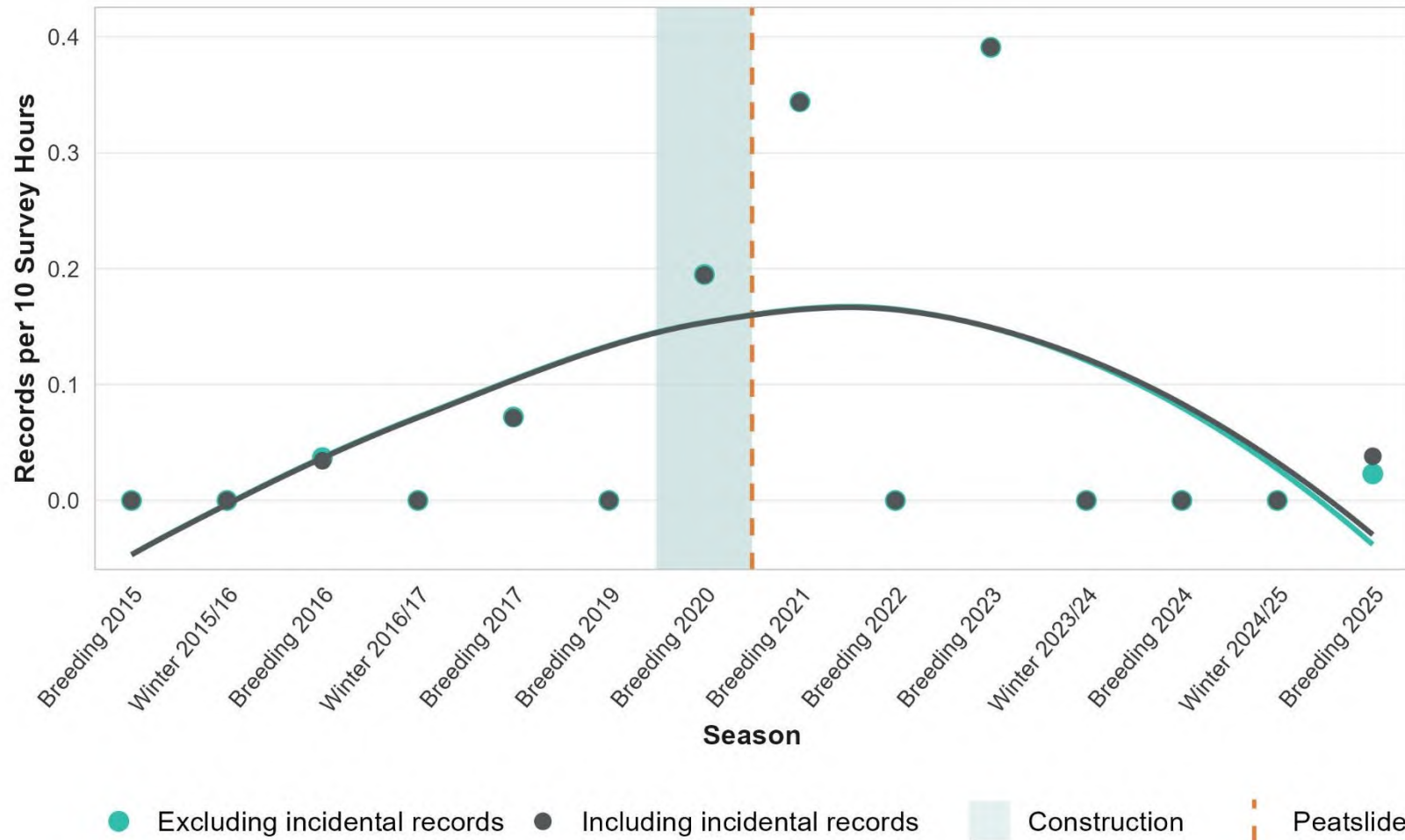


Figure 7-2 Golden eagle frequency

7.5.2.1.2 Hen Harrier

Table 7-11 Hen harrier description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Hen harrier have been recorded breeding within the Wind Farm Site during the 2020, 2021, 2024 and 2025 breeding seasons. The four nests were not in the same location each year, but moved within a distance of approximately 2km within the Wind Farm Site. Additionally, during supplemental surveys prior to the core survey period, a probable territory was identified at Killeter in 2019, approximately 2.4km outside the Wind Farm Site. In subsequent years, a roaming male was resident here, and did not appear to have a mate. Records of hen harrier were therefore clustered around these breeding sites, with frequent hunting activities around the nests and forays into the wider area. Habitat usage by hen harrier was largely of bog habitats with flights over conifer plantation also regular. Hen harrier were also recorded infrequently during the winter season. No hen harrier roosting activity was recorded at the Wind Farm Site, as birds were only seen to travel through and hunt within the Wind Farm Site during the winter season. Roosting was recorded in bog in Tievecloghoge/Meenlaught, approximately 2.5km east of the Wind Farm Site. This includes observations from surveys conducted from October 2013 to September 2014, which are described in the 2017 EIAR. No habitat loss occurred at any of the breeding locations for hen harrier as they are all located outside the footprint of the Existing Development. Similarly, no habitat loss occurred at any of the roosting locations as they are all located outside the Wind Farm Site. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss was that	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of low ecological value for hen harrier. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants³. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for hen harrier as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As above, hen harrier have been recorded breeding within the Wind Farm Site during the 2020, 2021, 2024 and 2025 breeding seasons. Additionally, a probable territory was identified at Killeter in 2019, approximately 2.4km outside the Wind Farm Site, and a roaming male was resident here in subsequent years. Records of hen harrier were clustered around these breeding sites, with frequent hunting activities around the nests and forays into the wider area. Hen harrier were also recorded infrequently during the winter season, travelling through and hunting within the Wind Farm Site, and roosting was recorded in bog in Tievecloghoge/Meenalaught, approximately 2.5km east of the Wind Farm Site. This includes observations from surveys conducted from October 2013 to September 2014, which are described in the 2017 EIAR.	The magnitude of the effect is assessed as High. When a High sensitivity species is cross referenced with a High impact, this corresponds to a Very High effect significance. No significant residual effects were identified (see Section 7.6.4).	Short-term very significant negative effect. No significant residual effects were identified (see Section 7.6.4).

³ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Hen harrier were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every season of the survey (see hen harrier activity table below). Breeding activity was recorded in 2019 (Killeter), 2020, 2021, 2024 and 2025 (at the Wind Farm Site). Winter roosting was only recorded in the initial period from April 2015 to September 2017⁴. Hunting was regularly recorded from winter 2016/17 onwards (with the exception of breeding season 2023). The distribution of hen harrier remained similar across this period: the 2020, 2021, 2024 and 2025 nests were not in the same location each year, but moved within a distance of approximately 2km within the Wind Farm Site. Records of hen harrier were clustered around these breeding sites, with frequent hunting activities around the nests and forays into the wider area to the north (Croaghonagh) and immediately south (Barnesmore/Carrickaduff) of the Wind Farm Site, as well as to the far east of the Wind Farm Site (Meenbog, Tievecloghoge and Meenalaught). Other records were clustered around the probable territory at Killeter. The abundance of hen harrier was initially low across this period (breeding 2015 and winter 2015/16) but increased in breeding season 2016 and then remained relatively stable until breeding season 2025 (see hen harrier abundance graph below). Between two and three birds were observed in most seasons (the breeding pair and a male from the Killeter territory). The frequency of occurrence of hen harrier also remained relatively stable across this period (after accounting for variation in survey effort; see hen		

⁴ This may be due to a change in the area surveyed rather than an absence of roosting birds, as winter surveys in Tievecloghoge/Meenalaught were only conducted during the initial period April 2015 to September 2017.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
harrier frequency graph below). There was a slight increase in the number of records in breeding season 2019 and 2020, , as the surveys focussed on a pair at their nest. The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. The survey data provide no evidence of a meaningful change in hen harrier distribution, activity, abundance or frequency during the construction activity. Breeding was attempted at the Wind Farm site during the construction activity in 2020 and the season following in 2021. There was no evidence of breeding in 2022 and 2023, before breeding was again attempted in 2024 and 2025. Given that the birds attempted breeding in 2021, the lack of an attempt in 2022 and 2023 is unlikely to be attributed to disturbance from the Existing Development. Young were not recorded successfully fledged from the nest in any year – no activity at the nest sites was recorded after June in 2020, after May in 2021, after July in 2024, and after May in 2025. It is possible that construction activity disturbed the breeding pair from their nest in 2020. However, the pattern of activity suggests nest failure in all subsequent years (2021, 2024 and 2025) despite no construction activity being underway (within disturbance range) at the time. There are a range of other environmental or anthropogenic factors that affect hen harrier breeding success. Therefore, it is difficult to determine whether nest failure in 2020 can be attributed to the construction activity or other environmental or anthropogenic factors (or a combination of both). However, on a precautionary basis, the magnitude of the effect of disturbance, if any occurred, as a result of the Existing Development is assessed to be high. The data indicate that the effect of disturbance, if any occurred, was a temporary, short-term effect: hen harrier established a nest site the first breeding season after the core construction works stopped. This was		

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	approximately 770m from the nest site used in 2020 and was closer to the works area than in 2020. Following the construction of the Existing Development, the Wind Farm Site has been stabilised and there is no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on hen harrier as a result of the Existing Development. Therefore, the residual effect of disturbance is assessed to be low. A comprehensive Biodiversity Management and Enhancement Plan (BMEP) is proposed (see Section 7.6.3 of the accompanying EIAR for the Prospective Development and the BMEP submitted as part of this application). This includes habitat enhancement measures for hen harrier.		

Table 7-12 Hen harrier activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
flying/ travelling	✓	✓		✓	✓				✓	✓	✓	✓	✓	✓
hunting				✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
resting (summer) or winter roosting	✓	✓	✓	✓										
breeding						probable	confirmed	confirmed				confirmed		confirmed

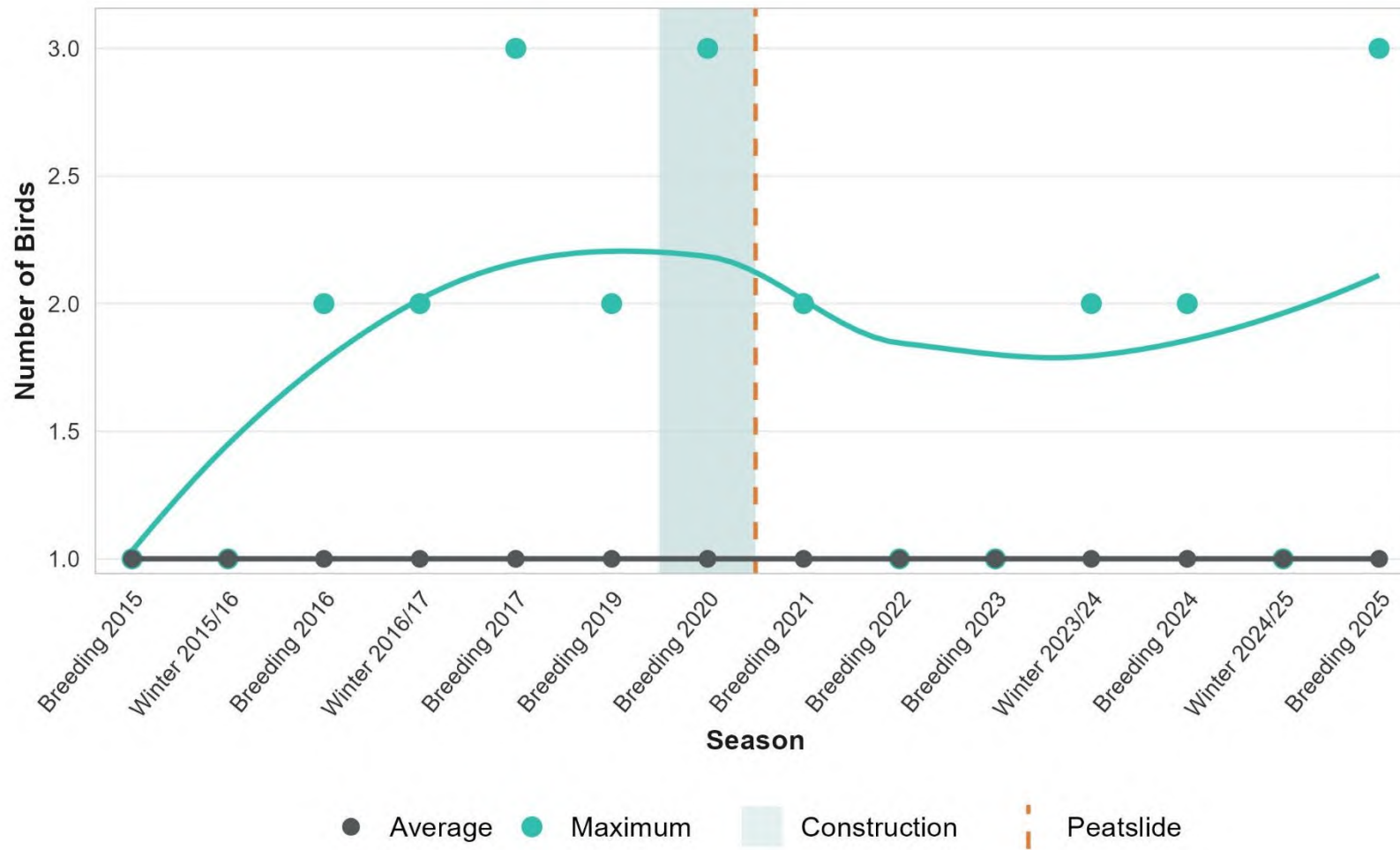


Figure 7-3 Hen harrier abundance

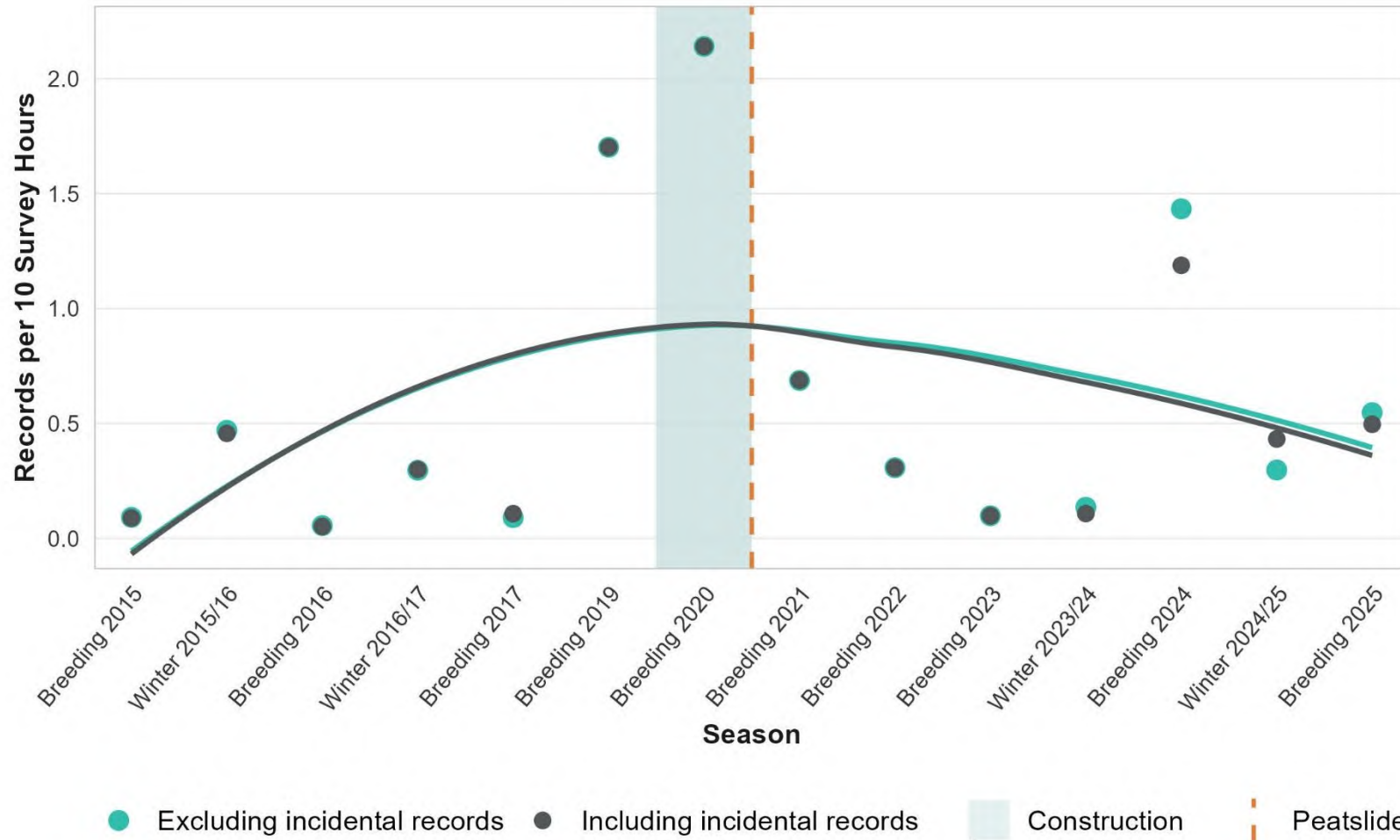


Figure 7-4 Hen harrier frequency

7.5.2.1.3 White-tailed Eagle

Table 7-13 White-tailed eagle description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	A white-tailed eagle nest site was identified approximately 8km outside the Wind Farm Site. No habitat loss occurred at the breeding location for white-tailed eagle as it is located outside the Wind Farm Site boundary. The dense commercial forestry plantations throughout the Wind Farm Site do not provide optimal habitat for this species. Following the construction of the Existing Development, the Wind Farm Site has been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants⁵. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for white-tailed eagle as a result of the Existing Development. White-tailed eagle are infrequent visitors to the Wind Farm Site, and were not recorded using the Wind Farm Site for hunting or breeding on any occasion. A single bird was observed within 500m of the Wind Farm Site on one date in January 2024 when an individual was perched within conifer plantation approximately 320m to the north of the Wind Farm Site. The Wind Farm Site is located outside the core foraging range of white-tailed eagle associated with the nest site (5km; SNH, 2016) therefore it is possible that the bird observed along the Mourne Beg River is not associated with the breeding pair.	The magnitude of the effect is assessed as Negligible. When a High sensitivity species is cross-referenced with a Negligible impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant.

⁵ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	A white-tailed eagle nest site was identified approximately 8km outside the Wind Farm Site. White-tailed eagle were not recorded within the Wind Farm Site on any occasion, however, as above, a single bird was observed within 500m of the Wind Farm Site on one date in January 2024. Birds were also recorded soaring and travelling through the wider area on occasion. White-tailed eagle were recorded during the survey periods April 2019 to July 2023 and September 2023 to September 2025. This species was first recorded in breeding season 2021 and then again from winter 2023/24 to breeding season 2025 (see white-tailed eagle activity table below). Flying and soaring was recorded in breeding season 2021. However, courtship was recorded in winter 2023/24, followed by breeding in 2024 and again in 2025. The distribution of white-tailed eagle remained similar across the seasons in which they were recorded within this period: breeding was recorded in the same territory at a lake approximately 8km outside the Wind Farm Site and activity was concentrated in this area in 2024 and 2025. Birds were occasionally recorded in the vicinity of the Barnesmore Gap, with one observation further east and one observation further north. The abundance of white-tailed eagle was variable across this period, with an increasing trend from 2021 onwards (see white-tailed eagle abundance graph below). This includes counts of two adults with two juveniles in 2025. This may reflect the maturation and dispersal of Irish-bred eagles hatched from reintroduced adults brought into Ireland in 2007-2011, or the second phase of the reintroduction programme which started in 2020. The frequency of occurrence of white-tailed eagle similarly increased from 2021 onwards (after	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant .

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	accounting for variation in survey effort; see white-tailed eagle frequency graph below). The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. White-tailed eagle were not recorded during surveys prior to 2021, however since then have been recorded nesting in two consecutive years approximately 8km from the Wind Farm Site. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on white-tailed eagle as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-14 White-tailed eagle activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present								✓			✓	✓		✓
flying/ travelling/ soaring								✓			✓	✓	✓	
hunting														
resting											✓	✓	✓	✓
breeding											courtship	confirmed		confirmed

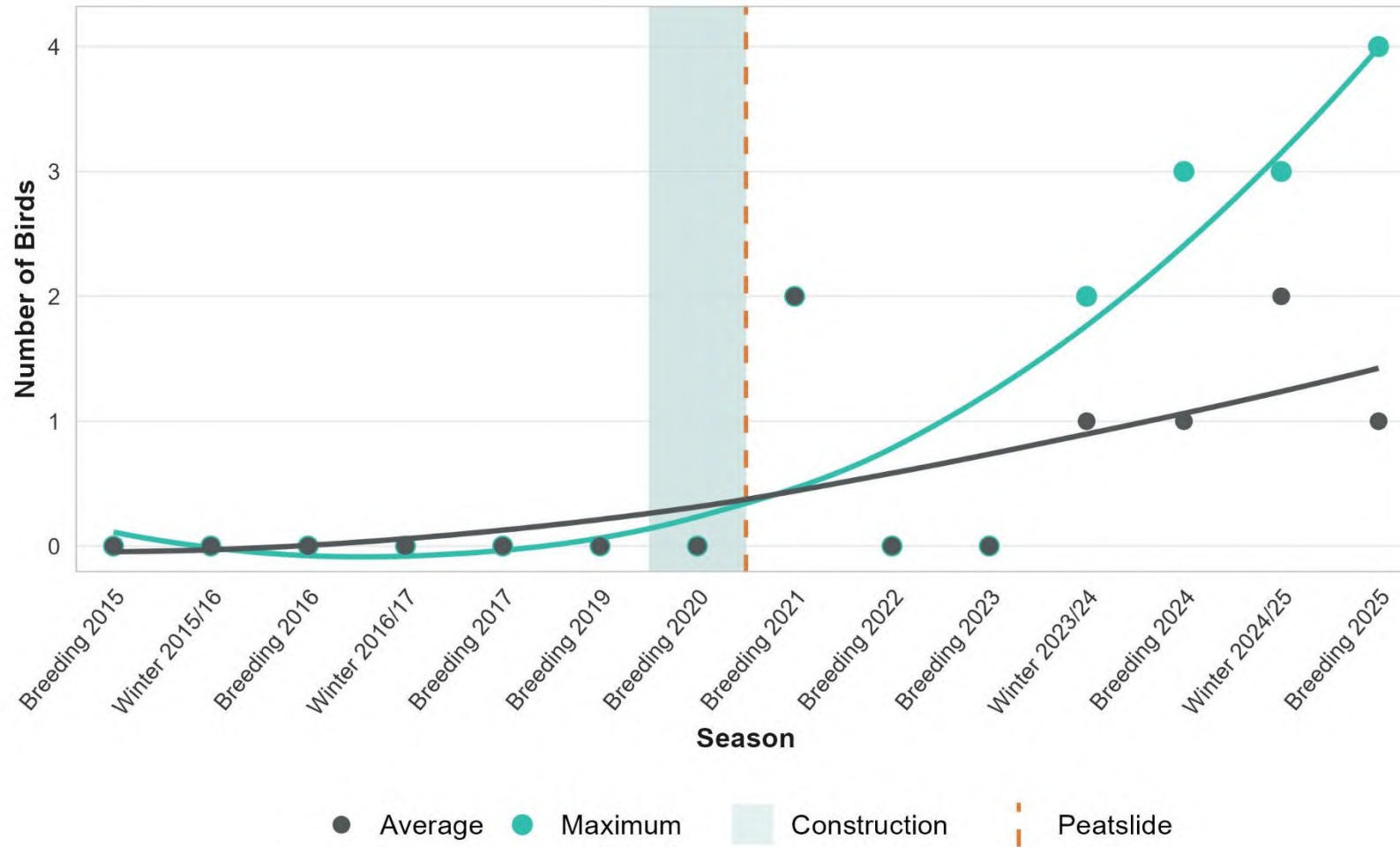


Figure 7-5 White-tailed eagle abundance

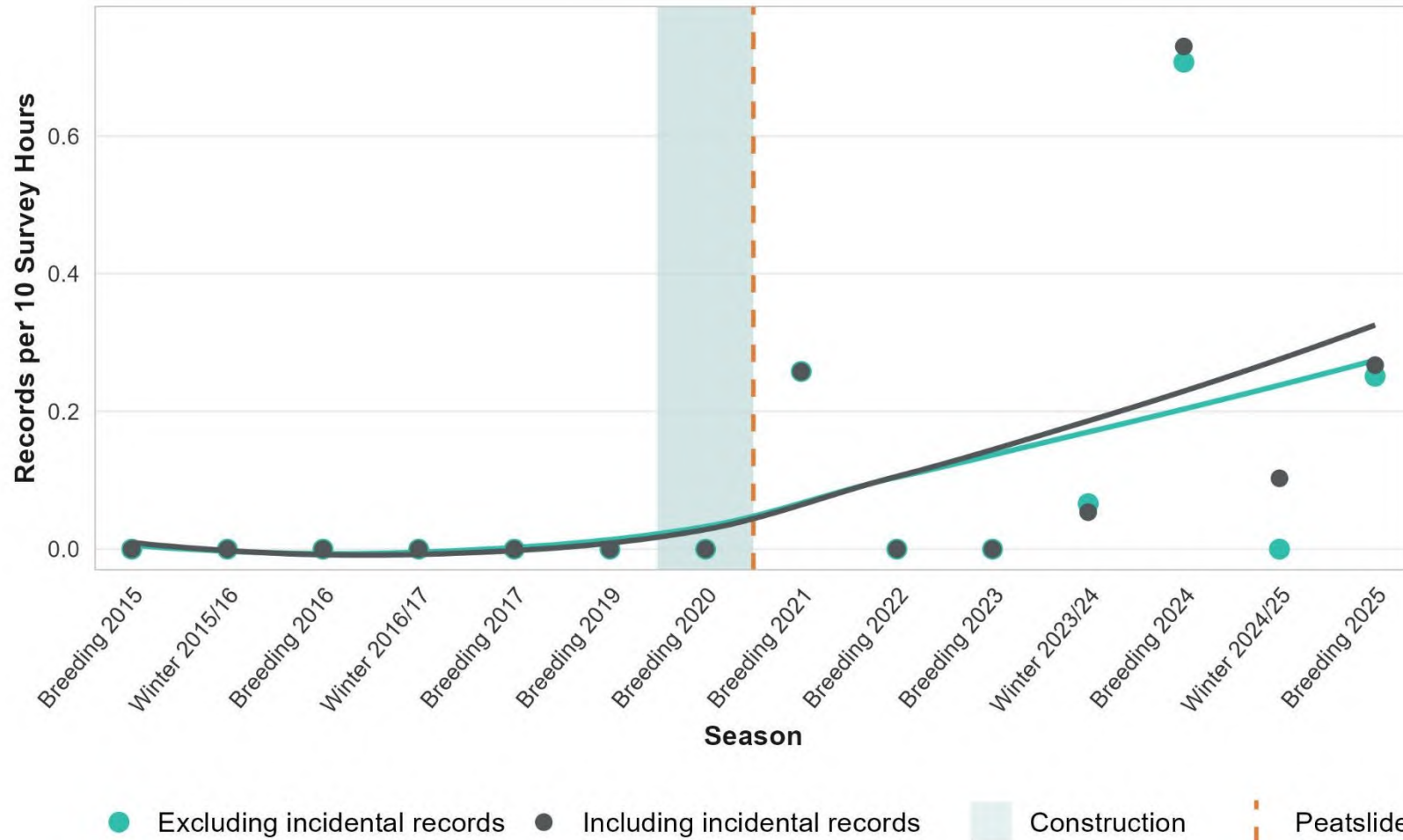


Figure 7-6 White-tailed eagle frequency

7.5.2.1.4 Golden Plover

Table 7-15 Golden plover description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	The majority of records of golden plover were in the wider area, including in the area of Barnesmore Wind Farm and the surrounding bog habitats, over 1.4km to the southwest of the Wind Farm Site, at Tievecloghoge. Lough Morne and Trusk Lough. Golden plover were also recorded in the general area between October 2013 and April 2014, as well as September 2014, which are described in the 2017 EIAR. This species was never recorded utilising habitats within the Wind Farm Site for breeding, roosting or foraging. Records of golden plover within the Wind Farm Site were infrequent, and were of birds flying through or circling over the area of bog in the northeast of the Wind Farm Site. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss will be that of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of no ecological value for golden plover. This species is not dependent upon the Wind Farm Site for foraging or roosting during the winter period, given how infrequently birds were seen flying within the Wind Farm Site and the lack of any records of birds using the Wind Farm Site. Where golden plover were recorded within the Wind Farm Site, the birds were seen travelling through the area and circling. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants⁶. Forestry activity	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

