Derrybrien Wind Farm Development Decommissioning Project – Prospective Development

Natura Impact Statement (NIS)

Electricity Supply Board (ESB)

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Change History of Report

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Contents

1 Introduction

1.1 Purpose of the report

ESB Engineering and Major Projects (EMP) was commissioned by Gort Windfarms Ltd. to carry out a Screening for Appropriate Assessment (AA) and subsequently to prepare a Natura Impact Statement (NIS) in relation to the decommissioning of the existing Derrybrien Wind Farm Development as part of the proposed "Derrybrien Wind Farm Development Decommissioning Project".

The proposed "Derrybrien Windfarm Development Decommissioning Project" comprises two elements:

- The carrying out of physical works to decommission specific features of the existing development (the "Prospective Development"); and the
- Proposed retention in situ of other specific features of the existing development (the "Retained Development").

This report provides supporting information to assist the relevant Competent Authority (An Bord Pleanála) in undertaking an Appropriate Assessment of the Prospective Development in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) and Regulation 42 of the Birds and Natural Habitats Regulations 2011, as amended. It accompanies the application made to An Bord Pleanála, under section 37L of the Planning and Development Act 2000, as amended ("the 2000 Act") for permission in respect of the Retained Development. In addition, an application has also been made simultaneously, under section 177E for substitute consent in respect of the Retained Development (which application is accompanied by, inter alia, a remedial Environmental Impact Assessment Report (EIAR) and remedial Natura Impact Statement (NIS)).

The purpose of the report is to first determine whether the Derrybrien Wind Farm Development Decommissioning Project - Prospective Development, either alone or in combination with other plans and projects, is likely to have a significant effect on any European sites[1] in view of the sites' conservation objectives. If likely significant effects cannot be ruled out, it must be demonstrated that the Prospective Development will not adversely affect the integrity of any European sites, either alone or in combination with other plans and projects, taking into account the conservation objectives of the site.

1.2 Brief Overview of the Project

The Prospective Development is located south of Loughrea in Co. Galway (see Figure 1 for a location map). It comprises the following:

- Enabling works to facilitate the decommissioning of the Derrybrien Windfarm.

[1] Natura 2000 Sites are referred to as European sites in this report

- Decommissioning and removal of the Derrybrien Wind Farm and associated ancillary components. The decommissioning works include the removal of the above-ground structures only (including the controlled dismantling of 70 no. turbines and 2 no. anemometer lattice masts), leaving certain features in situ.
- Decommissioning and removal of the Derrybrien Wind Farm grid connection comprising Derrybrien-Agannygal 110 kV Overhead Line (7.8 km) and Agannygal Substation connecting into the Ennis-Shannonbridge 110 kV Overhead Line. Reinstatement of the Ennis-Shannonbridge 110kV Line.

A description of the Derrybrien Wind Farm Development Decommissioning Project - Prospective Development along with its existing location and environment are provided in Sections 4.2 and 4.3. Full details of the project can be found in the Environmental Impact Assessment Report (EIAR) Chapter 4: Description of the Prospective Development and its accompanying appendices, including Appendix 4.1: Decommissioning Management Plan.

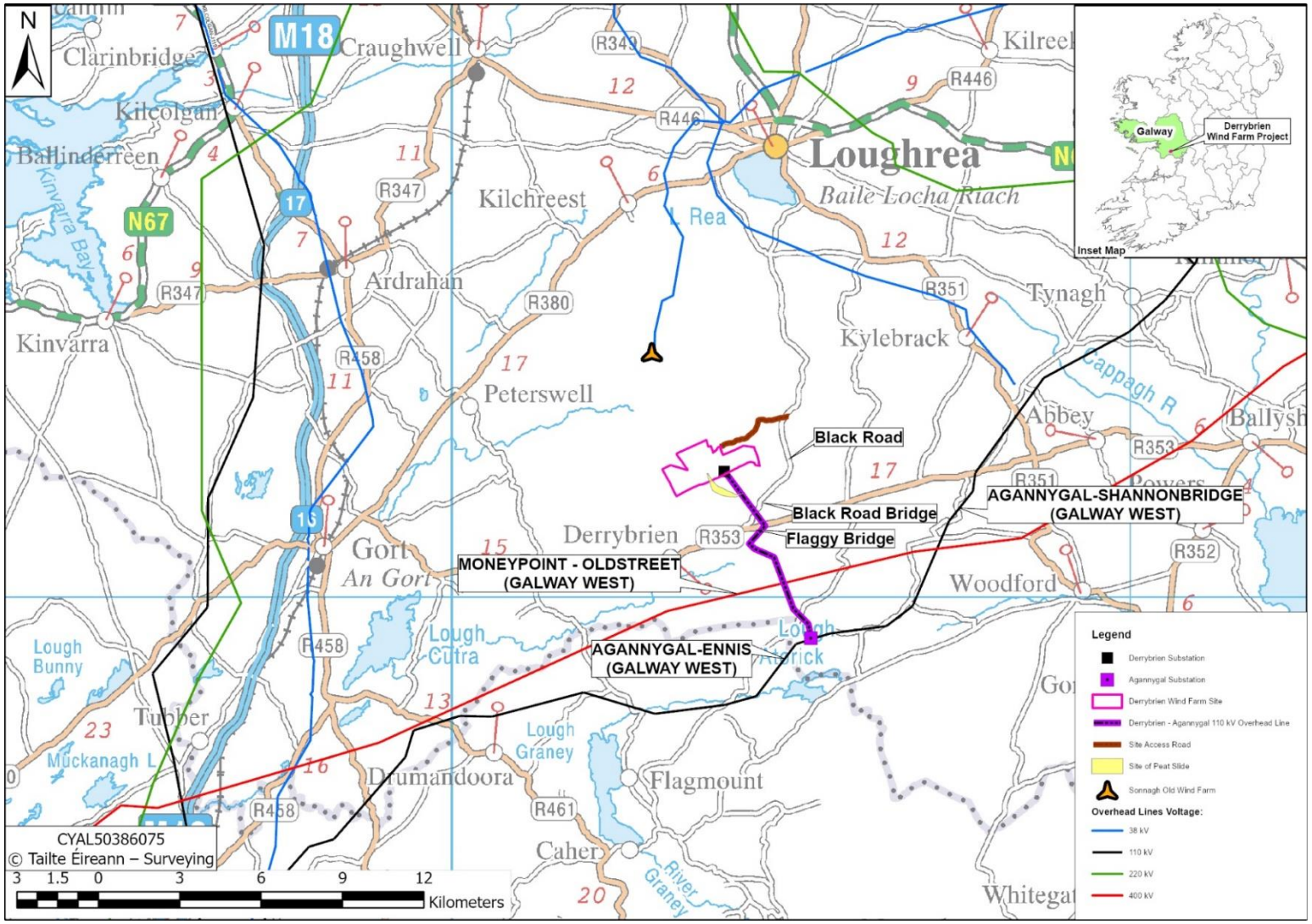

Figure 1 Prospective Development location south of Loughrea in Co. Galway

1.3 Statement of competence

The NIS has been prepared by **Kate-Marie O'Connor**, Senior Ecologist with ESB Engineering and Major Projects (EMP), with specialist input with respect to habitats from **Dr Patrick Crushell**, Wetland Surveys Ireland, birds from **Dr. Brian Madden**, Biosphere Environmental Services, bats from **Rachel Potter** and **Owain Gabb**, BSG Ecology and aquatic ecology from **Lauren Williams**; all of whom are ecological consultants working on behalf of ESB EMP.

Kate-Marie O'Connor (BA MSc, MCIEEM) is a Senior Ecologist with ESB and has over 13 years' professional experience in ecological assessment. She holds an honours degree in Natural Sciences from Trinity College Dublin, specialising in Botany, and obtained a distinction in her Masters in Environmental Modelling, Monitoring and Reconstruction from the University of Manchester. She also holds an advanced diploma in Planning and Environmental Law from The Honourable Society of King's Inn. She is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Kate-Marie provides ecological support and advice on a range of electricity infrastructure projects through all project stages, including pre-planning, construction and operation. Her experience primarily includes the preparation and review of Ecological Impact Assessments, Biodiversity Chapters of Environmental Impact Assessment (EIA) reports, Appropriate Assessment (AA) Screening reports and Natura Impact Statements (NIS) for a range of public and private projects across Ireland. Kate-Marie has extensive experience undertaking ecological surveys to inform various assessments, including surveys for habitats, bats, badger, otter, breeding and wintering birds and newts.

Dr. Patrick Crushell (BSc Applied Ecology; MSc Environmental Resource Management, PhD Environmental Sciences, C. Ecol, MCIEEM) received an honors degree in Applied Ecology from University College Cork, a Masters degree in Environmental Resource Management from University College Dublin and defended his PhD at Wageningen University, the Netherlands. He is a Chartered Ecologist of the Chartered Institute of Ecology and Environmental Management. Dr Crushell has been working in the area of nature conservation and ecological impact assessment for the past 23 years and has particular expertise in peatland habitats. Projects that he has been involved in include wetland inventory surveys; evaluation of proposed designated sites; restoration and management of peatland habitats; baseline ecological surveys and impact assessments of various development proposals including road, quarries, wind-farms, waste facilities, arterial drainage schemes, and residential developments; during and post-construction ecological monitoring. He has been working on the Derrybrien Wind Farm Project since 2003.

Dr. Brian Madden (BA Mod, PhD, MCIEEM) qualified in Natural Sciences at the University of Dublin in 1984 and earned a doctorate degree in 1990 from

the National University of Ireland for research in peatland ecosystem processes. Since 1994, Brian has worked as an independent environmental consultant. Brian is an expert ornithologist and has carried out various surveys for the National Parks and Wildlife Service, including survey of breeding birds of western machair systems and co-ordination of the National Peregrine Survey in 2002. Brian has extensive experience in the assessment of electricity infrastructure projects including high voltage transmission lines, substations, underground cables and wind energy projects. For many of the projects, Brian has been involved from pre-planning impact assessment stage through to the implementation and monitoring of mitigation measures during the operational stage. Brian has been involved in the Derrybrien Wind Farm Project since 2004.

Rachel Potter (Principal Ecologist at BSG Ecology; BSc MSc ACIEEM) has co-ordinated bat surveys at the Derrybrien wind farm since 2016 during which time she has designed and adapted approaches to reflect changing industry guidance, and been responsible for the bat assessment as part of the remedial EIA for the Site. Her current and recent work has also included co-ordinating ecological and ornithological inputs, including scoping and consultation for several wind farm projects in Wales. Other recent experience includes the production of ecological reports (Habitat Management and Monitoring Plans, licencing documentation and baseline monitoring reports) to facilitate the sign off of ecological conditions in relation to Garreg Lwyd Hill wind farm, Powys, and the management of post-construction monitoring work relating to hedgerow and stream corridor habitats, dormouse, great crested newt, and breeding waders for that site. Rachel also helped to complete pre-construction surveys for otter and bats, and identify key reptile habitat at RWE Renewables's Brechfa Forest West Wind Farm (Carmarthenshire), and designed and implemented bat work to address monitoring conditions for both that site and Vattenfall's Pen-y-Cymoedd wind farm (Neath Port Talbot / Rhondda Cynon Taf). Qualifications include: BSc (Hons), Zoology; MSc, Environmental Biology: Conservation and Resource Management; Associate Member Chartered Institute of Ecology and Environmental Management; and, holds bat and great crested newt licences for England and Wales.

Owain Gabb (Director at BSG Ecology; BSc MSc MCIEEM CEnv) has overseen the bat survey work at Derrybrien since 2016, reviewing all approaches and baseline reports and providing review comment and written input to this chapter. He has worked on onshore wind projects since 2003 and has led the ornithological and / or ecological input to numerous schemes throughout the UK and Ireland. His experience includes planning and co-ordinating ornithological, protected species and habitat survey work, co-ordinating consultation with statutory conservation agencies and LPAs, writing and reviewing technical reports, helping discharge conditions, and acting as expert witness at public hearings. He has also led monitoring work including: radio tracking of nightjar to determine proximity of nesting birds to operational turbines; dog-searches to assess levels of bird and bat fatality; and, flight line

and distribution studies to assess evidence for flight avoidance of turbine blades and displacement of birds from wind farms. Owain provided expert ornithological support to RES with regard to the Upper Ogmore wind farm, Bridgend. This was the first wind farm to be determined through the DNS process, and Owain's involvement included representing RES at the hearing. Owain has had recent involvement in many other wind farm projects, including ornithological monitoring at Pen y Cymoedd (Rhondda / Neath Port Talbot), condition discharge and ecological monitoring at Brechfa Forest West (Carmarthenshire), baseline survey, consultation and scoping for Alwen Forest (Conwy), and review of the Ornithological Impact Assessment and Ecological Impact Assessment for the Clachindarroch extension wind farm (Aberdeenshire). He has also planned and co-ordinated extensive bird survey work on behalf of EirGrid in the Irish Midlands and southern counties, and in relation to the Carrownaweelaun wind farm (County Clare). Qualifications include: BSc (Hons) Countryside Management; MSc Environmental Biology; Full Member Chartered Institute of Ecology and Environmental Management; and, Chartered Environmentalist (CEnv).

Lauren Williams BSc PGDip MCIEEM, a Senior Freshwater Ecologist with 24 years professional consultancy experience. Lauren holds a BSc in Zoology, a Certificate in Environmental Law and a Post Graduate Diploma in Environmental Monitoring Assessment and Engineering with Distinction from Trinity College Dublin. She is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). For 21 years Lauren worked as joint Principal Freshwater Ecologist in the Aquatic Services Unit (ASU), University College Cork (UCC) where she worked with Gerard Morgan (ASU Manager) who prepared the 2020 rEIAR for the Derrybrien Wind Farm Project and the 2024 EIAR for the Derrybrien Wind farm Development Decommissioning Project. Lauren assisted with those projects providing analysis and review of ASU biological water quality data between 2011 and 2020 and carrying out field studies and data analysis in 2022 as part of the 2024 EIAR Derrybrien Wind farm Development Decommissioning Project. Lauren specialises in water quality assessment, fisheries and protected aquatic species and habitat surveys, monitoring, aquatic ecological impact assessment (EcIA), regularly undertaking baseline studies and preparation of EcIA reports, EIAR chapters and Appropriate Assessment (AA) reporting in relation to a wide range of large infrastructural developments throughout Ireland. She has carried out aquatic sampling, monitoring, and reporting as part of EPA national river monitoring programmes. She is a recognized practitioner of the Q-value biotic index system and is a trainer for the EPA's Small Streams Risk Assessment (SSRS) method. Lauren is a recognized professional in aquatic protected species survey (freshwater pearl mussel and white-clawed crayfish, on behalf of National Parks and Wildlife Service (NPWS)), and an accredited River Habitat Survey (RHS) and River Hydromorphology Assessment Technique (RHAT) practitioner.

2 Appropriate Assessment

2.1 Regulatory context

The EU Habitats Directive 92/43/EEC provides legal protection for habitats and species of European importance through the establishment of a network of designated conservation areas known as the Natura 2000 Network. The Natura 2000 network includes sites designated as Special Areas of Conservation (SAC) under the EU Habitats Directive and Special Protection Areas (SPA) designated under the EU Birds Directive 79/209/EEC. Collectively in this report these sites are referred to herein as '*European sites*'.

The Habitats Directive is transposed into Irish national law with the European Communities (Natural Habitats) Regulations (as amended)..

The requirements for an Appropriate Assessment are set out under Article 6(3) of the Habitats Directive 92/43/EEC which state:

6(3) Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 sites) [European sites] *but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the sites conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

This provision is transposed into Irish law by Part XAB of the Planning and Development Act, 2000 as amended for the purposes of land use planning. Section 177U(4) of the said Act provides for screening for Appropriate Assessment as follows:

"The competent authority shall determine that an appropriate assessment of [...] *a proposed development* [...] *is required if it cannot be excluded, on the basis of objective information, that the* [...] *proposed development, individually*

or in combination with other plans or projects, will have a significant effect on a European site."

Section 177U(5) provides as follows:

"The competent authority shall determine that an appropriate assessment of a […] *proposed development,* […]*, is not required if it can be excluded, on the basis of objective information, that the* […] *proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site."*

Section 177T(1) and (2) of the Act provide that a NIS is:

A statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

It specifies that:

[The statement] *shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites.*

2.2 Appropriate Assessment process

Key stages in the Appropriate Assessment process are set out below, as per the respective aforementioned guidance documents. Stages 1 and 2 relate to Article 6(3) of the Habitats Directive and Stages 3 and 4 relate to Article 6(4). The outcome of each successive stage determines if a further stage in the process is required.

Stage 1. Screening for Appropriate Assessment

The first step in the screening process is to determine if the plan or project is directly connected to or necessary for the management of a European site. The process then identifies whether a plan or project, either alone or in combination with other plans or projects, is likely to have significant effects on a European site in view of its conservation objectives.

Stage 2. Appropriate Assessment

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. A Natura Impact Statement (NIS) must be prepared as part of this stage of the process. The AA is carried out by the competent authority, and is supported by the NIS.

Stage 3. Alternative Solutions

If Stage 2 of the process concludes that there is likely to be significant effects to a European site, Stage 3 then examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a European site.

Stage 4. Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

Stage 4 is the main derogation process of Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a European site to proceed in cases where it has been established that no less damaging alternative solution exists.

2.3 Conservation Status of habitats and species

Definitions of conservation status, integrity and significance used in this assessment are defined in accordance with 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (European Commission, 2019).

- The conservation status of a natural habitat is defined as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species.
- The conservation status of a species is defined as the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its population.
- The integrity of a European site is defined as the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified.
- Significant effect should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives.

Favourable conservation status

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within European sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Article (1) of the Habitats Directive (92/43/EEC) describes favourable conservation status for habitats and species as follows:

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

Favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

3 Methodology

3.1 Overview

The baseline date for the assessment of environmental effects is the present day. Following the refusal by An Bord Pleanála to grant Substitute Consent in relation to the Derrybrien Wind Farm Project (ABP planning reference no. ABP-308019-20), commercial wind generation immediately ceased. Since that time, the turbines have been maintained by the turbine supplier while in a prolonged non-operational state.

Baseline data to inform the assessment of potential impacts was collected from a desktop review of existing datasets as well as the results from the suite of ecological surveys. The following sections describe the methodologies followed in the compilation of this report. Recognised guidelines have been followed in relation to every aspect of the scoping, surveys and assessment.

3.2 Assessment criteria

This assessment has been undertaken in line with the following legislation and best practice methodologies:

- Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission

- Directive 2009/147/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission
- European Communities (Birds and Natural Habitats) Regulations 2011, as amended
- Planning and Development Acts 2000 - 2024 (and associated Regulations).
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (Department of the Environment Heritage and Local Government, Revision 1, 2010)
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission (European Commission, updated 2021)
- Managing Natura 2000 Sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission, 2019)
- Office of the Planning Regulator (OPR) (2021) OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 & PSSP 2/10
- Assessing Connectivity with Special Protection Areas (SPAs) Guidance. Published by Scottish Natural Heritage (NH, 2016a)

The assessment is also cognisant of case law relevant to Appropriate Assessment.

3.3 Desktop study

A desktop study was undertaken to inform this assessment, including the identification of any European site(s) that may be present within the zone of influence of the Project (refer to Section 3.4).

The National Parks and Wildlife Service (NPWS) website database was examined in relation to designated nature conservation areas and relevant reports. GIS data was accessed using the NPWS MapViewer (accessed date December 2024).

The desktop study included a review of historic and current mapping including aerial photographs, historic and current reports and data relating to the wind farm site and adjoining areas.

The following databases, websites and reports have been consulted:

- The National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht (DCHG) (www.npws.ie)
- The National Biodiversity Data Centre (NDBC) (www.biodiversityireland.ie)
- Bat Conservation Ireland (www.batconservationireland.org)

- Aerial photography (past and present) and photographs taken at the site
- Ordnance survey data (past and present) (www.geohive.ie)
- Information on water quality in the area available from www.epa.ie
- Information on local watercourse catchments from www.catchments.ie
- Information on soils, geology and hydrogeology in the area available from www.gsi.ie
- Information on the status of EU protected habitats and species in Ireland (NPWS, 2019a, 2019b and 2019c)
- The 2022 National Survey of Breeding Hen Harrier in Ireland (Ruddock et al., 2024). Irish Wildlife Manual No. 147. NPWS, Dublin.
- Annual reports from the Hen Harrier Project (www.henharrierproject.ie), which includes the Slieve Aughty Mountains SPA, were reviewed for period 2017-2021.
- Republic of Ireland National Hen Harrier Survey 2010 (Ruddock et al., 2012). Irish Wildlife Manual No. 59. NPWS, Dublin
- The second national survey of breeding Hen Harriers Circus cyaneus in Ireland 2005 (Barton et al., 2006). *Irish Birds* 8: 1-20
- A national survey of breeding Hen Harriers Circus cyaneus in Ireland 1998-2000 (Norriss et al., 2002). *Irish Birds* 7: 1-10
- Monitoring data for the Lesser Horseshoe Roost at Lough Cutra Castle (provided by National Parks and Wildlife Service)
- Galway County Council Planning Website http://www.eplanning.ie/GalwayCC/searchexact to search for planning applications relevant to the current assessment, in particular with regard to in-combination effects.
- Information on the location, nature and design of the Prospective Development provided by the design team, as presented in Chapter 1 Introduction, Chapter 4 Prospective Development of the EIAR and Appendix 4.1 Decommissioning Management Plan of Chapter 4.
- Information relevant to biodiversity contained within the EIAR in particular Chapter 6 Biodiversity (Terrestrial and Avian Ecology), Chapter 7 Biodiversity (Aquatic Ecology and Fisheries), Chapter 8 Lands, Soils and Geology and Chapter 9 Hydrology and Hydrogeology.

The following documents associated with Derrybrien Wind Farm Project Substitute Consent application (ABP planning reference no. ABP-308019-20) have also been reviewed to inform the assessment:

- ESB (2025) Derrybrien Wind Farm Development Decommissioning Project – Retained Development Remedial Natura Impact Statement (rNIS).
- ESB (2025) Derrybrien Wind Farm Project Remedial Environmental Impact Assessment Report – Retained Development – Chapter 6 Biodiversity (Terrestrial and Avian Ecology)
- ESB (2020) Derrybrien Wind Farm Project Remedial Natura Impact Statement (rNIS)

- ESB (2020) Derrybrien Wind Farm Project Remedial Environmental Impact Assessment Report – Chapter 7 Biodiversity (Terrestrial Ecology)
- Wilson (2012) Derrybrien Wind Farm Bat Assessment (Draft report) – Faith Wilson Ecological Consultant (2012)

3.4 Zone of influence

The 'zone of influence' (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The ZoI will vary for different ecological features depending on their sensitivity to an environmental change. It may therefore be appropriate to identify different zones of influence for different features. The features affected could include habitats, species, ecosystems and the processes on which they depend (CIEEM, 2018).

Departmental guidance in relation to Appropriate Assessment states that '*A distance of 15 km is currently recommended in the case of plans and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km and in some cases less than 100m, but this must be evaluated on a case-by-case basis….'* (DoEHLG, 2009 (Rev 1 2010)).

The first step in determining the ZoI is to analyse the characteristics of the project and identify the range of ZoI using the source-pathway-receptor conceptual model. Impacts associated with the project, both known and potential have been used to establish the potential zone(s) of influence.