⁶ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As above, the majority of records of golden plover were in the wider area. This species was never recorded utilising habitats within the Wind Farm Site for breeding, roosting or foraging. Records of golden plover within the Wind Farm Site were infrequent, and were of birds flying through or circling. Golden plover were recorded during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present in the majority of seasons; they were not recorded in winter 2015/16, breeding season 2021 or 2022 (see golden plover activity table below). Calling and flying/travelling/circling was recorded throughout the period, while foraging and roosting was sporadically recorded. Probable breeding was recorded in 2017. The distribution of golden plover remained similar across this period. Birds were recorded through the wider area, often associated with lakes, while records within the Wind Farm Site were infrequent and sporadic. The abundance of golden plover remained relatively stable across this period (see golden plover abundance graph below). While the average number of birds remained stable overall, the maximum number of birds varied across the years, due to some large wintering flocks. When interpreting the abundance graph, it should be noted that no surveys targeting golden plover were conducted between breeding season 2019 and 2023, which may account for the low numbers observed at this time, as only incidental records were made of this species.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
The frequency of occurrence of golden plover also decreased in breeding season 2021 and 2022 (after accounting for variation in survey effort; see golden plover frequency graph below), likely due to the same reason. The overall trend was towards a very minor increase over the period when considering all records (including incidental records). Construction activity did not begin at the Wind Farm Site until November 2019. Golden plover frequency remained at pre-2019 levels during construction, although the abundance declined and both the abundance and frequency were low in breeding season 2022 and 2023. However, as described above, this may be due to the lack of surveys targeting golden plover during this period, and because no winter surveys were conducted, when golden plover are much more likely to be present. The abundance and frequency had returned to pre-2019 levels by the time of the next winter season survey in 2023/24. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there is no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on golden plover as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-16 Golden plover activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present/ calling	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
flying/ travelling/ circling	✓			✓			✓				✓	✓	✓	✓
foraging	✓					✓								
resting/ roosting	✓			✓								✓		
breeding					probable									

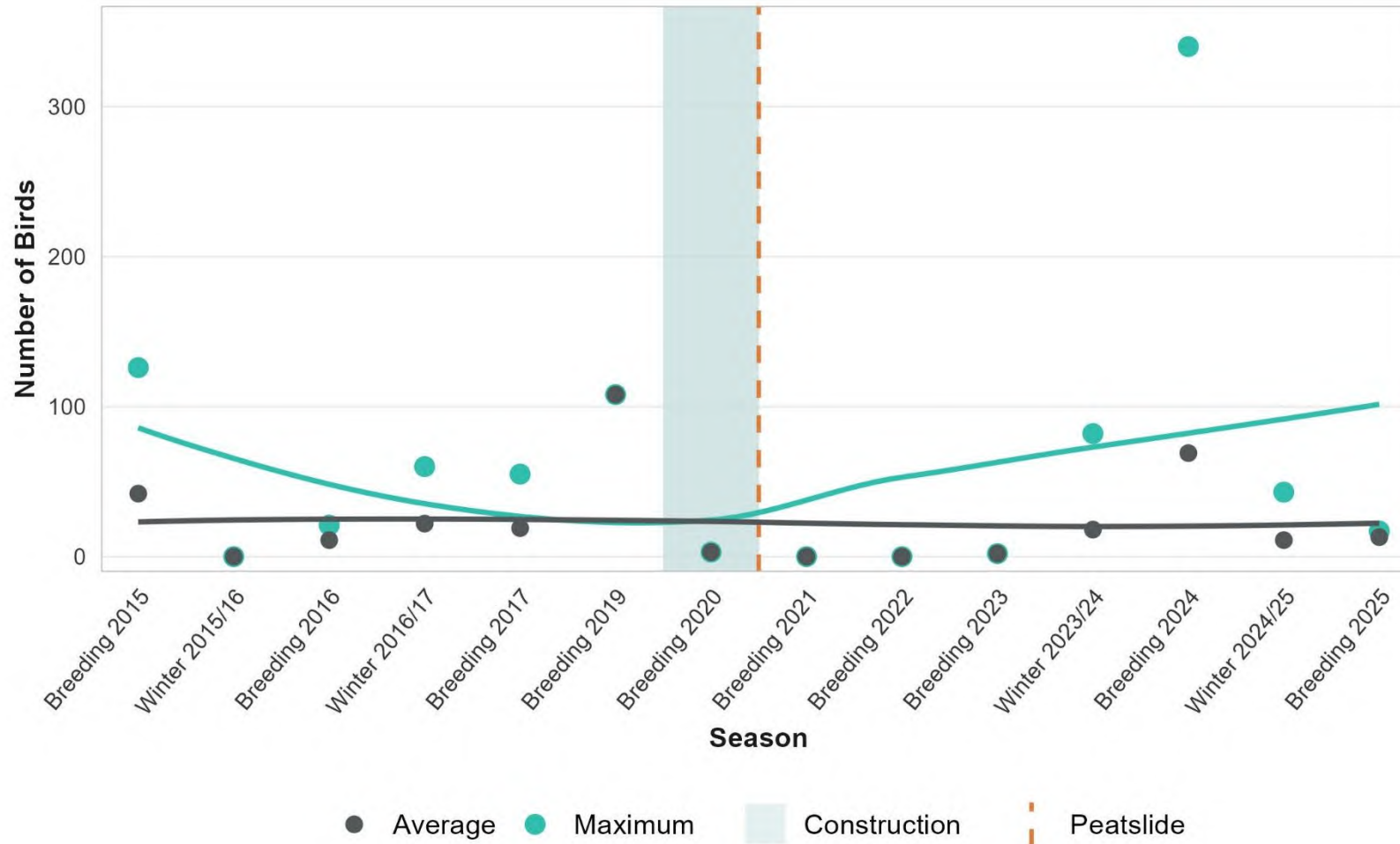


Figure 7-7 Golden plover abundance

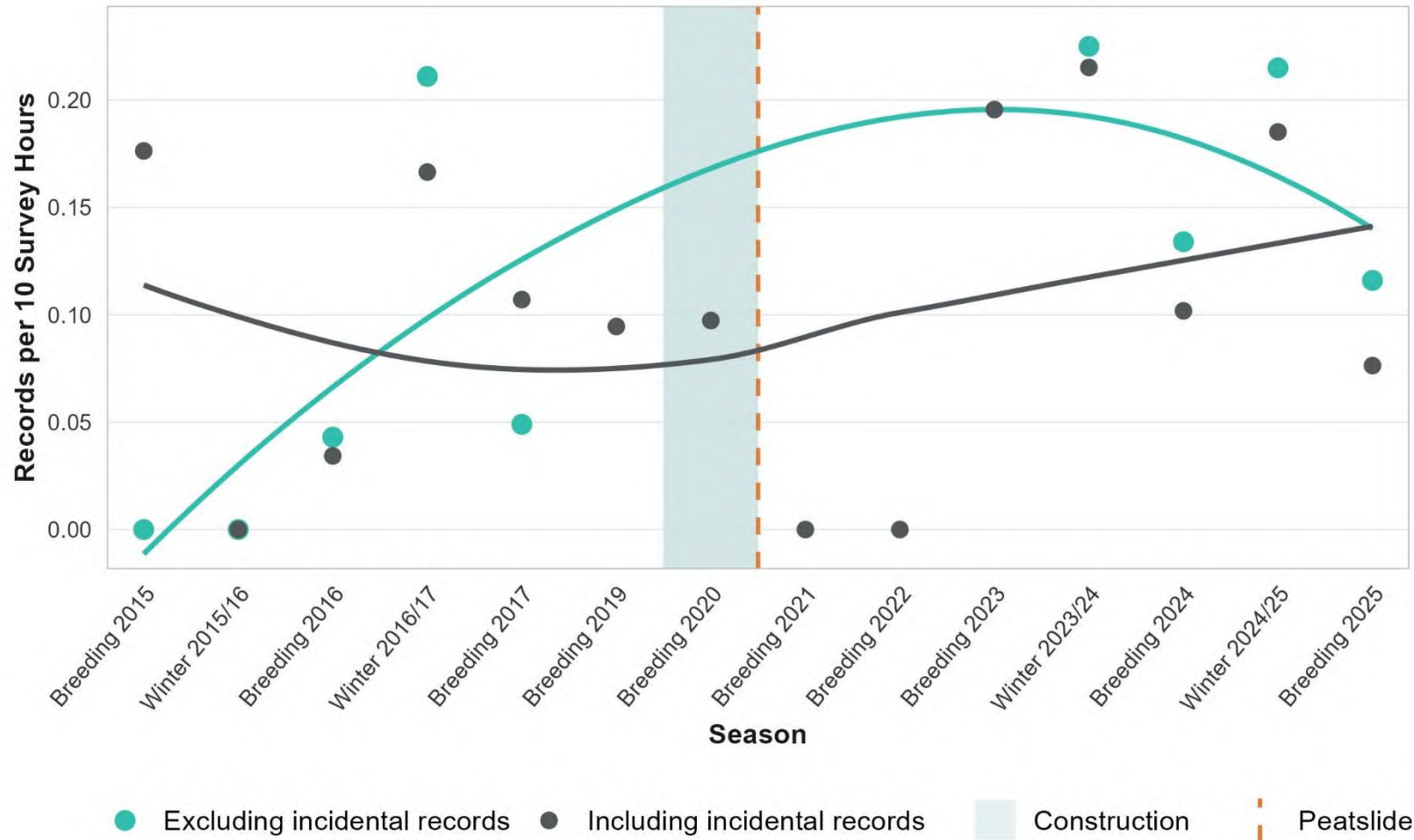


Figure 7-8 Golden plover frequency

7.5.2.1.5 Merlin

Table 7-17 Merlin description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Merlin were recorded breeding at a location on Barrack Hill, with probable breeding in 2016 and 2017, confirmed breeding in 2019, 2020 and 2021, and probable breeding again in 2023 and 2025. These breeding sites are located 0.5-1.5km outside the Wind Farm Site, with records of merlin therefore clustered in this area throughout the surveys. Merlin were recorded within the Wind Farm Site on four occasions - an incidental record of a bird perched on a fence post which then flew away from the Wind Farm Site and three times flying. Birds likely associated with the nest sites were recorded flying within 500m of the Wind Farm Site, and merlin were also recorded using the wider area for hunting on occasion. Merlin were also recorded in the general area six times between October 2013 and September 2014, which are described in the 2017 EIAR. No habitat loss occurred at any of the identified breeding locations for merlin as they are all located outside the Wind Farm Site boundary. In addition, no habitat loss occurred in the bog and heath habitats in the areas surrounding the nesting site where merlin activity was concentrated, as this area is also outside the Wind Farm Site boundary. The Wind Farm Site is located within the core foraging range of merlin (5km; SNH, 2016) therefore, on an extremely precautionary basis, there is potential for birds associated with the nest site at Barrack Hill to use the habitats within the Wind Farm Site for hunting. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss will be that of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of low ecological value for merlin. This species is not dependent upon the	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	Wind Farm Site for hunting or breeding, given the sparsity of records of birds within the Wind Farm Site. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site) Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants⁷. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for merlin as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, merlin were recorded probable breeding on Barrack Hill in 2016 and 2017, confirmed in 2019, 2020 and 2021, and probable breeding again in 2023 and 2025, 0.5-1.5km outside the Wind Farm Site, with records of merlin therefore clustered in this area throughout the surveys. Merlin were recorded within the Wind Farm Site on four occasions. Birds likely associated with the nest sites were recorded flying within 500m of the Wind Farm Site, and merlin were also recorded using the wider area for hunting on occasion, and in the general area six times between October 2013 and September 2014. Merlin were recorded during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every breeding season surveyed between 2016 and 2025, and during winter 2016/17 (see merlin activity table below). Breeding was probable	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

⁷ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
or confirmed every year except 2022 and 2024. Hunting, resting and travelling was observed in several seasons. The distribution of merlin remained similar across this period: breeding was recorded in Barrack Hill and activity was concentrated in this area in 2016, 2017, 2019, 2020, 2021, 2023 and 2025. Birds were occasionally recorded in the vicinity or in the Wind Farm Site throughout the period. The average abundance of merlin remained relatively stable across this period (see merlin abundance graph below), particularly during breeding seasons. Between one and two birds were recorded in most seasons, with a maximum of five and three in 2019 and 2020 respectively (juveniles with adults). The frequency of occurrence of merlin was highest between 2019 and 2023 (after accounting for variation in survey effort; see merlin frequency graph below), but this could be an artefact of the surveyor's surveys focussed on a pair at their nest. The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. Merlin abundance and frequency of occurrence was highest at this time, although, as described above, this may be an artefact in the data rather than an uptake in merlin activity. No decline or absence of merlin from their usual habits was detected during or immediately following construction. No breeding was recorded in 2022, however, given that breeding was confirmed in 2020 and 2021 (during and immediately after core construction), this is not attributed to disturbance from construction activity. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further		

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	disturbance and no evidence of any ongoing disturbance impact on merlin as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-18 Merlin activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present			✓	✓	✓	✓	✓	✓	✓	✓		✓		✓
flying/ travelling			✓	✓	✓	✓		✓	✓	✓		✓		✓
hunting						✓	✓	✓	✓	✓				
resting (summer) or winter roosting			✓			✓						✓		
breeding			probable		probable	confirmed	confirmed	confirmed		probable				probable

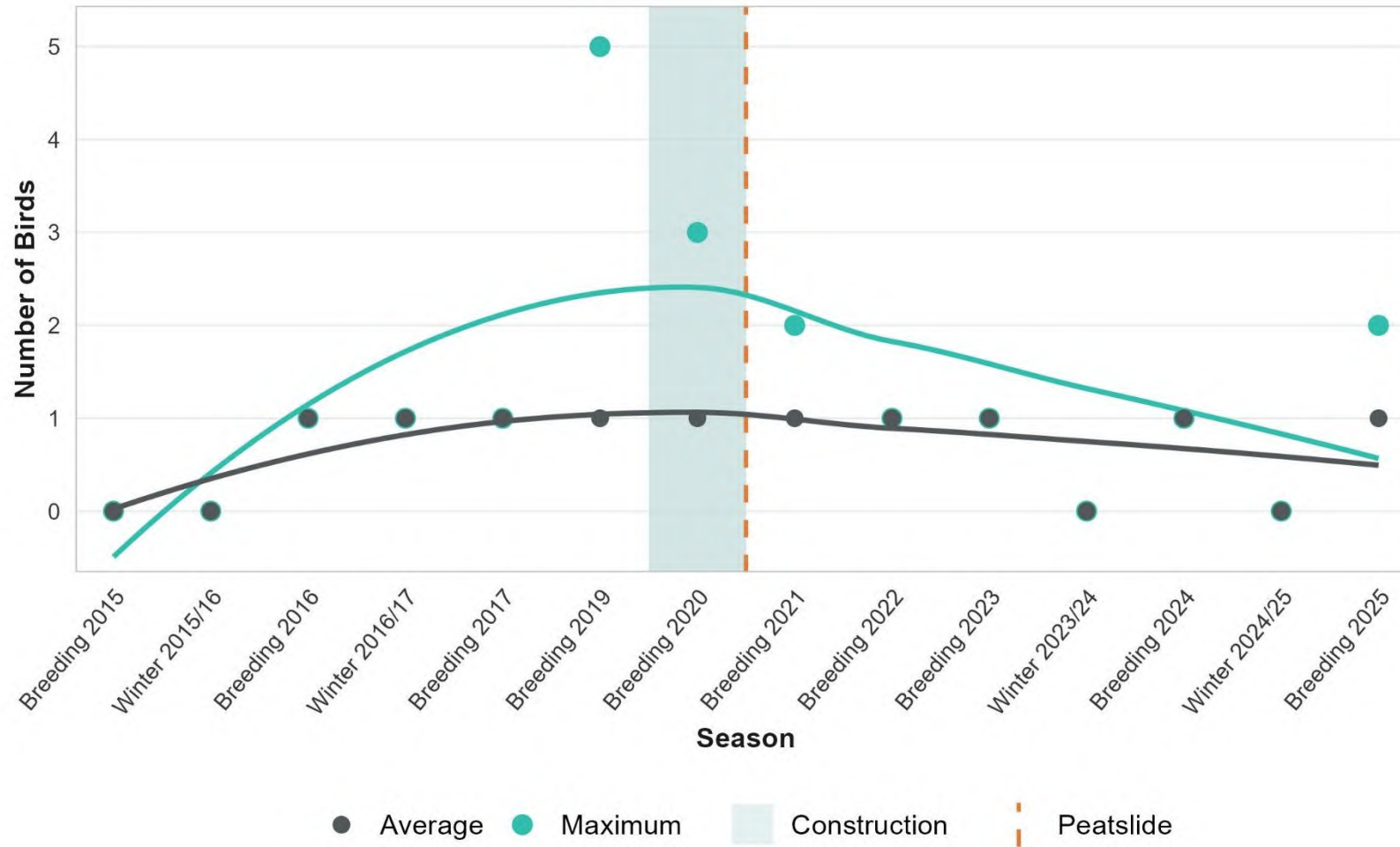


Figure 7-9 Merlin abundance

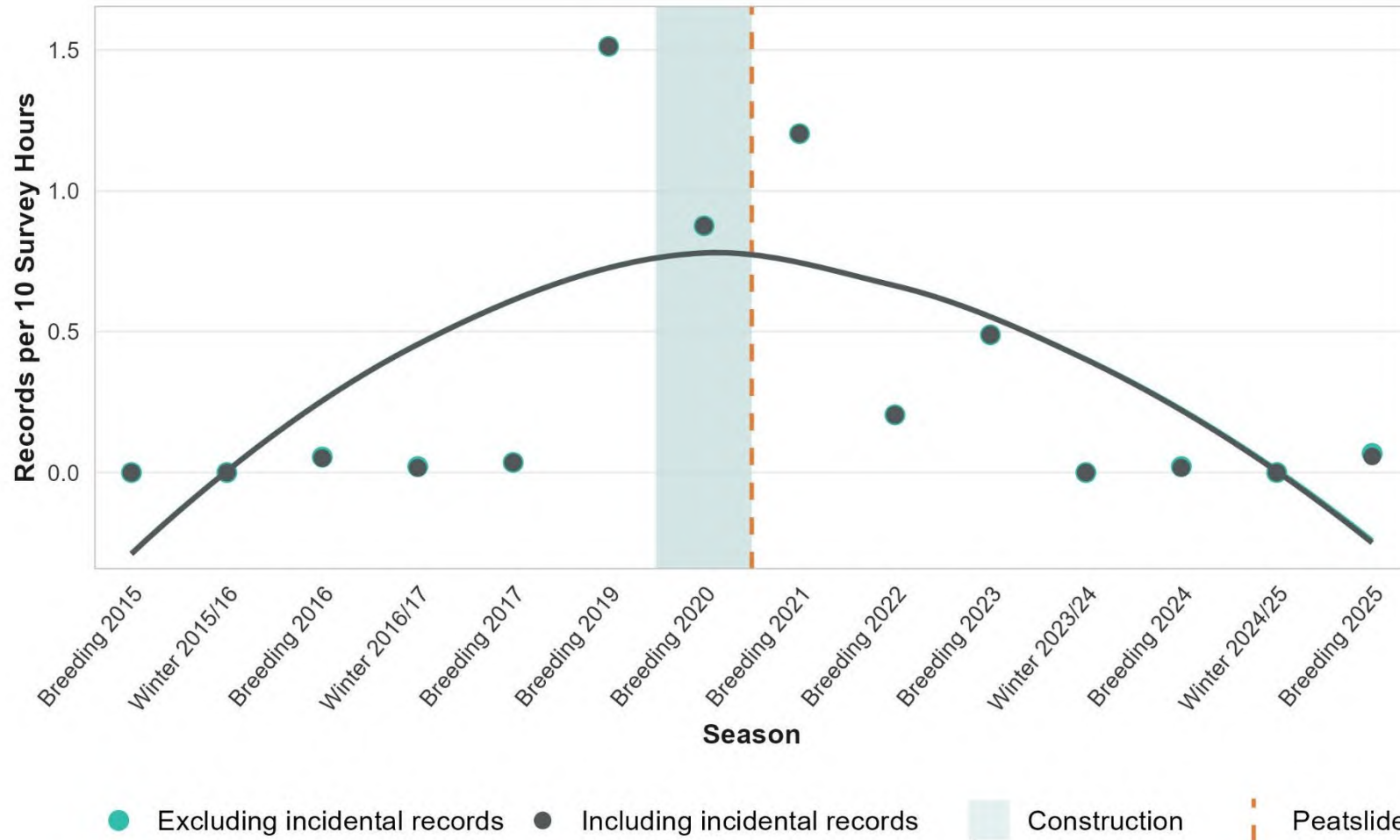


Figure 7-10 Merlin frequency

7.5.2.1.6 Peregrine Falcon

Table 7-19 Peregrine falcon description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Peregrine falcon were confirmed to be breeding within a territory in the Barnesmore Gap outside the Wind Farm Site in 2017, 2021 and 2023, with probable breeding also in 2020, 2022, 2024 and 2025, and possible breeding in 2019, approximately 1.5-2.5km outside the Wind Farm Site. Records of peregrine falcon were therefore clustered in this area throughout the surveys. In 2024, it is possible that there was also a separate breeding pair approximately over 3km to the south of the Wind Farm Site, though it is uncertain if this was actually the same pair as from the Barnesmore Gap. Peregrine falcon were infrequently recorded within the Wind Farm Site, travelling through, and were recorded travelling and hunting within the wider area on occasion. Peregrine falcon were also recorded in the general area between October 2013 and September 2014, which is described in the 2017 EIAR. No habitat loss occurred at any of the identified breeding locations for peregrine falcon as they are all located outside the Wind Farm Site boundary. In addition, no habitat loss occurred in the bog and heath habitats in the areas surrounding the nesting site where peregrine falcon activity was concentrated, as this area is also outside the Wind Farm Site boundary. The peregrine falcon territory at the Barnesmore Gap is located approximately 1.5-2.5km outside the Wind Farm Site and as such is located within the core foraging range of peregrine falcon (2km; SNH, 2016) therefore, on a precautionary basis, there is potential for birds associated with the territory to use the habitats within the Wind Farm Site for hunting. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss was that of conifer	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of low ecological value for peregrine falcon. This species is not dependent upon the Wind Farm Site for hunting or breeding, given the sparsity of records of birds within the Wind Farm Site and lack of any recorded hunting activity within the Wind Farm Site. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants⁸. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for peregrine falcon as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, peregrine falcon were breeding in the Barnesmore Gap in 2017, 2021 and 2023 (confirmed), 2020, 2022, 2024 and 2025 (probable), and 2019 (possible), approximately 1.5-2.5km outside the Wind Farm Site, with records of peregrine falcon clustered in this area throughout the surveys. Peregrine falcon were infrequently recorded within the Wind Farm Site, travelling through, and were recorded travelling and hunting within the wider area on occasion, as well as in the general area between October 2013 and September 2014.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

⁸ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Peregrine falcon were recorded during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every breeding season of the surveys between 2016 and 2025, and during winter 2016/17 and 2024/25 (see peregrine falcon activity table below). Breeding was possible, probable or confirmed every year except 2016. Hunting, resting and travelling was observed in several seasons. The distribution of peregrine falcon remained similar across this period: possible, probable or confirmed breeding was recorded in the Barnesmore Gap and activity was concentrated in this area in 2017, 2019, 2020, 2021, 2022, 2023, 2024 and 2025. Birds were occasionally recorded in the vicinity or in the Wind Farm Site throughout the period. The average abundance of peregrine falcon increased in 2016 and then remained relatively stable until 2025 (see peregrine falcon abundance graph below), particularly during breeding seasons. Between one and two birds were recorded in most seasons, with a maximum of three in 2021 (juveniles and adults). The frequency of occurrence of peregrine was highest between 2021 and 2022 (after accounting for variation in survey effort; see peregrine falcon frequency graph below), but this could be an artefact of the surveyor's focus on a pair at their nest. The trend was towards an overall increase in the frequency of occurrence at the end of the survey period compared to the beginning. The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. Peregrine falcon frequency of occurrence was highest the two years immediately after this, although, as described above, this may be an artefact in the data rather than an uptake in peregrine falcon activity. No		

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	decline or absence of peregrine from their usual habits was detected during or immediately following construction. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on peregrine falcon as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-20 Peregrine falcon activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
flying/ travelling			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
hunting					✓		✓	✓	✓			✓		✓
resting (summer) or winter roosting								✓						✓
breeding					confirmed	possible	probable	confirmed	probable	confirmed		probable		probable

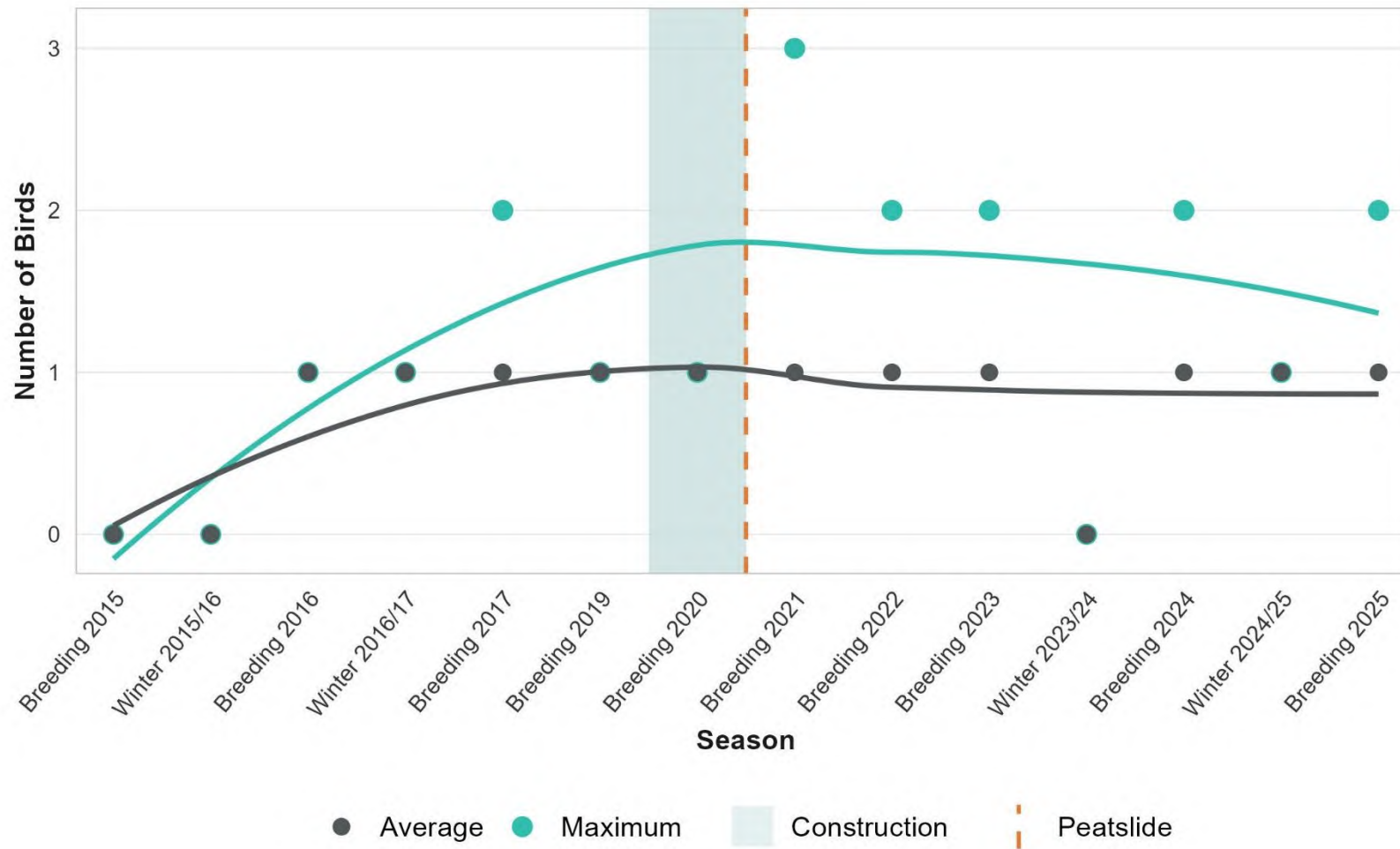


Figure 7-11 Peregrine falcon abundance

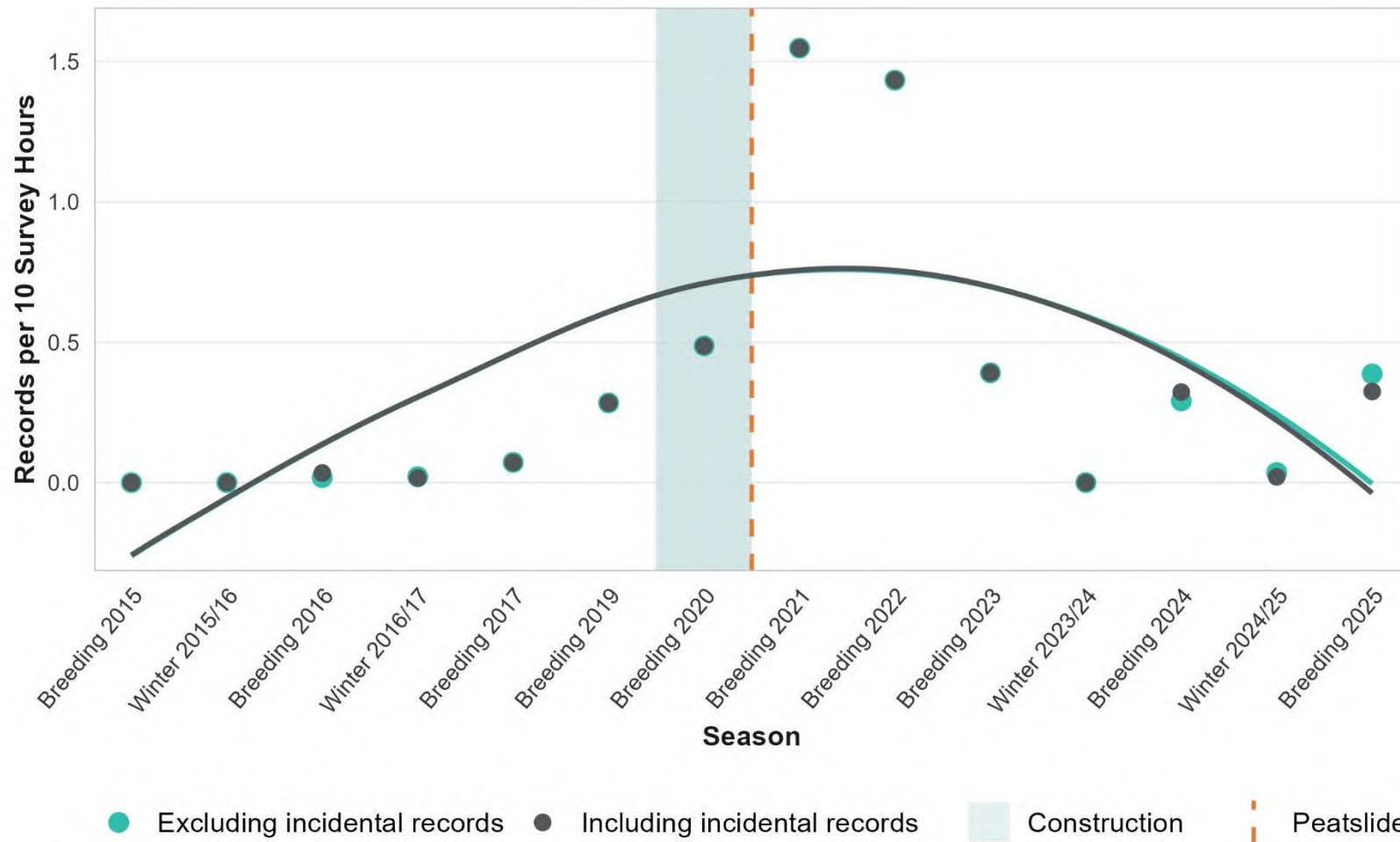


Figure 7-12 Peregrine falcon frequency

7.5.2.1.7 Whooper Swan

Table 7-21 Whooper swan description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Whooper swan were recorded during the winter and passage seasons in the survey period 2015 to 2025, as well as between October 2013 and September 2014, which is described in the 2017 EIAR. Records were predominantly those of birds in flight both over the Wind Farm Site and the wider area. There were no records of whooper swan using the habitats within the Wind Farm Site during any of the surveys undertaken. Beyond the Wind Farm Site, birds were recorded resting and preening at Lough Mourne, Loughnaweelagh and Lough Slug, all located over 1.7km outside the Wind Farm Site. Foraging activity was recorded at Lough Eske, Lough Cuill and Lough Shinnagh, waterbodies located over 3km outside the Wind Farm Site, and birds were recorded at Lough Bradan. No regular roosting sites were identified for the species during any of the surveys undertaken. No habitat loss occurred at any waterbodies in the wider surroundings as these are located outside of the Wind Farm Site boundary. Additionally, the available potential habitat for whooper swan within the Wind Farm Site is limited, restricted to Carrickaduff Lough to the south of Turbine 6. In addition to its location outside of the proposed infrastructure footprint, this small lough was surveyed as part of the waterbird distribution abundance surveys between September 2023 and September 2025 and no whooper swan were ever recorded in this location. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants⁹. Forestry activity	The magnitude of the effect is assessed as Negligible. When a Medium sensitivity species is cross-referenced with a Negligible impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant.

⁹ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for whooper swan as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, records of whooper swan were predominantly those of birds in flight both over the Wind Farm Site and the wider area. There were no records of whooper swan using the habitats within the Wind Farm Site during any of the surveys undertaken. Beyond the Wind Farm Site, birds were recorded resting, preening and foraging in loughs over 1.7km outside the Wind Farm Site. No regular roosting sites were identified for the species during any of the surveys undertaken. Whooper swan were recorded during the survey periods April 2015 to September 2017 and September 2023 to September 2025. Birds were present every season of the survey in these periods with the exception of breeding season 2024 (see whooper swan activity table below). The lack of whooper swan records between 2019 and 2023 can be attributed to the surveys only being conducted during the breeding season and only being conducted in habitats where breeding raptors were likely to occur (thus unlikely to detect swans). In the seasons where whooper swans were recorded, birds were travelling, foraging, and resting/roosting across most winter seasons, and migrating was recorded in winter 2024/25 and the passage period in early breeding season 2025. The distribution of whooper swan remained similar across seasons in which they were recorded: flights across the Wind Farm Site and wider area and landed birds in loughs in the wider surroundings. The abundance of whooper swan remained relatively stable across winter seasons (see whooper swan	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
abundance graph below). As described above, the lack of whooper swan records between 2019 and 2023 can be attributed to the surveys only being conducted during the breeding season and only being conducted in habitats where breeding raptors were likely to occur. Similarly, the frequency of occurrence of whooper swan remained relatively similar across winter seasons, although there was a high frequency of occurrence in the final season of winter 2025/25 (after accounting for variation in survey effort; see whooper swan frequency graph below). The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. There is no winter season data available between 2016/17 and 2023/24. However, the abundance and frequency of occurrence of whooper swans was similar or higher in winter 2023/24 and 2024/25 than it was in winter 2015/16 and 2026/17. This suggests that, if disturbance did occur, the numbers and frequency of whooper swan had returned to pre-construction levels by 2023/24, and the effect (if any occurred) was temporary. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on whooper swan as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-22 Whooper swan activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present	✓	✓	✓	✓							✓		✓	✓
flying/ travelling	✓	✓									✓		✓	✓
foraging				✓									✓	
resting/ roosting			✓	✓							✓		✓	
migrating													✓	✓

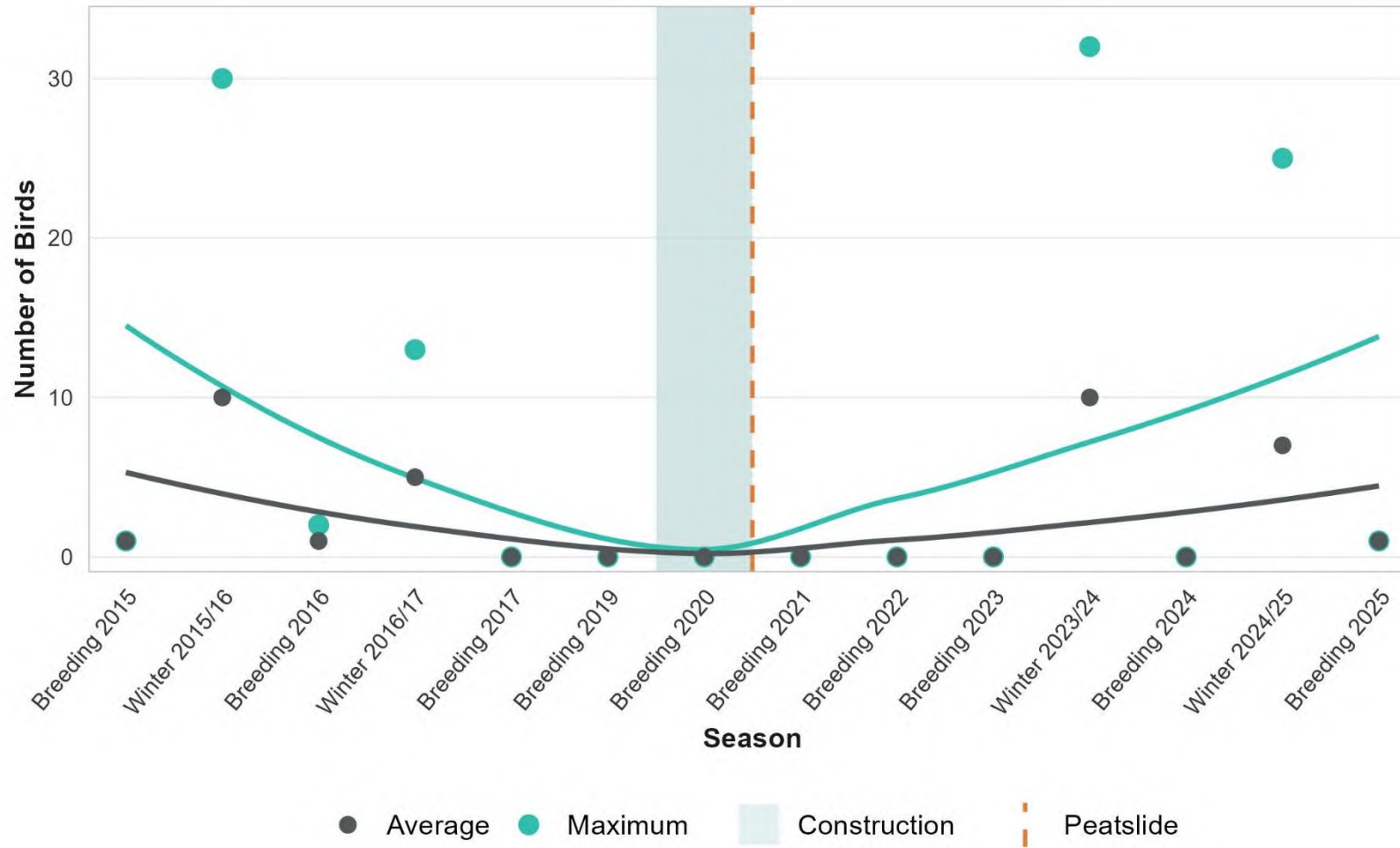


Figure 7-13 Whooper swan abundance

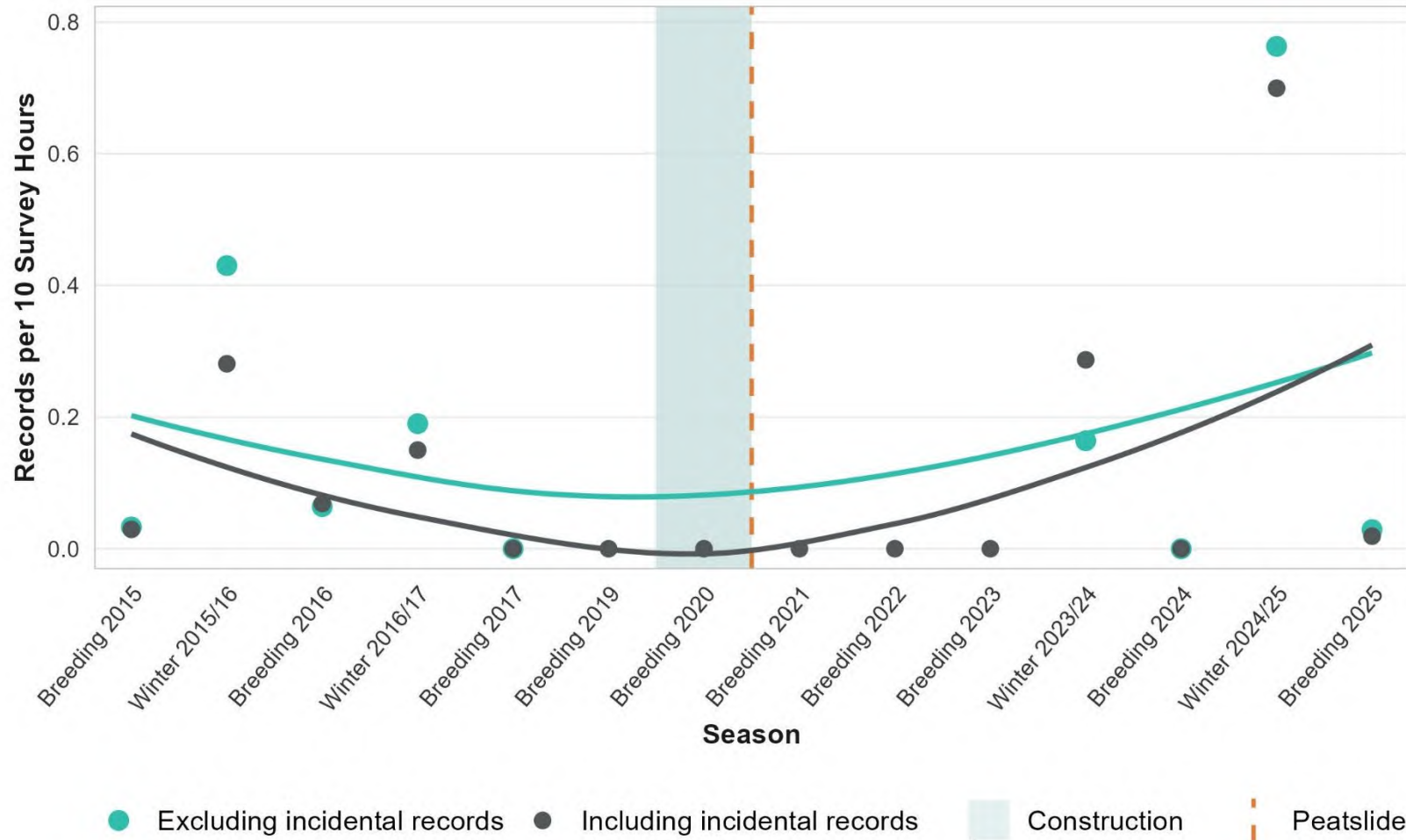


Figure 7-14 Whooper swan frequency

7.5.2.1.8 Kestrel

Table 7-23 Kestrel description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Kestrel are resident at the Wind Farm Site. Nest locations were confirmed in 2024 and 2025 between 150m and 2km to the west and northwest of the Wind Farm Site. A probable nest location was also identified in 2017 and 2022, in Barnesmore, west of the Wind Farm Site, and possible breeding in Killeter in 2020. Kestrel were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. No habitat loss occurred at any of the identified breeding locations for kestrel as they are all located outside the Wind Farm Site boundary. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss was that of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of low ecological value for kestrel. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Furthermore, kestrel is a wide-ranging generalist species and forestry and bog are not a scarce resource locally. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹⁰. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for kestrel as a result of the Existing Development.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

¹⁰ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, kestrel are resident at the Wind Farm Site. Nest locations were recorded in the wider area in 2024 and 2025 (confirmed), 2017 and 2022 (probable) and 2020 (possible). Kestrel were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. Kestrel were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every season of the survey with the exception of breeding season 2019 (see kestrel activity table below). Hunting and resting was recorded in several seasons across the survey period, while breeding was recorded across several breeding seasons in 2017 (probable), 2020 (possible), 2022 (probable), 2024 and 2025 (confirmed). The distribution of kestrel remained similar across this period: hunting or resting birds were recorded in the Wind Farm Site in several seasons, and breeding was recorded in the surrounding area at Barnsemore (breeding season 2017, 2024 and 2025), Barrack Hill (breeding season 2022) and potentially Killeter (juveniles observed in breeding season 2020). However, there were no records of kestrel during breeding season 2019. The abundance of kestrel remained relatively stable across this period (see kestrel abundance graph below). Between one and two birds were observed in most seasons, with an observation of three in 2025 (juvenile with adults). The frequency of occurrence of kestrel increased across this period (after accounting for variation in survey effort; see kestrel frequency graph below). However, as above, there were no records of kestrel during breeding season 2019.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
The core construction activity did not begin at the Wind Farm Site until November 2019. As such, the absence of kestrel during the 2019 breeding season cannot be attributed to the Existing Development, and could have been due to a range of other environmental or anthropogenic factors. Surveys were not conducted during winter 2019/20, however, by breeding season 2020, the abundance and frequency of kestrel had returned to pre-2019 levels. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on kestrel as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-24 Kestrel activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
flying/ travelling	✓		✓		✓									
hunting	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
resting/ roosting	✓		✓		✓				✓		✓		✓	
breeding					probable		possible		probable			confirmed		confirmed