The mechanism for defining the ZoI is summarised as follows:

- The nature, size and location of the project have been considered;
- The sensitivities of the relevant ecological receptors have been considered; and
- The known and potential impact sources and pathways have been identified.

Further information on potential impact pathways and the ZoI of the Prospective Development in relation to European sites is provided in Section 4.4.

3.5 Field surveys

Extensive ecological surveys have been undertaken within the Prospective Development area and its environs. These surveys include those undertaken as part of monitoring of Derrybrien Wind Farm during its construction (between 2003 and 2005) and its operation (between 2006 and 2022), which immediately ceased following the refusal by An Bord Pleanála on the 7th of February 2022 to grant Substitute Consent. Further ecological surveys were undertaken to inform the remedial Environmental Impact Assessment Report (rEIAR) and rNIS submitted as part of the Substitute Consent application as well as the EIAR and this NIS, which assess the decommissioning of

Derrybrien Wind Farm. The data generated from these surveys has provided essential information on the status of the receiving environment and has been used to assess potential impacts that may arise as a result of the Prospective Development. The ecological surveys relevant to this assessment (as informed by the European sites identified within the potential ZoI of the Project, see Section 3.4) are described below.

3.5.1 Terrestrial Habitats

The assessment presented in this report has been informed by a habitat survey of wind farm site, peat slide area, and the Derrybrien-Agannygal 110kV OHL corridor (August 2022, February, and May 2023)

The most recent surveys of the site followed methodology outlined in Smith et al. (2011). Detailed botanical and habitat descriptions were prepared for areas of ecological interest within the project area. The most recent terrestrial habitat surveys of the wind farm site (undertaken in 2022 and 2023) inform the receiving environment conditions against which the potential impacts associated with the decommissioning of the wind farm are assessed.

During the course of the survey, habitats present were classified according to Fossitt (2000) and where relevant according to Annex I of the EU Habitats Directive. Guidance in determining whether or not a habitat type may correspond to an EU Annex I type was sought from a variety of sources including European Commission (2013), and Fossitt (2000).

During the field survey, attention was paid to the possible occurrence of plant species which are considered to be rare in both a national and local context (Scannell and Synnott 1987) with particular emphasis on plant species listed in the Irish Red Data Book for vascular plants (Jackson et al., 2016), the Flora Protection Order (2015), and Annex II of the E.U. Habitats Directive.

Plant species nomenclature in this report follows Parnell & Curtis (2012) for vascular plants, Atherton (2010) for mosses and liverworts, and Whelan (2011) for lichens.

3.5.2 Bird Surveys

Field surveys were undertaken to establish baseline conditions on site.

The survey methods employed were appropriate for the purpose of monitoring target bird species to enable the prediction of impacts during the decommissioning phase of the Prospective Development.

Surveys were carried out during the 2022 and 2024 breeding seasons, and in the 2024/2025 winter season.

3.5.2.1 Previous monitoring surveys at Derrybrien

A programme for post construction vantage point monitoring of hen harrier distribution within the Derrybrien Wind Farm had commenced in March 2004.

Hen harrier *Circus cyaneus* and merlin *Falco columbarius* were identified as target species given the designation of the Slieve Aughty Mountains SPA for both species. All other bird species observed or heard were recorded during the vantage point surveys and general time spent within the wind farm site and the surrounding areas. The section of the Derrybrien to Agannygal overhead line grid connection within a 5 km radius of the wind farm was included as part of the regular monitoring study zone. The objectives of the monitoring programme, which had been undertaken in the years 2004, 2006, 2007, 2009, 2011, 2015 and 2018, were as follows:

- To determine if hen harriers and merlins that may nest in the vicinity (up to c. 5 km from wind farm site) use any part of the wind farm site for nesting and/or foraging purposes
- To determine what distance foraging birds will approach wind turbines
- To determine if birds habituate to the presence of turbines

The survey methodology used was that recommended for monitoring hen harriers at wind farm projects in upland areas by the NPWS (NPWS Hen Harrier Survey Methodology, Draft 12/03/03). At the time (2004), this was based on survey techniques established by Madders (2002) and these were later developed by Scottish Natural Heritage (SNH) as standard methods for survey of birds at onshore wind farm sites (SNH, 2014 & 2017). Methodology for the winter 2019/20 hen harrier winter roost survey followed O'Donoghue (2019).

3.5.2.2 Baseline surveys 2022 and 2024

Hen harrier and merlin

For the 2022 and 2024 baseline surveys, the objective of the surveys was to determine the locations of breeding species of conservation importance that could be disturbed by the decommissioning works. Focus was on hen harrier and merlin, with methodology following Ruddock et al. (2016). Four rounds of site visits were carried out within the project area in the period of late-March to late-June 2022, while three rounds of site visits were carried out in the period of early April to late-June 2024. Focus was on the early period, late-March to mid-May, when territorial birds are most active. Observations within the wind farm site were made using the vantage points used in the previous monitoring surveys (see Table 1 below). At each of these locations, watches up to 6 hours duration (split into several sessions) were made in each of the three survey periods.

Outside of the wind farm site at Derrybrien, watches of shorter duration (minimum 1 hour) were made over areas which had suitable breeding habitat or which had supported hen harrier territories in the past. All observations were within an approximate 2 km distance of the wind farm infrastructure, including part of the route corridor of the

overhead line (breeding birds beyond that would be unlikely to be affected by decommissioning works).

Table 1 Details of vantage points within wind farm used for surveys.

Vantage Point (VP)	
VP A: M 60560 05219	On track out on open bog with views back west into centre of site and views east over Caheranearl to Earl's Chair.
VP B: M 58704 04749	Looking over clearfell, open bog and forest edge at northwest corner of site from track c. 300 m north of '365 m' high point on Cashlaundrumlahan.

The 2022 surveys were carried out over the following periods:

- 29th – 31st March
- 28th – 30th April
- 24th – 26th May
- 28th – 30th June

The 2024 surveys were carried out over the following periods:

- 9th – 10th April
- 5th – 11th May
- 18th – 19th June

Other breeding birds

Surveys by transects were carried out for all breeding birds within the wind farm site and along the overhead line corridor. The survey was in accordance with the Countryside Bird Survey methodology (BirdWatch Ireland / NPWS), which is based on Bibby et al. (2000).

Sampling locations were selected along sections of wind farm roads to represent the main habitats present, as follows (and see Figure 2):

- No. 1: T28 to T37 – through cutover blanket bog (see Plate 1)
- No. 2: T23 to T70 – through peat slide section
- No. 3: T12 to T15 – through regenerating bog area (see Plate 2)
- No. 4: T47 to T50 – through standing conifer plantation

For the overhead line corridor, routes were selected partly due to ease of access, as follows (see Figure 3):

- No. 5: PS1[2] (substation) to PS4 – tall conifers to both sides (see Plate 3)
- No. 6: PS10 to PS12 (both sides of Black Road) - tall conifers to both sides
- No. 7: Local road to PS36 to AM34[3] – clear felled area to both sides, with bog and wet grassland vegetation

[2] PS stands for pole set.
[3] AM stands for angle mast, which is a steel structure.

The transects were surveyed on two occasions within the following periods:

- 24th – 26th May 2022
- 28th – 30th June 2022

- 9th – 11th May 2024
- 18th – 20th June 2024

The transects were walked at a slow pace, with a 5 minute stop near each turbine or poleset location. Birds were recorded at distances of up to 300 m either side of the transect, both by sight and sound.

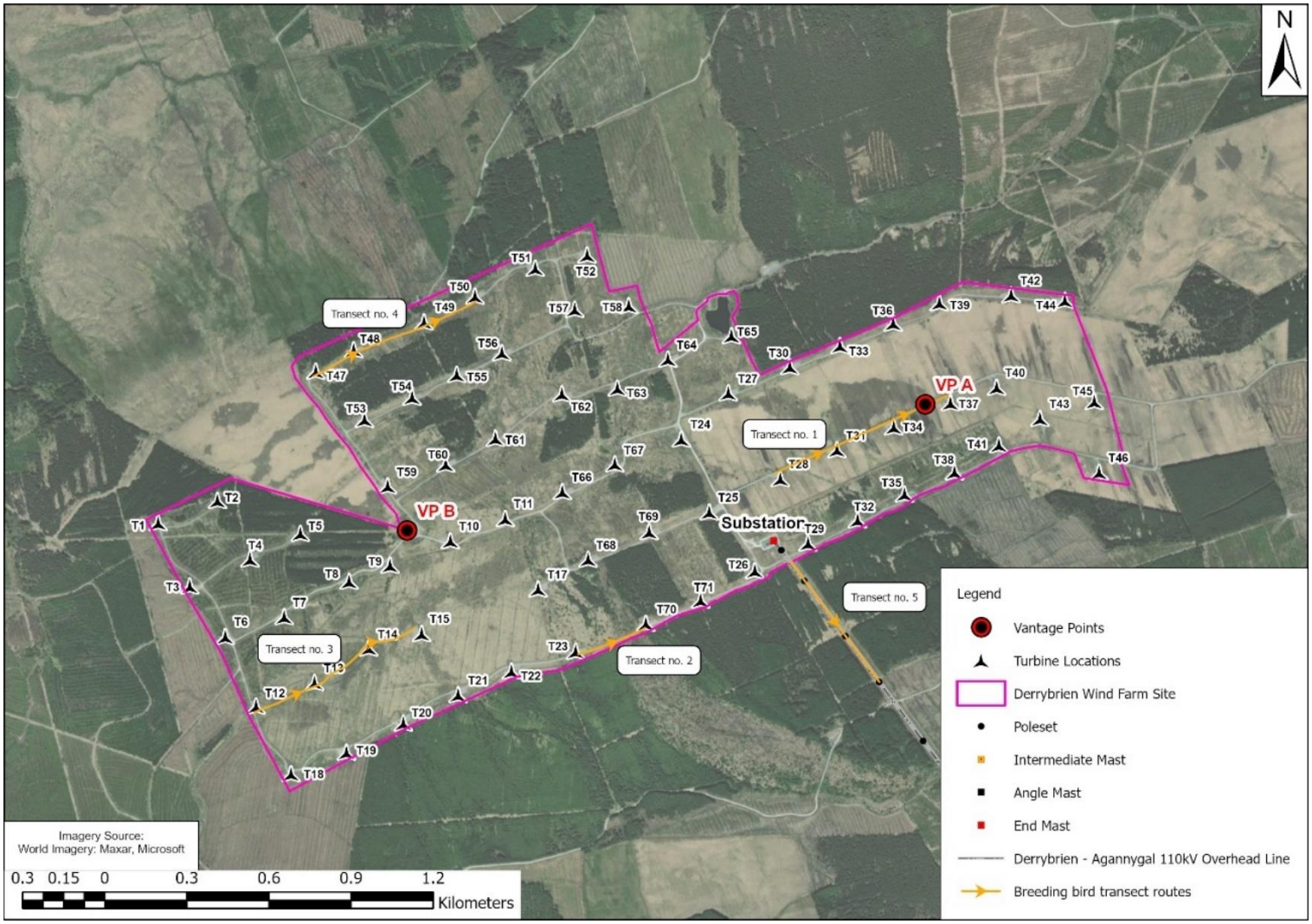

Figure 2 Survey transects used on Derrybrien Wind Farm site, 2022 and 2024.

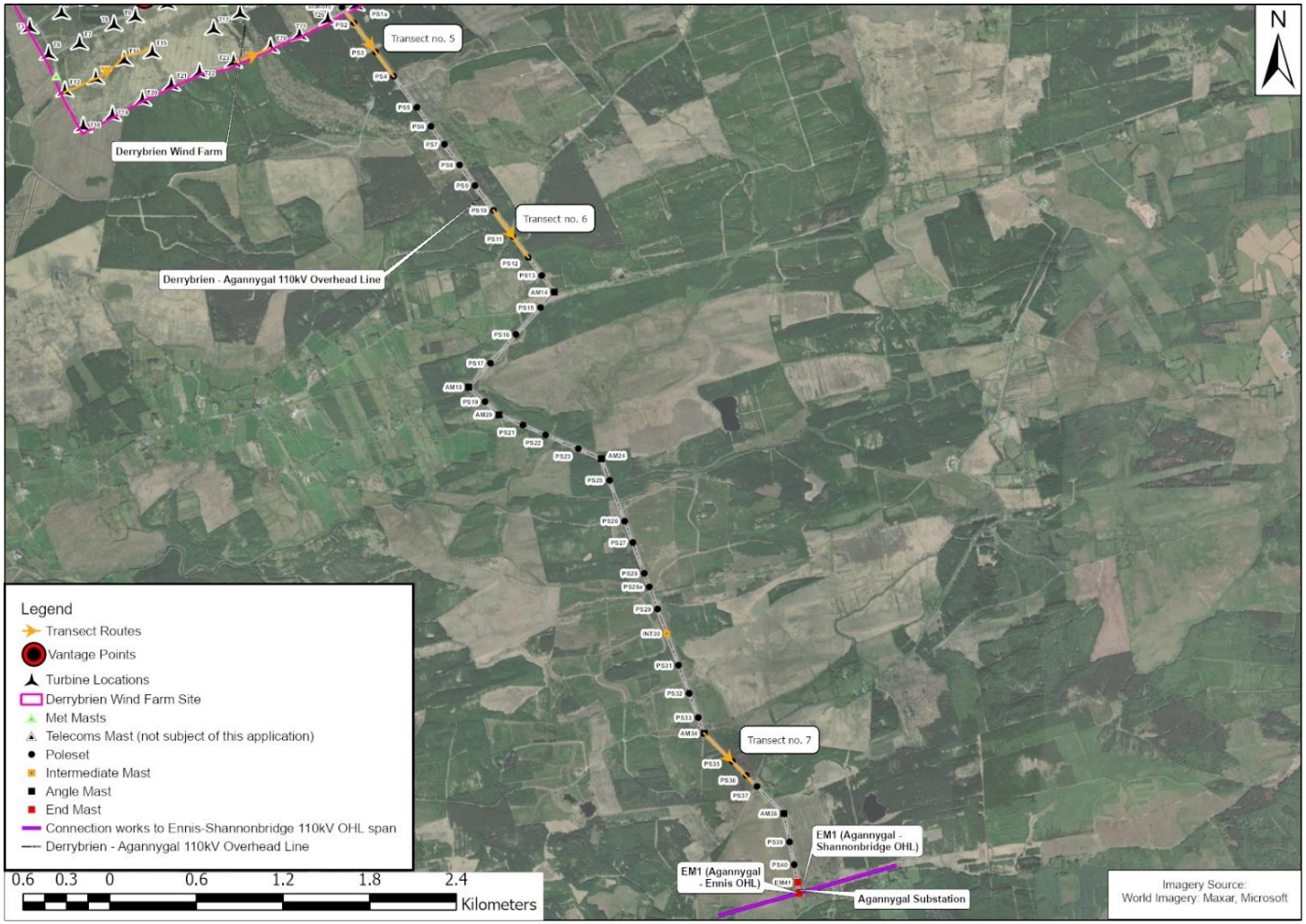

Figure 3 Survey transects used along overhead line grid connection between Derrybrien Wind Farm and Agannygal Substation, 2022 and 2024.

Plate 1 Survey transect No. 1 through bog in eastern sector of site, May 2022.

Plate 2 Survey transect No. 3 through regenerating bog in western sector of site, May 2022.

Plate 3 Survey transect No. 5 along the overhead line corridor, May 2022.

3.5.3 Bats

Bat activity surveys were undertaken between 2011 and 2023 on behalf of Gort Windfarms Ltd. All work completed during and after 2016 has been completed by BSG Ecology.

The purpose of gathering data over multiple years was to establish the species composition, spatial occurrence and activity levels of the local bat population as part of work to understand the impacts of the operational wind farm site, and subsequently to inform the remedial EIAR, which was submitted to An Bord Pleanála as part of the substitute consent application for the Derrybrien Wind Farm Project (ABP planning reference no. ABP-308019-20). The most recent work has included inspections of buildings and trees on site. Initial building and tree inspections were completed in 2022, with the building inspections repeated in summer 2023.

The following field surveys have informed the assessment presented in this report, with the most recent data collection being relied on more heavily than the more historical survey data in characterising the baseline bat community. This greater reliance on the more recent data reflects its greater relevance to the EIAR and NIS (due to the scope of work completed) and the fact that being more contemporary it was collected at a time when conditions most closely resembled those currently on site.

3.5.3.1 Bat survey 2022 and 2023

BSG Ecology completed field surveys to inform the decommissioning of the wind farm with reference to best practice survey methodologies set out by Bat Conservation Trust (Collins 2023; Collins 2016). These were as follows:

- Assessment of the potential use of Derrybrien Substation by bats including internal and external building inspections for bats and/or evidence of their presence, and post-dusk emergence and/or pre-dawn entry bat activity surveys (2023 and 2022). In 2022 work was undertaken on 15 August (building inspection followed by a dusk emergence survey [4]), 09 September (re-entry survey) and 26 September (emergence survey). All internal areas were inspected, external features were viewed using binoculars. A follow up survey was completed on 20 July (re-entry survey) 2023.
- Assessment of the potential use of Agannygal substation by bats including internal and external building inspections for bats and/or evidence of their presence, and post-dusk emergence and/or pre- dawn entry bat activity surveys (2022 and 2023). In 2022 the survey work was completed on 16 August (building inspection followed by dusk emergence) and 08 September (when a Songmeter 4 detector was left at the northern gable end to determine activity through the night and at dawn following the completion of a dusk emergence survey). All internal areas were inspected, external features were viewed using binoculars. A follow up survey was completed on 19 July (emergence survey) 2023.
- Assessment of the potential use by bats of three bridges along the Black Road, where structural works are proposed, including inspection for bats and/or evidence of bats (completed on 16th of August 2022). Features suitable for use by bats were inspected using an endoscope.
- Assessment of trees to be removed for bats – including trees at set down areas adjacent to the turbine locations and around the construction compound (completed on 15th of August 2022).

eDNA analysis of bat droppings collected during the surveys was completed by a specialist laboratory.

3.5.3.2 Bat survey 2020 and 2021

Bat survey methods in 2020 were derived with reference to guidance for onshore wind farms produced by SNH *et al*. (2019[5]). Survey work comprised:

- Static bat detector survey. SNH et al. (2019) guidance was applied. This indicated that for a wind farm of 70 turbines a total of 32 locations should be sampled for a total of ten consecutive nights in each of spring, summer and autumn using static

[4] Both emergence surveys involved two surveyors standing on different aspects of the building.
[5] This has since been superseded, and is now attributable to NatureScot et al (2021). The changes between the 2019 and 2021 guidance are minor.

detectors. Data for summer and autumn were collected in 2020. Spring, summer and autumn data were collected in 2021. Bat fatalities were searched for during each of the periods in which static detectors were deployed[6].

3.5.3.3 Bat survey 2019

Bat survey methods in 2019 were derived with reference to guidance documents produced by Bat Conservation Ireland (BCI) (2012), and multi-agency guidance published by Scottish Natural Heritage (SNH *et al*., 2019)[7]. Survey work comprised:

- Static bat detector survey. Sampling was completed during the autumn (29 August to 8 October 2019) at each of 32 turbine locations using static detectors (11 detectors were rotated between the 32 locations). Ten consecutive nights of data were collected at each location.

3.5.3.4 Bat Survey 2016

Survey methods were derived with reference to guidance produced by Bat Conservation Ireland (BCI) (2012), Natural England (2014) and the Bat Conservation Trust (Hundt [Ed], 2012).

Field surveys to inform the assessment for the site comprised:

- Driven transect survey with stopping points.
- Static bat detector survey at 32 turbine locations (these were selected to representatively sample the habitats present). The same locations were used as in 2019.

3.5.3.5 Bat survey 2011

The first bat survey work at the Site was in 2011; a bat activity survey was undertaken on 5 November 2011 (Wilson, 2012). Each turbine was visited during the survey and a bat detector used to record activity along tracks whilst driving between turbines. Surveys were completed using a Heterodyne Bat Detector (Pettersson D100), a Time Expansion Bat Detector (Pettersson D240) and a Frequency Division Bat Detector (Bat Box Duet).

[6] These were completed using specialist search dogs. A total of 32 turbines were searched at a rate of 8 turbines per day for 10 consecutive days in each of spring, summer and autumn 2021 and in summer and autumn 2020. Fatality surveys were also completed, at a far more limited scale, during late summer and autumn 2016. The work was undertaken to inform the remedial EIA (ABP planning reference no. ABP-308019-20), and is not of particular relevance to the decommissioning. The work in 2020 and 2021 followed a curtailment regime being implemented. No dead bats were recorded. It is not commented on further in this document.

[7] The SNH guidance supersedes previous guidance by Natural England (2014) and the Bat Conservation Trust (BCT) (Hundt, 2012). While this guidance is not specifically aimed at Ireland, it is broadly compatible with Bat Conservation Ireland's equivalent guidance (BCI, 2012), more prescriptive in some areas and more applicable to a wind farm of the scale of Derrybrien.

3.5.4 European Otter

A dedicated otter (*Lutra lutra*) survey of the Derrybrien North stream (a tributary of the Owendalulleegh River) between Black Road Bridge and Flaggy Bridge (approximately 1 km in length) was carried out on the 22nd August 2022 and 2nd December 2022.

In addition to the recent surveys, a dedicated otter survey of the wind farm site was undertaken on the 20th July 2018, which included a thorough search of the drains within the site. Otter signs were also recorded during aquatic habitat surveys on the Owendalulleegh River on the 25th August 2018 and on the Boleyneendorrish River while undertaking Q-value assessments on the 10th October 2018.

4 Screening for Appropriate Assessment

4.1 Introduction

Screening determines whether appropriate assessment is necessary by examining:

1. Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and
2. The potential effects of a project or plan, either alone or in-combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant (DoEHLG, 2009 (Rev 1 2010).

The Prospective Development is not directly connected with or necessary to the management of any European site.

Screening for AA involves the following:

1. Description of project
2. Identification of relevant European sites and compilation of information on their qualifying interests and conservation objectives
3. Identification of effects – direct, indirect and cumulative and determination as to their likely significance
4. Conclusions of the Screening Report.

4.2 Existing Environment

4.2.1 Project location

4.2.1.1 Wind Farm Site

Derrybrien Wind Farm site is located in the northern part of the Slieve Aughty Mountains approximately 11 km south of Loughrea County Galway, 12.7 km east of Gort, Co. Galway and 24 km west of Portumna, County Galway (see Figure 1 for a location map). Galway City lies some 35 km to the northwest of the wind farm site. The wind farm site is in the south of the county approximately 4.6 km from the border with County Clare and 21 km from the border with County Tipperary in the south east. The centre of the site is at ITM co-ordinates E 559572.0998, N 705010.181.

The wind farm site is located within the townlands of Boyaboy, Bolenyneendorrish, Coppanagh, Derreennamucka, Derrybrien East, Derrybrien North, Derrybrien West, Funshadaun, Kilbeg, Loughatorick North, Loughstorick South and Toormacnevin.

The overall area of the wind farm site is approximately 344.5 ha, but the wind farm infrastructure occupies only a very small proportion of this (31.1 ha - approximately 9% of site).