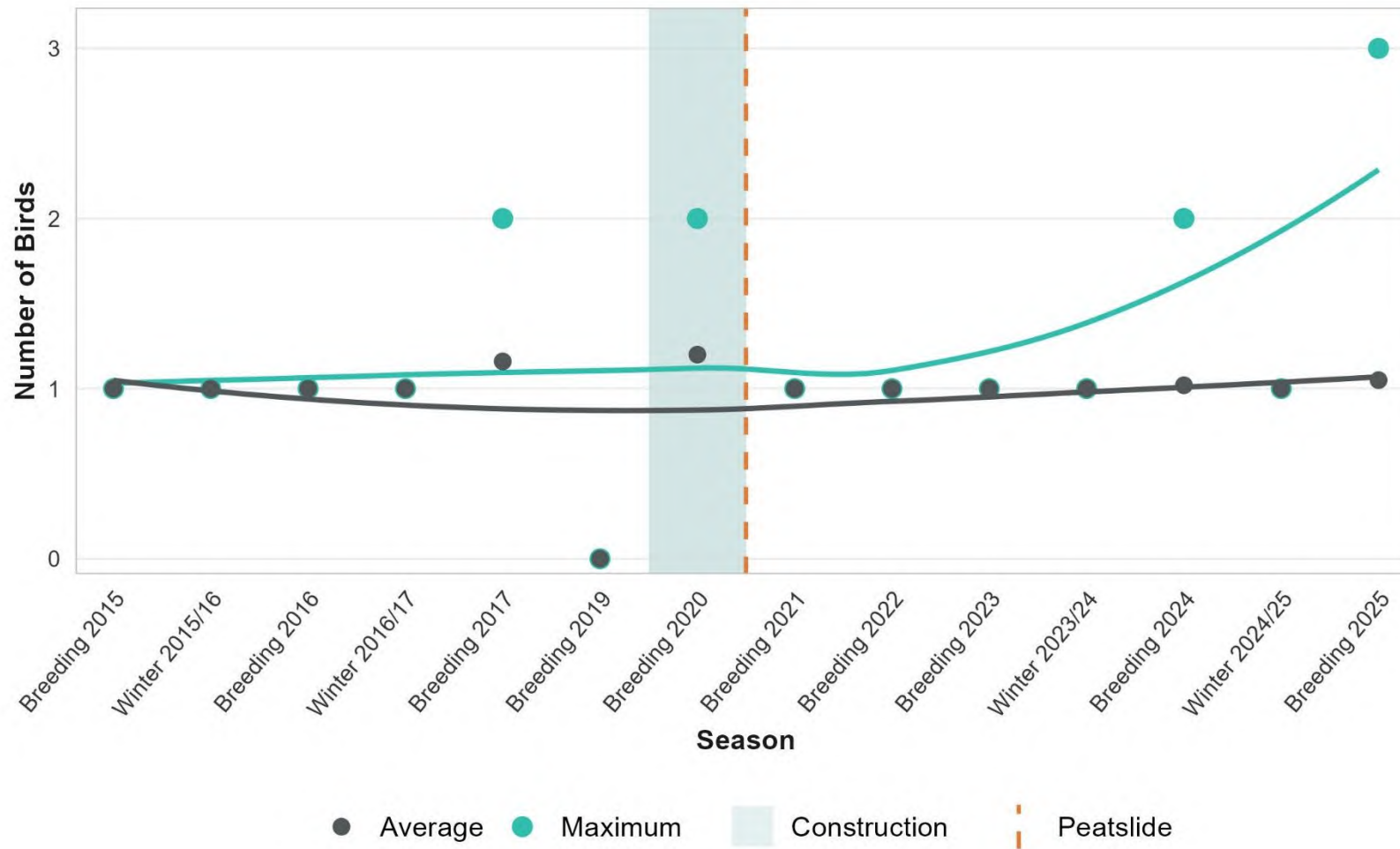


Figure 7-15 Kestrel abundance

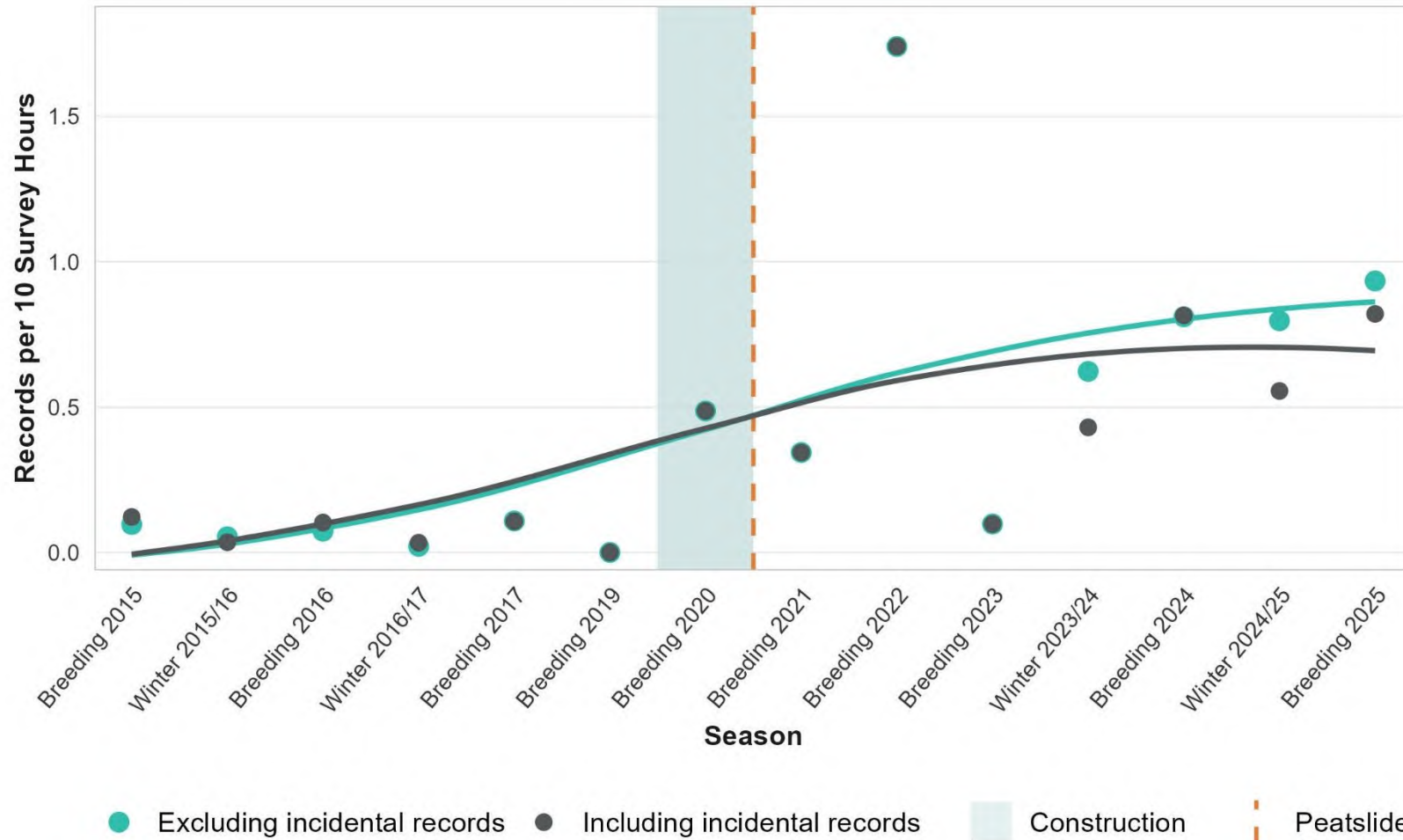


Figure 7-16 Kestrel frequency

7.5.2.1.9 Red Grouse

Table 7-25 Red grouse description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	A possible breeding area for red grouse was located to the southwest of the Wind Farm Site, where calling males were heard in 2024 and 2025. There is also a probable breeding area at Croaghonagh, where a pair were observed during the breeding season. Red grouse were occasionally recorded within 500m of the Wind Farm Site, but there were no records of this species within the Wind Farm Site. No habitat loss occurred at any of the possible or probable breeding locations for red grouse as they are all located outside the Wind Farm Site boundary. In addition, no habitat loss occurred in the bog and heath habitats in the areas where red grouse activity was recorded, as these areas are also outside the Wind Farm Site boundary. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹¹. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for red grouse as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.	The magnitude of the effect is assessed as Negligible. When a Medium sensitivity species is cross-referenced with a Negligible impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant.

¹¹ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Disturbance	As described above, a possible breeding area for red grouse was located to the southwest of the Wind Farm Site and a probable breeding area at Croaghonagh. Red grouse were occasionally recorded within 500m of the Wind Farm Site, but there were no records of this species within the Wind Farm Site. Red grouse were recorded during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present from winter 2015/16 to breeding season 2019 and again from winter 2023/24 to breeding season 2025. The lack of red grouse records between 2020 and 2023 can be attributed to the surveys only being conducted during the summer months and targeting breeding raptor nests (thus less likely to detect red grouse). In the seasons where red grouse were recorded, birds were calling (including calling males in some seasons), flying/flushed and resting/roosting. The distribution of red grouse remained similar across this period. This species was predominantly recorded in open bog to the southwest and west of the Wind Farm Site boundary in the seasons in which it was recorded. The abundance of red grouse remained relatively stable across the seasons in which it was recorded (see red grouse abundance graph below). As described above, the lack of red grouse records between 2020 and 2023 can be attributed to the surveys only being conducted during the summer months and targeting breeding raptor nests. The frequency of occurrence of red grouse increased slightly over the survey period (after accounting for variation in survey effort; see red grouse frequency graph below). The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
engineering response. There is no data available during the red grouse display period (late winter season) between 2016/17 and 2023/24. However, the abundance and frequency of occurrence of red grouse was similar or higher at the end of the survey period than it was at the beginning. This suggests that, if disturbance did occur, the numbers and frequency of red grouse returned to pre-construction levels, and the effect (if any occurred) was temporary. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on red grouse as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-26 Red grouse activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present/calling		✓	✓	✓	✓	✓					✓	✓	✓	✓
flying/flushed			✓		✓						✓	✓	✓	✓
calling males		✓		✓							✓			
resting/roosting				✓	✓						✓			

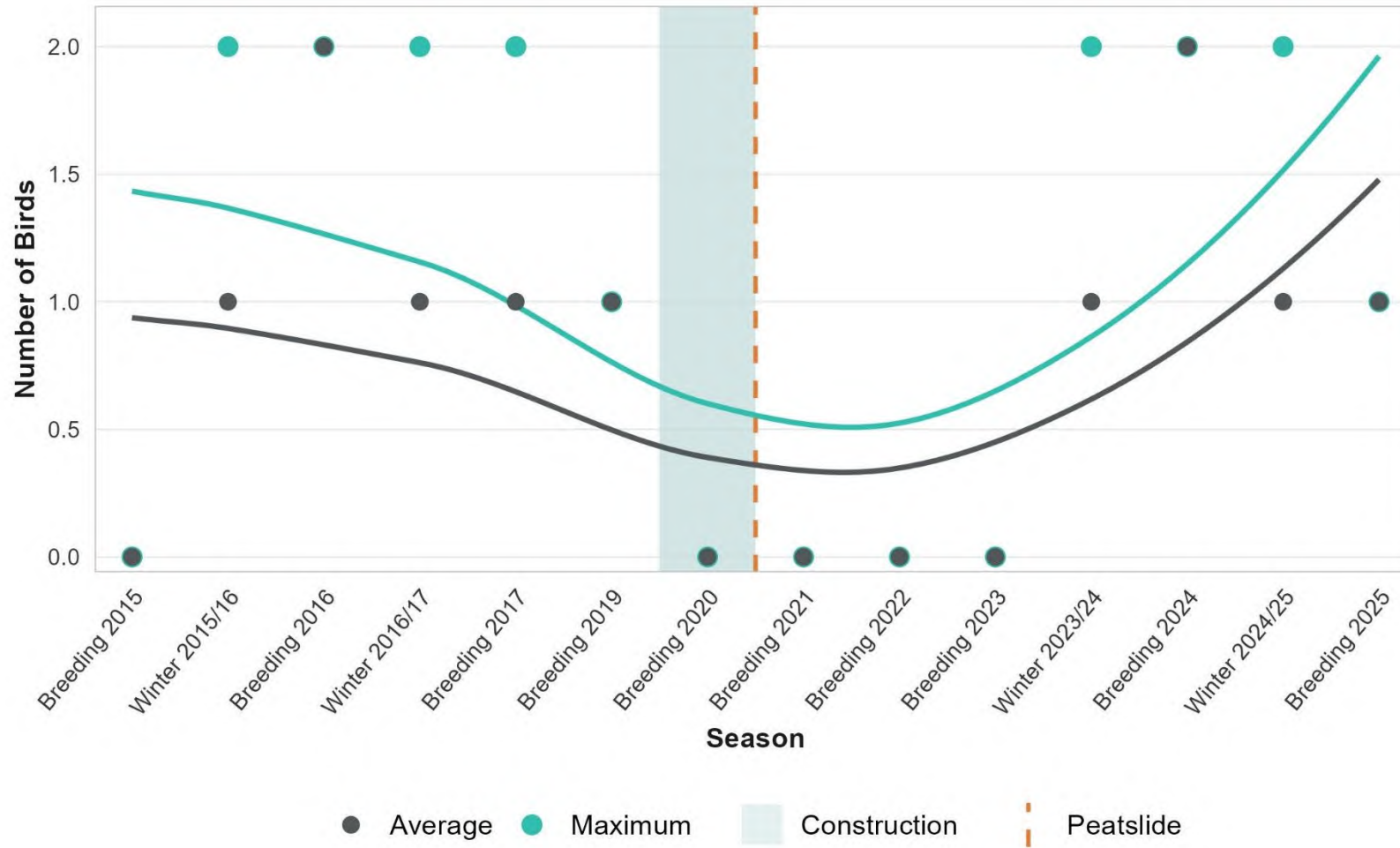


Figure 7-17 Red grouse abundance

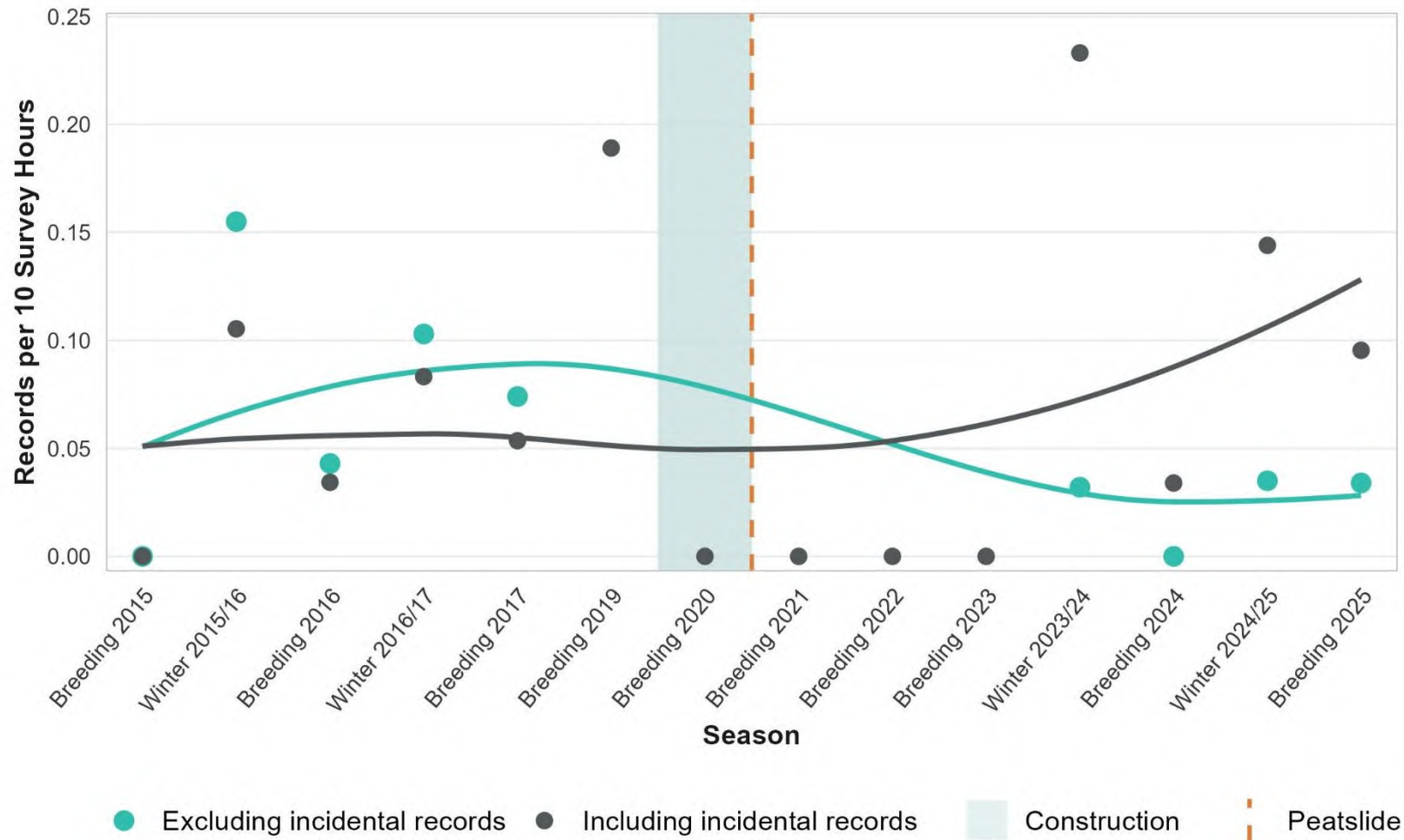


Figure 7-18 Red grouse frequency

7.5.2.1.10 Snipe

Table 7-27 Snipe description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Snipe were resident at the Wind Farm Site and were regularly recorded during the breeding and wintering seasons, with records most frequent within areas of bog and wet grasslands. One breeding territory was identified that overlaps with the north-easternmost area of the Wind Farm Site, and a further four breeding territories were located in the wider area. Snipe were also regularly using bog habitats within the Wind Farm Site and wider surroundings in the winter season. The breeding territory that partially overlaps with the Wind Farm Site is outside the footprint of the Existing Development, therefore there was no loss of habitat at this breeding territory. No habitat loss occurred at the other four identified breeding locations for snipe as they are all located outside the Wind Farm Site boundary. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss will be that of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of no ecological value for snipe. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	no potential for significant erosion or run off of pollutants¹². Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for snipe as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, snipe were resident at the Wind Farm Site. One breeding territory was identified that overlaps with the north-easternmost area of the Wind Farm Site, and a further four breeding territories were located in the wider area. Snipe were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every season of survey between breeding season 2016 and 2020, and again between breeding season 2023 and 2025 (see snipe activity table below). The lack of snipe records in 2021 and 2022 can be attributed to the surveys only targeting breeding raptor nests in the wider area (thus less likely to detect snipe). In the seasons where snipe were recorded, birds were flying/flushed/travelling and calling. Displaying was recorded in breeding season 2016, 2020, 2024 and 2025, as well as late winter 2024/25. The distribution of snipe remained similar across this period. Surveys were not conducted in the Wind Farm Site between 2019 and 2023, however snipe were recorded in the Wind Farm Site in all seasons where surveys were conducted within it, and snipe were recorded throughout the wider surroundings every season in which they were recorded.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

¹² The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
There was a minor increase in the abundance of snipe across this period (see snipe abundance graph below). As described above, the lack of snipe records in 2021 and 2022 can be attributed to the surveys only targeting breeding raptor nests in the wider area. Similarly, the frequency of occurrence of snipe increased across this period (after accounting for variation in survey effort; see snipe frequency graph below). The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. There was no data collected at the Wind Farm Site itself between breeding season 2017 and winter 2023/24. However, the abundance and frequency of occurrence of snipe was higher end of the survey period than it was at the beginning. This suggests that, if disturbance did occur, the numbers and frequency of snipe had returned to pre-construction levels by 2023/24, and the effect (if any occurred) was temporary. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on snipe as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-28 Snipe activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present/ calling			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
flying/ travelling/ flushed			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
displaying			✓				✓					✓	✓	✓

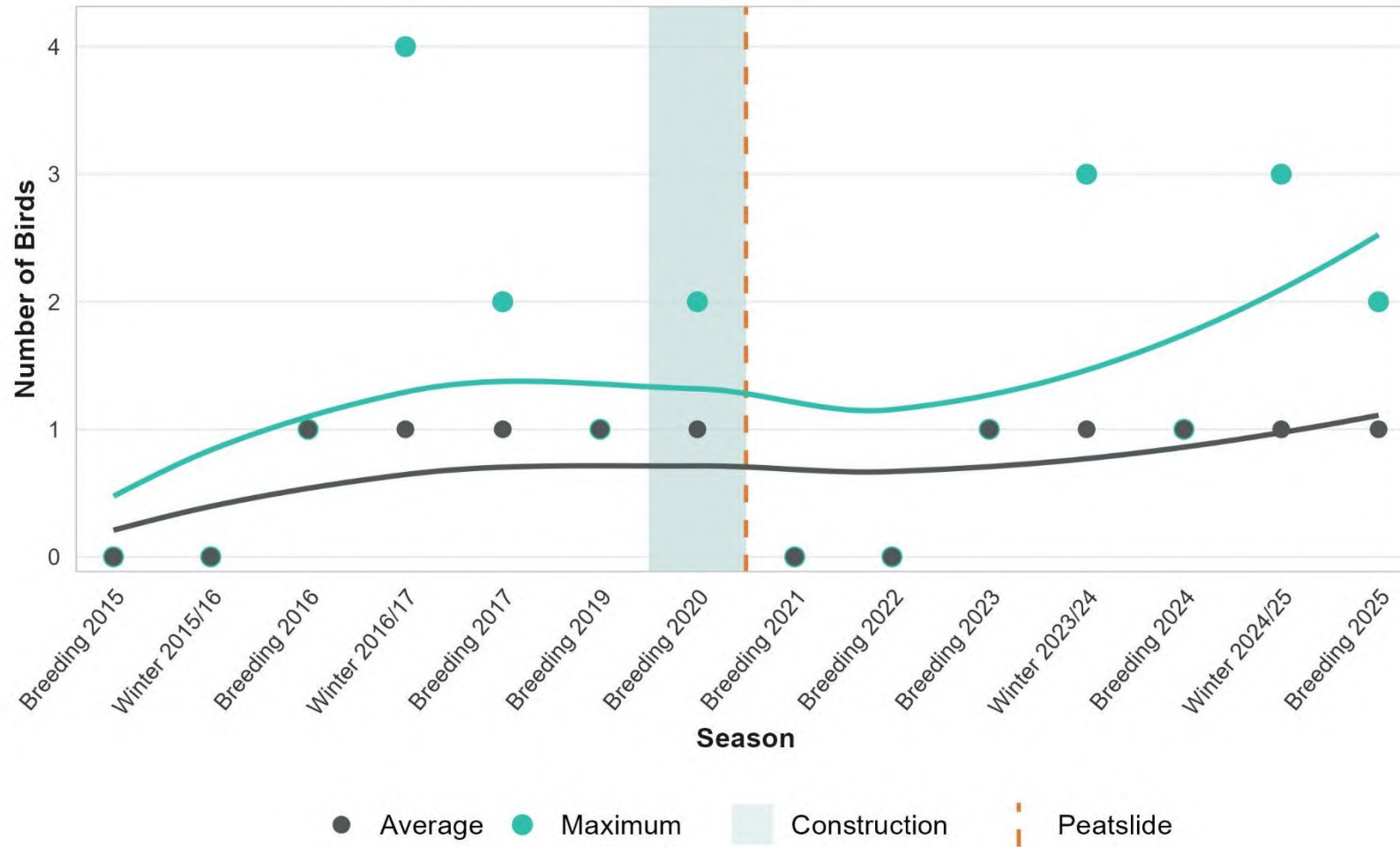


Figure 7-19 Snipe abundance

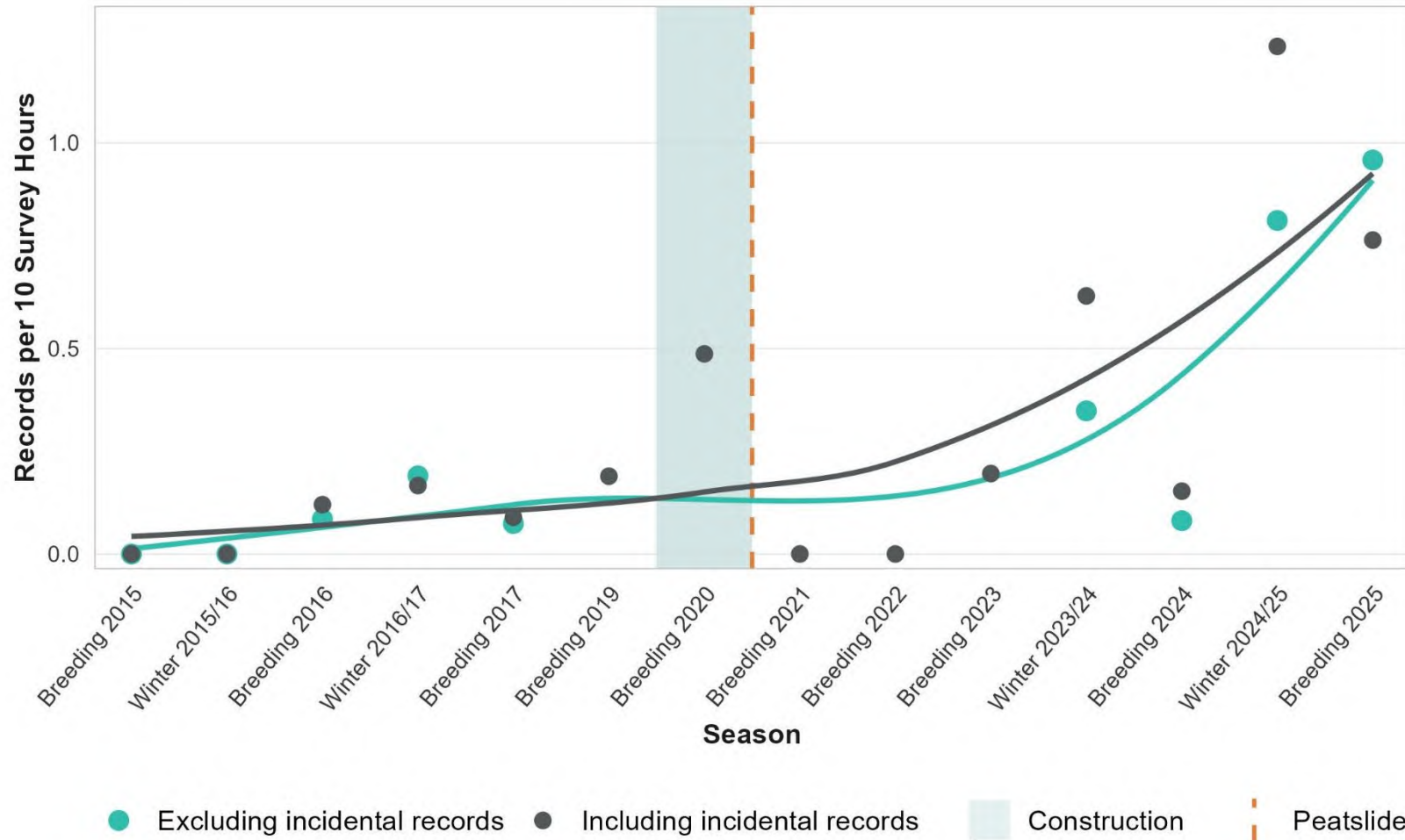


Figure 7-20 Snipe frequency

7.5.2.1.11 Woodcock

Table 7-29 Woodcock description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	There was one observation of a displaying male woodcock in May 2016 and two in April and May 2017. The remaining woodcock observations were predominantly during the winter and passage (April, May) seasons, and no further evidence of breeding was observed despite undertaking species-specific breeding woodcock surveys at the Wind Farm Site. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. The footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Woodcock were also regularly recorded on the access road of the Wind Farm Site after its construction. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹³. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for woodcock as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.
Disturbance	As described above, there was one observation of a displaying male woodcock in May 2016 and two in April and May 2017. The remaining woodcock observations were predominantly during the winter and passage seasons.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is	Short-term slight negative effect, which is not significant.

¹³ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Woodcock were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017 and September 2023 to September 2025. Birds were present every season of survey between winter 2015/16 and breeding season 2017, and again between winter 2023/24 and breeding season 2025 (see woodcock activity table below). The lack of woodcock records between 2019 and 2023 can be attributed to the surveys only targeting breeding raptor nests in the wider area (thus less likely to detect woodcock). In the seasons where woodcock were recorded, birds were flying/flushed/travelling and once resting. Displaying was recorded in breeding season 2016 and 2017. The distribution of woodcock remained similar across this period. Surveys were not conducted in the Wind Farm Site between 2019 and 2023, however woodcock were recorded in the Wind Farm Site in all seasons where surveys were conducted within it. The average abundance of woodcock remained stable across this period (see woodcock abundance graph below). As described above, the lack of woodcock records between 2019 and 2023 can be attributed to the surveys only targeting breeding raptor nests in the wider area. There was a minor increase in the frequency of occurrence of woodcock across this period (after accounting for variation in survey effort; (see woodcock frequency graph below). The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. There was no data collected at the Wind Farm Site itself between breeding season 2017 and winter 2023/24. However, the abundance and frequency of occurrence of woodcock was similar or higher end of the survey period than it was at the beginning. This suggests that, if disturbance	cross-referenced with a Low impact, this corresponds to a Low effect significance.	

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	did occur, the numbers and frequency of woodcock had returned to pre-construction levels by 2023/24, and the effect (if any occurred) was temporary. Displaying woodcock were only recorded in 2016 and 2017, despite dedicated breeding woodcock surveys in 2024 and 2025. Given that woodcock continue to overwinter at the Wind Farm Site, it is unlikely that the absence of breeding birds is as a result of the Existing Development. Records of roding woodcock were very infrequent in 2016 and 2017 (three in total), therefore it is more likely that woodcock breed in low density in this area. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on woodcock as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-30 Woodcock activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present		✓	✓	✓	✓						✓	✓	✓	✓
flying/ travelling/ flushed		✓	✓	✓	✓						✓	✓	✓	✓
displaying			✓		✓									
resting				✓										

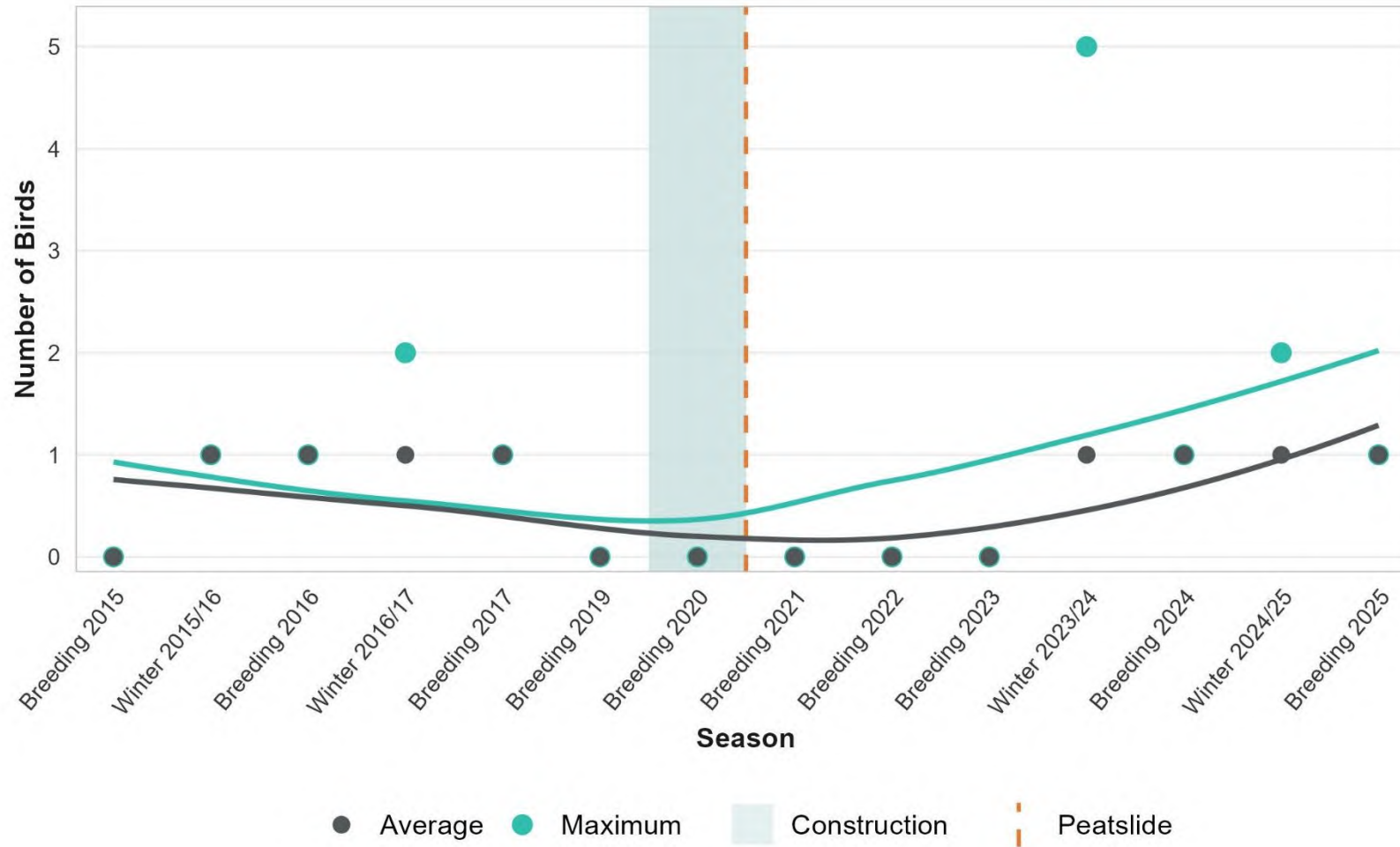


Figure 7-21 Woodcock abundance

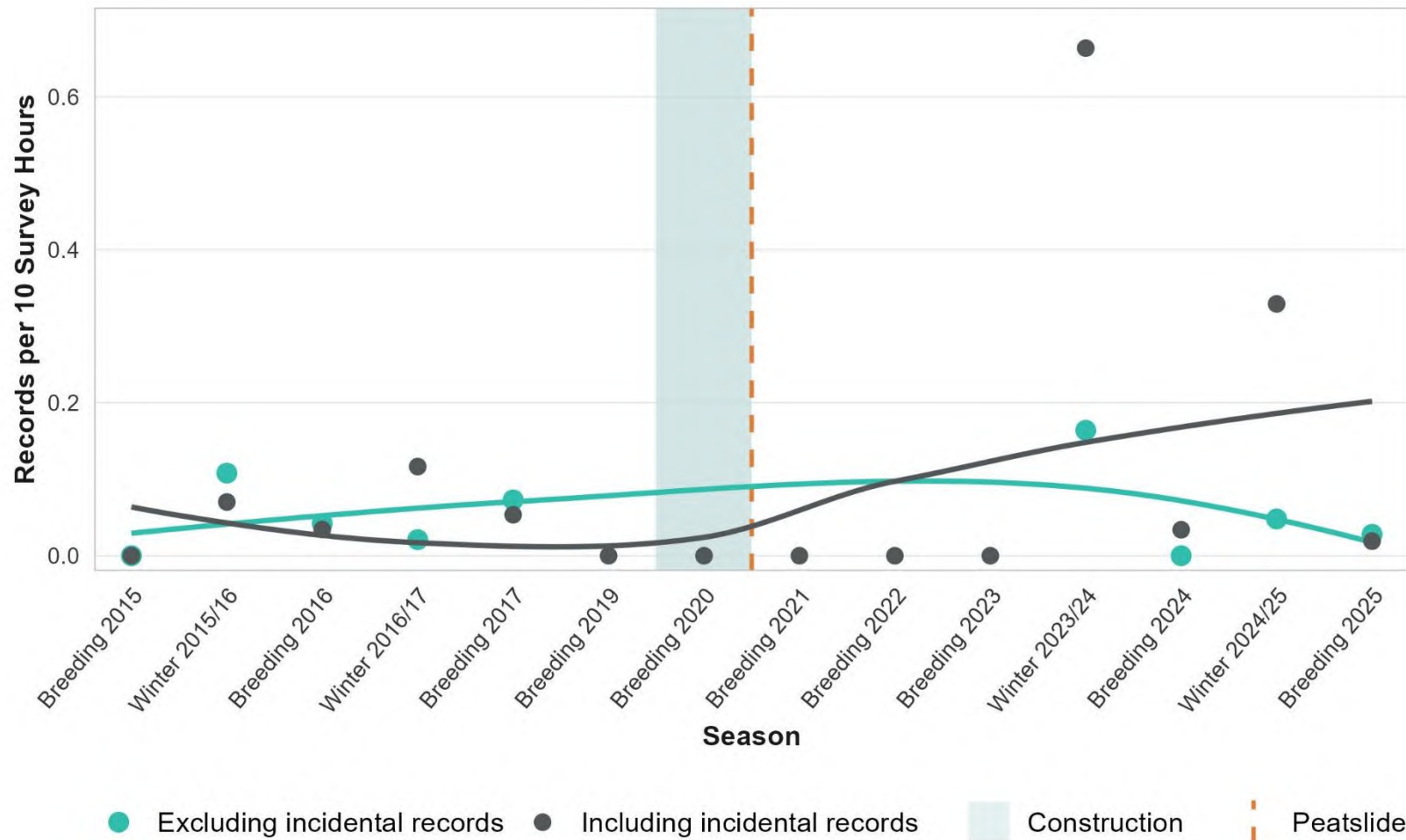


Figure 7-22 Woodcock frequency

7.5.2.1.12 Buzzard

Table 7-31 Buzzard description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Buzzard are resident at the Wind Farm Site. One breeding territory was identified partially within the Wind Farm Site, and three other territories were found in the wider surroundings between 0.6km and 3km outside the Wind Farm Site. Buzzard were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. The breeding territory that partially overlaps with the Wind Farm Site is outside the footprint of the Existing Development, therefore there was no loss of habitat at this breeding territory. No habitat loss occurred at the other identified breeding locations for buzzard as they are all located outside the Wind Farm Site boundary. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. Of this, over 16.6ha (74.4%) of habitat loss will be that of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground which are of limited ecological value for buzzard. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Furthermore, buzzard is a wide-ranging generalist species and forestry and bog are not a scarce resource locally. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹⁴. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of	The magnitude of the effect is assessed as Low. When a Low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant.

¹⁴ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	timber and other forestry related activities. There is no potential for further habitat loss for buzzard as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, buzzard are resident at the Wind Farm Site. One breeding territory was identified partially within the Wind Farm Site, and three other territories were found in the wider surroundings between. Buzzard were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. Buzzard were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every season of survey with the exception of winter 2015/16 (see buzzard activity table below). Hunting, soaring and resting was recorded in several seasons across the survey period, while breeding was confirmed in 2024 and 2025 and displaying was observed in winter 2016/17, 2023/24 and 2024/25. The distribution of buzzard remained similar across this period: hunting or resting birds were recorded in the Wind Farm Site and surrounds in several seasons. A breeding territory was located partially within the Wind Farm Site in 2024 and in the wider surroundings in Meenbog (2025), Barnesmore (2024) and Killeter (2024). No breeding territory was detected prior to 2024. The average abundance of buzzard remained relatively stable across this period (see buzzard abundance graph below). Between one and two birds were observed in most seasons, with up to four birds in 2021. The frequency of occurrence of buzzard increased across this period (after accounting for variation in survey effort; (see buzzard frequency graph below). However, as	The magnitude of the effect is assessed as Low. When a Low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Short-term imperceptible negative effect, which is not significant.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	above, there were no records of buzzard during winter 2015/16. The core construction activity did not begin at the Wind Farm Site until November 2019. As such, the absence of buzzard during winter 2015/16 cannot be attributed to the Existing Development, and could have been due to a range of other environmental or anthropogenic factors. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on buzzard as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-32 Buzzard activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
flying/ soaring	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
hunting	✓		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
resting/ roosting	✓		✓		✓	✓		✓						✓
breeding				displaying							displaying	confirmed	displaying	confirmed

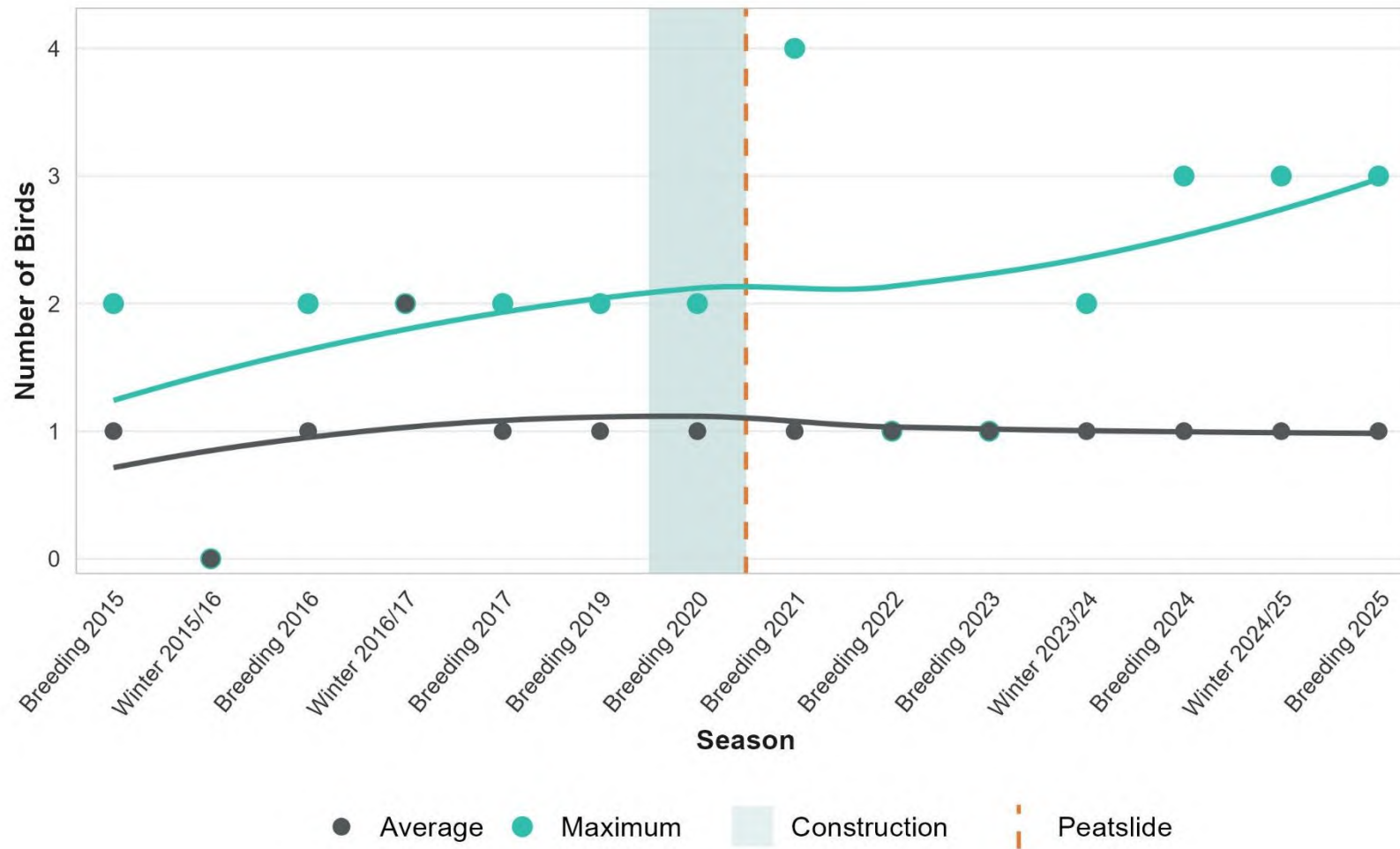


Figure 7-23 Buzzard abundance

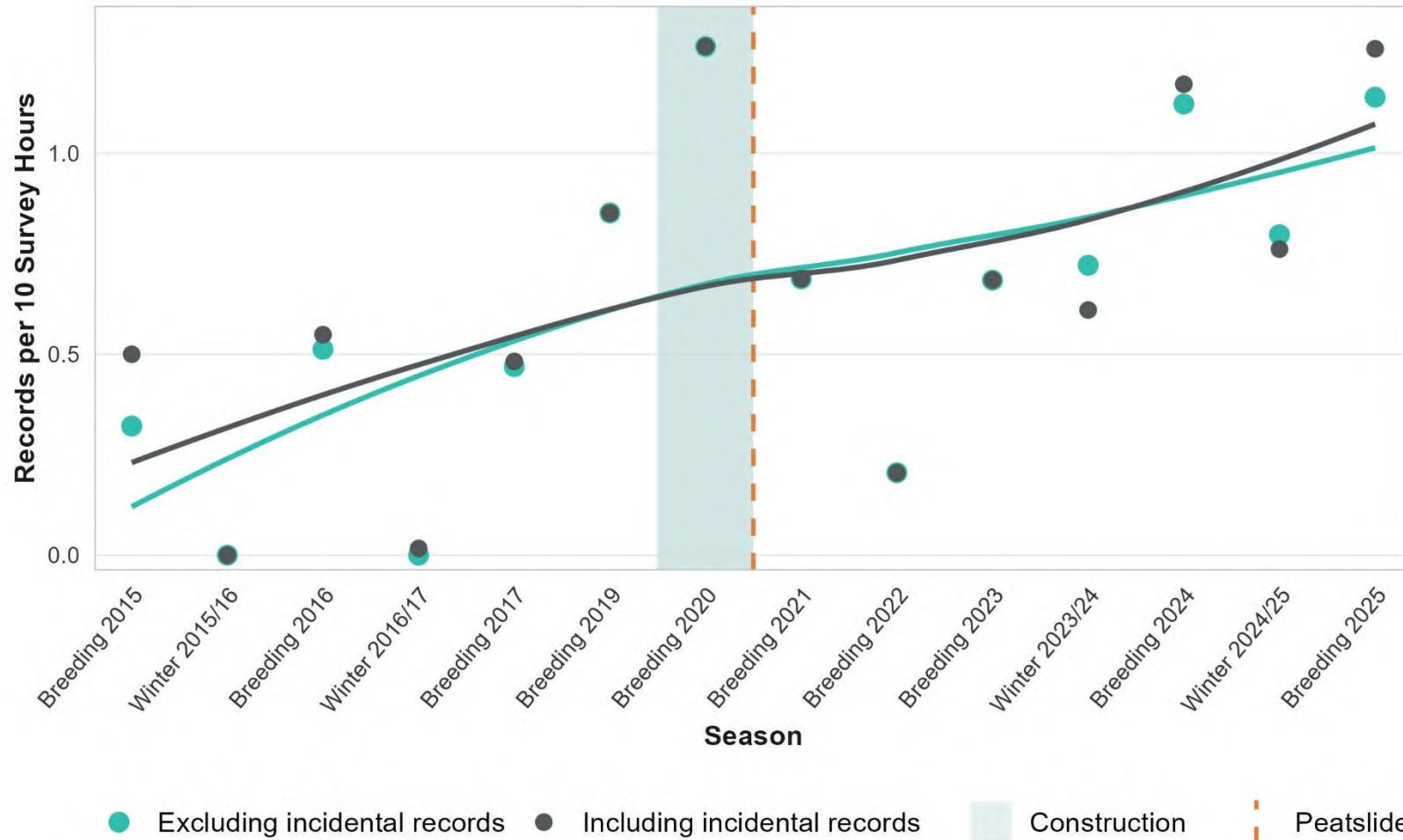


Figure 7-24 Buzzard frequency

7.5.2.1.13 Long-eared Owl

Table 7-33 Long-eared owl description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	A long-eared owl breeding territory was identified in conifer trees along the main access road in February 2024. A long-eared owl was also recorded flying to the north of the Wind Farm Site on one occasion in June 2016. No habitat loss occurred at the breeding territory, as it is located outside the footprint of the Prospective Development, and was occupied after construction of the access road. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. The footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Furthermore, as forestry is not a scarce resource locally, there is an abundance of similar suitable habitat in the surrounding area. Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹⁵. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for long-eared owl as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Long-term slight negative effect, which is not significant.

¹⁵ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Disturbance	As described above, a long-eared owl breeding territory was identified in conifer trees along the main access road in February 2024, and a long-eared owl was recorded flying to the north of the Wind Farm Site on one occasion. Long-eared owl were recorded in proximity to the Wind Farm Site in breeding season 2016 and winter 2023/24 (see long-eared owl activity table below). Long-eared owl may hold territories year-round. Given the cryptic nature of this species, it may therefore have been present but not detected during other seasons. The core construction activity began at the Wind Farm Site in November 2019 and continued until the November 2020 Peatslide, which was followed by an engineering response. There was no data collected at the Wind Farm Site itself between breeding season 2017 and winter 2023/24. However, from the data available, long-eared owl appears to persist in the area in similar numbers in 2023/24 as in 2016. This suggests that, if disturbance did occur, the effect (if any occurred) was temporary. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on long-eared owl as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Short-term slight negative effect, which is not significant.

Table 7-34 Long-eared owl activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present			✓								✓			
flying			✓											
breeding											probable			

7.5.2.1.14 Sparrowhawk

Table 7-35 Sparrowhawk description of effects

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Direct Habitat Loss	Sparrowhawk are resident at the Wind Farm Site. One breeding territory was identified partially within the Wind Farm Site, with a second immediately to the east of the Wind Farm Site boundary. A further three territories were found in the wider surroundings between 0.7km and 3km outside the Wind Farm Site, and another at Lough Derg, which is a large distance from the Wind Farm Site. Sparrowhawk were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. The breeding territory that partially overlaps with the Wind Farm Site is outside the footprint of the Existing Development, therefore there was no loss of habitat at this breeding territory. No habitat loss occurred at the other identified breeding locations for sparrowhawk as they are all located outside the Wind Farm Site boundary. The Existing Development has resulted in the loss of 23.3ha of land within the Wind Farm Site boundary. In addition, the footprint of the Existing Development is very small relative to the total area within the Wind Farm Site (3.7% of 892ha, excluding the Grid Connection Site). Furthermore, sparrowhawk is a wide-ranging generalist species and forestry and bog are not a scarce resource locally.	The magnitude of the effect is assessed as Low. When a Low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Long-term imperceptible negative effect, which is not significant .

Description of effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	Following the construction of the Existing Development, the Wind Farm Site had been stabilised with all infrastructure left in a condition where there was no potential for significant erosion or run off of pollutants¹⁶. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further habitat loss for sparrowhawk as a result of the Existing Development. There is no evidence of any significant effect of habitat loss as a result of the Existing Development.		
Disturbance	As described above, sparrowhawk are resident at the Wind Farm Site. One breeding territory was identified partially within the Wind Farm Site, with a second immediately to the east of the Wind Farm Site boundary and a further three territories were found in the wider surroundings, and another a large distance from the Wind Farm Site. Sparrowhawk were also regularly recorded hunting within the Wind Farm Site and throughout the wider area. Sparrowhawk were recorded at the Wind Farm Site and surrounding area during the survey periods April 2015 to September 2017, April 2019 to July 2023, and September 2023 to September 2025. Birds were present every season of survey with the exception of winter 2015/16 (see sparrowhawk activity table below). Flying and hunting was recorded in several seasons across the survey period, and resting in winter 2024/25, while breeding was recorded across several seasons in 2019, 2022, 2023 and 2025 (confirmed) and 2024 (probable). Displaying was observed in breeding season 2020 and winter 2023/24. A territory was identified near Lough Derg in 2017, but this is a large distance from the Wind Farm Site.	The magnitude of the effect is assessed as Low. When a Low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Short-term imperceptible negative effect, which is not significant.

¹⁶ The November 2020 Peatslide area is stable, recolonising slowly and is monitored on an annual basis.

Description of effects	Significance (Percival, 2003)	Significance (EPA, 2022)
The distribution of sparrowhawk remained similar across this period: hunting or resting birds were recorded in the Wind Farm Site and surrounds in several seasons. A breeding territory was located partially within the Wind Farm Site in 2025 and in the wider surroundings in Meenbog (2025) and Killeter (2019, 2022, 2023 and 2024 [probable]). No breeding territory was detected in the vicinity of the Wind Farm Site prior to 2019. The average abundance of sparrowhawk remained relatively stable across this period (see sparrowhawk abundance graph below). Between one and two birds were observed in most seasons, with up to five birds in 2017 (adults and juveniles; note this was at Lough Derg, which is a large distance from the Wind Farm Site). The frequency of occurrence of sparrowhawk slightly increased across this period (after accounting for variation in survey effort; (see sparrowhawk frequency graph below), with the highest occurrence in breeding season 2022 and 2023. However, as above, there were no records of sparrowhawk during winter 2015/16. The core construction activity did not begin at the Wind Farm Site until November 2019. As such, the absence of sparrowhawk during winter 2015/16 cannot be attributed to the Existing Development, and could have been due to a range of other environmental or anthropogenic factors. Following the construction of the Existing Development, the Wind Farm Site had been stabilised and there in no ongoing construction. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. There is no potential for further disturbance and no evidence of any ongoing disturbance impact on sparrowhawk as a result of the Existing Development. There is no evidence of any significant effect of disturbance having occurred as a result of the Existing Development.		