The wind farm site is accessed from a Coillte access road via a minor public road known as the Black Road L-4214 (approximately 3.1 km from the wind farm to the Black

Road/Coillte junction). The Black Road generally runs in a north south direction between the R353 at its southern end and Killeenadeema village (south of Loughrea) at its northern end. Access to the Black Road is via the R353 Regional Road, which originates near Portumna, passes over Flaggy Bridge before passing through the village of Derrybrien to join the N66 Loughrea – Gort National Secondary Road near Gort. From Gort the Black Road is accessed via the N66 for a distance of 1.7 km and the R353 for a distance of 14 km. Alternatively, the Black Road /Coillte access road can be accessed via minor public roads from Loughrea a distance of approximately 10 km.

4.2.1.2 Existing Derrybrien to Agannygal 110 kV OHL

The Derrybrien to Agannygal 110 kV Overhead Line is the grid connection constructed for exporting the electricity generated at the wind farm to the national grid. It begins at the Derrybrien Substation (located within the Derrybrien wind farm site, ITM 559916E, 704736N) and ends at the Agannygal Substation (located to the south-east of the windfarm site, ITM 563118E, 698593N). It is within the townlands of Loughatorick North, Derrybrien East, Derreennamucka and Derrybrien North.

The grid connection comprises of c. 7.8 km 110 kV conductor, 34 no. double wood pole structures, 2 no. end masts, 5no. angle masts and 1 no. intermediate mast. The OHL connects into the Ennis – Shannonbridge line at the Agannygal 110kV Substation. The Agannygal 110kV Substation splits this line into two circuits: Agannygal – Shannonbridge (Galway West) and Agannygal – Ennis (Galway West).

Periodic access to the overhead line structures for inspection is from nearby roads and Coillte forestry tracks.

4.2.2 Project Setting

The site is largely bounded by Coillte-owned coniferous forestry plantations. The closest settlement to the wind farm site is the village of Derrybrien some 2 km to the south. The nearest occupied houses are located just over 2 km from the wind farm site.

The Slieve Aughty Mountains within which Derrybrien Wind Farm is located have some of the largest concentrations of coniferous forest in the country which was mainly planted in the 1960s and 1970s and much of which is located on peat bog. The forest cover is one of the defining characteristics of the Derrybrien area and the Slieve Aughty Mountains area generally.

The wind farm site is located on peat bog which had been disturbed by afforestation and turbary, ranging in depth across the site from 1-7m deep, but in the main peat depths are in the range 2-3 m with the average peat depth across the site of approximately 2.6 m. Turf cutting has and continues to take place on the eastern part of the site and also external to the site to the east and immediately adjacent to it.

Most of the wind farm site is within the Owendalulleegh and Boleyneendorrish River Catchments with the remainder draining into the Owenaglanna/Duniry River Catchments.

A small section of the overhead line and Agannygal Substation are located in the catchment of Lough Atorick.

Derrybrien Wind Farm is within the Slieve Aughty Mountains SPA which was classified as a SPA in March 2007 and formally designated by Statutory Instrument in March 2012. The SPA encompasses the entire Slieve Aughty range from just south of Lough Rea in the north to Lough Derg in the east and beyond Lough Graney to the south west. The SPA is designated for the protection of hen harrier and merlin.

The majority of the Derrybrien – Agannygal 110 kV OHL route is covered by shallow to locally deep blanket peat which was largely forested in 1998. Prior to the construction of Agannygal Substation, the ground at the site comprised a shallow layer of peat (approximately 1m) over glacial till.

4.2.2.1 Hydrological Context

The wind farm site partially extends over the catchments of three rivers, the Owendalulleegh and Boleyneendorrish in the Galway Bay South East EPA catchment and Duniry in the Lower Shannon EPA catchment[8, 9].

The Derrybrien-Agannygal 110kV Overhead Line is predominately located within the Owendalulleegh catchment with a short section close to Agannygal Substation and Agannygal Substation itself being located within the Bleach catchment within the Lough Derg Water hydrological Management Unit.

The location of project works relative to the hydrological Water Management Units, catchments and sub-catchments are shown in Figure 4.

The sub-catchments directly connected to the wind farm site are described briefly below.

- The Owendalulleegh River System drains approximately two-thirds (67%) of the wind farm site through a number of small hill slope stream tributaries – Cloghvoley (designated as sub-catchment SC6), Derrybrien North (SC7, further divided into SC7(a), (b), (c) and (d) owing to the large portion of the wind farm which drains to the respective streams) and Derrybrien South (SC8 and SC9). The Owendalulleegh River rises in the townland of Gorteenayanka and flows westward to the south of the site to Lough Cutra approximately 22 km downstream. It then flows to the northwest through a heavily karstified region where it disappears underground. It reaches Kinvarra town approximately 15 km further downstream, at which point it enters Galway Bay.
- The Boleyneendorrish River drains approximately 31% of the site via sub-catchments SC1, SC2, SC3 and SC4. It flows westward to the northwest through a heavily karstified region before also entering the sea at Kinvarra town.

[8] Catchment information from EPA Database
[9] Sub-catchment information obtained from OPW Flood Studies Update (FSU) portal

- The Duniry River drains a very small section of the overall site (<1%) to the northeast, designated as sub-catchment SC5. The river is a tributary of the River Kilcrow which flows into Lough Derg on the River Shannon.

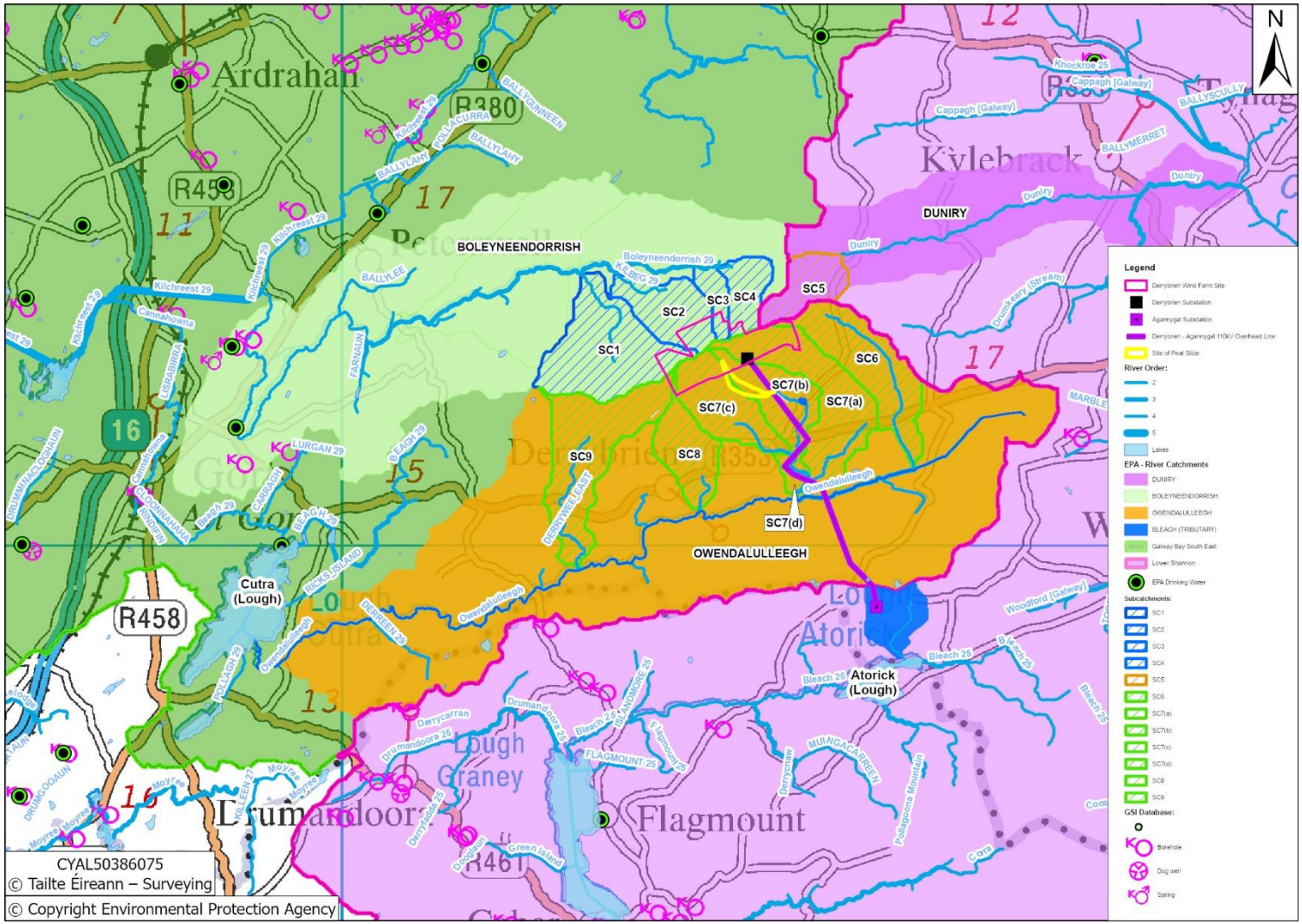

Figure 4 Hydrological and hydrogeological context of the Prospective Development area and its surrounding environment

4.2.3 Habitats

A map illustrating the distribution of habitats within the Prospective Development area is presented in Figure 5 (wind farm site) and Figure 6 (overhead line and Agannygal Substation).

The following terrestrial habitats are present within or adjacent to the Prospective Development area (habitat names and codes correspond with the Fossitt (2000) classification system):

- Conifer plantation (WD4)
- Recently felled woodland (WS5)
- Cutover bog (PB4)
- Upland bog (PB4)
- Dystrophic lake (FL1)
- Heath bog mosaic (HH/PB)
- Artificial lakes and ponds (FL5)
- Buildings and artificial surfaces (BL3)
- Drainage ditches (FW4)

No problematic alien invasive species were recorded on site.

Two individual non-native New Zealand Flax (*Phormium tenax*) occur along the roadside nearby the onsite substation. The plants are likely to have been planted there intentionally in the past. There is no evidence of this species spreading within the site.

The toxic weed Common Ragwort (*Senecio jacobaea*) is sparsely distributed in areas of recolonising bare ground proximate to the site infrastructure in association with Colt's Foot (*Tussilago farfara*).

Neither Japanese Knotweed (*Fallopia japonica*) or Rhododendron (*Rhododendron ponticum*) have been recorded within the site. However Japanese knotweed was previously recorded in close proximity to barrage 3 / the Derrybrien North stream south of the Black Road in the wider locality of the site.

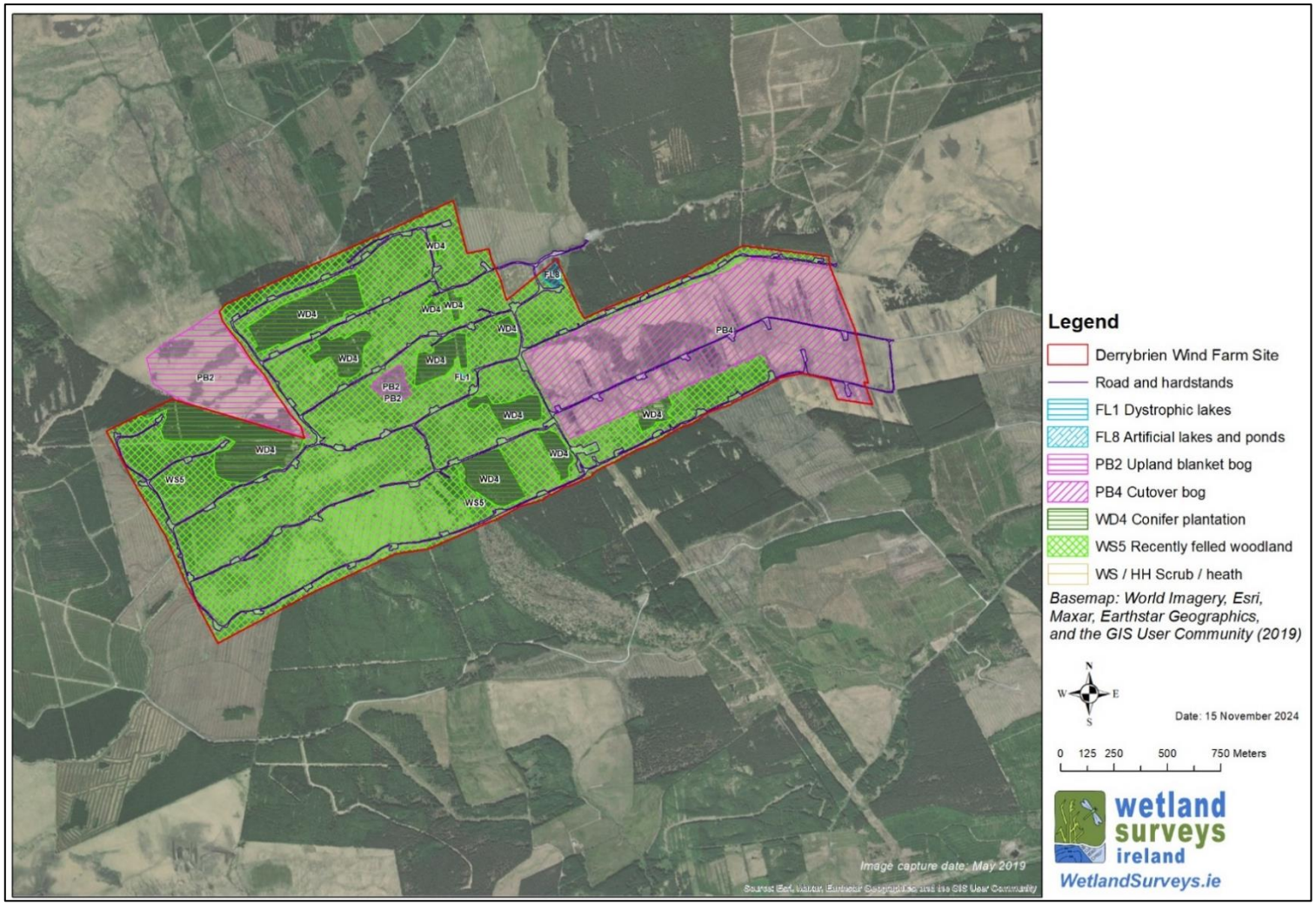

Figure 5 Habitat map of wind farm site.

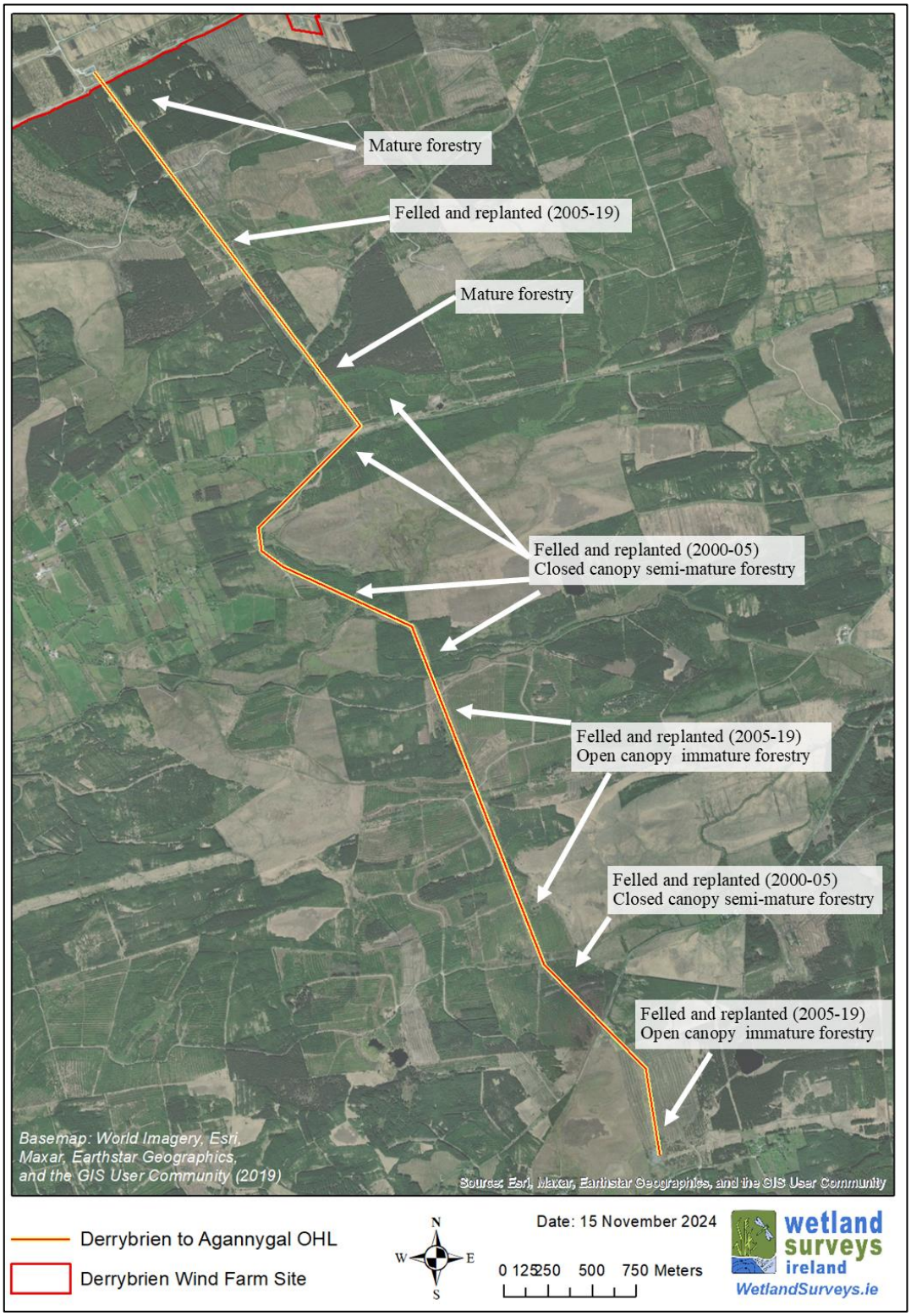

Figure 6 Annotated aerial photograph indicating the habitats that occur along the Derrybrien to Agannygal overhead line route and at Agannygal Substation.

4.2.4 Birds

The results of the recent 2023 and 2024 bird surveys are presented below in Section 4.2.4.1. A review of the status of the hen harrier and merlin in the study area (from 1998 to 2018) is presented Section 4.2.4.2. This historic information provides additional context. A review of the hen harrier population in the wider Slieve Aughty Mountains SPA is presented in Section 4.2.4.3.

4.2.4.1 Status of birds in study area in 2022, 2024 and 2025

4.2.4.1.1 Vantage point watches

Details of the vantage point watches carried out in the 2022 and 2024 breeding seasons are given in Appendix B.

2022 Survey Results: Hen harrier and merlin

There were no sightings of hen harrier or merlin within the wind farm site during the 2022 watches.

There was no evidence of an occupied hen harrier territory within at least a 2 km radius of the Prospective Development area.

There was one sighting of an adult male hen harrier hunting over bog to north of Coppanagh (M6208) on 28th April 2022 (this bird was observed whilst in transit to site). Location is approximately 4 km northeast of the wind farm.

2024 survey results; hen harrier and merlin

There were no sightings of hen harrier or merlin within the wind farm site during the 2024 watches.

There were two hen harrier sightings within approximately a 2 km distance of the wind farm as follows:

- 15th April: female flying in area from Bohaboy to within c.500 m of northern boundary of wind farm
- 16th April: ringtail circling over forest near Knocknarebana c.2 km southwest of wind farm

There were no further sightings from these two areas or elsewhere in May or June and it is believed that no breeding attempts were made at either location.

There were no sightings of merlin during any of the 2024 hinterland surveys.

4.2.4.1.2 Transect breeding surveys

Details of the results of each transect survey within the wind farm and along the grid connection route for the 2022 and 2024 breeding seasons are given in Appendix B. The conservation status (after Gilbert *et al.* 2021) for each species is given.

The results of the transect surveys both within the wind farm site and along the overhead line corridor show a good diversity of small bird species (passerines) nesting or at least feeding on the bog and regenerating bog vegetation. Low scrub, notably willow and bramble, is often present and provides good cover for small birds. Self-seeded conifers are also a feature in previously cleared areas both within the wind farm site and along the overhead line corridor.

Some of transects are through fairly open areas, e.g. T1, T3 and T7, whilst some are through mature conifer stands, e.g. T4, T5 and T6.

The survey showed that meadow pipit (Red-listed) and skylark (Amber-listed) are widespread species where open bog type vegetation occurs.

Kestrel (Red-listed) was recorded hunting along the overhead line corridor (transect no. 7).

Willow warbler (Amber-listed) is widespread in scrub and along woodland edges, while goldcrest (Amber-listed) is characteristic of conifer stands. Mallard (Amber-listed) is a localised species throughout the study area, occurring in the larger bog drains and ponds.

Other species which are widespread include wren, blackbird, song thrush, robin, whitethroat, stonechat, lesser redpoll and chaffinch.

Siskin and jay, species characteristic of conifer plantation, were recorded.

4.2.4.1.3 Winter 2024/25 surveys

Hen harrier was not recorded within the wind farm site from October 2024 to March 2025, nor were any winter roost sites located within a distance of up to 5 km of the wind farm. However, there were two sightings of hen harrier in the hinterland of the site, as follows:

- Second year male – observed at 09.46 hrs on 16th December 2024 near Kilbeg within the Boolyneendorrish river valley, approximately c. 2 km north-west of wind farm site. Flew from conifer plantation to open bog hunting – struck at flushed snipe but no kill. Continued north towards Lough Belsrah. Watched for 240 sec at hights 2-25 m (approx.).
- Adult male – observed at 16.34 hrs on 14th February 2025 from Francis Gap to east of Sonnagh Old, approximately 2.5 km to north of wind farm. Bird flying northwards hunting, Watched for 250 sec at heights 1-5 m above ground.

There were no sightings of merlin during any of the winter surveys.

Golden plover were recorded on or over the wind farm site on three occasions in October and November 2024, as follows:

- 18th October 2024: flock of 14 birds flew northwards over western end of wind farm at c. 50 m height.
- 19th October 2024: six birds flew up (09.43 hrs) from open bog in eastern sector of site (near T31) and flew calling in a northwest direction gaining height.
- 13th November 2024: flock of 20+ birds flew eastwards over eastern end of site – flying quite low and at one point looked as if going to land on bog as did a circle over same.

Kestrel was recorded within the wind farm site in October, November, January and March. All records were of single birds hunting (3 males, 1 female).

As in previous surveys, meadow pipit was present on site in all winter surveys, though in low numbers from November to January. Highest count was a flock of 20+ on 18th October 2024.

4.2.4.2 Review of status of birds in study area, 1998-2018

4.2.4.2.1 Period prior to Derrybrien Wind Farm construction (1998-2003)

An assessment of birds on the Derrybrien Wind Farm site for the original Environmental Impact Statements (prepared by Saorgus Energy Ltd., 1998 & 2001) had noted the presence of meadow pipit, skylark and snipe from the site. It was considered that various other species could occur in the area, including merlin, hen harrier, woodcock and red grouse (source of information stated to be from local NPWS ranger).

Information on the distribution of hen harriers within a radius of approximately 5 km of the wind farm was provided by NPWS to Brian Madden for the period 2000-2003. For the 2003 breeding season, there was a total of 12 known territories.

The total population for the Slieve Aughty Mountains in the first National Hen Harrier Survey in 1998 to 2000 was 15-23 pairs (Norriss *et al*., 2002).

None of the breeding hen harrier territories in the 2000 to 2003 period were within the area of the wind farm nor was there any information available to indicate a historic territory in this area. The nearest two territories in 2003 were approximately 2 km to the northwest and approximately 2 km to the southeast. The territory to the southeast was approximately 1.5 km from the overhead line corridor. A further possible territory was approximately 1 km south of the Agannygal Substation site.

4.2.4.2.2 Status of birds during construction phase of Derrybrien Wind Farm (mid 2003 – March 2006)

A survey took place in 2004 during the period when construction works were on hold due to the peat slide. Tree felling had taken place to facilitate the construction of the wind farm infrastructure, but the greater part of the required felling to construct the wind farm had not yet occurred. The majority of the road network was in place as well as 37 of the turbine foundations.

The main finding of the 2004 survey (BES, 2004) was that hen harriers were using the unplanted part of the Prospective Development site for foraging, with sightings over the bog in the eastern sector on three dates in May and June.

Within the hinterland area (to c. 5 km of the wind farm site) a total of ten breeding territories were located. Distribution of territories was similar to that in 2003. As in 2003, there were two territories within a 2 km distance of the wind farm. There were no signs of territorial behaviour by hen harriers within the wind farm site during the 2004 season.

4.2.4.2.3 Status of birds during operation phase of Derrybrien Wind Farm (2006 – 2018)

Usage of wind farm site by hen harrier

Surveys for hen harriers and other bird species were carried out during the operational phase of the wind farm in the years 2006, 2007, 2009, 2011, 2015 and 2018. These comprised vantage point surveys within the wind farm and hinterland surveys to locate breeding territories.

At no time in the monitoring period were hen harriers suspected of nesting within the wind farm site or within at least a 1 km radius of the wind farm. Hen harriers were, however, recorded foraging within or flying through the wind farm on at least one occasion in each of the survey years. All records were of single birds, involving both males and females. Sightings were both in the vicinity of the unplanted bog in the eastern sector of the site and in the areas which were clear felled to facilitate the wind farm. The clear-felled areas developed to a mix of low scrub (brambles, willows etc.) and re-vegetating bog species (heather, grasses etc.) which supported a range of potential prey items for hen harriers, especially meadow pipit and skylark.

While much of the wind farm had provided suitable foraging habitat for hen harrier during the operational phase, the likelihood of birds availing of the foraging potential was considered to be influenced largely by the proximity of nesting pairs to the site, and the availability of foraging habitats in the surrounding area. The amount of foraging habitat in the surrounding area is partly dependent on forestry management practices, with the unplanted bog and heath remaining fairly constant in area over time. When a substantial area of forest is harvested and replanted, hen harriers will invariably be attracted to the pre-thicket stage forest for foraging purposes and possibly even to attempt nesting.

In addition to the records described above, two *ad-hoc* sightings of hen harrier within the wind farm were made by John Curtin (ecologist) in 2020 as follows:

- 30th June 2020 - female perched on a stump in clear-fell in the western sector of site, then flew
- 8th September 2020 – ringtail near substation

Hen harrier breeding territories within 5 km of wind farm site

Since the start of the monitoring surveys for breeding territories in 2004, up to 14 breeding territories were identified within an approximate 5 km radius of the wind farm. Most of these were traditional territories dating to at least the late 1990s. However, in any one year occupancy varied, with some territories showing no evidence of occupancy or perhaps being abandoned early in the season. Also, within each territory the exact location of the nest site will often vary between years.

Table 2 shows a summary of the number of territories occupied in various years since 2004 within a 5 km radius of the wind farm. Data from the respective National Hen Harrier Surveys for 2005 and 2010 are also given to supplement the years when monitoring did not take place at the wind farm. Two categories of breeding are given – confirmed (where

nesting actually took place though may not have been successful) and possible (where territory was apparently occupied early in season only).

Table 2 Summary of the number of territories occupied in various years since 2004 within a 5 km radius of the wind farm.

	2004	2005	2006	2007	2009	2010	2011	2015	2018
Confirmed	9	14	11	12	11	8	6	2	2
Possible	1	-	2	2	2	4	4	4	3
Total	**10**	**14**	**13**	**14**	**13**	**12**	**10**	**6**	**5**

Since monitoring commenced in 2004, there had been two regular territories within a 1-2 km distance of the Derrybrien Wind Farm site. In 2011, the only successful nesting (i.e. young birds fledged) by the 10 pairs within the 5 km radius of the wind farm was from one of these territories, and this territory was still occupied in both the 2015 and 2018 surveys (though no young were known to be produced).

The monitoring of hen harrier territories within the 5 km radius of Derrybrien Wind Farm showed that the number of confirmed nesting attempts was fairly constant between 2004 and 2009 but there then followed a decline in 2011 which continued more markedly into 2015 and 2018 (with only 2 confirmed nesting attempts in each year). Between 2010 and 2018, the total number of pairs (confirmed and possible) dropped from 12 to 5.

Status of breeding merlin in wind farm site

Merlin is a scarce breeding bird within the Slieve Aughty Mountains, with the Site Synopsis for the Slieve Aughty Mountains SPA (NPWS, 2015) noting that "*The population size is not well known but is likely to exceed 5 pairs*".

There were no sightings of merlin within the wind farm site during the various breeding bird surveys between 2006 and 2018. A single sighting was made in the hinterland area several kilometres from the wind farm on 10th May 2011 during a search for hen harrier territories which probably indicated local breeding.

As merlin is a difficult species to survey due to its discrete breeding behaviour (Lusby *et al.* 2011), there is some chance that one or more pairs could breed in the hinterland of the wind farm and remain unnoticed. However, it is undoubtedly a rare breeding bird within the Slieve Aughty Mountains.

Other breeding bird species recorded within wind farm site

A range of bird species characteristic of bog, heath, scrub and forest habitats was recorded on site during the various monitoring surveys, including those that may be prey species for hen harrier and merlin, such as meadow pipit and skylark. Meadow pipit is widespread within the Derrybrien Wind Farm. Young fledged birds are often seen and post breeding flocks (often in excess of 50 birds) are a feature in late July and August. Skylark is fairly widespread as a breeding species throughout the site.

4.2.4.2.4 Winter bird species recorded within wind farm area

Winter 2011/12

There were no sightings of hen harriers within or around the wind farm site during surveys between November 2011 and January 2012. However, a range of bird species characteristic of bog, heath, scrub and forest habitats was recorded, including those that may be prey species for hen harrier and merlin, such as meadow pipit. Meadow pipit was present on site in all winter surveys, though in relatively low numbers (mostly single birds or small flocks up to 5).

Winter 2019/20

Hen harrier was not recorded on site from October 2019 to March 2020, nor were any winter roost sites located within a distance of up to 5 km of the wind farm. Several sightings of hen harrier made in the hinterland of the site (within c. 2 km and 4 km distance) in October 2019 were likely to be lingering summer birds, as follows:

- Male – observed in late morning period c. 2.5 km south-west of wind farm (Knocknarebana) during a reconnaissance visit on 12th October
- Immature male – observed hunting c. 2 km north-east of Caheranearl at 10.45 hrs on 18th October
- Immature male – recorded at 17.25 hrs on a lone pine tree preening and then flying to the south c. 4 km north-east of Caheranearl on 18th October – probable same bird as earlier.

A merlin was recorded off-site near Knocknarebana (approximately 2.5 km south-west of wind farm site) during a hen harrier dusk roost watch on 17th October 2019.

Meadow pipit was present on site in all winter surveys, though in relatively low numbers (mostly single birds or small flocks up to 5). A loose flock of c. 40 was present within the wind farm on 22nd October 2019.

4.2.4.3 Review of hen harrier population in Slieve Aughty Mountains SPA

The population decline which had been recorded within the 5 km radius of the Derrybrien Wind Farm during the monitoring period was reflected in the Slieve Aughty Mountains SPA as a whole.

Survey results of the estimated population within the SPA in various years are presented in Table 3. Data are from the National Hen Harrier Surveys (Norriss *et al*. 2002, Ruddock *et al*. 2011, 2016) and from the Hen Harrier Project (2020, 2021).

Table 3 Comparative population data from the national hen harrier surveys in 1998-2000, 2005, 2010 and 2015 for the Slieve Aughty Mountains, and for 2020 and 2021. Figures are total estimated pairs.

1998-2000	2005	2010	2015	2020	2021	2022	Change % (2005-2022)
10-21	24-27	16-24	8-14	7	8	3-5	-67%

Note: Survey effort in 1998-2000 survey was less than in subsequent surveys.

A detailed study of hen harriers in three areas (Slieve Aughty Mountains, Ballyhoura Mountains and West Clare hills) by researchers from University College Cork showed population declines in all three areas between 2007 and 2011 and also that the numbers of young fledged at successful hen harrier nests was quite low compared to other populations (Irwin *et al*. 2012).

The cause(s) of the marked population decline and low productivity within the Slieve Aughty Mountains SPA, and indeed in areas such as the Ballyhoura Mountains and the West Clare hills and several other SPAs, remain largely unknown but are expected to be due to a number of reasons, perhaps in combination, including the following (after Ruddock *et al*. 2016):

- Habitat change (largely forest management affecting prey availability)
- Predation
- Persecution
- Access and recreation (walking paths, cycling tracks etc)
- Non-intensive grazing
- Wind energy and Utility and service lines

Of relevance to power lines within the Slieve Aughty SPA, Ruddock *et al.* (2016) wrote the following:

> "*There appeared to be a positive association, although this was not statistically tested, and supported by behavioural observations, that habitat management (i.e. clearance) for power line infrastructure may provide corridors for movement and foraging by hen harriers within the forested landscape. The use of such corridors could prove useful to increasing connectivity with suitable nesting and foraging areas and particularly linking forested areas with open habitats which are shown to be used more frequently in Ireland.*"

For the Slieve Aughty Mountains SPA, the 2020 Hen Harrier Project report noted the following:

> *"A number of potential pressures were noted in the SPA. These include forestry operations and recreational and vehicle traffic on access roads and tracks near nest sites. Turf cutting and pine marten were noted regularly near nest sites."*

The 2021 Hen Harrier Project report noted the following in relation to the Slieve Aughty Mountains SPA:

> *"A significant pressure on Hen Harrier in this SPA is the direct and indirect effects of habitat loss and fragmentation. The extent and age profile of the forest plantations in the SPA may be leading to an increased vulnerability top predation. Forestry activities along with recreational traffic are regularly observed near nest and pose an ongoing risk of disturbance".*

Following a further significant decline in the breeding population of the Slieve Aughty Mountains in 2022, Ruddock *et al.* (2024) wrote the following:

> *"The Slieve Aughties region (Co. Galway and Co. Clare), which is larger than the Slieve Aughty Mountains SPA, has had its population decline by around two thirds since 2015 and now holds fewer than six pairs of breeding hen harrier. The extent of declines here since previous surveys is severe, with an 82% decline when compared to the peak population recorded in 2005 (27 breeding pairs). The extent of losses of breeding hen harrier in the region are widespread and substantial in the national context. The range of pressures and threats recorded by surveyors include a predominance of coniferous forest plantation and the associated forest and plantation management and use, forest clearance (clear-cutting, removal of all trees) and wind energy developments and associated utility and service lines (e.g. power-lines, pipelines). There was also a spectrum of grazing levels across the region, from intensive grazing by sheep and deer to non-intensive grazing. In some areas, a notable abandonment of pastoral systems, and lack of grazing provided excellent suitable habitat but was countered by totally unsuitable habitat in other areas. The extent of turf cutting, including both hand-cutting of peat and mechanical removal of peat, is widespread, across large areas of supporting peatland habitat, and the associated impact includes human and machinery disturbance at key temporal periods during the breeding season. Various recreational activities including paths, tracks, cycling tracks, outdoor sports and leisure activities, recreational activities such as walking, horse-riding and various off-road vehicles were also recorded by surveyors. In addition, extensive and uncontrolled burning (e.g. widespread unmanaged and/or malicious burning) was reported by surveyors across the region which is likely contributing to the loss and/or poor condition of supporting habitats for both breeding hen harrier and their prey."*

From the available data on the hen harrier population in the Slieve Aughty Mountains SPA, it is concluded that the population has undergone a substantial decline (>67%) since the designation of the SPA in 2007.

4.3 Description of Prospective Development

The Prospective Development comprises the following:

- Enabling works to facilitate the decommissioning of the Derrybrien Windfarm.
- Decommissioning and removal of the Derrybrien Wind Farm and associated ancillary components. The decommissioning works include the removal of the above-ground structures only, leaving certain features in situ.
- Decommissioning and removal of the Derrybrien Wind Farm grid connection comprising Derrybrien-Agannygal 110 kV Overhead Line (7.8 km) and Agannygal Substation connecting into the Ennis-Shannonbridge 110 kV Overhead Line. Reinstatement of the Ennis-Shannonbridge 110kV Line.

The Prospective Development in relation to its immediate surrounding environment along with the locations of various features described in Sections 4.3.1 to 4.3.5 are shown on Figures 7 and 8. The Prospective Development red line application boundary is shown on Figure 9.

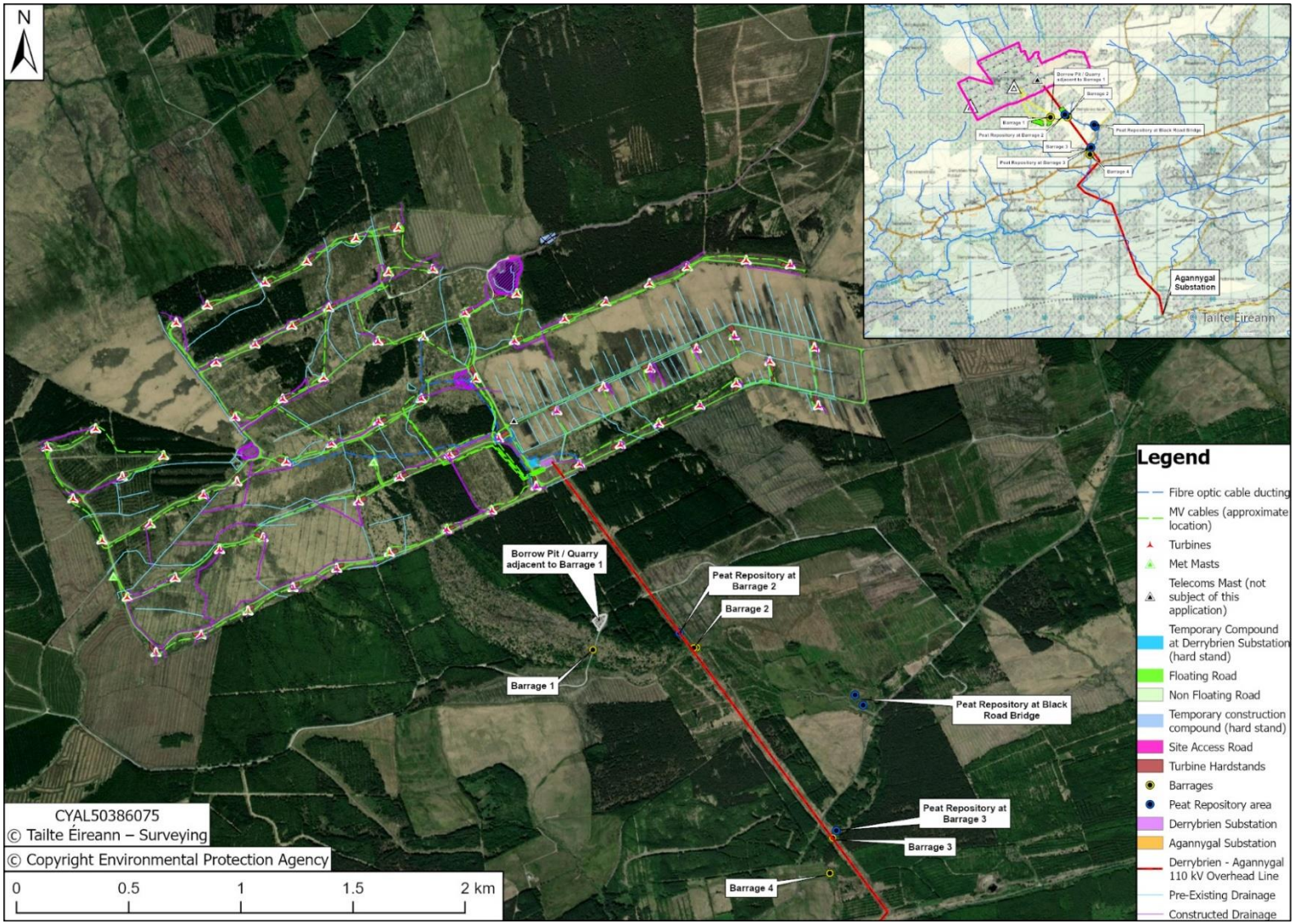

Figure 7 Prospective Development (wind farm site and overhead line) and its immediate surrounding environment (Sheet 1 of 2)

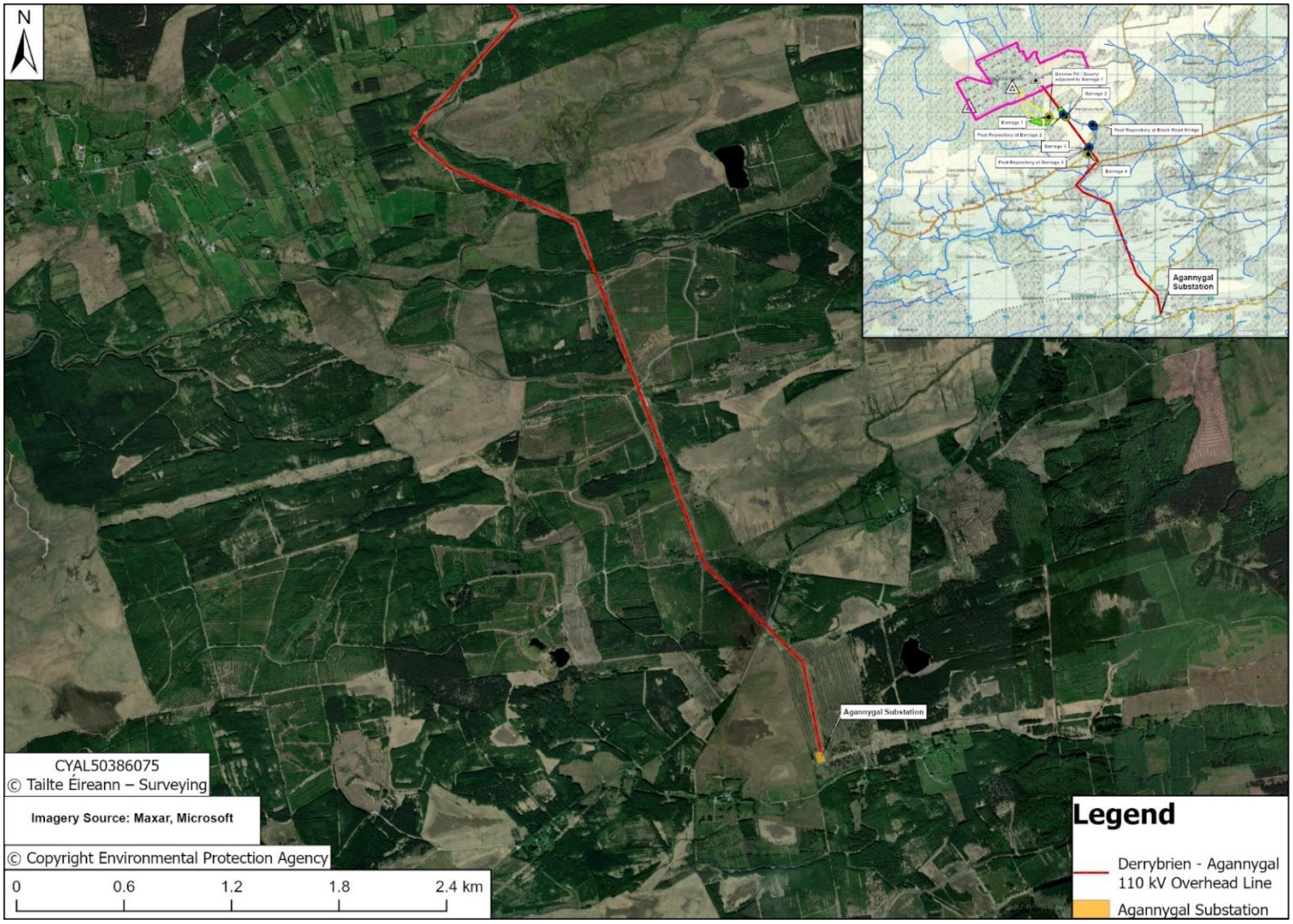

Figure 8 The Prospective Development (overhead line) and its immediate surrounding environment (Sheet 2 of 2)

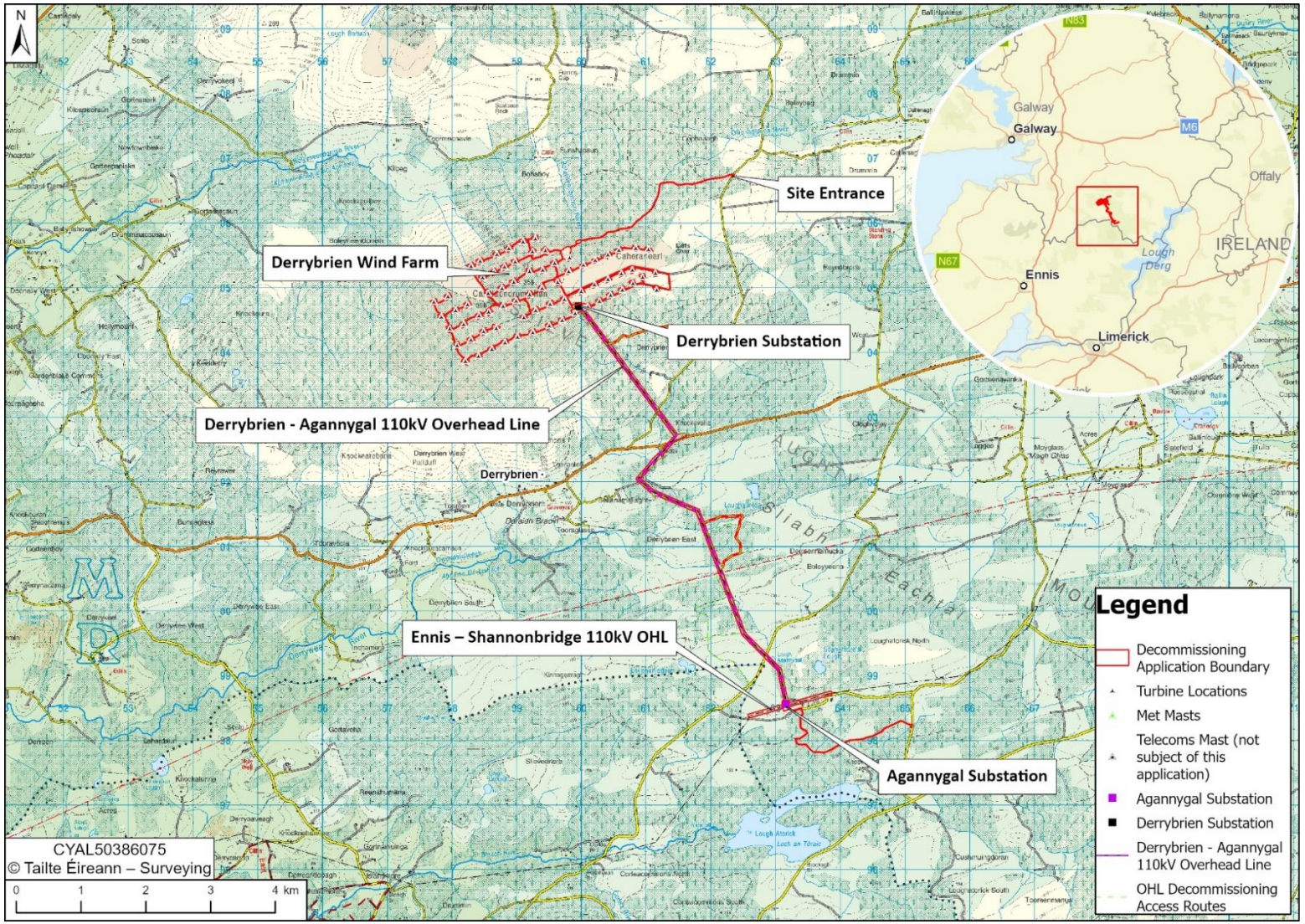

Figure 9 Prospective development red line application boundary.