Table 7-36 Sparrowhawk activity

	Breeding 2015	Winter 2015/16	Breeding 2016	Winter 2016/17	Breeding 2017	Breeding 2019	Breeding 2020	Breeding 2021	Breeding 2022	Breeding 2023	Winter 2023/24	Breeding 2024	Winter 2024/25	Breeding 2025
present	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
flying/ travelling	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
hunting			✓	✓	✓	✓			✓	✓	✓	✓		✓
resting/ roosting													✓	
breeding				confirmed (Lough Derg)		confirmed	displaying		confirmed	confirmed	displaying	probable		confirmed

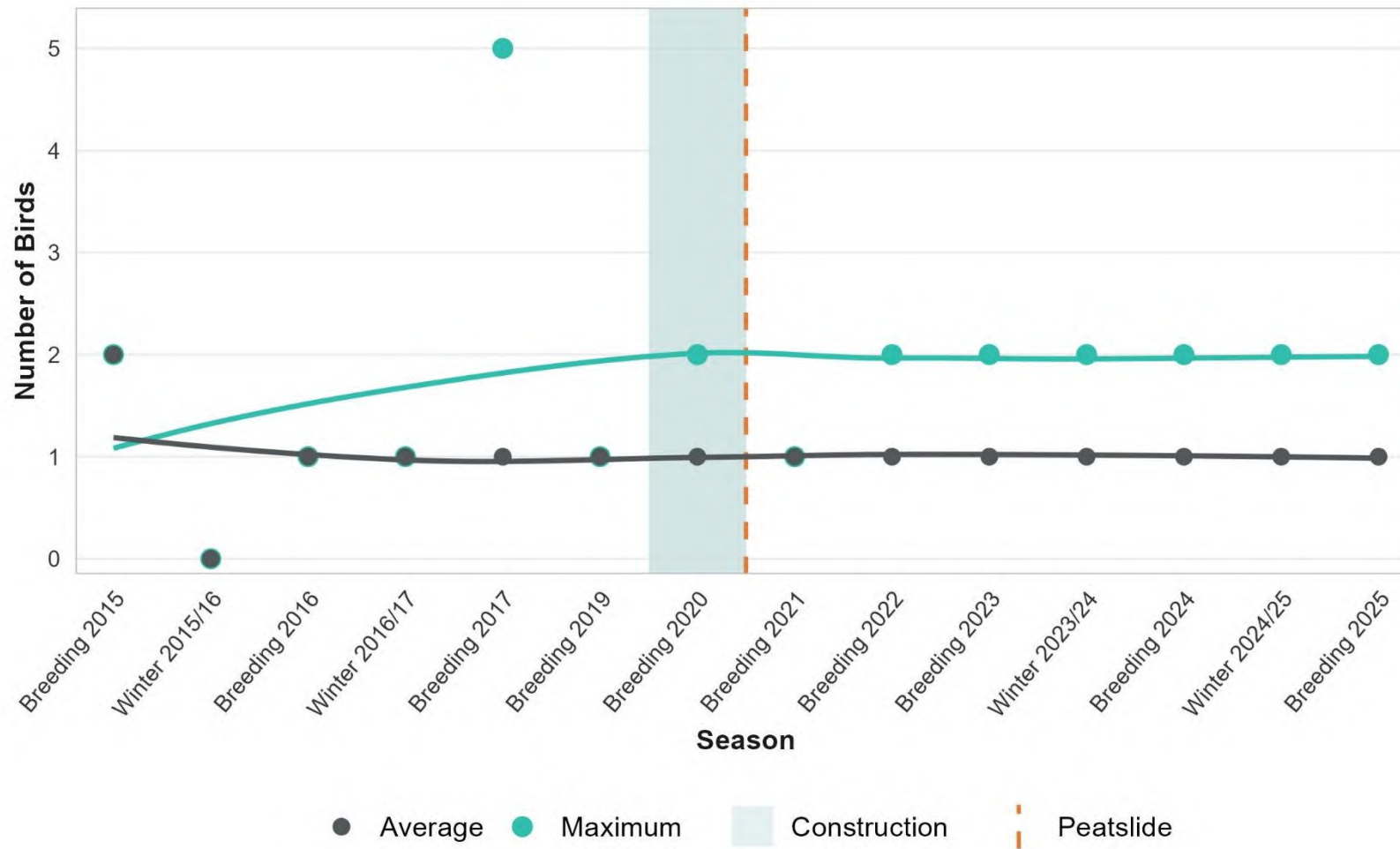


Figure 7-25 Sparrowhawk abundance

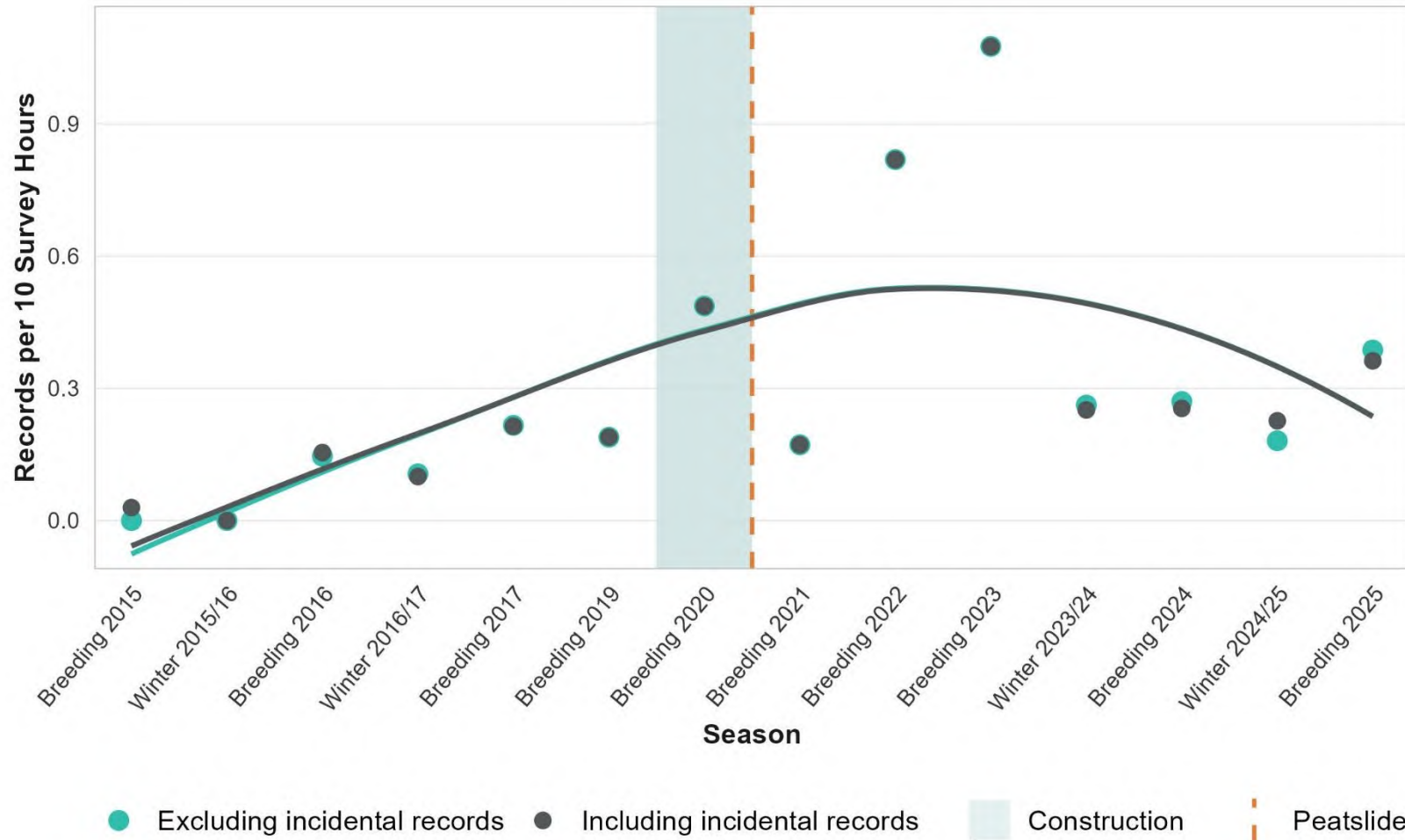


Figure 7-26 Sparrowhawk frequency

7.5.2.2 Effects Associated with the Grid Connection

The Grid Connection Site has a total area of approximately 9ha and extends along the N15 National to the L-2595 Local Road, then proceeds to the L-1985 Local Road, continues along the L-19852 Local Road (with a short section running adjacent to this road in a field) and finally follows a private road to reach the Clogher 110kV substation. The Clogher substation is situated approximately 6.5 km southwest of the existing onsite 110kV substation. The Grid Connection Site traverses the townlands of Ardinawark, Keadew Upper, Keadew Lower, Cullionboy, Cashelnavean, Tawnawully Mountains and Friarsbush.

On a precautionary basis, it is assumed that some temporary disturbance occurred during works for the Grid Connection. Given this, the scale of the works and the extent of similar habitat in the wider surroundings, significant effects are unlikely to have occurred. The effect significance for all KORs is assessed as no greater than **Low** (Percival, 2003) or a **short-term slight negative effect** (EPA, 2022).

7.5.2.3 Effects on Designated Sites

A remedial Appropriate Assessment Screening Report and rNIS has been prepared for the Existing Development to provide the competent authority with the information necessary to complete an Appropriate Assessment for the Existing Development. The screening did not identify any potential pathway for adverse effects on an SPA. Per the conclusion of the rNIS:

“it can be objectively concluded that the Existing Development, individually or in-combination with other plans or projects, has not and will not adversely affect the integrity of any European Site”

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

7.6 Mitigation and Best Practice Measures

This section describes the measures that were implemented to mitigate negative effects associated with the Existing Development on ornithological receptors. Effects on ornithological receptors have been addressed through the design of the Existing Development and the implementation of a Construction and Environmental Management Plan (Appendix 4-4). A Biodiversity Management and Enhancement Plan, which includes targeted hen harrier habitat enhancement measures, is also proposed (Appendix 6-4 of the accompanying EIAR for the Prospective Development). Full details are provided in Chapter 7 of the accompanying EIAR for the Prospective Development. These are discussed below.

7.6.1 Design of the Existing Development

The project design has followed the basic principles to avoid significant effects on ornithological receptors. These are outlined in Section 7.6.1 of Chapter 7 of the 2017 EIAR.

7.6.2 Construction and Environmental Management Plan

A Construction and Environmental Management Plan was prepared for the construction phase of the Permitted Development and was in place prior to the commencement of construction works at the Wind Farm Site and Grid Connection Site. These measures are outlined in the 2019 CEMP which is included as Appendix 4-4 of this rEIAR. Note that the majority of these measures are proposed as industry best practice rather than to mitigate any identified significant effect.

7.6.3 Biodiversity Management and Enhancement Plan

A Hen Harrier Habitat Enhancement Plan was proposed for the Existing Development. Full details are provided in Section 7.6.3 of Chapter 7 of the 2017 EIAR. Although no potentially significant effects were identified with regard to hen harrier, in acknowledgement of the historic significance of the area to hen harrier, a foraging habitat enhancement plan was prepared.

This is superseded by a BMEP which has been prepared to ensure that the Subject Development does not result in a net loss of foraging habitat for hen harrier. The plan is designed to create approximately the same amount of permanent foraging habitat for hen harrier as will potentially be lost by the Subject Development. Further details are provided in Chapter 7 of the accompanying EIAR for the Prospective Development.

7.6.4 Residual Effects

The effects of indirect habitat loss for hen harrier due to disturbance during the construction phase was a temporary, short-term (significant) effect, as hen harrier established a nest site in 2021, 770m from the 2020 nest site, and closer to the construction area. Therefore, the residual effect of disturbance is assessed to be **Low** (Percival, 2003) and **Slight** (EPA, 2022). As described above, the Subject Development includes a proposed BMEP containing measures for hen harrier habitat enhancement.

Following successful implementation of the measures described in this section, no effect significance greater than **Low**, as per Percival (2003) criteria, was identified for any KOR. No effect significance greater than **long-term slight negative effect**, as per EPA, 2022 criteria, was identified for any KOR. Taking into consideration the effect significance levels identified and the proposed best practice and mitigation, no significant residual effects on the KORs with regard to direct habitat loss or disturbance were identified.

7.7 Cumulative Impacts

The Existing Development was considered in combination with other plans and projects in the surrounding area that could have resulted in cumulative, in-cumulation, and transboundary impacts on KORs. Each of these types of cumulative impacts are discussed in the following sections.

7.7.1 Cumulative Effects – Existing Development

The Existing Development was considered in combination with other plans and projects in the surrounding area that could result in cumulative impacts on KORs. The plans and projects considered are listed in Chapter 2 of this rEIAR. The full list of plans and projects has been considered and relevant ones from this list are considered in this cumulative assessment. These are outlined below.

7.7.1.1 Plans Considered in the Assessment

The following plans were considered in the cumulative impact assessment:

- County Donegal Development Plan 2024 - 2030
- Northern and Western Regional Spatial and Economic Strategy 2020-2032
- Ireland's 4th National Biodiversity Action Plan 2023 – 2027

7.7.1.2 Projects Considered in the Assessment

7.7.1.2.1 Developments/Land Uses

A review of the relevant planning registers was undertaken to document relevant general development planning applications in the vicinity of the Prospective Development, as described in Chapter 2 of this EIAR. The majority of these relate to the provision and/or alteration of one-off rural housing and the provision and/or alteration of agricultural buildings. Owing to the scale and nature of these developments, significant cumulative impacts are not anticipated.

7.7.1.2.2 Forestry and Agricultural Practices

The land surrounding the Wind Farm Site and Grid Connection Site is dominated by conifer forestry with upland grasslands that are grazed with sheep and cattle. There are quarrying and peat harvesting activities ongoing in the wider area. The potential for the Existing Development to contribute to cumulative effects on birds when considered alongside these land uses was assessed. The Coillte planned harvest units for the Croaghonagh South were considered as part of this assessment.

No significant residual effects of ornithological receptors were recorded as a result of the construction of the Existing Development. On a precautionary basis, it is assumed that some temporary disturbance occurred during work. However, the effects were short-term (e.g. hen harrier) and no significant ongoing or residual effects resulting from the Existing Development were identified.

7.7.1.2.3 Other Wind Farm Developments

Wind farm projects within 25km of the proposed turbine locations are provided in Table 7-37 including details of their planning status, number of turbines and distance from the Wind Farm Site. Each wind farm is discussed individually in the following sections.

Table 7-37 Wind farm developments within 25km of the proposed turbine locations

Wind Farm	Planning Status	Number of Turbines	Separation Distance (turbine to turbine)
Altgolan Wind Farm	Proposed	5	15.6km
Altlow Turbine	Existing	1	13.2km
Anarget Wind Farm	Existing	3	17.8km
Anarget Wind Farm Extension	Existing	3	17.9km
Ballystrang Wind Farm	Existing	6	17.0km
Barnesmore Repowering	Permitted	13	2.07km
Barnesmore Wind Farm	Existing	25	2.09km
Bin Mountain Wind Farm	Existing	6	18.2km
Cark Wind Farm	Existing	30	16.8km
Cark Wind Farm Extension	Existing	4	16.7km

Wind Farm	Planning Status	Number of Turbines	Separation Distance (turbine to turbine)
Castlecraig Wind Farm	Existing	10	20.6km
Church Hill Wind Farm	Existing	8	11.3km
Church Hill Wind Farm Extension	Permitted	1	12.1
Clogheravaddy Wind Farm	Existing	6	24.0km
Clunahill Wind Farm	Pre-planning	6	24.6km
Crighshane Wind Farm	Existing	14	8.3km
Crilly Wind Farm	Permitted	4	13.9km
Croaghanmeal Wind Farm	Existing	7	6.3km
Culliagh Wind Farm	Existing	18	14.9km
Culliagh Wind Farm Extension	Existing	3	14.5km
Drumnahough Wind Farm	Permitted	12	16.2km
Graffy Wind Park	Proposed	8	19.3km
Gronan Wind Farm	Existing	4	12.1km
Lenalea Wind Farm	Existing	7	17.4km
Lough Cuill Wind Farm	Existing	8	6.2km
Lough Hill Wind Farm	Existing	6	18.9km
Meenadreen Wind Farm	Existing	4	6.7km
Meenadreen Wind Farm Extension	Existing	8	6.1km
Meenahorna Wind Farm	Existing	7	13.6km
Meenakeeran Wind Farm	Proposed	5	3.1km
Meenalaban Wind Farm	Existing	7	14.1km
Meenamullan Wind Farm	Proposed	6	12.8km
Meenanilta Wind Farm	Existing	3	13.0km
Meenamilta Wind Farm Extension 2	Existing	3	12.8km
Meenamilta Wind Farm Extension 3	Existing	4	12.5km

Wind Farm	Planning Status	Number of Turbines	Separation Distance (turbine to turbine)
Meentycat Wind Farm	Existing	9	14.9km
Pullytean Wind Farm	Proposed	7	9.3km
Seegronan Wind Farm	Existing	6	13.0km
Seegronan Wind Farm Extension	Existing	3	11.8km
Slieveglass Wind Farm	Existing	3	20.5km
Straness Wind Farm	Existing	15	3.5km
Thornog Wind Farm	Existing	3	21.9km
Thornog Wind Farm Extension	Existing	5	21.0km
Tievenameenta Wind Farm	Existing	15	10.5km
Tullynaglack Wind Farm Mid-Point	Pre-planning	n/a	20.9km

Altgolan Wind Farm

The potential for the Existing Development to result in significant cumulative effects when assessed alongside the proposed Altgolan Wind Farm was considered. The planning file¹⁷ was reviewed on the Northern Ireland Planning Portal website and the EIAR was reviewed.

The potential for displacement, disturbance and collision risk was assessed for buzzard, hen harrier, kestrel and peregrine. No significant negative impacts were anticipated for these species. The potential effects on other breeding birds were not considered to be significant. Potential impacts on wintering waterfowl, including whooper swan, were also assessed. No significant impacts were anticipated. There was previous records of breeding curlew within the 500m survey radius however, recent surveys did not find any evidence of breeding curlew, thus the development was considered to have no significant effect on local or national breeding curlew population. Cumulative impacts with wind farms within 25km of the site were considered. The overall cumulative effect was assessed to be not significant.

Altlow Turbine

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Altlow Turbine was considered. The planning file¹⁸ was reviewed on the Donegal County Council website and the Environmental Report was reviewed.

Bird species were recorded in the course of the habitat and mammal surveys. No species of conservation concern were identified. No evidence was found to show that the site is within a regularly used migration route by birds or a route used by wintering wildfowl. From the location and topography of the area there was no reason to believe it would be used by significant numbers of migrating birds or wildfowl. Therefore, the possibility of an impact by disturbance on migrating birds during construction was disregarded. A minor loss of habitat was also not expected to affect any of the bird species in the

¹⁷ <https://planningregister.planningsystemni.gov.uk/application/182293>

¹⁸ <https://eplanning.ie/ePlan/AppFileRefDetails/1120428/6?localAuthorityId=6>

area. It was considered unlikely that the operational turbine would have any disturbance impacts on the passerine species in the adjoining habitats. The site did not provide suitable roosting or nesting habitat for Greenland white-fronted geese. It was concluded that *‘the proposed development will have no long term negative impacts on the local environment provided that all mitigation measures are implemented’*.

Anarget Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Anarget Wind Farm was considered. The planning file¹⁹ was reviewed on the An Coimisiún Pleanála website. There was no impact assessment available within the planning file, however the inspectors report was reviewed. The inspector noted that Dúchas (the Heritage Service) had no objections to Anarget Wind Farm in relation to its proximity to conservation areas.

Anarget Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Anarget Wind Farm Extension was considered. The planning file²⁰ was reviewed on Donegal County council website and the EIS was reviewed.

During bird surveys for this extension and for previous applications, a low diversity was present and species recorded included meadow pipit, skylark, wheatear, snow bunting, snipe, raven, hooded crow, peregrine, and kestrel. It was noted that sensitive species such as golden plover, red grouse, peregrine, merlin, hen harrier, and golden eagle could all feasibly utilise habitats within the site but there were no records of these species during surveys. As there was an absence of any negative impacts at the site or at similar locations for raptors such as golden eagle, merlin and hen harrier, the extension of the site was considered not to have any significant negative impact. It was not expected that there would be any significant changes to existing bird movements across the site. It was anticipated that locally breeding pairs of red grouse or golden plover could be displaced if their territories were within or near the area of the proposed turbine locations or access roads but as both species are likely to have very large territories the displacement was not considered likely to involve the loss of birds but rather a change in their territories.

Ballystrang Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Ballystrang Wind Farm was considered. The planning file²¹ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Ballystrang Wind Farm is located in open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Barnesmore Repowering

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the granted Barnesmore Repowering was considered. The planning file²² was reviewed on the An Coimisiún Pleanála website and the EIAR was reviewed.

¹⁹ <https://archive.pleanala.ie/en-ie/case/112591>

²⁰ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/0520375/0>

²¹ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/028010/0>

²² <https://www.pleanala.ie/en-ie/case/306303>

The target species discussed in this document were golden plover, curlew, common sandpiper, snipe, red grouse, kestrel, merlin, peregrine, hen harrier, buzzard, golden eagle, sparrowhawk, white-tailed eagle, whooper swan, cormorant, heron and some small passerine species. Prior to mitigation, from the primary field surveys and assessment, there were considered to be negligible effects on extant bird species. However, some moderate effects were predicted for the construction phase on snipe, red grouse, common sandpiper, golden plover, whooper swan and meadow pipit and skylark. Snipe, whooper swan, common sandpiper, hen harrier, skylark and meadow pipit were also assessed as moderate - minor displacement effects during the operational phase. Following mitigation, these effects are assessed as being of negligible magnitude, and not significant. Kestrel were considered to be vulnerable to collision so nest boxes were proposed to increase set-back distance for this species. There were no raptors or other priority species directly impacted by the development subject to the implementation of disturbance management measures during construction / decommissioning. It was concluded that *'Following implementation of proposed mitigation, and best practice measures, there are considered to be no significant negative effects of the Development on ornithology'*.

Barnesmore Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Barnesmore Wind Farm was considered. The planning file²³ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology.

The area of the development is comprised largely of open peatland. These habitats are likely to host some of the KORs recorded at the Wind Farm Site. Note that this site was re-appraised as part of the Barnesmore Repowering, as outlined above.

Bin Mountain Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Bin Mountain Wind Farm was considered. The planning file²⁴ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Bin Mountain Wind Farm is located in an area of open peatland habitats, and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Cark Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Cark Wind Farm was considered. The planning files^{25, 26} were reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Cark Wind Farm is located in an area of open peatland habitats, and is therefore likely to host many of the KORs recorded at the Wind Farm Site.

Cark Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Cark Wind Farm Extension was considered. The planning file²⁷ was reviewed on the Donegal County Council website. There was no impact assessment available

²³ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/95914/0>

²⁴ <https://planningregister.planningsystemni.gov.uk/application/237719>

²⁵ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/951310/0>

²⁶ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/96780/0>

²⁷ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/018262/0>

within the planning file relating to ecology, although it was noted that Dúchas provided no comments on nature conservation. From aerial imagery, Cark Wind Farm Extension is located in an area of conifer plantation and open peatland habitats, and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Cark/Largymore Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Cark/Largymore Wind Farm was considered. The planning file²⁸ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Cark/Largymore Wind Farm is located in an area of open peatland and farmland habitats, and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

CastleCraig Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing CastleCraig Wind Farm was considered. The planning file²⁹ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, CastleCraig Wind Farm is located in an area of open peatland and farmland habitats, and is therefore likely to host many of the KORs recorded at the Wind Farm Site.

Church Hill Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Church Hill Wind Farm was considered. The planning file³⁰ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available within the planning file relating to ecology. However, reports on ornithological monitoring during the pre-planning, construction and operational phases from 2004 to 2016 were available and reviewed. Species including golden plover, hen harrier, merlin, peregrine falcon, kestrel, curlew, lapwing, snipe, buzzard and sparrowhawk were discussed. Golden plover (wintering), hen harrier, kestrel, snipe (breeding), buzzard and sparrowhawk numbers were found to have remained stable over the monitoring period. A decline in wintering snipe numbers was noted. A hen harrier nest was located within 500m of a turbine during construction, but is suspected to have been predated. However, hen harrier breeding numbers in the wider area remained stable. Kestrel were breeding on the edge of the 500m turbine buffer zone in one year, while breeding buzzard and snipe were recorded within 500m turbine buffer zone and regularly forage in this zone. Merlin was recorded sporadically but in recent years have not been seen within 500m of turbines, while peregrine falcon was also recorded sporadically. Breeding curlew declined but it was assessed that curlew were absent from the local area before construction began, in correlation with the decline of curlew nationwide.

Church Hill Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the permitted Church Hill Wind Farm Extension was considered. The Planning File³¹ was reviewed on the Northern Ireland Planning Portal Website and the EIS was reviewed. An assessment was undertaken to determine the risk to birds at the site, including a review of

²⁸ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/028328/0>

²⁹ <https://planningregister.planningsystemni.gov.uk/application/57370>

³⁰ <https://planningregister.planningsystemni.gov.uk/application/237906>

³¹ <https://planningregister.planningsystemni.gov.uk/application/236226>

data from historic and continued bird surveys at the operational Church Hill Wind Farm (discussed above). Hen harrier and snipe were assessed.