4.3.1 Enabling Works to facilitate the decommissioning of the Derrybrien Wind Farm

Enabling works will be undertaken at the Derrybrien Wind Farm site to facilitate the decommissioning, dismantling and removal of the Derrybrien Wind Farm. The enabling works will include the following:

- Establishment of temporary compounds. 3 no. temporary site compounds and hardstand areas will be re-established at the Derrybrien Wind Farm site and the Agannygal Substation.
- Minimal vegetation/scrub clearance and minor levelling works at the existing hardstand areas and access tracks. Waste arising from these enabling works is expected to comprise of vegetation, rubble and gravel. Any clean material that cannot be reused on site will be removed by licensed waste carriers for disposal at appropriately licensed facilities.
- Improvements to existing access roads and forestry tracks. The existing access road and forestry tracks typically comprise a 3m wide running track constructed of crushed rock which has been founded on the mineral soil underlying the peat and floating road construction. Minor permanent upgrades to some sections of the access roads may be required to facilitate heavy plant accessing the wind farm. It is envisaged that the improvement works would include filling potholes and localised widening where necessary. Temporary widening of the turbary road and certain sections of turning heads may also be required to provide safe access to the mobile crane that will be used to dismantle the turbines. 1 No. 10m long turning area at Turbine No.4 is required to facilitate access and it is proposed to remain in place post decommissioning.
- In addition, there will some widening of the bell mouth off the Black Road in order to enter the Coillte Track. This will be mostly achieved by the removal of existing stone berms that have narrowed the entrance at the wind farm site.

4.3.2 Decommissioning Derrybrien Wind Farm (including the Derrybrien 110kV Substation)

The decommissioning works will include the removal of the above ground structures only, leaving the access tracks, hard stands, wind turbine foundations, underground LV cables, meteorological mast foundations and substation foundations in situ. Any protruding foundations or structures will be cut to below ground level and infilled and levelled to match adjoining areas. These proposed decommissioning works are to be confined to areas within the control of Gort Windfarms Ltd. (as illustrated on the site layout plans) and are considered typical of the industry norm in respect of wind farm decommissioning.

No bog rehabilitation or active drain blocking will occur and the existing drainage network will be left to naturally rehabilitate. No replanting of forest will occur although some natural regeneration will be likely. The decommissioning works associated will include the following:

- De-energising of the site, which will involve initially disconnection of turbines, low voltage (LV) components followed by disconnection of high voltage (HV) elements;
- Temporary widening of the Turbary Road and certain sections of turning heads;
- Controlled dismantling of 70 no. turbines (blades, nacelle, and tower) and 2 no. anemometer lattice masts;
- Controlled removal of electrical equipment from Derrybrien Substation and demolition of substation building.

Access to wind farm: It is proposed that the wind farm site will be accessed from a Coillte access road in the townlands of Bohaboy, Funshadaun and Coppanagh, via the Black Road (approximately 3.1 km from wind farm to the Black Road/Coillte junction). Black Road generally runs in a north south direction between the R353 at its southern end and Killeenadeema village (south of Loughrea) at its northern end. Access to the Black Road is via the R353 Regional Road, which originates near Portumna, passes over Flaggy Bridge before passing through the village of Derrybrien to join the N66 Loughrea - Gort National Secondary Road near Gort. From Gort the Black Road is accessed via the N66 for a distance of 1.7 km and the R353 for a distance of 14km. Alternatively, the Black Road /Coillte access road can be accessed via minor public roads from Loughrea a distance of approximately 10km.

Controlled dismantling of 70 no. turbines and 2 no. anemometer lattice masts: The 70 no. turbines and 2 no anemometer masts will be dismantled by mobile cranes operating on the adjacent granular hardstand areas, which are designed to support the crane loads on the glacial till or rock below the peat.

It is not proposed to carry out any remedial works on any of the elements of the wind farm that will be left in place after decommissioning. However, it may be necessary to carry out temporary road widening works along the narrow (approx. 3 metres) turbary road between Turbines T31 and T45 to provide safe access for the mobile crane that will be used to dismantle the turbines. If this is required, then the roads will be widened temporarily using a combination of steel plates, timber bog mats and aggregates, as necessary to provide adequate edge support to the wheels of the crane without significantly increasing the loads on the peat.

Specialist trucks and low-loader transporters will be required to remove the heavy and oversize components of the turbines from the site. The mass and length of the main turbine components are as follows for the Vestas V52/850 turbine: Nacelle (22 tonnes), 26m Rotor Blades (1.9 tonnes), Tower sections (base tower 29.9 tonnes, top tower 20.5 tonnes)) and 49m Mast (55 tonnes).

The 2 no. anemometer lattice masts will be split into sections so that the mass of each load will be less than 30 tonnes, and the axle load on the transporters will be limited to a maximum of 12 tonnes/axle so that they can travel on the national road network in Ireland. Wind turbines and components will be reused or recycled where possible.

Controlled removal of electrical equipment from Derrybrien Substation and demolition of substation building: The Derrybrien Substation and control building will be dismantled. Before demolition, the building will be inspected for the presence of bats by a

suitably qualified and experienced bat ecologist. The demolition works will be carried out under licence from NPWS during the appropriate time of year (as per the steps specified in the bat mitigation strategy) and under supervision by a bat ecologist. There will be no blasting on the site. The 80-tonne step-up transformer will be removed from site on a specialised 28.5 m long multi-axle articulated truck and low-loader transporter. All demolition waste will be removed from the site. (Sulphur hexafluoride (SF6) switchgear from the substation and any oil- containing equipment will be carefully removed in compliance with applicable legislation. All waste generated will be managed in accordance with applicable legislative requirements.

On completion of the works, all above- ground structures will have been removed from the windfarm site. All sub-surface infrastructure, hardstand areas and the internal road network will remain in situ but will not be visible in the context of the surrounding landscape. Locations of works will be levelled and reinstated to match adjoining areas of ground. It is not proposed to replant the wind farm site with trees although natural regrowth of previously felled areas is likely continue.

Subject to a separate assessment and a grant of substitute consent by the Board, the features of the wind farm that Gort Windfarms Ltd intends to leave in-situ after decommissioning works are completed are listed below:

- Reinforced concrete foundations for 70no. wind turbines.
- Reinforced concrete foundations of structures within the Derrybrien Substation compound.
- Reinforced concrete foundations of 2no. Anemometer masts.
- Approximately 17.5km of access tracks and 70no. hardstand areas
- Direct buried underground electrical and communications cabling.
- 3no. Borrow Pits / Quarries
- Naturalised Peat Repository areas
- Onsite Drainage Infrastructure.
- The third-party mast will remain in situ but the electricity supply to the site will be disconnected.

4.3.3 Decommissioning Derrybrien Wind Farm Grid Connection

The decommissioning works will include:

- Destringing of the overhead line conductor
- Removal of the overhead line infrastructure (34 no. double wood pole structures and 8 no. angle masts)
- Controlled removal of Agannygal Substation and demolition of control building
- Controlled removal of standby generator (bunded) and diesel tank, external lighting poles, lightning mast
- Removal of palisade fencing surrounding the Agannygal Substation
- Reinstatement of the Ennis-Shannonbridge 110kV Line.

Destringing of Overhead Line Conductor: Access routes for decommissioning the OHL have been identified in the Decommissioning Management Plan subject to detailed design (see Figure 10 and Figure 11 below). The Decommissioning Management Plan is included in Appendix 4.1 of the EIAR. All-terrain vehicles including low ground pressure excavators will be used to access the OHL locations. Conductor destringing will be carried out and all-terrain vehicles will be used to pull lines to allow the conductor to be pulled from angle mast to angle mast. Where the OHL crossed public roads, temporary goalpost or H frames will be used to support the conductor etc. over the road so that safe access can be maintained on the public roads.

Removal of Overhead Line infrastructure: Access routes for decommissioning the OHL have been identified subject to detailed design (Planning Drawing Ref:). The OHL will be decommissioned and will entail the removal of the OHL infrastructure between the Derrybrien Substation and Agannygal Substation. During the removal of the overhead line, all polesets and masts will be cut at base. The OHL poles and mast elements will be removed from site for reuse and if necessary, disposal in accordance with the relevant legislation. On completion of the works, all above-ground structures will have been removed from the route of the overhead line and the Agannygal Substation site. Any disturbed areas shall be reinstated and the below -ground features will be imperceptible.

Decommissioning of Agannygal Substation: The decommissioning of Agannygal Substation will involve the removal of the above -ground elements of the substation. These works will entail the de-energising of the electrical equipment and the removal of the substation from site. The substation equipment will be reused or recycled where possible. All waste will be managed in accordance with applicable legislation. On completion of the works, all structures will be removed from the Agannygal Substation site. The palisade fencing surrounding the substation will be dismantled and removed from site. The reinforced concrete base for the substation will be left in- situ as will the access road to the site.

Reinstatement of the Ennis-Shannonbridge 110 kV Line: Following the decommissioning of the wind farm grid connection, the Ennis-Shannonbridge 110kV Overhead Line will be reinstated. These works will involve the re-conductoring of the OHL span at Agannygal Substation. The full section of line between angle masts will be wheeled and re-tensioned (approximate length 1.3km). Stringing equipment will comprise 4x4 vehicles, puller – tensioners, teleporters, stringing wheels, conductor drums, compressor & head, transit vans, chains and other small tools, drum stands and drum carriers. It is estimated that the work would take less than 6 weeks to undertake.

On completion of the works, all above-ground structures will have been removed from the route of the overhead line and the Agannygal Substation site. Any disturbed areas shall be reinstated and below ground features rendered imperceptible. The OHL poles and mast elements will be removed from site in accordance with the relevant legislation. The reinforced concrete bases will remain in situ. Tree replanting is not proposed although natural regrowth of previously felled areas is likely continue.

Subject to a separate assessment and a grant of substitute consent, the features of the overhead line and Agannygal Substations that Gort Windfarms Ltd intends to leave in- situ after decommissioning works are completed are listed below:

- Below ground element of. double wooden pole sets.
- Reinforced concrete foundations for 2no. end masts.
- Reinforced concrete foundations for 5no. angle masts.
- Reinforced concrete foundations for 1no. intermediate mast.
- Reinforced concrete foundations of structures within the Agannygal Substation compound.

4.3.4 Offsite features constructed in response to the peat slide (2003)

Subject to a separate assessment and a grant of substitute consent, it is proposed that no development works will be carried out to decommission the ancillary works associated with the peat slide in 2003. All features have naturalised and become heavily vegetated over the past 20 years and are virtually imperceptible today.

The features that will be left in-situ after decommissioning works are:

- Barrage 1 and Coillte Access Track.
- Barrage 2 (including 284 m of floating access road) and Repository Area.
- Barrage 3 and Repository Area.
- Barrage 4.
- Repository Area at the Black Road Bridge.
- Minor repairs work to instream structures/bridges – at Black Road Bridge, Flaggy Bridge, the Farmer's Track / Culvert, Crooked Bridge and Stepping Stones,
- Minor borrow pits used to source material,
- Drainage works.

4.3.5 Decommissioning Programme

The Prospective Development programme and phasing plan is presented in the Decommissioning Management Plan (Appendix 4-1 of the EIAR). The duration of the decommissioning phase is expected to be approximately 24 months, which may need to be extended appropriately e.g. seasonal, garda escort availability for abnormal loads etc.

The decommissioning of the project is expected to take place in stages. The stages are expected to run concurrently unless, they are prevented from being done, due to for example, the seasonality of the works such as the presence of breeding birds or hedge trimming etc, weather conditions, ground conditions or availability of an outage of the grid for the reinstatement of the Ennis-Shannonbridge line etc.

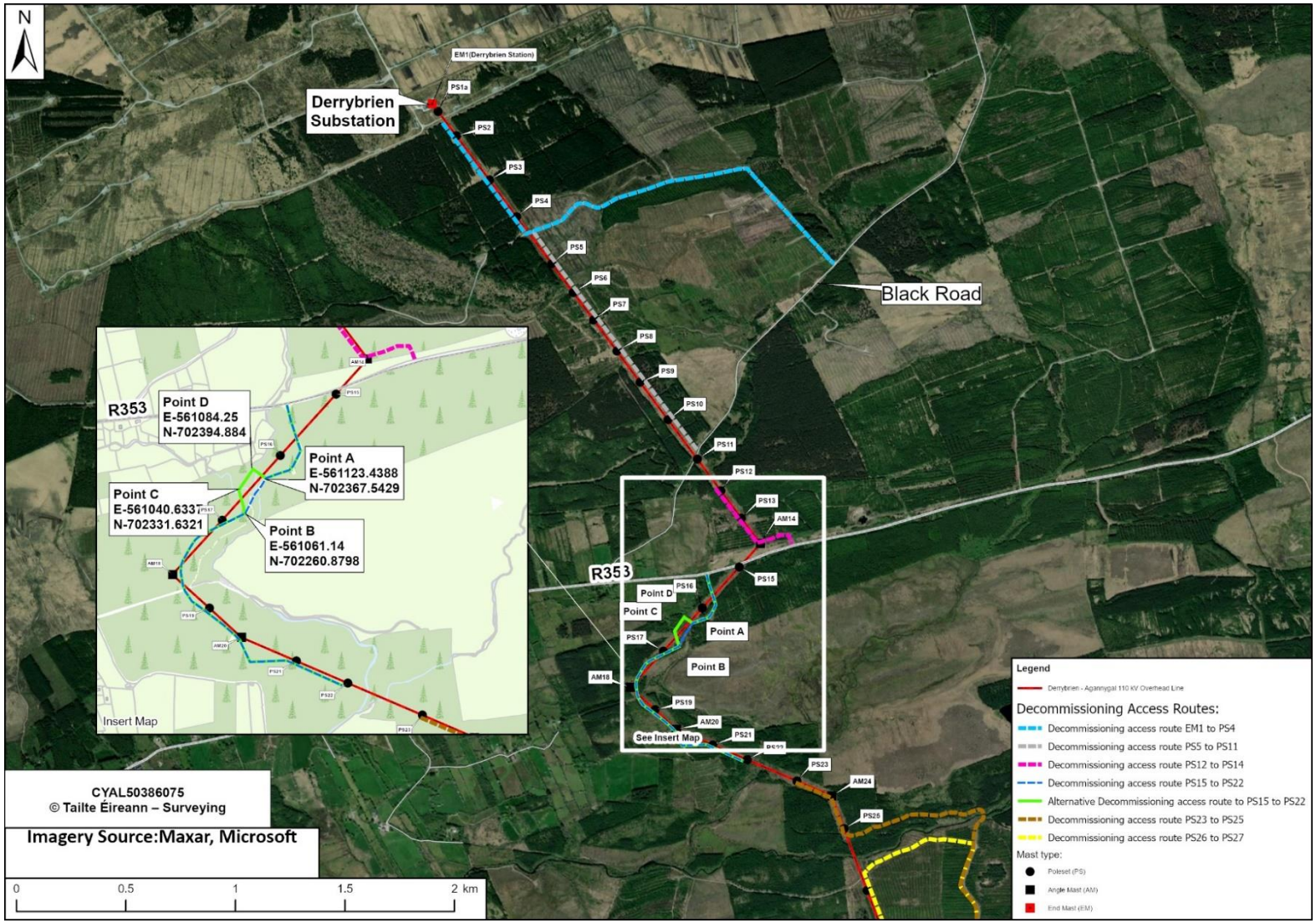

Figure 10 Derrybrien - Agannygal OHL - Indicative Decommissioning Access Routes (Sheet 1 of 2)

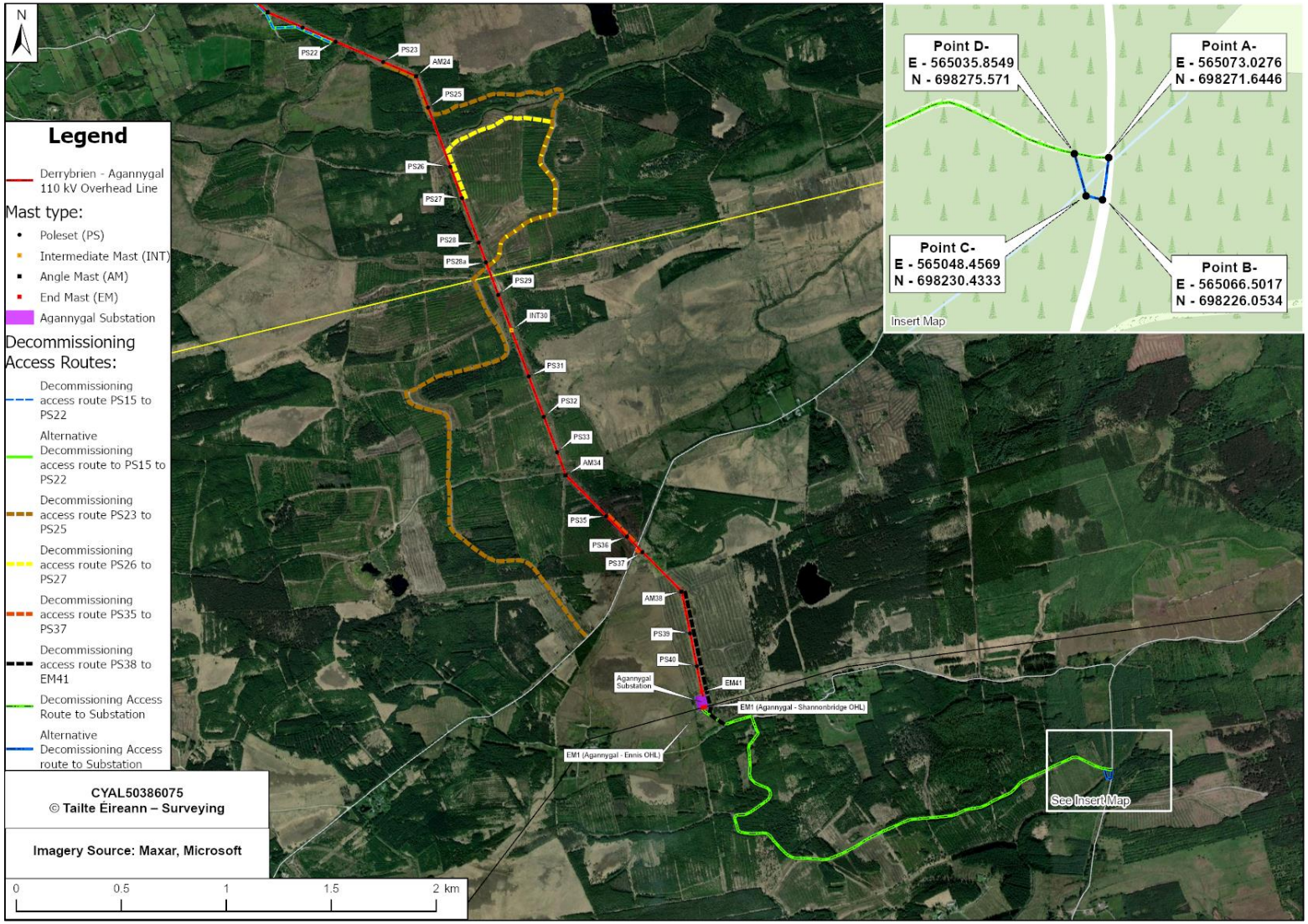

Figure 11 Derrybrien - Agannygal OHL - Indicative Decommissioning Access Routes (Sheet 2 of 2)

4.4 Description of European Sites within Zone of Influence

The Prospective Development is entirely within the Slieve Aughty Mountains SPA (site code 004168). In addition to the Slieve Aughty Mountains SPA, 23 other European sites have been identified within a 15 km radius of the Prospective Development (4 SPAs and 19 SACs).

The Derrybrien Wind Farm site drains to three river catchments. The Owenaglanna flows east becoming the Duniry River eventually discharging into Lough Derg, whereas the Boleyneendorrish and the Owendalulleegh Rivers flow westward, the latter discharging to Lough Cutra and the former joining a nexus of tributaries and dropping underground into the karst geology just north-east of Gort. The outflow from Lough Cutra, the Beagh River drops underground in the Punch Bowl and emerges again as the Cannahowna River which then flows north to Gort. Thereafter, known as the Gort River, it flows north before dropping underground at Pollatoophil at Castletown and emerges west north-west near Kiltartan where it is joined by the combined flows of the Boleyneendorrish and Kilchreest Rivers which drain the northern slopes of the Slieve Aughty Mountains. These combined flows then continue west underground emerging into the Coole River which flows due south to the Coole-Garryland wetland complex. Flows from here continue entirely underground until they emerge west north west in Galway Bay at Kinvarra. All these underground watercourses discharge to the sea at Kinvarra Bay. A small section of the grid connection and Agannygal Substation drain to Lough Atorick which is within one of the subbasins of the Bleach River. The Bleach River flows from Lough Atorick on into Lough Graney which in turn flows into the lower portion of Lough Derg at Scarriff Co. Clare, part of the River Shannon catchment.

The Prospective Development is hydrologically connected to 10 European sites; one of which is the Slieve Aughty Mountains SPA, within which the Prospective Development is located. The nine other hydrologically connected European sites are located at a significant instream distance from the site boundary (approximately 14.2 km or greater, see Appendix A for full details). Sonnagh Bog SAC is located north of the Boleyneendorrish River, approximately 2.2 km downstream of the Prospective Development. At their closest point, this SAC and river are separated by a 15 m terrestrial land buffer, comprising a public road and conifer plantation/scrub habitat. In addition, the SAC is located on elevated ground above the river valley. Therefore, no potential hydrological impact pathway exists between the Sonnagh Bog SAC and the Prospective Development.

As described in Chapter 7 Biodiversity (Aquatic Ecology and Fisheries) and Chapter 9 Hydrology and Hydrogeology of the EIAR, the Prospective Development will interact with a number of watercourses and drainage ditches within the wind farm site and along the OHL corridor (including its access routes). There will be a requirement to cross a number of watercourses (including the Owendalulleegh River and its tributaries) to facilitate access to the OHL as part of the decommissioning works. In addition, there will be a requirement to replace a culvert along the decommissioning haul route to Agannygal Substation. Any potential hydrological impacts associated with the

Prospective Development (in absence of mitigation) are only likely to have an effect on the local sub-catchments. As such there is no potential for impacts on European sites hydrologically connected to the Prospective Development but at a substantial instream distance (approximately 14.2 km or greater) and therefore these sites are considered to be beyond the ZoI of the Prospective Development.

The only exception to this (albeit it very unlikely) is in relation to the potential for a peat slide to occur as a result of peat instability arising from the Prospective Development, in particular when considered in-combination with the existing turbary activities on the wind farm site. Such a peat slide would only potentially affect SC7(a) and SC7(d) catchments (see Figure 4), extending down the Owendalulleegh River to Lough Cutra. Whilst the likelihood of a peat slide occurring is deemed to be very low to low (as outlined in Chapter 8 Land, Soils and Geology of the EIAR), a precautionary approach has been applied and as such Lough Cutra SAC and Lough Cutra SPA, which are located approximately 22 km downstream of the site, have been identified as potentially being within the ZoI of the Prospective Development.

The ZoI for birds will vary with species and type of impact: relevant factors include conservation status, sensitivity to disturbance and species core foraging distances, as described in the Scottish Natural Heritage Guidelines (SNH, 2016a). Target bird species occurring within the study area were identified during the desk review and core foraging ranges were established for these species. For hen harrier, the core foraging range from nest sites during the breeding season is 2 km, with a maximum range of 10 km. With regards to merlin, the core foraging range from nest sites during the breeding season will vary depending on habitats present. Cramp and Simmons (1980) note that male merlins may fly several kilometres to hunt, while in a study in Sweden it was found that the hunting range could be twice the pair's territory, the latter averaging about 2km^2 (cited in Sale 2016).

Based on the bird species which have been identified as target species for the purpose of this assessment, the ZoI for birds is primarily up to 2 km from the wind farm project area.

The Prospective Development is located entirely within the Slieve Aughty Mountains SPA and therefore this SPA is within its ZoI. The nearest SPA after that is Lough Rea SPA, located approximately 8.9 km north of wind farm site, significantly beyond the ZoI of the Prospective Development site for birds. Lough Rea SPA is designated for SCI species shoveler and coot as well as wetland and waterbirds. The wind farm site and OHL corridor do not contain habitats suitable for these wetland bird species, neither have been recorded near the wind farm site. The Prospective Development and Lough Rea SPA are located within different river catchments and therefore there is no potential hydrological impact pathways between the two sites.

After Lough Rea SPA, the next nearest SPA is Lough Cutra SPA, which is located approximately 10 km south-west of the wind farm site and approximately 22 km downstream of the site via the Owendalulleegh River catchment. Lough Cutra SPA is

designated for SCI species cormorant, which has never been recorded within the wind farm site. As noted above, a precautionary approach has been applied and Lough Cutra SPA has been identified within the ZoI of the Prospective Development with regards to the potential for a peat slide to occur as a result of peat instability arising from the Prospective Development, in particular when considered in-combination with the existing turbary activities on the wind farm site. All other SPAs are considered to be beyond the ZoI of the Prospective Development.

Bats are highly mobile species, and capable of travelling large distances to forage and during migration. Of particular importance is the area around a bat roost in which habitat availability and quality will have an influence on the resilience and conservation status of that roost (the core sustenance zone (CSZ)). For Irish bat species the core sustenance zone ranges from approximately 1 to 4 km (Collins, 2023), although individual flights can be longer. Shiels *et al.* (1999) found that the maximum (mean) flight distance recorded for individuals from two Leisler's bat maternity roosts ranged from approximately 4.5 km to 7.5 km throughout the year. There is no species guidance on the ZoI for the decommissioning of wind farms. Industry guidance suggests a 10 km ZoI is considered when assessing impacts of new wind farm proposals on bats; 'Bats and onshore wind turbines: survey, assessment and mitigation' (SNH *et al.,* 2021)) and EUROBATS Guidelines for consideration of bats in windfarm projects (Rodrigues *et al.,* 2015). However, the ZoI for the decommissioning of a non-operational wind farm is likely to be very localised with regard to bats.

The nearest SAC designated for the Annex II species lesser horseshoe bat is Lough Cutra SAC, which is located approximately 10 km south-west of wind farm site – significantly beyond lesser horseshoe bat's CSZ of 2 km (Collins, 2023). As noted above, a precautionary approach has been applied and Lough Cutra SAC has been identified within the ZoI of the Prospective Development with regards to the potential for a peat slide to occur as a result of peat instability arising from the Prospective Development, in particular when considered in-combination with the existing turbary activities on the wind farm site. All other SACs designated for lesser horseshoe bat are considered to be beyond the ZoI of the Prospective Development.

Otter likely use the main river channels of the three river catchments within the ZoI of the Prospective Development (Owendalulleegh, Boleyneendorrish and Duniry) and their tributaries as well as the unnamed stream crossed by the proposed access route to Agannygal Substation that flows into Lough Atorick for breeding, foraging and commuting. In accordance with Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes (NRA, 2008), the ZoI of the Prospective Development on the local otter population is likely to be 150 m from the site boundary. The local otter population are not connected to any SAC designated for otter. Galway Bay Complex SAC (000268) is the nearest SAC designated for otter that is hydrologically connected to the Prospective Development. This SAC is located approximately 45 km downstream of the Prospective Development, significantly beyond the normal territorial range of otter in Ireland, which is approximately 7.5 km ±1.5 km for female otter and approximately 13.2 km ±5.3 km for male otter (Ó'Néill et al., 2008).

Therefore, only three European sites located within the ZoI of the Prospective Development: Slieve Aughty Mountains SPA, Lough Cutra SAC and Lough Cutra SPA. No other potential impact pathway exists between the Prospective Development and any other European site. As there is no potential for impacts to occur, no other European sites are considered to be within the ZoI of the Prospective Development.

All European sites located within the wider environment of the Prospective Development are shown on Figure 12.

Appendix A presents information relating to all European sites within 15 km of the Prospective Development including their Qualifying Interests / Special Conservation Interests and Conservation Objectives.

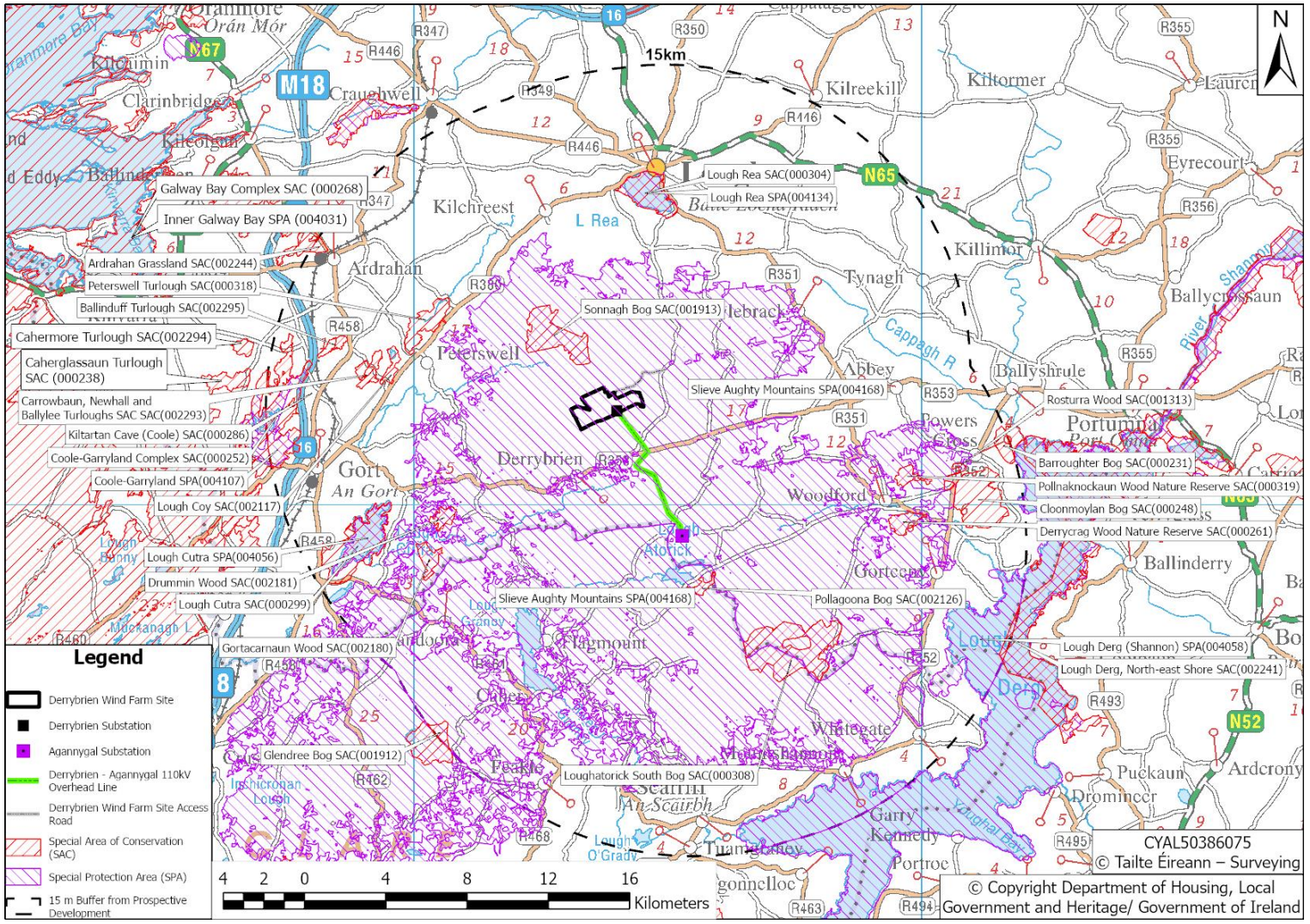

Figure 12 - European Sites within the wider environment of the Prospective Development

4.4.1.1 Slieve Aughty Mountains SPA

The following description has been sourced from NPWS site synopsis (NPWS, 2015) and found at www.npws.ie.

The Slieve Aughty Mountains SPA is a very large site that extends from just south of Lough Rea in the north to as far south as Scariff in Co. Clare. The peaks are not notably high or indeed pronounced, with a maximum of 378 m near Cappaghabaun Mountain. The site includes many small and medium sized lakes, notably Lough Graney and Lough Atorick. Important rivers which rise in the site include the Owendalulleegh and Graney. Lough Derg occurs immediately to the south-east of the site. The Slieve Aughty hills are predominantly comprised of Old Red Sandstone. Outliers of Lower Palaeozoic provide occasional outcrops capping the hills.

The site consists of a variety of upland habitats, though approximately half is afforested. The coniferous forests include first and second rotation plantations, with both pre-thicket and post-thicket stands present. Substantial areas of clearfell are also present at any one time. The principal trees are sitka spruce (*Picea sitchensis*) and lodgepole pine (*Pinus contorta*). Almost one-third of the site is unplanted blanket bog and heath, with both wet and dry heath present. Well-developed blanket bog occurs at several locations. The remainder of the site is largely rough grassland that is used for hill farming. This varies in composition, with some wet areas with rushes (*Juncus* spp.) and some areas with scrub encroachment.

The SPA is of importance for supporting nationally important populations of hen harrier and merlin. Red grouse, a Red-listed species, is widespread in the bog and heath habitats throughout the site.

4.4.1.2 Lough Cutra SAC

The following description has been sourced from NPWS site synopsis (NPWS, 2013) and found at www.npws.ie.

Lough Cutra is a large oligo/mesotrophic freshwater lake lying on limestone, but with much sediment washed down from the sandstone hills above. Woodland occurs around much of the lakeshore, as well as on a number of islands. These woodlands provide feeding grounds for Lesser Horseshoe bats which roost at the site. Between 1999 and 2001 up to 93 bats were recorded in hibernation at Lough Cutra Castle and it is thought likely that a summer nursery roost also occurs here. A peak count of 142 bats was recorded in 2010. The most recent count data received from the NPWS show that the population of Lesser Horseshoe bat at the site is stable with 128 bats recorded in 2018.

4.4.1.3 Lough Cutra SPA

The following description has been sourced from NPWS site synopsis (NPWS, 2009) and found at www.npws.ie.

Lough Cutra is a large oligo/mesotrophic freshwater lake lying on limestone but with much sediment washed down from the sandstone hills above. The Owendalulleegh

River is the main in-flowing river. Woodland occurs around much of the lakeshore. While much of this is planted, wet woodland with willows (*Salix spp*.) and Alder (*Alnus glutinosa*) is also represented. The lake has a number of islands, some of which are wooded.

Historical data for Lough Cutra show that it was a long-established breeding site for Cormorant (166 pairs in 1985), with birds recorded breeding on Parsons Island and appearing to commute to the coast for feeding (2009 site synopsis). However, declines were reported in 1996 (34 pairs) and monitoring conducted in 2010 as part of a study undertaken by Tierney *et al.* (2011) revealed that the colony at Lough Cutra had been recently abandoned. More recent counts undertaken in May 2017 showed that cormorants were present at the site but no breeding activities were recorded (Data provided by NPWS in 2018).

4.5 Assessment of Likely Significant Effects

The Prospective Development has been assessed to determine if it is likely to have an effect on any European site (including the Slieve Aughty Mountains SPA) and if the effect is likely to be significant. The source (potential impacts from the Prospective Development), pathways (hydrological, physical or ecological connectivity) and receptors (Qualifying Interests and Special Conservation Interests of the European sites) were examined to determine potential source – pathway – receptor connectivity. This was undertaken using GIS software and various data sources including NPWS and EPA data.

The potential for impacts and likelihood of significant effects on the features of interest identified in this report is based on information collated from the desk study, the nature of the project, site visits and the detailed information provided in the relevant chapters of the EIAR.

As detailed in Section 3.4, given the nature and scale of the Prospective Development as well as its baseline environment, there are only three European sites located within its Zone of Influence – the Slieve Aughty Mountains SPA, Lough Cutra SAC and Lough Cutra SPA.

The potential impacts on Slieve Aughty Mountains SPA as a result of the Prospective Development are as follows (as detailed in the sections below):

- Loss and fragmentation of suitable habitat for SCI species hen harrier and merlin arising from small amounts of localised vegetation clearance within the wind farm site and along the OHL that will be undertaken during the enabling works to facilitate the decommissioning.
- Degradation of suitable habitat for hen harrier and merlin as a result of physical disturbance and/or the introduction and/or spread of invasive plant species.
- Increased levels of disturbance, associated with human presence, noise, vibration and lighting, resulting in the temporary displacement of hen harrier and merlin from lands within the Zone of Influence of the Prospective Development to suitable habitat beyond in the wider locality.
- Removal of collision risk and displacement of hen harrier due to decommissioning of turbines and OHL.

The potential impacts on the Lough Cutra and Lough Cutra SPA as a result of the Prospective Development are as follows (as detailed in the section below):

- Indirect impacts on lesser horseshoe bat and/or cormorant (respective qualifying interests of this SAC and SPA) due to a reduction in the quality of supporting habitat as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.
- Indirect impacts on lesser horseshoe bat and/or cormorant (respective qualifying interests of this SAC and SPA) due to increased mortality of their prey species as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.

4.5.1 Slieve Aughty Mountains SPA

4.5.1.1 Temporary loss and disturbance of habitat

The enabling and main works of the Prospective Development will require the following:

- Vegetation and scrub clearance, as required, at existing hardstand areas and access tracks.
- Temporary widening of the turbary track which runs from the junction east of turbine T25 to turbine T45 to provide safe access for the mobile crane. A strip of up to 1,450 m in length will be widened over a 2 m wide strip. The extended strip will be removed when works are complete and the edge of the turbary track re-profiled as required. Full details of the construction method are given in Section 3.5.5 of Appendix 4.1: Decommissioning Management Plan.
- Disturbance of vegetation to allow access to the polesets within the grid route corridor.

The above-described works will mostly involve clearance of willow scrub and heather from along the edges of the infrastructure, as required (see Plate 1), and disturbance from plant movement to bog vegetation and scrub along the grid route corridor (see Plate 2). Such vegetation has potential to provide nesting and feeding habitat for passerine bird species, as well as hunting opportunities for hen harrier.

In compliance with the Wildlife Acts, 1976-2023, the required clearance will be carried out outside of the bird breeding season and hence active nests will not be affected.

The areas where the vegetation will be cleared, cut to base or disturbed, would be expected to recover within 1-3 years after the initial work.

In absence of mitigation, the potential for likely significant effects on the SCI bird species of Slieve Aughty Mountains SPA as a result of temporary habitat loss arising from the Prospective Development cannot be ruled out. This potential impact is examined further in the NIS (see Section 5).

No problematic alien plant invasive species were recorded on site (including no species listed on the Third Schedule of the Birds and Habitats Regulations), however Japanese knotweed was previously recorded in close proximity to barrage 3 / the Derrybrien North stream south of the Black Road in the wider locality of the site. In absence of mitigation, invasive species could be introduced to the site resulting in the degradation of supporting habitat for hen harrier or merlin. As such the potential for likely significant effects as a result of these potential impacts cannot be ruled out. This potential impact is examined further in the NIS (see Section 5).

4.5.1.2 Disturbance to birds from decommissioning works

The works associated with the Prospective Development are expected to last up to approximately 24 months. The works have potential to cause disturbance effects on

birds of conservation importance within the site and in adjoining and nearby areas. Disturbance would mainly affect breeding hen harrier or merlin, as the study area does not support sensitive wintering species such as roosting hen harriers, or swan or geese species.

Scottish Natural Heritage (2016) write “Different bird species have different tolerance levels to disturbance. Even within species, disturbance distance can vary according to time of year or geographical location. Some sensitive species may be disturbed by activity as much as 750 m away.” SNH had published “A review of disturbance distances in selected bird species” prepared by Ruddock and Whitfield (2007). This review included 26 ‘priority’ species and was based largely on expert opinion. The 2007 guidance note was replaced in 2022 by “Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species” (NatureScot Research Report 1283) prepared by Goodship and Furness. The 2022 review included 65 bird species.

In absence of mitigation, disturbance from decommissioning works is considered to result in a likely significant effect on hen harrier and merlin (see details below).

4.5.1.2.1 Hen Harrier

There was no hen harrier breeding activity recorded within the Prospective Development study area in 2022 breeding season.

While there were two sightings of hen harrier to the north (c. 500 m from boundary) and southwest (c. 2 km from boundary) of the wind farm in April 2024 (see Section 3.5.2.2), there were no subsequent sightings through the season and no nesting attempts were known to have taken place.

Suitable habitat for breeding and foraging exists within and around the wind farm site. Winter roosting by hen harrier has not been recorded within or at least to a 2 km distance of the wind farm site.

Hen harrier is considered in the NatureScot (2022) review of disturbance distances in birds. The species is rated as of ‘medium sensitivity' to disturbance, with a buffer zone of 300-750 m suggested for both breeding birds and non-breeding birds.

Should a breeding territory be established in the future within a 1 km distance of the study area, there is potential that decommissioning works could have disturbance effects on the breeding activities of hen harrier due to increased levels of human presence, noise, vibration and/or lighting. This potential impact would only persist for the duration of the decommissioning works (i.e. 24 months).

In absence of mitigation, the potential for likely significant effects on the SCI bird species of Slieve Aughty Mountains SPA as a result of disturbance arising from the Prospective Development cannot be ruled out. This potential impact is examined further in the NIS (see Section 5).

4.5.1.2.2 Merlin

The habitats in the study area, i.e., bog and conifer plantation, are suitable for supporting breeding merlin. While there was no evidence of merlin breeding in the study area in 2022 and 2024 breeding bird surveys or indeed in any of the past surveys, the possibility of future breeding cannot be ruled out. It is noted that merlin is a particularly difficult species to census and the traditionally used methods may not provide a true indication of the abundance, densities or distribution of the species (Lusby et al. 2011).

Merlin is considered in the NatureScot (2022) review of disturbance distances in birds. The species is rated as of 'medium sensitivity' to disturbance, with a buffer zone of 300-500 m suggested for breeding birds. For disturbance by forestry operations, Currie & Elliot (1997) gave a distance range of 200 m to 400 m for merlin.

Should merlin breed in future years within a 500 m distance of the wind farm development area, there is potential that decommissioning works could have disturbance effects on the breeding activities of merlin due to increased levels of human presence, noise, vibration and/or lighting. This potential impact would only persist for the duration of the decommissioning works (i.e. 24 months).

In absence of mitigation, the potential for likely significant effects on the SCI bird species of Slieve Aughty Mountains SPA as a result of disturbance arising from the Prospective Development cannot be ruled out. This potential impact is examined further in the NIS (see Section 5).

4.5.1.3 Impacts on birds by removal of turbines and overhead line

The existing wind farm infrastructure has potential to have negative effects on SCI birds of the Slieve Aughty Mountains SPA as a result of the following:

- Displacement from the area around the turbines due to their physical presence
- Collision risk

4.5.1.3.1 Potential Collision Impact

Collision risk posed to bird species is one of the main environmental concerns associated with wind energy developments. Essentially, birds are at risk of collision when their flight path overlaps with the rotor blade sweep area of a turbine, and birds whose flight heights coincide with the height of turbine rotor blade sweep are most at risk. At the Derrybrien Wind Farm, there is no collision risk as turbines are in a prolonged non-operational state (subject to maintenance by the turbine supplier). The risk of collision with rotating turbine blades will be completely eliminated at the Derrybrien Wind Farm as part of the Prospective Development.

However, collision with overhead lines is also a concern and a well-documented cause of bird mortality (Bevanger 1998, Ferrer & Janss 1999, Jenkins et al. 2010, SNH 2016b). Species at most risk are large birds such as eagles, vultures, storks, herons, swans and geese. While the birds may be able to manoeuvre around large objects such as turbines or masts, their eyesight is rather poor at detecting thin horizontal objects ahead of them. In a review of 16 investigations of bird collision with power lines globally, Bevanger

(1998) recorded collisions among hawks, vultures, eagles and falcons but did not list harriers. However, in a review of collision casualties with overhead lines for all bird species based on recovery data from the long-term BTO Ringing Scheme, Rose and Baillie (1989) recorded over 100 recoveries for hen harrier. The hit wire index (i.e. system to standardise the recovery samples) for hen harrier was particularly high relative to body size. They noted that hen harrier inhabits open moorland areas and may hunt at heights which make them particularly vulnerable to collisions with overhead wires.

For the Derrybrien to Agannygal 110kV line, which does not have bird flight diverters as mitigation, the risk of collision exists presently for hen harrier and other large bird species. Any risk of collision with the overhead line will be eliminated by the removal of the line – thus, conditions will revert to the status prior to construction of the wind farm project.

4.5.1.3.2 Displacement impact

Displacement of birds from otherwise suitable habitat as a result of the presence of wind turbines has been reported as a potential indirect impact of wind turbines (de Lucas et al. 2007, Pearce-Higgins et al. 2009). The displacement occurs as a result of behavioural responses that prevent or decrease the use of an area for activities such as nesting or foraging.

However, the results of studies on potential displacement have varied widely and in an overall review of the literature Madders & Whitfield (2006) concluded that displacement effects of wind turbines on raptors, and hen harrier in particular, are negligible for the most part. In a review of potential displacement effects on birds at twelve wind farm sites in Britain, Pearce-Higgins et al. (2009) reported an avoidance area of 250 m from turbines for hen harrier. At the Derrybrien Wind Farm, hen harriers have been recorded both foraging and flying through the wind farm, with distances often less than 50 m of the machines (Madden & Porter 2007, BES monitoring reports).