The effects during the construction phase were judged to be Not Significant and the magnitude of the potential operational disturbance was considered to be low for both species. The size of the proposed single wind turbine extension project would have a limited effect on the overall cumulative presence of turbines in the area, therefore cumulative impacts were deemed Not Significant. In a consultation response, the Northern Ireland Environment Agency noted that hen harrier and merlin nesting occurred at a distance of ~900m and 1.8km from the proposed development site in 2011 respectively. The habitat was considered generally unsuitable for red grouse, which have not been detected at the site since 2004. The site is not a known flyway or foraging/roosting area for large numbers of waterfowl. The EIS concluded that the likely effects of the proposed development on all bird species was Not Significant.

Clogheravaddy Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Clogheravaddy Wind Farm was considered. The planning file³² was reviewed on the Donegal County Council website and the NIS was reviewed.

Within the NIS, disturbance, displacement and collision risk of SCI species associated with Lough Nillan SPA was considered, and it was concluded that *‘with the application of the proposed mitigation measures, the development of the wind farm at Clogheravaddy will have no adverse impacts on the Natura 2000 sites in the wider hinterland.’*

Clunahill Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the proposed Clunahill Wind Farm was considered. The planning file³³ was reviewed on the Northern Ireland Planning Portal website and the Environmental Statement was reviewed.

Impacts during the construction, de-commissioning, and operational stages were assessed for curlew, snipe and red grouse. The impacts from construction disturbance and displacement during the operational stage were assessed to be of moderate regional significance and high local significance for curlew. Mortality through collision with turbine blades was assessed to be of low significance for curlew also. The impacts of disturbance from construction and displacement from foraging was assessed to be of low significance for snipe. There were no significant impacts anticipated relating to red grouse. Impacts during the operational stage were assessed for raptors, including buzzard, kestrel, peregrine, red kite, sparrowhawk and hen harrier. The collision risk modelling indicated a moderate significant impact for kestrel, a low significant impact for buzzard, a negligible impact on peregrine, red kite, and sparrowhawk and no impact on hen harrier. Impacts on breeding passerines, including meadow pipit, were assessed and impacts were anticipated to be low or negligible. Cumulative impacts of wind farms within 5km of the development site were assessed, and found to be not significant.

Crighshane Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Crighshane Wind Farm was considered. The planning file³⁴ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available

³² <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/1451305/0>

³³ <https://planningregister.planningsystemni.gov.uk/application/694694>

³⁴ <https://planningregister.planningsystemni.gov.uk/application/228950>

within the planning file relating to ecology. However, reports on ornithological monitoring during the pre-planning, construction and operational phases from 2004 to 2016 were available and reviewed. Buzzard, kestrel, hen harrier, merlin, sparrowhawk, curlew and snipe were discussed. Numbers of hunting buzzard, kestrel, hen harrier, sparrowhawk and breeding snipe have remained stable. Hen harrier bred within 3km of the site boundary in one year. There were some records of merlin over the years. Breeding curlew declined but it was assessed that curlew were absent from the local area before construction began, in correlation with the decline of curlew nationwide.

Crilly Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the permitted Crilly Wind Farm was considered. The planning file³⁵ was reviewed on the Donegal County Council Planning website and the EIS was reviewed.

Of the bird species recorded, those requiring further assessment were hen harrier and snipe only. Resting and foraging hen harrier were considered sensitive to visual disturbance and sudden noise events over moderate distances, and potentially vulnerable to collision with turbines during the migration period. Wintering and breeding snipe were also considered sensitive to development. The effects on birds due to habitat loss was considered to be Negligible. No evidence of breeding hen harrier was registered during surveys and no historical records of breeding in the Crilly Wind Farm area. Due to the small local population sizes of snipe, irregular use of the area for foraging by hen harrier and the overall small predicted effects on habitats, the magnitude of construction disturbance effects on hen harrier and snipe was considered to be low. The magnitude of collision mortality effects on hen harrier and snipe was also considered to be low. No impact to any SPA bird designation features were anticipated. It was concluded that *‘the likely effects of the proposed development on all bird species are Not Significant.’*

Croaghanmeal Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Croaghanmeal Wind Farm was considered. The planning files^{36,37} were reviewed on the An Coimisiún Pleanála website and Donegal County Council website. There was no impact assessment available within the planning file, however the inspectors report was reviewed.

The inspector assessed Croaghanmeal Wind Farm Extension in conjunction with adjacent sites Straness Wind Farm and Meenadreen Wind Farm Extension which effectively form a single windfarm for 33 no. turbines in addition to the five turbines already at Meenadreen Wind Farm.

The original planning application to the local authority was refused in part due to *“concerns in regard to the impact of the proposed development and that of adjoining developments on the natural environment including the disturbance and displacement of breeding areas, habitat and foraging areas of hen harriers.”*

The DoEHLG commented *“we consider the nature conservation issues and mitigation measures have been adequately addressed in the EIS. It is felt that there would be no significant threat to any designated area, habitat or important species”*.

However, the Northern Ireland Planning service raised some concerns regarding the ornithological interest of the site *“the bird survey carried out indicated that the proposed development was of ornithological interest during the breeding season. It was indicated that 1) a second survey for breeding waders would be prudent, and 2) that the hen harrier had an established breeding population in the*

³⁵ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/1351404/0>

³⁶ <https://archive.pleanala.ie/en-ie/case/220235>

³⁷ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/041461/0>

uplands of south Donegal/Tyrone/Fermanagh and that the EIS confirmed sightings within the Study area and potential of the area as a foraging habitat. Concerns were therefore expressed from the potential for disturbance of birds from foraging areas or even actual or potential nest sites. It was also stated that 3) potential risk of collision with whooper swans may have been underestimated and more data on this issue be sought."

The inspector concluded *"However based on the submissions available to me including the EIS and in the First Party grounds of appeal, the presence of the existing turbines and the absence of further contradictory data I do not recommend an objection to the proposed (amended and reduced) development on significant detriment to the ornithological interest of the area."*

The inspector stated that *'None of the bird species observed on the site are included in the Irish Red Data Book. No potential impact to birds or mammals is foreseen during the construction or operation of the development.'* The inspector then found that *'The likely impact of the development on the ecology of the area, climate, air quality, noise and archaeology are properly addressed.'* and that *'The information contained in the EIS with regard to the habitats, flora and fauna on the site is considered to be adequate to demonstrate that the development would not have any undue effect on the natural heritage of the area.'*

Cullagh Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Cullagh Wind Farm was considered. The planning file³⁸ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Cuillagh Wind Farm is located in an area of open peatland habitats, and is therefore likely to host many of the KORs recorded at the Wind Farm Site.

Cullagh Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Cullagh Wind Farm Extension was considered. The planning file was reviewed on the Donegal County Council website and the EIS was reviewed.

Impacts were considered for Greenland white-fronted geese, whooper swan, golden plover, hen harrier, peregrine, merlin, and red grouse. It was noted that there may be an enhanced collision risk or barrier effects to migratory flocks of golden plover, Greenland white-fronted geese, and whooper swan. The potential impacts from construction disturbance, loss of habitat and collision risk was assessed to be low and not significant for hen harrier, peregrine and merlin, and red grouse. It was noted that disturbance from ancillary construction works, may have impacts on potentially sensitive breeding birds such as golden plover, snipe, red grouse, peregrine and merlin.

Drumnahough Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the permitted Drumnahough Wind Farm was considered. The planning file³⁹ was reviewed on the An Coimisiún Pleanála website and the EIS was reviewed.

The avian Key Ecological Receptors discussed in this document were merlin, peregrine, hen harrier, kestrel, sparrowhawk, buzzard, golden eagle, golden plover, snipe, goosander, great black-backed gull, lesser black-backed gull, grey heron, red grouse and Red-listed passerine species. The magnitude of the

³⁸ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/971740/0>

³⁹ <https://www.pleanala.ie/en-ie/case/308806>

effect of direct habitat loss during construction was assessed as Negligible for goosander and lesser black-backed gull and Low for merlin, peregrine kestrel, sparrowhawk, buzzard, golden eagle, hen harrier, golden plover, snipe, great black-backed gull, grey heron and red grouse. The magnitude of the effect of displacement and barrier effect during construction was assessed as Negligible for kestrel, sparrowhawk, buzzard, golden eagle, goosander and lesser black-backed gull, Low-Negligible for grey heron, Low for merlin, peregrine, hen harrier, golden plover and great black-backed gull, Medium for red grouse and Red-listed passerine species, and High for snipe. The magnitude of the effect of displacement and barrier effect during operation was assessed as Negligible for golden eagle, golden plover, goosander and grey heron, Low for merlin, peregrine, kestrel, sparrowhawk, hen harrier, great black-backed gull, lesser black-backed gull, red grouse and Red-listed passerines, Medium for buzzard and High for snipe. Finally, the magnitude of the effect of collision risk during operation was assessed as Negligible for hen harrier, golden plover and grey heron, Low for merlin, peregrine, kestrel, sparrowhawk, buzzard, golden eagle, snipe, goosander and lesser black-backed gull, Medium for great black-backed gull and no impact for red grouse. It was concluded that, taking account of mitigations, *‘the proposed development can be built without significant effects on avifauna at the local and county scale’*.

Graffy Wind Park

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the proposed Graffy Wind Park was considered. The planning file⁴⁰ was reviewed on the Donegal County Council Planning website and the EIS was reviewed.

KORs identified included merlin, white-tailed eagle, hen harrier, golden eagle, whooper swan, red grouse, sparrowhawk, kestrel, snipe, and jack snipe. Direct and indirect disturbance to breeding during the construction phase was assessed to be medium significance to merlin, and low significance to meadow pipit, sparrowhawk, snipe, whinchat, and amber-listed passerines. Collision risk was considered to be low significance for white-tailed eagle, low/medium significance for golden eagle and very low significance for kestrel. Indirect disturbance to breeding during the operational phase of the development was considered to be of medium significance to merlin, low significance to whinchat, and very low significance to snipe. Cumulative impacts of wind farms within 15km of the development site were assessed, and found to be not significant, due to the low density of operational and consented wind farms.

Gronan Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Gronan Wind Farm was considered. The planning file⁴¹ was reviewed on the Northern Ireland Planning Portal Website. There was no impact assessment available within the planning file. There was no impact assessment available within the planning file related to ecology. From aerial imagery, Gronan Wind Farm is located in an area of open peatland/wet grassland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Lenalea Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Lenalea Wind Farm was considered. The planning file⁴² was reviewed on the Donegal County Council Planning website and the EIS was reviewed.

⁴⁰ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/2151990/0>

⁴¹ <https://planningregister.planningsystemni.gov.uk/application/149194>

⁴² <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/0950116/0>

The target species recorded on this site were hen harrier, golden plover, red grouse, merlin, peregrine, Greenland white-fronted goose, whooper swan, red-throated diver, curlew, kestrel, snipe, buzzards and other amber-listed species. The proposed development was not considered to contain good quality hen harrier breeding habitat, though the species may continue to forage in the site and surrounding habitats. Records indicate regular occurrence of whooper swan in autumn and spring and periodically during the winter. Greenland white-fronted goose was not known to use the site or local habitats however they were recorded once on spring migration outside the site. Collision risk for Greenland white-fronted goose and whooper swan was considered to be low given the apparently small numbers and infrequent movements of birds. The Lenalea site was not considered to contain large populations of any species particularly sensitive to wind farm developments and it was therefore not expected that there would be significant cumulative impacts on the local faunal communities. It was concluded that ‘*With the successful application of mitigating measures... and best practice construction techniques, the wind farm construction will not have any long term negative impacts on the habitats or locally occurring wildlife on the site. With the successful application of mitigating measures the residual impacts post construction would be negligible.*’

Lough Cuill Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Lough Cuill Wind Farm was considered. The planning file⁴³ was reviewed on the Donegal County Council Planning website. The impact assessment was not accessible within the planning file, however the inspectors report was reviewed.

The inspector stated that “*The applicants have also carried out surveys in regards to bird species within the area and it is concluded that impact of the proposal in regards to breeding is negligible and the risk of collision with the turbines is low. I am satisfied with the scope and level of detail provided by the applicant in regards to bird species in the area. I am also satisfied that based on the information submitted that the proposal would have no significant or adverse impact upon such species.*”

Lough Hill Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Lough Hill Wind Farm was considered. The planning file⁴⁴ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Lough Hill Wind Farm is located in an area of open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Meenadreen Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenadreen Wind Farm was considered. The planning files^{45,46} were reviewed on the An Coimisiún Pleanála website and Donegal County Council website. There was no impact assessment available within the planning file, however the inspectors report was reviewed.

This site was refused planning permission for the erection of turbines on three occasions (PL05.103184 (Reg. Ref. 95/58); PL05.104225 (Reg. Ref. 95/1710); Reg. Ref. 99/2078), with effects on the habitats of bird species cited as a refusal reason in all cases. Limited information could be extracted from the Inspector’s Report on the first party appeal against certain conditions and a third party appeal against a

⁴³ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/1250866/0> [

⁴⁴ <https://planningregister.planningsystemni.gov.uk/application/52048>

⁴⁵ <https://archive.pleanala.ie/en-ie/case/212856>

⁴⁶ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/05127/0>

decision by the Planning Authority to grant permission (PL05.116924 (Reg. Ref. 99/1257)), after which the development was ultimately granted. Within the first party appeal, the developer stated that that ‘*the extensive planting will affect the land as a bird habitat and that most rare species are not located on or close to the site e.g. peregrine falcon, hen harrier and merlin. Also Red Grouse are unlikely to use the site as planting evolves. The EIS. does not indicate that the site has been used as a migratory route by birds and this is after detailed inspection and investigation. Noise impact on birds would be negligible.*’. The wind farm was ultimately granted based on this appeal with this information.

Meenadreen Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenadreen Wind Farm Extension was considered. The planning files^{47,48} were reviewed on the An Coimisiún Pleanála website and Donegal County Council website. There was no impact assessment available within the planning file, however the inspectors report was reviewed.

The inspector assessed Meenadreen Wind Farm Extension in conjunction with adjacent sites Straness Wind Farm and Croaghanmeal Wind Farm Site which effectively form a single windfarm for 33 no. turbines in addition to the five turbines already at Meenadreen Wind Farm.

The original planning application to the local authority was refused in part due to “*concerns in regard to the impact of the proposed development and that of adjoining developments on the natural environment including the disturbance and displacement of breeding areas, habitat and foraging areas of hen harriers.*”

The DOEHLG commented “*we consider the nature conservation issues and mitigation measures have been adequately addressed in the EIS. It is felt that there would be no significant threat to any designated area, habitat or important species*”.

However, the Northern Ireland Planning service raised some concerns regarding the ornithological interest of the site “*the bird survey carried out indicated that the proposed development was of ornithological interest during the breeding season. It was indicated that 1) a second survey for breeding waders would be prudent, and 2) that the hen harrier had an established breeding population in the uplands of south Donegal/Tyrone/Fermanagh and that the EIS confirmed sightings within the Study area and potential of the area as a foraging habitat. Concerns were therefore expressed from the potential for disturbance of birds from foraging areas or even actual or potential nest sites. It was also stated that 3) potential risk of collision with whooper swans may have been underestimated and more data on this issue be sought.*”

The inspector concluded “*However based on the submissions available to me including the EIS and in the First Party grounds of appeal, the presence of the existing turbines and the absence of further contradictory data I do not recommend an objection to the proposed (amended and reduced) development on significant detriment to the ornithological interest of the area.*”

Meenahorna Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenahorna Wind Farm was considered. The planning file⁴⁹ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Meenahorna Wind Farm is located in an area of

⁴⁷ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/041462/0>

⁴⁸ <https://archive.pleanala.ie/en-ie/case/220172>

⁴⁹ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/028373/0>

open peatland habitats, and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Meenakeeran Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the proposed Meenakeeran Wind Farm was considered. The planning file⁵⁰ was accessed on the Northern Ireland Planning Register, and the ES Non-technical summary was reviewed, in the absence of the ornithology chapter.

The potential for impacts of loss of foraging habitat and disturbance during the construction and operational phase were assessed for golden plover, hen harrier, woodcock, and snipe, and found to be low to negligible and deemed not significant. Impacts from collision risk with turbines were assessed for golden plover and hen harrier and found to be low to negligible, and not significant.

Meenalaban Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenalaban Wind Farm was considered. The planning file⁵¹ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Meenalaban Wind Farm is located in an area of conifer plantation and open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Meenamullan Wind Farm

The proposed Meenamullan Wind Farm is at the pre-planning stage and therefore no planning application has been lodged and no impact assessment has been completed to date. The development is located in open peatland and conifer plantation. These habitats are likely to host some of the KORs recorded at the Wind Farm Site.

Meenanilta Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenanilta Wind Farm was considered. The planning file⁵² was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Meenanilta Wind Farm is located in an area of conifer plantation habitats and is therefore likely to host many of the KORs recorded at the Wind Farm Site.

Meenanilta Wind Farm Extension 2

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenanilta Wind Farm Extension (2) was considered. The planning file⁵³ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Meenanilta Wind Farm Extension (2) is located in an area of conifer plantation and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

⁵⁰ <https://planningregister.planningsystemni.gov.uk/application/703917>

⁵¹ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/028008/0>

⁵² <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/018143/0>

⁵³ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/018305/0>

Meenanilta Wind Farm Extension 3

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meenanilta Wind Farm Extension (3) was considered. The planning file⁵⁴ was reviewed on the Donegal County Council website and the EIS was reviewed.

The main species identified on the site and the surrounding area were skylark and meadow pipit. The EIS states that *‘Research conducted in other EU countries has concluded that mortality rates generated by turbines are negligible and mainly relate to seasonal migrational routes. The proposed site is not situated in any of these routes. The overall predicted impact to the bird population in the area would be therefore positive, due to the improvement of the general habitat on site.’*

Meentycat Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Meentycat Wind Farm was considered. The planning file⁵⁵ was reviewed on the Donegal County Council website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Meentycat Wind Farm is located in an area of open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Pullytean Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the proposed Pullytean Wind Farm was considered. The planning file⁵⁶ was reviewed on the Northern Ireland Planning Portal website and the Environmental Statement was reviewed.

The Important Ornithological Features identified in this assessment included lesser black-backed gull, golden plover, hen harrier, merlin, peregrine, snipe, great black-backed gull, kestrel, red grouse, and woodcock. Disturbance, displacement, loss of habitat, and collision risk effects for lesser black-backed gull, golden plover, hen harrier, merlin and peregrine were assessed to be negligible and not significant. No significant impacts were anticipated for snipe, great black-backed gull, kestrel, red grouse or woodcock. It was noted that due to the mitigation and enhancement measures proposed alongside the project that there would be a net positive benefit for local biodiversity through the lifetime of the project.

Seegronan Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Seegronan Wind Farm was considered. The planning file⁵⁷ was reviewed on the Northern Ireland Planning Portal website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Seegronan Wind Farm is located in an area of open peatland/wet grassland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

⁵⁴ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/049275/0>

⁵⁵ <https://www.eplanning.ie/DonegalCC/AppFileRefDetails/018038/0>

⁵⁶ <https://planningregister.planningsystemni.gov.uk/application/706437>

⁵⁷ <https://planningregister.planningsystemni.gov.uk/application/236513>

Seegronan Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Seegronan Wind Farm Extension was considered. The planning file⁵⁸ was reviewed on the Northern Ireland Planning Portal Website and the EIS was reviewed.

The Key Ornithological receptors assessed were hen harrier and snipe. The impacts of disturbance and loss of habitat during the construction and operational phases of the development for hen harrier and snipe were assessed to be not significant.

Slieveglass Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Slieveglass Wind Farm was considered. The planning file⁵⁹ was reviewed on the Northern Ireland Planning Portal Website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Slieveglass Wind Farm is located in an area of open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Straness Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Straness Wind Farm was considered. The planning files^{60,61} were reviewed on the An Coimisiún Pleanála website and Donegal County Council website. There was no impact assessment available within the planning file, however the inspectors report was reviewed.

The inspector assessed Straness Wind Farm Extension in conjunction with adjacent sites Croaghanmeal Wind Farm and Meenadreen Wind Farm Extension which effectively form a single windfarm for 33 no. turbines in addition to the five turbines already at Meenadreen Wind Farm.

The original planning application to the local authority was refused in part due to ‘*concerns in regard to the impact of the proposed development and that of adjoining developments on the natural environment including the disturbance and displacement of breeding areas, habitat and foraging areas of hen harriers.*’

The DoEHLG commented ‘*we consider the nature conservation issues and mitigation measures have been adequately addressed in the EIS. It is felt that there would be no significant threat to any designated area, habitat or important species.*’

However, the Northern Ireland Planning service raised some concerns regarding the ornithological interest of the site ‘*the bird survey carried out indicated that the proposed development was of ornithological interest during the breeding season. It was indicated that 1) a second survey for breeding waders would be prudent, and 2) that the hen harrier had an established breeding population in the uplands of south Donegal/Tyrone/Fermanagh and that the EIS confirmed sightings within the Study area and potential of the area as a foraging habitat. Concerns were therefore expressed from the potential for disturbance of birds from foraging areas or even actual or potential nest sites. It was also stated that 3) potential risk of collision with whooper swans may have been underestimated and more data on this issue be sought.*’

⁵⁸ <https://planningregister.planningsystemni.gov.uk/application/187388>

⁵⁹ <https://planningregister.planningsystemni.gov.uk/application/175332>

⁶⁰ <https://www.eplanning.ie/DonagallCC/AppFileRefDetails/041526/0>

⁶¹ <https://archive.pleanala.ie/en-ie/case/220176>

The inspector concluded ‘*However based on the submissions available to me including the EIS and in the First Party grounds of appeal, the presence of the existing turbines and the absence of further contradictory data I do not recommend an objection to the proposed (amended and reduced) development on significant detriment to the ornithological interest of the area.*’

Thornog Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Thornog Wind Farm was considered. The planning files^{62,63} was reviewed on the Northern Ireland Planning Portal Website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Thornog Wind Farm is located in an area of open peatland and farmland/wet grassland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Thornog Wind Farm Extension

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Thornog Wind Farm Extension was considered. The planning file^{64,65} was reviewed on the Northern Ireland Planning Portal Website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Thornog Wind Farm Extension is located in an area of open peatland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Tievenameenta Wind Farm

The potential for the Existing Development to result in significant cumulative or in-combination effects when assessed alongside the existing Tievenameenta Wind Farm was considered. The planning file⁶⁶ was reviewed on the Northern Ireland Planning Portal Website. There was no impact assessment available within the planning file relating to ecology. From aerial imagery, Tievenameenta Wind Farm is located in an area of open peatland and farmland/wet grassland habitats and is therefore likely to host some of the KORs recorded at the Wind Farm Site.

Tullynaglack Wind Farm

The proposed Tullynaglack Wind Farm is at the pre-planning stage and therefore no planning application has been lodged and no impact assessment has been completed to date. The area of the development is comprised of farmland, open peatland and conifer plantation. These habitats are likely to host some of the KORs recorded at the Wind Farm Site.

⁶² <https://planningregister.planningsystemni.gov.uk/application/54470>

⁶³ <https://planningregister.planningsystemni.gov.uk/application/106918>

⁶⁴ <https://planningregister.planningsystemni.gov.uk/application/63419>

⁶⁵ <https://planningregister.planningsystemni.gov.uk/application/109059>

⁶⁶ <https://planningregister.planningsystemni.gov.uk/application/212401>

7.7.1.3 Cumulative Impact Assessment

During the assessment of cumulative effects on KORs, cumulative habitat loss and disturbance associated with the construction of the Existing Development, forestry and agricultural practices was assessed. No significant cumulative effects are predicted to result from the construction phase disturbance because construction works are short in duration and have little to no temporal overlap. For this reason, construction phase disturbance effects are not predicted to result in significant cumulative effects and are not considered further in the cumulative assessment.

A GIS mapping exercise was undertaken that aimed to quantify the amount of land within the wider landscape (i.e., the continuous upland habitat in which the Wind Farm Site lies). To define the area of interest, it was found that by including lands above 100m in elevation, a reasonable approximation of the Blue Stack Mountains and the South Donegal hen harrier stronghold and uplands was achieved and the key suitable habitats for all KORs at a regional scale were included. Natural borders such as valleys and rivers were used and Lough Finne and the River Finn were used as the northern extent of the regional upland area. The rationale for this approach was as follows: O'Donoghue (2004) described the modern landscape of the Irish breeding hen harrier as upland, typically above 100m above sea level. The exercise showed that the total upland area is 122,769ha. Of this, the total area of forestry is 31,477ha and the total area of open habitat is 91,292ha. Open areas greater than 500m from turbines (excl. the proposed turbine locations) is 84,435ha (or 92.5% of the open habitat). Full details are provided in Chapter 7 of the accompanying EIAR for the Prospective Development.

7.7.1.3.1 Golden Eagle

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
National Scale	At a national level, the main pressures and threats for golden eagle listed in Article 12 reporting are: conversion to forest from other land uses, or afforestation; abandonment of grassland management; and extensive grazing or undergrazing by livestock; as well as poisoning of animals and illegal shooting/killing. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for golden eagle. All of the pressures/threats were ranked as of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of open habitat for golden eagle. Afforestation reduces the	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant .

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
extent of open foraging habitat. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for golden eagle (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance, as well as carrion availability). For example, drainage, reseeding and improvement may reduce habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to golden eagle. Altgolan Wind Farm, the Altlow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. This species is primarily an open habitat species that does not regularly use forestry. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of limited to no ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above-reported effects and the effects of the Existing Development, cumulative effects on golden eagle are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on golden eagle are anticipated at the county, national or international scale.		