While there is no evidence to indicate that displacement has occurred for bird species within the Derrybrien Wind Farm due to the presence of turbines, this potential impact will be eliminated by the removal of the turbines - thus, conditions will revert to the status prior to construction of the wind farm project

4.5.2 Lough Cutra SAC

A peat slide of a significant magnitude could potentially result in the following indirect impacts on lesser horseshoe bat, the only qualifying interest of Lough Cutra SAC:

- Indirect impacts on lesser horseshoe bat due to a reduction in the quality of supporting habitat as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.
- Indirect impacts on lesser horseshoe bat due to increased mortality of their prey species as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.

The Prospective Development will not involve any significant excavations as the majority of the at-ground and below-ground infrastructure (e.g. access roads, hardstands, turbine, substation, pole set and angle mast concrete foundations, electrical cabling) as well as the naturalised peat repository areas will remain in-situ as part of the Retained Development. In addition, the offsite development constructed in response to the 2003 peat slide will also remain in-situ, including the barrages located along the Derrybrien North stream (a tributary of the Owendalulleegh River) (subject to the grant of Substitute Consent). Borrow pits on the site will not be re-opened and small volumes of aggregates that will be used for the widening works, where required, will be imported from nearby quarries. As outlined in Chapter 8 Land, Soils and Geology of the EIAR, the following activities associated with the Prospective Development may result in slightly significant[10] impacts on peat stability within the wind farm site:

- Heavy construction traffic loading on the floating roads;
- Additional loading on the peat where the crane hardstanding needs to be temporarily extended (T4) or where narrow sections of the existing site access road need to be temporarily widened at the east end of the turbary area; and
- Loading on the peat from the low ground bearing pressure (LGBP) wide-tracked excavators and ATV that will be used to take down and remove timber polesets PS-1a to PS-4 for the 110kV OHL.

The likelihood of a peat slide occurring however as a result of these activities is considered to be very low to low. This is due to the following reasons:

- All the site access tracks have been designed, tested and certified for the maximum live load surcharge, which is from the mobile cranes.
- The extension to hardstanding at Turbine T4 will be short and temporary, constructed as a floating road comprised of 600 mm of crushed rock granular fill reinforced with two layers of geogrids. This will result in a low surcharge. In addition the road will be connected to the hardstanding by the embedded reinforcements.
- The proposed OHL works will be carried out in an area of established coniferous forestry and the polesets will be accessed as far as possible via existing site access tracks and Coillte forestry roads.

As such the Prospective Development may only result in slightly significant impacts with regards to peat instability of which the risk is very low to low; therefore any potential associated significant reduction in water quality is deemed to be very unlikely to occur. Therefore, the Prospective Development is not likely to have any effect on this SAC.

[10] Reference to slight significance is as per the definition in *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, 2022): "*an effect which causes noticeable changes in the character of the environment without affecting its sensitivities*".

The potential for in-combination effects on Lough Cutra SAC as a result of peat instability arising from the Prospective Development and turbary activities within the wind farm site is assessed in section 4.6.

4.5.3 Lough Cutra SPA

A peat slide of a significant magnitude could potentially result in the following indirect impacts on cormorant, the only qualifying interest SCI species of Lough Cutra SPA:

- Indirect impacts on cormorant due to a reduction in the quality of supporting habitat as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.
- Indirect impacts on cormorant due to increased mortality of their prey species as a result of a reduction in water quality associated with a peat slide arising from the decommissioning activities.

As explained above in section 4.5.2, the Prospective Development may only result in slightly significant impacts with regards to peat instability of which the risk is very low to low; therefore any potential associated reduction in water quality is deemed to be very unlikely to occur. Therefore, the Prospective Development is not likely to have any effect on this SPA.

The potential for in-combination effects on Lough Cutra SPA as a result of peat instability arising from the Prospective Development and turbary activities within the wind farm site is assessed in section 4.6.

4.6 Potential In-combination Effects

In order to take account of in-combination or cumulative effects, plans and projects that are completed, approved but uncompleted, or proposed (but not yet approved) should be considered in this context (European Commission, updated 2021).

The potential for the Prospective Development to act in-combination with other plans, projects or activities, located within the same zone of influence, and result in likely significant effects on European sites is assessed below. These include the following project and activities (see Section 5.2 of the NIS for full details):

- Derrybrien Wind Farm Development Decommissioning Project – Retained Development
- Turbary activity
- Adjacent coniferous forestry operations

As described above in Section 4.4, the only potential impacts that may result in likely significant negative effects on the Slieve Aughty Mountains SPA as result of the Prospective Development, and therefore may act in-combination with potential impacts arising from other projects or plans within the same ZoI as the Prospective Development, are as follows:

- Temporary loss of suitable habitat for SCI species hen harrier and merlin arising from small amounts of localised vegetation clearance within the wind farm site and along the OHL that will be undertaken during the enabling works to facilitate the decommissioning.
- Degradation of suitable foraging habitat for hen harrier and merlin as a result of physical disturbance and/or the introduction and/or spread of invasive plant species.
- Increased levels of disturbance, associated with human presence, noise, vibration and lighting, resulting in the temporary displacement of hen harrier and merlin from lands within the ZoI of the Prospective Development to suitable habitat beyond in the wider locality.

Activities (such as those related to turbary or forestry plantations) and/or the construction of other developments located within the Zone of Influence as the Prospective Development during the same period of time could potentially act in-combination resulting in increased levels of impact. In absence of mitigation, this in turn could result in potential in-combination effects on the Slieve Aughty Mountains SPA.

The assessment of in-combination effects on the Slieve Aughty Mountains SPA is considered in Section 5.2 of the NIS.

With regards to Lough Cutra SAC and Lough SPA, there is potential for the Prospective Development to act in combination with the mechanical peat harvesting in the turbary areas on or immediately adjacent to the wind farm, potentially resulting in an increased risk of peat instability and therefore peat slide. A peat slide of a significant magnitude could potentially result in the indirect impacts on lesser horseshoe bat or cormorant, the respective qualifying interests of Lough Cutra SAC and Lough Cutra SPA.

The effect of the cumulative impacts on peat stability depends on the extent to which mitigation measures (e.g. that no harvesting takes place during decommissioning activities) are implemented by the turbary rights holders for mechanical peat harvesting. However, it is important to note that the turbary activities on site (including the implementation of mitigation measures) are undertaken completely independent from the Prospective Development and are outside the control of Gort Windfarms Ltd. In addition, considering the nature and scale of potential impacts on peat stability arising from the Prospective Development in isolation, it is considered to have no additive cumulative effects on peat instability.

4.7 Screening Assessment Conclusion

This screening assessment was completed based on best available scientific data and in line with the relevant European Commission and national guidelines to determine the possibility of likely significant effects, if any, on European site(s) as a result of the Prospective Development.

Based on the findings of the screening assessment, it has been determined that the likelihood of significant effects on the Annex II species of Lough Cutra SAC and the SCI species of Lough Cutra SPA as a result of the Prospective Development can be ruled out. In addition, considering the nature and scale of potential impacts on peat stability arising from the Prospective Development in isolation, it is considered to have no additive cumulative effects on peat instability when considered with the mechanical peat harvesting on site.

The likelihood of significant effects on the Slieve Aughty Mountains SPA as a result of the Prospective Development, either alone or in-combination with other plans and projects, cannot be ruled out beyond all reasonable scientific doubt. This is due to the following potential negative impacts:

- Temporary loss and disturbance of habitat
- Disturbance to birds from decommissioning works

The potential for likely significant effects on the SCI species of Slieve Aughty Mountains SPA arising from the Prospective Development, in the absence of mitigation, requires further assessment. The likelihood of effects on all other European sites is considered to be negligible and is not considered further.

Therefore, it is considered that an Appropriate Assessment under the Habitats Directive is required for the Derrybrien Wind Farm Decommissioning Project. The potential for adverse effects on the integrity of the Slieve Aughty Mountains SPA is assessed in section 5 – Natura Impact Statement.

5 Natura Impact Statement

5.1 Assessment of Adverse Effects

The Appropriate Assessment Screening in Section 4 of this report identified only one European site for which likely significantly effects as a result of the Prospective Development may occur – Slieve Aughty Mountains SPA. This section of the report (the Natura Impact Statement) presents the information required by the competent authority to undertake an Appropriate Assessment. The purpose of the Appropriate Assessment is to assess the implications of the Prospective Development, either alone or in-combination with other projects or plans, on the integrity of the Slieve Aughty Mountains SPA in view of the site's conservation objectives (see Table 4 below). The focus is on demonstrating, with supporting evidence, that the Prospective Development will not adversely affect the integrity of this European site. The integrity of a European site is defined as the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified.

Site-specific conservation objectives for the Slieve Aughty Mountains SPA are available on NPWS website: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004168.pdf (Citation: NPWS 2022, Conservation Objectives: Slieve Aughty Mountains SPA 004168. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage).

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

The maintenance of habitats and species within European sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The site-specific conservation objectives for the Slieve Aughty Mountains SPA (NPWS, 2022) are as follows (see Table 4 for full details, including the corresponding attributes and targets):

- To restore the favourable conservation condition of hen harrier in Slieve Aughty Mountains SPA.
- To maintain the favourable conservation condition of merlin in the Slieve Aughty Mountains SPA.

The screening assessment concluded that it is not possible to rule out the likelihood of significant effects on the SCI species of the Slieve Aughty Mountains SPA due to the following potential negative impacts:

- Temporary loss and disturbance of habitat
- Disturbance to birds from decommissioning works

The assessment of the Prospective Development on the integrity of the Slieve Aughty Mountains SPA, in absence of mitigation and in view of the site's conversation objectives, is presented in Table 4.

Table 4 Assessment of the Prospective Development in absence of mitigation and in view of the Attributes, Measures and Targets of the Site Specific Conservation Objectives for the Slieve Aughty Mountains SPA (NPWS, 2022)

A082 Hen Harrier *Circus cyaneus*			
Conservation Objective: To restore the favourable conservation condition of hen harrier in Slieve Aughty Mountains SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Assessment**
Population size	Number of confirmed breeding pairs	Restore numbers to at least 14-24 confirmed breeding pairs	In absence of mitigation, the Prospective Development could potentially result in negative impacts on these attributes and targets, and therefore hen harrier, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat and/or increased levels of disturbance/displacement, which in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives. Any risk of collision with the Derrybrien to Agannygal 110kV OHL will be eliminated by the removal of the OHL as part of the Prospective Development. Thus, conditions will revert to the status prior to construction of the wind farm project.
Productivity rate	Number of fledged young per confirmed pair	Restore to at least 1.0–1.4 fledged young per confirmed pair	
Spatial utilisation by breeding pairs	Percentage	Restore the spatial utilisation of the SPA by breeding pairs to at least 68–92%	

Extent and condition of heath and bog and associated habitats	Hectares; condition assessment	Restore the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	In absence of mitigation, the Prospective Development could potentially result in impacts on this attribute and target, and therefore hen harrier, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat. These potential impacts in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.
Extent and condition of low intensity managed grasslands and associated habitats	Hectares; condition assessment	Restore the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	In absence of mitigation, the Prospective Development could potentially result in impacts on this attribute and target (in relation to the other semi-natural habitats, i.e. scrub), and therefore hen harrier, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat. These potential impacts in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.
Extent and condition of hedgerows	Kilometres; condition assessment	Maintain at least the length and quality of this resource to support the targets relating to population size, productivity rate	The Prospective Development will not result in any potential impacts on hedgerows and as such there is no potential to impact this attribute or target.

		and spatial utilisation	
Age structure of forest estate	Percentage	Achieve an even and consistent distribution of age-classes across the forest estate	The Prospective Development will not result in any potential impacts on the age structure of the forest estate and as such there is no potential to impact this attribute or target.
Disturbance to breeding sites	Level of impact	Disturbance occurs at levels that does not significantly impact upon breeding hen harrier	In absence of mitigation, the Prospective Development could potentially result in negative impacts on these attributes and targets, and therefore hen harrier, as a result of increased levels of disturbance/displacement, which in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.
[A098] Merlin *Falco columbarius*			
Conservation Objective: To maintain the favourable conservation condition of merlin in the Slieve Aughty Mountains SPA, which is defined by the corresponding list of attributes and targets below:			
Population size	Number of occupied territories	The breeding population is stable or increasing	In absence of mitigation, the Prospective Development could potentially result in negative impacts on these attributes and targets, and therefore merlin, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat and/or increased levels of disturbance/displacement, which in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and
Productivity rate	Number of fledged young per breeding attempt with known outcome	Sufficient to at least maintain population	

			projects, and in view of its conservation objectives.
Distribution: extent of available nesting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable nesting sites throughout the SPA to maintain the population	No evidence of nesting merlin have been recorded within the site or its hinterland (c. 2 km from the Prospective Development). Indeed there were no sightings of merlin during the 2024 surveys. Whilst somewhat unlikely, merlin could potentially nest in the between now and the commencement of the Prospective Development. In absence of mitigation, the Prospective Development could potentially result in negative impacts on this attribute and target, and therefore merlin, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat and/or increased levels of disturbance/displacement, which in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.
Extent and condition of suitable open habitats for foraging	Hectares; condition assessment	Sufficient availability of suitable foraging habitat across the SPA to support the targets relating to population size, productivity rate and range	In absence of mitigation, the Prospective Development could potentially result in impacts on this attribute and target, and therefore merlin, as a result of temporary loss and/or disturbance and degradation of suitable supporting habitat. These potential impacts in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve

			Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.
Disturbance to breeding sites	Level of impact	Disturbance occurs at levels that does not significantly impact upon breeding merlin	In absence of mitigation, the Prospective Development could potentially result in negative impacts on this attribute and target, and therefore merlin, as a result of increased levels of disturbance/displacement, which in turn could result in potential adverse effects on the integrity of the Slieve Aughty Mountains SPA. Mitigation measures provided in 5.3 will ensure that the Prospective Development will not result in adverse effects on the integrity of the Slieve Aughty Mountains SPA, either alone or in-combination with other plans and projects, and in view of its conservation objectives.

5.2 Assessment of Potential In-combination Adverse Effects

Article 6(3) of the Habitats Directive requires that: "*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives*". It is therefore required that the potential impacts of the proposed development are considered in combination with any other relevant plans or projects.

The assessment presented in Section 4.5 of the Screening for Appropriate Assessment concluded that the potential for in-combination effects on the SCI bird species of Slieve Aughty Mountains SPA arising from the Prospective Development and other plans and/or projects cannot be ruled out.

The following projects and activities within the have been considered as part of the assessment of cumulative effects on the Slieve Aughty Mountains SPA.

- Impacts of the Derrybrien Wind Farm Development Decommissioning Project – Retained Development
- Turbary activity
- Adjacent coniferous forestry plantations

The Prospective Development will take place in the context of on-going forestry activities within the surrounding areas and ongoing turbary both within the site and in surrounding areas.

The age structure of the commercial forest plantations in the hinterland of the wind farm area is an important factor in the amount of habitat available to hen harriers in any one period. The importance of forestry as an influencing factor on the size of the hen harrier population in the Slieve Aughty Mountains SPA was highlighted by Ruddock et al. (2016). Since monitoring for hen harrier at Derrybrien commenced in 2004, there have been marked changes in the age structure of the forest plantations in the surrounding areas. Since about 2016, large areas along the wind farm entrance road have been clear-felled and replanted and is now providing suitable foraging habitat for hen harriers.

Of particular relevance is the harvesting and replanting of the forest area immediately to the south-west of the wind farm (53.4 ha) by Coillte between 2016 and 2018. This area will provide suitable second rotation foraging habitat for hen harriers until at least 2030 – birds foraging here and in other replanted areas around the wind farm would be expected to also use the habitats within the wind farm.

As the Prospective Development will not result in the removal of suitable foraging habitat for hen harrier or merlin, the Prospective Development will not contribute to any cumulative negative effect when considered with forestry operations.

Turbary is confined to the eastern sector of the wind farm site and is also localised in the bog areas which surround the site. Turbary can remove suitable breeding and foraging habitat for bird species such as hen harrier and snipe, and can also cause disturbance to local breeding birds. While the negative effects from turbary within and around the wind farm site have not been quantified, the Prospective Development, with mitigation in place, will not contribute to any cumulative negative effect on birds by loss of habitat or disturbance.

It is considered that the Prospective Development will not contribute to any negative effects on birds when considered with other projects.

Cumulative Impacts with the "Prospective Development"

When the impacts on birds by the Retained Development are considered with the Prospective Development, there are no significant cumulative impacts, as follows:

- While the Retained Development will result in a permanent loss of cutover bog habitat of some value to birds, the Prospective Development will not result in any permanent loss of bog habitat. Hence, there is no cumulative loss of habitat when both Developments are considered.
- The Retained Development is a passive development and will not result in any disturbance to birds.
- The Retained Development is not relevant to impacts on birds as a result of the removal of turbines and overhead line.
- The Retained Development will not result in any additional changes to habitats used by birds when considered with the Prospective Development.

In addition all plans and projects are subject to the overarching environmental protective policies and objectives contained within the *Galway County Development Plan 2022-2028*

(Galway County Council, 2022), including those that relate specifically to the protection of European sites, water quality and the management of invasive species (see Appendix C):

5.3 Mitigation measures and Monitoring

This section outlines measures which will be implemented during the decommissioning of the Project to avoid or reduce the potential for adverse effects on the Slieve Aughty Mountains SPA.

5.3.1 Measures to Mitigate Temporary Loss and Disturbance of Habitat

As noted, seasonal restrictions will apply to the various works, including the temporary widening of the turbary track between turbines T25 and T45, so as to avoid disturbance to breeding passerine species which provide food items for hen harrier. In compliance with the Wildlife Acts, 1976-2023, the required clearance will be carried out outside of the bird breeding season and hence active nests will not be affected. However, it is suggested that works could commence in August following a pre-construction survey to determine if any birds are still nesting (most species will have completed the breeding cycle by late July) – this would maximise the time for the recovery of the vegetation after the works are complete (see below).

Mitigation will be implemented to minimise disturbance to cutover bog by the temporary widening of the turbary track between turbines T25 and T45, which provides suitable breeding habitat for various passerine species which provide food items for hen harrier. The objective is to minimise the area of exposed peat surface and to encourage rapid re-vegetation of the disturbed bog surface. This will be achieved by the removal of the vegetated bog surface within the work footprint, the storage of this material, and subsequent re-use along the section of track which had been disturbed (see NatureScot 2024).

First, suitable areas within the site will be identified where the removed material can be stored for the duration of the works or until needed – it is noted that such areas will not be on other vegetated bog surfaces but rather on local hardcore areas covered with a geotextile layer (to minimise water loss). Also, it is important that the selected storage area will not be prone to disturbance for the duration of the required storage period.

Two approaches will then be used to ‘save’ the surface vegetated material. Where practical, the surface will be cut-out as sods or ‘turves’ to a depth of approximately 20-30 cm using a dumper/digger with a bucket operating from the existing track. Care will be taken to keep the turves as intact as possible and the vegetated side upwards. The turves will be loaded to a trailer and transported to the pre-identified storage area. The turves will be off-loaded from the trailer and placed side by side and vegetation side upwards. They will be placed in single layers, i.e. not piled on top of each other.

Alternatively, where the cutting out of turves will not be practical due to shallow peat or an undulating surface from past turbary and drains, the surface vegetated areas will be scrapped off and removed to storage areas where piles will be formed until ready to re-use when works are complete. Such material will contain root and rhizome material, as well as a seed bank.

Should storage of the above materials be for prolonged periods (months), the stored turves and peat piles will need to be watered during dry spells.

When ready for placement at the location where the works took place along the track, the turves or peat piles will be lifted with a dumper and bucket and taken to the destination. Here they will be off-loaded and placed side by side on the disturbed bog surface with vegetation side up. The turves will be bedded in with the bucket of a dumper so that they form a continuous layer without gaps between them. This approach will provide almost immediate cover of the bare surface. Alternatively, the surface peat material from the stored peat piles will be spread over the bare surface.

All of the above processes will be monitored by the ECoW.

5.3.2 Additional Measures to Mitigate Temporary Loss and Disturbance of Habitat

5.3.2.1 Physical Disturbance to Terrestrial Habitats

The following terrestrial habitat protection measures will mitigate any potential impacts on the Slieve Aughty Mountains SPA associated with habitat degradation arising from physical disturbance:

- Cutting back of vegetation during the site enabling works should be done from the hard surfaced areas. Where it is necessary to work on soft terrain away from hard stand areas then manual tools should be used to eliminate any impacts associated with ground compaction and disturbance from plant machinery.
- The project ecologist will undertake pre-construction verification surveys of turbine blade and rotor storage sites and advise on micro-siting to ensure minimal ecological impacts and will be agreed with the Geotechnical Engineer.
- All plant machinery required for the works associated with widening the turning heads will operate on existing adjacent road surface.
- All plant machinery required for the works associated with widening the turbary road will operate on existing adjacent road surface.
- The use of bog mats, geotextile and stone will ensure that the peatland habitat in the footprint of the road widening will be reinstated following completion of decommissioning.
- In the event that turves are removed from the turbary area to facilitate widening the following will be implemented:
    - Turves will be stored in an appropriate location in the wider site. The condition of turves will be monitored regularly and watering will be implemented if deemed necessary.

- In advance of works along the OHL route the project ecologist, Geotechnical Engineer and project contractor will undertake a joint walkover survey to demarcate agreed access routes and agree detailed approach. This walkover will verify ground conditions at the time of work. This will help inform the approach to access to individual structures during decommissioning. The Project ecologist will liaise with the contractor to decide on the most appropriate ground protection measures (bog mats, EPDM, aluminium mats) taking into consideration the following:
    - Prevailing ground and weather conditions.
    - Number of journeys required by plant to complete the work.
    - The type of plant required to complete the work at individual structures.

5.3.2.2 Invasive Species

Whilst no problematic alien plant invasive species were recorded on site (including no species listed on the Third Schedule of the Birds and Habitats Regulations), Japanese knotweed was previously recorded along the R353 in the wider locality of the site. It is recommended that a pre-construction non-native invasive species survey is carried out prior to decommissioning in order to account for any changes that may occur in the baseline environment. If any problematic non-native plant species are recorded, an Invasive Species Management Plan (ISMP) will be prepared. The ISMP will include measures to avoid and/or control any non-native plant species that may be present, in accordance with The Management of Invasive Alien Plant Species on National Roads – Technical Guidance (TII, 2020). In addition, all machinery will be checked and cleaned for non-native invasive species prior to entering site to avoid any potential introduction and/or spread of such species.

5.3.3 Measures to Mitigate Disturbance to Birds from Decommissioning Works

In absence of mitigation, the Prospective Development could adversely affect the integrity of the Slieve Aughty Mountains SPA as a result of disturbance effects on breeding hen harrier or merlin. Best available evidence has been reviewed and it is suggested that these species could be disturbed by works at the following distances:

- Hen harrier 1,000 m
- Merlin 500 m

Should these species be recorded breeding within the given distances of the works area (as established through confirmatory surveys before and/or during, as described below), a buffer zone (using above distances) shall be established around the expected location of the nest (location will be identified as far as is possible without causing disturbance to the bird) and all works will be restricted within the zone until it can be demonstrated by an ornithologist that the species has completed the breeding cycle in the identified area. Any restricted area on site that is required to be set up will be marked clearly using hazard tape fencing and all site staff will be alerted through toolbox talks.

The above mitigation, which will apply from March to August (inclusive), will ensure that the works will not have significant negative effects on bird species of conservation importance.