7.7.1.3.2 Golden Plover

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale (25km)	At a national level, the main pressures and threats for golden plover listed in Article 12 reporting are: conversion to forest from other land uses, or afforestation; intensive grazing or overgrazing by livestock; drainage for use as agricultural land; conversion from one type of agricultural land use to another; burning for agriculture; and wind, wave and tidal power, including infrastructure; as well as problematic native species, other invasive alien species, and vandalism or arson. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for golden plover. The threat/pressure of wind, wave and tidal power was ranked as of medium importance, while those relating to forestry were all ranked as of high importance. Intensive grazing by livestock, and drainage for use as agricultural land were ranked as of high importance, while the remainder relating to agricultural practices were ranked as of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of open habitat for golden plover. Afforestation reduces the extent of open habitat. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for golden plover (e.g., through changes in grazing pressure, vegetation structure,	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
drainage and levels of human disturbance). For example, drainage may reduce foraging/roosting habitat suitability in some areas, while reseeded and improved may maintain suitable habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to golden plover. Altgolan Wind Farm, the Altlow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. This species is an open habitat species. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of no ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This		

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on golden plover are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on golden plover are anticipated at the county, national or international scale.		

7.7.1.3.3 Hen Harrier

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Breeding: National Scale Wintering: Regional Scale (25km)	At a national level, the main pressures and threats for hen harrier listed in Article 12 reporting are: conversion to forest from other land uses, or afforestation; replanting with or introducing non-native or non-typical species; wood transport; removal of small landscape features for agricultural land parcel consolidation; reseeded of grasslands and other semi-natural habitats; conversion from one type of agricultural land use to another; burning for agriculture abandonment of management/use of other agricultural and agroforestry systems; and wind, wave and tidal power, including infrastructure; as well as problematic native species.	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for hen harrier. The pressures/threat of wind, wave and tidal power is ranked as of medium importance. Conversion to forest from other land uses, or afforestation, and replanting with or introducing non-native or non-typical species were ranked as of high importance, with the remaining pressures/threats relating to forestry and agricultural practices ranked as of medium importance. Commercial forestry habitats are of limited value to hen harrier except during the pre-thicket stage (approximately the first ten years of growth) when they can be used by hunting and nesting birds. Some areas of forestry in the landscape may naturally become unsuitable for this species over the lifetime of the Existing Development due to the maturation of commercial forestry. However, due to the regular cycles of commercial forestry, additional areas are likely to also be felled within the landscape, and as such new potential suitable habitat would become available. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for hen harrier (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeding and improvement may reduce habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat. Cark Wind		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to hen harrier. Altgolan Wind Farm, the Altilow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of limited ecological value for this species. This species sometimes nests in forestry, it traditionally nests in open habitat and uses open habitats for foraging. The total area of available open habitat in the regional upland area is 84,435ha. In the same uplands, there are 29,859ha of forestry greater than 500m from a turbine. Owing to the likely asynchronous rotation cycle of the forestry crop, only a proportion of the forestry will be young (pre-thicket) and thus useful/available to hen harrier at any one time. The forestry is suitable for approximately a quarter of its		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
lifecycle. All else being equal, approximately 7,465ha of the 29,859ha is likely available to hen harrier at any one time. The 91,900ha combined total constitutes a significant amount of upland habitat available for hen harrier in any given year. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat and 16.6ha of forestry (with a quarter of it available at any one time). The available habitat is therefore 10.45ha, which represents a 0.01% loss of available habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 91,889ha continues to constitute a significant amount of upland habitat. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of these wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on hen harrier are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on hen harrier are anticipated at the county, national or international scale.		

7.7.1.3.4 Merlin

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale	At a national level, the main pressures and threats for merlin listed in Article 12 reporting are: replanting with or introducing non-native or non-typical species; clear-cutting, removal of all trees; conversion from one type of agricultural land use to another; peat extraction; and wind, wave and tidal power, including infrastructure. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for merlin. Of the threats/pressures listed, conversion into agricultural land is ranked as of high importance, and the remainder are ranked as of medium importance. The maturation and management of commercial forestry in the landscape influences the availability and distribution of habitat for merlin. Afforestation may reduce the extent of open foraging habitat, while forest maturation further reduces habitat suitability over time, but provides trees that this species sometimes uses for nesting. Conversely, felling and restructuring operations may periodically create temporary open habitat conditions in some areas. The suitability of the landscape for merlin is therefore influenced by the age structure, composition and management cycle of commercial forestry. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats.	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
	The intensity and type of agricultural activity can affect habitat suitability for merlin (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeding and improvement may reduce habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to merlin. Altgolan Wind Farm, the Altílow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. While it is acknowledged that this species sometimes nests in forestry, it traditionally nests in open habitat and uses open habitats for foraging. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil	

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	and bare ground and recolonising bare ground, which are of limited ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on merlin are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on merlin are anticipated at the county, national or international scale.		

7.7.1.3.5 Peregrine Falcon

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale (25km)	At a national level, the main pressure/threats for peregrine falcon listed in Article 12 reporting are: wind, wave and tidal power, including infrastructure; agricultural activities (which relates to changes in habitat extent and quality due to agricultural management); and use of plant protection chemicals in agriculture; as well as poisoning of animals, illegal harvesting, and other human intrusions and disturbance not mentioned above (which relates to checking nests and taking chicks for the purposes of falconry). The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which also have the potential to influence habitat availability and quality for peregrine falcon. Overall, the pressure from wind, wave and tidal power is not considered to currently be having a negative impact on the national/regional populations. The maturation and management of commercial forestry in the landscape influences the availability and distribution of habitat for peregrine falcon. Afforestation may reduce the extent of open foraging habitat, while forest maturation further reduces habitat suitability over time. Conversely, felling and restructuring operations may periodically create temporary open habitat conditions in some areas that could be suitable for foraging. The suitability of the landscape for peregrine falcon is therefore influenced by the age structure, composition and management cycle of commercial forestry. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for peregrine falcon (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeding and improvement may reduce habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to peregrine falcon: this species needs open areas with a plentiful supply of birds to hunt and secure sites for breeding (Ratcliff, 1993). Altgolan Wind Farm, the Altilow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats.		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of limited ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on peregrine falcon are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on peregrine falcon are anticipated at the county, national or international scale.		

7.7.1.3.6 White-tailed Eagle

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
National Scale	At a national level, the main pressures and threats for white-tailed eagle listed in Article 12 reporting are: wood transport; transmission of electricity and communications; agricultural activities generating diffuse pollution to surface or ground waters; and wind, wave and tidal power, including infrastructure; as well as sports, tourism and leisure activities, plant and animal diseases, pathogens and pests, and increases in precipitation due to climate change. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for white-tailed eagle. Of the pressures/threats listed, wind, wave and tidal power are ranked as of high importance, while those relating to commercial forestry or agriculture are of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of open habitat for white-tailed eagle. Afforestation reduces the extent of open foraging habitat, although this species also forages over water. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for white-tailed eagle (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance, as well as carrion availability). For example, drainage, reseeding and improvement may reduce	The magnitude of the effect is assessed as Low. When a High sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat, although this species also forages over water. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to white-tailed eagle. Altgolan Wind Farm, the Altilow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of limited ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative		

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat. White-tailed eagle typically breed at large waterbodies (<8ha) and largely hunt fish, although they will opportunistically take terrestrial prey (Radović and Mikuska, 2009; Treinys et al., 2015). There are no suitable waterbodies in proximity to the Wind Farm Site; the nearest large (<8ha) waterbody is Lough Morne, over 1.7km from the Wind Farm Site boundary. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on white-tailed eagle are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on white-tailed eagle are anticipated at the county, national or international scale.		

7.7.1.3.7 Whooper Swan

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale (25km)	At a national level, the main pressures and threats for whooper swan listed in Article 12 reporting are: transmission of electricity and communications; and wind, wave and tidal power, including infrastructure; as well as sports, tourism and leisure activities, and modification of flooding regimes, flood protection for residential or recreational development. The following provides an assessment of the threats/pressures that are relevant at the regional level. Threats/pressures relating to wind farms were of ranked as of medium importance. There is no evidence to suggest, nor is there any expectation, that the forestry or upland habitats of the wider surroundings of the Wind Farm Site would be of any significant value to this species. Whooper swan is a wetland species however it also favours improved agricultural grassland for foraging. During surveys, whooper swan were typically found to be using large waterbodies in the wider area or travelling over. The unfavourable nature of onsite habitats (i.e., dominated by mature forestry) effectively eliminates the potential for ecologically significant habitat loss effects. The majority of other wind farms (with exception of Bin Mountain Wind Farm and Barnesmore Wind Farm) do not have turbines located within 500m of large waterbodies and the Existing Development is not located within 500m of a large waterbody. As no significant loss of these habitats is predicted, no cumulative habitat loss is therefore predicted. Improved agricultural grassland is more commonly found in lowland areas and is therefore there is a relatively restricted extent in the landscape within this cumulative assessment. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on whooper swan are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on whooper swan are anticipated at the county, national or international scale.		

7.7.1.3.8 Kestrel

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Local Scale (5km)	At a national level, the main pressures and threats for kestrel listed in Article 12 reporting are: use of plant protection chemicals in agriculture; conversion from mixed farming and agroforestry systems to specialised production; and removal of small landscape features for agricultural land parcel consolidation; as well as interspecific relations. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for kestrel. The threats/pressures listed that relate to agriculture were ranked as of medium importance. Kestrel is a habitat generalist that may use commercial forestry and agricultural environments. The majority of the Existing Development is located within commercial forestry, while Straness Wind Farm is also partially located, within commercial forestry habitats. Barnesmore Wind Farm and Repowering,	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant .

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	Meenakeeran Wind Farm and Straness Wind Farm are located, or partially located within open peatland habitats. These habitats are of value to kestrel. However forestry and open peatland habitats are widespread and abundant in the landscape. Extensive areas of suitable habitat persisted after construction. Given that kestrel at the Wind Farm Site was determined to be a population of Local Importance (Higher Value), this further reduces the likelihood of significant cumulative impacts at the landscape scale. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, no residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on kestrel are anticipated at the county, national or international scale.		

7.7.1.3.9 Red Grouse

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Local Scale (5km)	The main pressures and threats for red grouse listed in Article 12 reporting are: conversion to forest from other land uses, or afforestation; intensive grazing or overgrazing by livestock; burning for agriculture, drainage for use as agricultural land; and peat extraction; as well as change of habitat location, size, and/or quality due to climate change, other invasive alien species, and problematic native species. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for red grouse. All the threats/pressures listed are ranked as of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of open habitat for red grouse. Afforestation reduces the extent of open habitat. The majority of the Existing Development is located within commercial forestry, while Straness Wind Farm is also partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for red grouse (e.g., through changes in grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeding and improvement may reduce habitat suitability for foraging, roosting and nesting, while low-intensity grazing systems may maintain suitable habitat. Barnesmore Wind Farm and Repowering, Meenakeeran Wind Farm and Straness Wind Farm are located, or partially located within open peatland habitats. Open peatland habitats are widespread and abundant in the landscape. Extensive areas of suitable habitat persisted after construction. Given that red grouse was determined to be a population of Local Importance (Higher Value),	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	this further reduces the likelihood of significant cumulative impacts at the landscape scale. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on snipe are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on red grouse are anticipated at the county, national or international scale.		

7.7.1.3.10

Snipe

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale (25km)	At a national level, the main pressures and threats for snipe listed in Article 12 reporting are: conversion to forest from other land uses, or afforestation; mowing or cutting of grasslands; intensive grazing or overgrazing by livestock; conversion from one type of agricultural land use to another; abandonment of grassland management; drainage for use as agricultural land; wind, wave and tidal power, including infrastructure; and peat extraction; as well as other invasive alien species, and problematic native species. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant.

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for snipe. Some of the threats/pressures relating to forestry and agriculture were ranked as of high importance (mowing or cutting of grasslands; intensive grazing or overgrazing by livestock; conversion from one type of agricultural land use to another), while the remained were ranked as of medium importance. Peat extraction, and wind, wave and tidal power were ranked as of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of open habitat for snipe. Afforestation reduces the extent of open foraging habitat. The majority of the Existing Development is located within commercial forestry, while Cark Wind Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for snipe (e.g., through changes in grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeding and improvement may reduce habitat suitability for foraging, roosting and nesting, while low-intensity grazing systems may maintain suitable habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to snipe. Altgolan Wind Farm, the Altilow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm,		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of very limited ecological value for this species. The total area of available open habitat in the regional upland area is 84,435ha. The footprint of the Existing Development includes c. 6.3ha of suitable open habitat, which represents a 0.007% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 84,429ha continues to constitute a significant amount of upland habitat Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on snipe are considered to be influenced		

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on snipe are anticipated at the county, national or international scale.		

7.7.1.3.11 Woodcock

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Local Scale (5km)	The main pressures and threats for woodcock listed in Article 12 reporting are: logging without replanting or natural regrowth; clear-cutting, removal of all trees; abandonment of traditional forest management; abandonment of grassland management; and removal of small landscape features for agricultural land parcel consolidation; as well as other human intrusions and disturbance not mentioned above, interspecific relations (competition, predation, parasitism, pathogens), and problematic native species. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for woodcock. All the threats/pressures listed are ranked of medium importance. The extent of commercial forestry in the landscape influences the availability and distribution of suitable habitat for woodcock. Afforestation provides potentially suitable habitat, particularly in areas of native planting. The majority	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant .

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
of the Existing Development is located within commercial forestry, while Straness Wind Farm is partially located, within commercial forestry habitats. The extent of agricultural activity in the landscape influences the availability and distribution of suitable habitat for woodcock. Open peatland habitats are also of limited value to woodcock. Barnesmore Wind Farm and Repowering, Meenakeeran Wind Farm and Straness Wind Farm are located, or partially located within open peatland habitats. However forestry and open peatland habitats are widespread and abundant in the landscape. Extensive areas of suitable forested habitat persisted after construction. Given that woodcock was determined to be a population of Local Importance (Higher Value), this further reduces the likelihood of significant cumulative impacts at the landscape scale. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on snipe are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on woodcock are anticipated at the county, national or international scale.		

7.7.1.3.12 Buzzard

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Local Scale (5km)	At a national level, the main pressures and threats for buzzard listed in Article 12 reporting are: abandonment of grassland management; as well as poisoning of animals, and illegal shooting/killing. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for buzzard. Threats/pressures relating to agriculture were ranked as of medium importance. Buzzard is a habitat generalist that may use commercial forestry and agricultural environments. The majority of the Existing Development is located within commercial forestry, while Straness Wind Farm is partially located, within commercial forestry habitats. Barnesmore Wind Farm and Repowering, Meenakeeran Wind Farm and Straness Wind Farm are located, or partially located within open peatland habitats. These habitats are of value to buzzard. However forestry and open peatland habitats are widespread and abundant in the landscape. Extensive areas of suitable habitat persisted after construction. Given that buzzard was determined to be a population of Local Importance (Higher Value), this further reduces the likelihood of significant cumulative impacts at the landscape scale. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of these wind farms. Taking into consideration the above reported effects and the effects of the Existing	The magnitude of the effect is assessed as Low. When a Low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Likely long-term imperceptible negative effect, which is not significant.

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	Development, no residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on buzzard are anticipated at the county, national or international scale.		

7.7.1.3.13 Long-eared Owl

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Regional Scale (25km)	At a national level, the main pressures and threats for long-eared owl listed in Article 12 reporting are: replanting with or introducing non-native or non-typical species; clear-cutting removal of all trees; roads, paths, railroads and relative infrastructure; use of plant protection chemicals in agriculture; and removal of small landscape features for agricultural land parcel consolidation; as well as poisoning of animals, and illegal shooting/killing. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for long-eared owl. The threats/pressures relating to forestry and agriculture were ranked as of medium importance. The maturation and management of commercial forestry in the landscape influences the availability and distribution of habitat for long-eared owl. Afforestation may reduce the extent of open foraging habitat, while forest maturation further reduces habitat suitability over time, but provides nesting trees. Conversely, felling and restructuring operations may periodically create temporary open habitat conditions in some areas. The suitability of the landscape for long-eared owl is therefore influenced by the age structure, composition and management cycle of commercial forestry. The majority of the Existing Development is located within commercial forestry, while Cark Wind	The magnitude of the effect is assessed as Low. When a Medium sensitivity species is cross-referenced with a Low impact, this corresponds to a Low effect significance.	Likely long-term slight negative effect, which is not significant .

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
Farm Extension, Clogheravaddy Wind Farm, Crilly Wind Farm, Drumnahough Wind Farm, Graffy Wind Park, Lenalea Wind Farm, Meenadreen Wind Farm, Meenahorna Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm and Extension (2), Straness Wind Farm and Tullynaglack Wind Farm are also located, or partially located, within commercial forestry habitats. The intensity and type of agricultural activity can affect habitat suitability for long-eared owl (e.g., through changes in prey availability, grazing pressure, vegetation structure and levels of human disturbance). For example, drainage, reseeded and improvement may reduce habitat suitability in some areas, while low-intensity grazing systems may maintain suitable foraging habitat. Cark Wind Farm Extension, Castlecraig Wind Farm, Church Hill Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Crilly Wind Farm, Croaghanmeal Wind Farm, Lenalea Wind Farm, Meenanilta Wind Farm Extension (3), Thornog Wind Farm, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located, within farmland habitats. Open peatland habitats are of value to long-eared owl. Altgolan Wind Farm, the Altlow Turbine, Anarget Wind Farm and extension, Ballystrang Wind Farm, Barnesmore Wind Farm and Repowering, Bin Mountain Wind Farm, Cark Wind Farm and Extension, Cark/Largymore Wind Farm, Castlecraig Wind Farm, Church Hill Wind Farm and Extension, Clogheravaddy Wind Farm, Clunahill Wind Farm, Crighshane Wind Farm, Culliagh Wind Farm and Extension, Drumnahough Wind Farm, Graffy Wind Park, Gronan Wind Farm, Lough Cuill Wind Farm, Lough Hill Wind Farm, Meenadreen Wind Farm Extension, Meenahorna Wind Farm, Meenakeeran Wind Farm, Meenalaban Wind Farm, Meenamullan Wind Farm, Meenanilta Wind Farm Extension (3), Meentycat Wind Farm, Pullytean Wind Farm, Seegronan Wind Farm and Extension, Slieveglass Wind Farm, Straness Wind Farm, Thornog Wind Farm		

Potential effects	Significance (Percival, 2003)	Significance (EPA, 2022)
and Extension, Tievenameenta Wind Farm and Tullynaglack Wind Farm are located, or partially located within open peatland habitats. The footprint of the Existing Development is small (32.6ha). Of this, over 16.6ha of the habitat loss was of conifer plantation, buildings and artificial surfaces, spoil and bare ground and recolonising bare ground, which are of limited ecological value for this species. While it is acknowledged that this species nests in forestry, it uses open habitat for foraging. Therefore this assessment is undertaken with regards to open habitat, as the loss of foraging habitat is likely to have a greater impact on this species, given that forestry is widespread in the area and nesting sites are not scarce. The total area of open habitat in the regional upland area is 91,292ha. The footprint of the Existing Development includes c. 5.7ha of suitable open habitat, which represents a 0.006% loss of open habitat in the regional upland area. This is not a significant contribution to the cumulative loss of habitat for this species. Furthermore, the remaining c. 91,286ha continues to constitute a significant amount of upland habitat. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after November 2020. Furthermore, no significant effects of habitat loss and disturbance were reported for any of the other wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, cumulative effects on long-eared owl are considered to be influenced primarily by the broader effects of commercial forestry and agricultural practices on habitat availability and quality, rather than by the relatively limited contribution associated with the Existing Development. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on long-eared owl are anticipated at the county, national or international scale.		

7.7.1.3.14 Sparrowhawk

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
Local Scale (5km)	At a national level, the main pressures and threats for sparrowhawk listed in Article 12 reporting are: removal of small landscape features for agricultural land parcel consolidation; conversion from mixed farming and agroforestry systems to specialised; and use of plant protection chemicals in agriculture. The following provides an assessment of the threats/pressures that are relevant at the regional level. The landscape within this cumulative assessment is influenced by a combination of commercial forestry, agricultural land use and other wind farm developments, all of which have the potential to influence habitat availability and quality for sparrowhawk. The threats/pressures relating to agriculture and forestry are ranked as of medium importance. Sparrowhawk is a habitat generalist that may use commercial forestry and agricultural environments. The majority of the Existing Development is located within commercial forestry, while Straness Wind Farm is partially located, within commercial forestry habitats. Barnesmore Wind Farm and Repowering, Meenakeeran Wind Farm and Straness Wind Farm are located, or partially located within open peatland habitats. These habitats are of value to sparrowhawk. However forestry and open peatland habitats are widespread and abundant in the landscape. Extensive areas of suitable habitat persisted after construction. Given that sparrowhawk at the Wind Farm Site was determined to be a population of Local Importance (Higher Value), this further reduces the likelihood of significant cumulative impacts at the landscape scale. Therefore, in this landscape, the contribution of the Existing Development to cumulative habitat loss and disturbance/displacement effects is considered to be limited. No significant residual effects of habitat loss or disturbance as a result of the Existing Development were identified from survey data collected after	The magnitude of the effect is assessed as Low. When a low sensitivity species is cross-referenced with a Low impact, this corresponds to a Very Low effect significance.	Likely long-term imperceptible negative effect, which is not significant.

Potential effects		Significance (Percival, 2003)	Significance (EPA, 2022)
	November 2020. Furthermore, no significant residual effects of habitat loss and disturbance were reported for any of these wind farms. Taking into consideration the above reported effects and the effects of the Existing Development, no residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or disturbance. No significant impacts on sparrowhawk are anticipated at the county, national or international scale.		

7.7.2 In-cumulation Effects

This section considers the potential for additional impacts to arise when considering the Existing Development in cumulation with the Prospective Development (i.e., the effects of the Subject Development on ornithological receptors). No significant residual effects on ornithological receptors were identified as a result of the Existing Development on its own. The potential for significant effects on the identified KORs associated with the Existing Development to occur when considered in cumulation with the Prospective Development are considered below. No additional KORs were identified as a result of the in cumulation assessment.

The Existing Development did not have an adverse impact on any SPAs. The NIS also concluded that the Prospective Development will not have an adverse impact on any SPAs. As such, there is no potential for adverse in-cumulation effects on SPAs to occur.

There is no potential for a significant in-cumulation effects to occur, based on the following rationale. No significant residual effects on KOR's were identified as a result of the Existing Development on its own. Also, no significant residual effects on KOR's were identified as a result of the Prospective Development on its own. The footprint of the Existing Development has resulted in physical habitat loss, which is the key potentially significant in-cumulation effect. However, the footprint of the Existing Development overlaps with much of the infrastructure of the Prospective Development. As a result, the physical habitat loss effect of the Existing Development is less than and largely contained within the displacement effect resulting from the proposed turbines of the Prospective Development. As such, no significant additive contribution to in-cumulative effect is predicted to result from the Existing Development.

7.7.3 Cumulative Effects – Subject Development

For the assessment of cumulative effects of the Subject Development, any other existing, permitted or proposed projects (wind energy or otherwise) have been considered. The potential cumulative effects of the Subject Development and other relevant developments has been carried out with the purpose of identifying what influence the Subject Development will have on the surrounding environment when considered cumulatively.

Further information on projects considered as part of the cumulative assessment are given in Section 2.10 of Chapter 2: Background and Policy of the EIAR and Section 2.9 of Chapter 2 Background and Policy of this rEIAR. The cumulative effects assessment of the Subject development has considered the list of plans and projects listed in Appendix 2-1 of the EIAR, and Appendix 2-1 of the rEIAR.

During the assessment of cumulative effects on KORs resulting from the Subject Development, the in-cumulative effect was first considered and then the cumulative habitat loss and displacement/disturbance associated with operational turbines, forestry and agricultural practices was assessed. No significant cumulative effects are predicted to result from the construction phase because these are short in duration and have little to no temporal overlap with other developments. In undertaking the cumulative assessment of the Subject Development, consideration was given to the results of the landscape-level assessment as per Section 7.7.1.3.1 of the EIAR. The result of the assessment of cumulative effects of the Subject Development does not meaningfully differ from the cumulative effect significance of the Prospective Development. Which is to say, provided that the Subject Development is constructed, operated and decommissioned in accordance with the design, best practice mitigation and the successful implementation of the habitat enhancement measures that are described within this application, significant cumulative effects on the identified KORs are not anticipated. Please see Section 7.7 of the EIAR for full details.

7.7.4

Transboundary Effects

Given the location of the Existing Development, close to the border with Northern Ireland, this section considers the potential for transboundary effects as a result of the Existing Development on its own, in cumulation with the Prospective Development and in combination with other land uses and projects. As the Existing Development is located entirely within the Republic of Ireland, there is no potential for direct transboundary effects to occur or have occurred either alone or in combination with other projects and land uses.

The field surveys were conducted at the Wind Farm Site and wider area at survey radii specific to the target species (e.g., hen harrier roost surveys up to 2km from the Wind Farm Site and breeding raptor surveys up to 8km from the Wind Farm Site). These radii were irrespective of country borders. As such, effects on populations occurring in or originating from Northern Ireland have been considered in this impact assessment. In consideration of potential indirect transboundary effects on ornithological receptors, no effect was identified. The Existing Development has not and will not result in significant effects on ornithological populations originating from Northern Ireland.

The Prospective Development will also be located outside Northern Ireland and will not result in significant effects on ornithological populations originating from Northern Ireland. Therefore, the Subject Development will not result in any significant residual transboundary effect on ornithological receptors.

7.8

Conclusion

Following consideration of the residual effects, it is concluded that the Existing Development does not have the potential to result or have resulted in any significant effects on any of the identified KORs at any geographic scale either individually, in-cumulation with the Prospective Development or cumulatively with other projects and land uses. No significant effects on receptors of International, National or County Importance were identified. No potential for the Existing Development to result or have resulted in significant effects on any European Designated Site was identified. Transboundary effects between the Republic of Ireland and Northern Ireland were considered in the assessment and no significant residual effects were identified.