5.3.4 Pre-decommissioning and Decommissioning Phase Monitoring

Prior to any works commencing during the bird breeding season (March-August inclusive) monitoring surveys within the Prospective Development area (wind farm and OHL corridor) will take place to a distance of 1 km from the Prospective Development area. The purpose of the surveys is to confirm the locations of breeding territories of hen harrier or merlin and to ensure that mitigation is successfully implemented to avoid disturbance effects on breeding activities as a result of the works.

The surveys will be undertaken by a competent ornithologist, with experience of upland breeding species.

For hen harrier, the survey will follow the method of Ruddock *et al*. (2016) (as used in the 2022 and 2024 surveys).

5.4 Conclusion of NIS

This NIS provides a complete, precise and scientifically robust assessment, in light of best scientific knowledge, of the possible adverse effects of the Prospective Development on the integrity of European sites within the identified Zone of Influence (*i.e.* Slieve Aughty Mountains SPA).

One European site was identified at screening stage as having the potential to be significantly affected as a result of the Prospective Development – Slieve Aughty Mountains SPA.

The assessment undertaken in the NIS has been informed by project-specific field surveys and specialist reporting with reference to the ecological communities and habitats potentially affected by the Derrybrien Windfarm Development Decommissioning Project - Prospective Development, in order to provide a scientific basis for evaluations.

With the implementation of mitigation measures (as described in Section 5.3) the Prospective Development will not result in any adverse effects on the integrity of the Slieve Aughty Mountains SPA or any other European site, either alone or in combination with other plans and projects, during the decommissioning of the wind farm and associated infrastructure.

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Appendix A - European sites (SACs and SPAs) within 15 km of the Prospective Development (Slieve Aughty Mountains SPA and Lough Cutra SAC and SPA are within the ZoI of the Prospective Development)

European Sites (Natura 2000)	Distance from the Prospective Development (Approximate)	Qualifying Interest / Special Conservation Interest Bird Species (Reference to their Site Specific Conservation Objectives)
Slieve Aughty Mountains SPA (004168)	The entire Prospective Development is within the boundary of the SPA.	• Hen Harrier (*Circus cyaneus*) [A082] • Merlin (*Falco columbarius*) [A098] NPWS (2022a)
Sonnagh Bog SAC (001913)	1.5 km north-west of wind farm site 2.8 km north-west of grid connection No potential hydrological impact pathway. The Boleyneendorrish River (which is connected to the Project) is located in close proximity to the SAC, however they are separated by a terrestrial land buffer of approximately 14 m at its closest point, comprising a public road and conifer plantation/scrub habitat	• Blanket bogs (* if active bog) [7130] NPWS (2019d)
Drummin Wood SAC (002181)	7.4 km south-west of wind farm site 9.3 km west of grid connection No potential hydrological impact pathway as it is located upstream of the Project via the Owendalulleegh River system	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] NPWS (2021a)
Peterswell Turlough SAC (000318)	7.7 km north-west of wind farm site 9.8 km north-west of grid connection No potential hydrological impact pathway as it is located upstream of the Project via the Kilchreest River, a tributary of the Boleyneendorrish River	• Turloughs [3180] • Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation [3270] NPWS (2021b)
Lough Rea SPA (004134)	8.9 km north of wind farm site 9.7 km north of grid connection No hydrological connection	• Shoveler (*Anas clypeata*) [A056] • Coot (*Fulica atra*) [A125] • Wetland and Waterbirds [A999] NPWS (2025)

European Sites (Natura 2000)	Distance from the Prospective Development (Approximate)	Qualifying Interest / Special Conservation Interest Bird Species (Reference to their Site Specific Conservation Objectives)
Lough Rea SAC (000304)	8.9 km north of wind farm site 9.7 km north of grid connection No hydrological connection	• Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. [3140] NPWS (2019e)
Lough Coy SAC (002117)	9 km north-west of wind farm site 11 km north-west of grid connection No hydrological connection	• Turloughs [3180] NPWS (2021c)
Pollagoona Bog SAC (002126)	9 km south-east of wind farm site 2 km south of grid connection No hydrological connection	• Blanket bogs (* if active bog) [7130] NPWS (2017)
Gortacarnaun Wood SAC (002180)	9 km south-west of wind farm site 11 km west of grid connection 14.2 km downstream of the grid connection via the Owendalulleegh River system	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] NPWS (2021d)
Carrowbaun, Newhall and Ballylee Turloughs SAC (002293)	9.6 km west of wind farm site 11.9 km west of grid connection 15 km downstream of the wind farm site via the Boleyneendorrish River system	• Turloughs [3180] NPWS (2021e)
Lough Cutra SPA (004056)	10 km south-west of wind farm site 12 km west of grid connection 22 km downstream of the wind farm site via the Owendalulleegh River system	• Cormorant (*Phalacrocorax carbo*) [A017] NPWS (2025)
Lough Cutra SAC (000299)	10 km south-west of wind farm site 12 km west of grid connection 22 km downstream of the wind farm site via the Owendalulleegh River system	• *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] NPWS (2018a)

European Sites (Natura 2000)	Distance from the Prospective Development (Approximate)	Qualifying Interest / Special Conservation Interest Bird Species (Reference to their Site Specific Conservation Objectives)
Ballinduff Turlough SAC (002295)	11.7 km north-west of wind farm site 13.7 km north-west of grid connection No hydrological connection	• Turloughs [3180] NPWS (2021f)
Pollnaknockaun Wood Natura Reserve SAC (000319)	12.6 km south-east of wind farm site 10.9 km east of grid connection No hydrological connection	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] NPWS (2018b)
Loughatorick South Bog SAC (000308)	12.8 km south-east of wind farm project 6 km south-east of grid connection No hydrological connection	• Blanket bogs (* if active bog) [7130] NPWS (2019f)
Kiltartan Cave (Coole) SAC (000286)	12.7 km west of wind farm site 15 km west of grid connection No hydrological connection	• Caves not open to the public [8310] • *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] NPWS (2018c)
Derrycrag Wood Nature Reserve SAC (000261)	13 km south-east of wind farm site 10 km east of grid connection No hydrological connection	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] NPWS (2018d)
Coole-Garryland Complex SAC (000252)	13.4 km west of wind farm site 15.5 km west of grid connection 30 km downstream of the wind farm via the Boleyneendorrish River system	• Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation [3150] • Turloughs [3180] • Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation [3270] • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] • Limestone pavements [8240]

European Sites (Natura 2000)	Distance from the Prospective Development (Approximate)	Qualifying Interest / Special Conservation Interest Bird Species (Reference to their Site Specific Conservation Objectives)
		• *Taxus baccata* woods of the British Isles [91J0] NPWS (2024)
Coole-Garryland SPA (004107)	13.8 km west of wind farm site 16 km west of grid connection 30 km downstream of the wind farm via the Boleyneendorrish River system	• Whooper Swan (*Cygnus cygnus*) [A038] NPWS (2025)
Ardrahan Grassland SAC (002244)	14.6 km north-west of wind farm site 16 km north-west of grid connection No hydrological connection	• Alpine and Boreal heaths [4060] • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Limestone pavements [8240] NPWS (2024)
Rosturra Wood SAC (001313)	15.5 km east of wind farm site 13.7 km east of grid connection No hydrological connection	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] NPWS (2018e)
Cloonmoylan Bog SAC (000248)	15.9 km east of wind farm site 13.7 km east of grid connection No hydrological connection	• Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the *Rhynchosporion* [7150] • Bog woodland [91D0] NPWS (2016)
Glendree Bog SAC (001912)	16 km south-west of wind farm site 15 km south-west of grid connection No hydrological connection	• Blanket bogs (* if active bog) [7130] NPWS (2019h)
Barroughter Bog SAC (000231)	18 km east of wind farm 14.3 km east of grid connection 22 km downstream of the wind farm site via the Duniry River system	• Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the *Rhynchosporion* [7150] NPWS (2015b)

European Sites (Natura 2000)	Distance from the Prospective Development (Approximate)	Qualifying Interest / Special Conservation Interest Bird Species (Reference to their Site Specific Conservation Objectives)
Lough Derg (Shannon) SPA (004058)	18 km south-east of wind farm site 13 km east of grid connection 23 km downstream of the wind farm site via the Duniry River system	• Cormorant (*Phalacrocorax carbo*) [A017] • Tufted Duck (*Aythya fuligula*) [A061] • Goldeneye (*Bucephala clangula*) [A067] • Common Tern (*Sterna hirundo*) [A193] • Wetland and Waterbirds [A999] NPWS (2024)
Lough Derg, North-east Shore SAC (002241)	18 km east of wind farm 14.7 km east of grid connection 23 km downstream of the wind farm site via the Duniry River system	• *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210] • Alkaline fens [7230] • Limestone pavements [8240] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] • *Taxus baccata* woods of the British Isles [91J0] NPWS (2019i)

Appendix B – Vantage Point Watches and Transect Surveys 2022 & 2024 Results

APPENDIX B.1

DERRYBRIEN WIND FARM

VANTAGE POINT WATCHES

2022 & 2024

TABLE 1

Summary of Vantage Point (VP) watch variables, Derrybrien Wind Farm, March to June 2022

Date	Season	VP no.	Duration (hrs)	Start Time	Weather conditions
29/03/2022	Breeding	1	3	10:00	Dry, good visibility, SW wind, F2-3
29/03/2022	Breeding	2	3	15:00	Dry, good visibility, SW wind, F3
30/03/2022	Breeding	1	3	08:15	Showers, good visibility, SW wind, F3
30/03/2022	Breeding	2	3	14.00	Dry, Good visibility, SW wind, F2
28/04/2022	Breeding	2	3	11:30	Dry, Good visibility, W wind, F1
28/04/2022	Breeding	1	3	15.00	Dry, Good visibility, W wind, F2
29/04/2022	Breeding	2	3	07.30	Dry, Good visibility, SW wind, F2
29/04/2022	Breeding	1	3	14.30	Showers, Good visibility, SW wind, F3
24/05/2022	Breeding	1	3	09.30	Dry, Good visibility, S wind, F1-2
24/05/2022	Breeding	2	3	15.00	Dry, Good visibility, S wind, F2
25/05/2022	Breeding	1	3	07:15	Dry, Good visibility, SW wind, F3
25/05/2022	Breeding	2	3	13:00	Dry, Good visibility, SW wind, F3
28/06/2022	Breeding	2	3	08:45	Dry, Good visibility, NW wind, F2
28/06/2022	Breeding	1	3	15.30	Dry, Good visibility, NW wind, F2
29/06/2022	Breeding	1	3	07.30	Dry, Good visibility, W wind, F2
29/06/2022	Breeding	2	3	12.30	Dry, Good visibility, W wind, F3

TABLE 2

Vantage Point raw data & flight activity, Derrybrien Wind Farm,

March-June 2022

Date	VP No	Map Reference	Species	No.	Flight Time	Flight Duration (s)	Band 1 (0-25m)	Band 2 (25-175m)	Band 3 (175+m)	Comments
29/03/2022	1		Kestrel	1	10.54	180	100	80		Male hunting along edge of forest / track
29/03/2022	2		Red grouse	1+	17.17	0	0	0		1-2 birds heard calling from bog to NW of site over period of c.10 min. Heard again from T47 area after formal watch
30/03/2022	1									No target species 3 mistle thrushes flew across site; pair stonechats near VP; skylarks & pipits singing
30/03/2022	2									No target species. Grouse heard from bog later after watch (as yesterday evening)
28/04/2022	2		Sparrow hawk	2	13.08	180	0	180	0	Pair in display /circling over site (T54-55 area)

Date	VP No	Map Reference	Species	No.	Flight Time	Flight Duration (s)	Band 1 (0-25m)	Band 2 (25-175m)	Band 3 (175+m)	Comments
			Teal	2	14.10	30	30	0	0	Pair flew low between T10 and T11 area
28/04/2022	1									No target species
29/04/2022	2									No target species Several swallows over site
29/04/2022	1		Snipe	1	16.46	300	100	200	0	Snipe drumming etc over bog between T31 and T33
24/05/2022	1									No target species 2 cuckoos heard, one seen; swallows over site
24/05/2022	2									No target species
25/05/2022	1									
25/05/2022	2									No target species Cuckoo
28/06/2022	2		Kestrel	1	09.43	90	30	60	0	Hunting male near T66 Meadow pipit, skylark, willow warbler & stonechat with young
28/06/2022	1									No target species
29/06/2022	1									No target species
29/06/2022	2		Sparrow hawk		14.34					Heard crying from woods north of T54 area

Date	VP No	Map Reference	Species	No.	Flight Time	Flight Duration (s)	Band 1 (0-25m)	Band 2 (25-175m)	Band 3 (175+m)	Comments
										Mistle thrush family party
	2		Lesser black-backed gull	7	15.07	160	0	160	0	Loose party flew over site – at least 4-5 immature types

TABLE 3

Summary of Vantage Point (VP) watch variables, Derrybrien Wind Farm,

April to June 2024

Date	Season	VP no.	Duration (hrs)	Start Time	Weather conditions
09/04/2024	Breeding	2	3	10:30	Dry, good visibility, W wind, F3
09/04/2024	Breeding	1	3	15:00	Dry, good visibility, W wind, F3
10/04/2024	Breeding	1	3	08:00	Dry, good visibility, SW wind, F3
10/04/2024	Breeding	2	3	13.00	Dry, good visibility, SW wind, F3
10/05/2024	Breeding	1	3	10:00	Dry, Good visibility, SW wind, F1
10/05/2024	Breeding	2	3	15.00	Dry, Good visibility, SW wind, F2
11/05/2024	Breeding	1	3	07.15	Dry, Good visibility, S wind, F2
11/05/2024	Breeding	2	3	12.30	Dry, Good visibility, S wind, F3
18/06/2024	Breeding	2	3	09:30	Dry, Good visibility, N wind, F3
18/06/2024	Breeding	1	3	14.30	Dry, Good visibility, N wind, F2
19/06/2024	Breeding	1	3	08.30	Dry, Good visibility, W wind, F3
19/06/2024	Breeding	2	3	12.30	Dry, Good visibility, W wind, F3

TABLE 4

Vantage Point raw data & flight activity, Derrybrien Wind Farm,

April-June 2024

Date	VP No	Map Reference	Species	No.	Flight Time	Flight Duration (s)	Band 1 (0-25m)	Band 2 (25-175m)	Band 3 (175+m)	Comments
09/04/2024	1		Kestrel	1	12.05	220	140	80	0	Hunting near T33 and edge of bog - male
09/04/2024	2		Sparrow hawk	1	15.57	180	0	180	0	Circling bird over forest near T54-T55. Also, 3 Mistle thrushes flying between plantations
10/04/2024	1		Snipe	1	08.23	200	100	100	0	Drumming bird over bog south of T31 – T34. Also, pair stonechats near VP; skylarks & pipits singing
10/04/2024	2									No target species. 2 wheatears on track – probable migrants
10/05/2024	1		Kestrel	1	12.12	50	50	0	0	Kestrel flying low near T27 and site entrance. Cuckoo calling, swallows & several house martins over site
10/05/2024	2									No target species

Date	VP No	Map Reference	Species	No.	Flight Time	Flight Duration (s)	Band 1 (0-25m)	Band 2 (25-175m)	Band 3 (175+m)	Comments
										Willow warblers singing
11/05/2024	1									No target species 2 cuckoos active
11/05/2024	2		Sparrow hawk	1	15.13	20	20	0	0	Male hunting near T53
18/06/2024	2									No target species; 12 mistle thrushes in area of VP, Meadow pipit, skylark, & willow warbler with young
18/06/2024	1									No target species; 20+ swallow & c.10 sand martins, Grey wagtail flew over VP towards quarry pond
19/06/2024	1		Snipe	1	09.16	30	30	0	0	Flew up and then back down onto bog near T31
19/06/2024	2									No target species; Mistle thrush numbers up to 16 y

APPENDIX B.2

DERRYBRIEN WIND FARM

TRANSECT SURVEYS

2022 & 2024

2022 SURVEY YEAR

The information presented here comprises the results of the breeding bird transect surveys undertaken in 2022. The locations of these transects is presented in Figure 2 (wind farm site) and Figure 3 (OHL corridor) in Section 4.2.4.1.2. T stands for Turbine, while PS stands for pole set and AM stands for angle mast.

Table 1: Transect No. 1 (T28-T37) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Mallard	2	0	A
Cuckoo	2	0	G
Raven	0	4	G
Skylark	6	8	A
Swallow	10+	20+	A
Willow warbler	5	8	A
Wren	2	3	G
Blackbird	0	1	G
Stonechat	3	4	G
Meadow pipit	10	16	R
Reed bunting	2	1	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 2: Transect No. 2 (T23-T70) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Woodpigeon	0	6	G
Cuckoo	1	0	G
Magpie	2	0	G
Goldcrest	2	3	A
Great tit	1	0	G
Coal tit	4	9	G
Swallow	0	10+	A
Willow warbler	7	11	A
Whitethroat	2	1	G
Wren	4	5	G
Blackbird	3	3	G
Song thrush	1	0	G
Robin	3	4	G
Stonechat	2	4	G
Meadow pipit	6	9	R
Chaffinch	4	6	G

Species	26th May 2022	30th June 2022	Conservation Status
Lesser redpoll	0	7	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 3: Transect No. 3 (T12-T15) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Mallard	0	3	A
Woodpigeon	8	0	G
Cuckoo	1	0	G
Hooded crow	2	4	G
Coal tit	3	0	G
Skylark	8	11	A
Swallow	6	10+	A
Willow warbler	5	3	A
Whitethroat	1	4	G
Wren	7	3	G
Blackbird	4	5	G
Robin	2	2	G
Stonechat	4	3	G
Meadow pipit	12	10	R
Chaffinch	3	1	G
Lesser redpoll	0	7	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 4: Transect No. 4 (T47-T50) survey results.

Species	26th May 2022	30th June 2022	Conservation Status
Sparrowhawk	0	1	G
Woodpigeon	4	13	G
Magpie	3	4	G
Jay	0	3	G
Goldcrest	3	1	A
Coal tit	7	12	G
Swallow	0	6	A
Willow warbler	9	4	A
Wren	2	5	G
Blackbird	6	10	G

Species	26th May 2022	30th June 2022	Conservation Status
Song thrush	3	1	G
Mistle thrush	4	6	G
Robin	3	4	G
Meadow pipit	1	3	R
Chaffinch	10+	8	G
Siskin	5	0	G
Lesser redpoll	6	3	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 5: Transect No. 5 (PS1-PS4) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Woodpigeon	4	7	G
Cuckoo	1	0	G
Coal tit	2	5	G
Swallow	10+	0	A
Willow warbler	8	12	A
Wren	4	2	G
Blackbird	5	5	G
Song thrush	2	1	G
Mistle thrush	1	4	G
Robin	1	0	G
Chaffinch	6	10	G
Lesser redpoll	0	7	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 6: Transect No. 6 (P10-P12) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Woodpigeon	0	3	G
Cuckoo	1	0	G
Goldcrest	2	0	A
Coal tit	5	2	G
Swallow	0	5	A
Willow warbler	6	4	A
Whitethroat	1	0	G

Species	26th May 2022	30th June 2022	Conservation Status
Wren	6	3	G
Blackbird	6	2	G
Song thrush	1	2	G
Robin	3	2	G
Stonechat	0	4	G
Meadow pipit	2	0	R
Chaffinch	9	5	G
Siskin	0	7	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 7: Transect No. 7 (Local road/PS36 to AM34) survey results, 2022.

Species	26th May 2022	30th June 2022	Conservation Status
Mallard	0	2	A
Kestrel	1	0	R
Cuckoo	2	0	G
Hooded crow	0	5	G
Skylark	3	6	A
Swallow	20+	0	A
Willow warbler	2	1	A
Whitethroat	2	3	G
Wren	4	1	G
Blackbird	2	0	G
Song thrush	1	2	G
Robin	2	0	G
Stonechat	3	5	G
Meadow pipit	9	15	R
Chaffinch	2	0	G
Reed bunting	2	3	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

2024 SURVEY YEAR

The information presented here comprises the results of the breeding bird transect surveys undertaken in 2024. The locations of these transects is presented in Figure 2 (wind farm site) and Figure 3 (OHL corridor) in Section 4.2.4.1.2. T stands for Turbine, while PS stands for pole set and AM stands for angle mast.

Table 1: Transect No. 1 (T28-T37) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Mallard	0	0	A
Woodpigeon	0	7	G
Cuckoo	3	1	G
Raven	0	0	G
Skylark	4	9	A
House martin	2	0	A
Swallow	6	20+	A
Willow warbler	3	4	A
Wren	3	1	G
Blackbird	2	4	G
Stonechat	2	5	G
Meadow pipit	7	11	R
Reed bunting	1	3	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 2: Transect No. 2 (T23-T70) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Woodpigeon	2	4	G
Cuckoo	0	0	G
Magpie	0	0	G
Goldcrest	1	2	A
Great tit	2	2	G
Coal tit	7	4	G
Swallow	3	0	A
Willow warbler	4	3	A
Whitethroat	2	2	G
Wren	2	3	G
Blackbird	1	5	G
Song thrush	0	2	G
Robin	2	3	G
Stonechat	1	0	G

Species	9th May 2024	20th June 2024	Conservation Status
Meadow pipit	**2**	**5**	**R**
Chaffinch	6	9	**G**
Lesser redpoll	0	0	**G**

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 3: Transect No. 3 (T12-T15) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Mallard	2	0	A
Woodpigeon	0	0	G
Cuckoo	0	0	G
Hooded crow	2	1	G
Coal tit	0	0	G
Great tit	1	0	G
Skylark	5	6	A
Swallow	10+	6	A
Willow warbler	7	5	A
Whitethroat	2	3	G
Wren	4	5	G
Blackbird	2	1	G
Robin	3	3	G
Stonechat	3	6	G
Meadow pipit	9	14	R
Chaffinch	4	4	G
Lesser redpoll	6	4	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 4: Transect No. 4 (T47-T50) survey results, 2024

Species	9th May 2024	20th June 2024	Conservation Status
Sparrowhawk	0	0	G
Woodpigeon	9	14	G
Magpie	2	1	G
Jay	1+	2	G
Goldcrest	2	2	A
Coal tit	4	5	G
Swallow	4	0	A

Species	9th May 2024	20th June 2024	Conservation Status
Willow warbler	6	5	A
Wren	4	5	G
Blackbird	3	4	G
Song thrush	2	3	G
Mistle thrush	2	7	G
Robin	1	2	G
Meadow pipit	0	2	R
Chaffinch	13	7	G
Siskin	0	4	G
Lesser redpoll	12	0	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 5: Transect No. 5 (PS1-PS4) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Woodpigeon	2	5	G
Cuckoo	1	0	G
Goldcrest	1	0	A
Coal tit	5	4	G
Blue tit	2	0	G
Swallow	10+	10+	A
Willow warbler	5	6	A
Wren	2	5	G
Blackbird	3	4	G
Song thrush	1	0	G
Mistle thrush	2	0	G
Robin	3	3	G
Meadow pipit	4	2	R
Chaffinch	7	8	G
Lesser redpoll	2	0	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 6: Transect No. 6 (P10-P12) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Woodpigeon	4	2	G

Species	9th May 2024	20th June 2024	Conservation Status
Cuckoo	0	0	G
Goldcrest	0	1	A
Coal tit	2	6	G
Swallow	5	3	A
Willow warbler	7	5	A
Whitethroat	2	1	G
Wren	5	2	G
Blackbird	4	5	G
Song thrush	1	0	G
Robin	1	3	G
Stonechat	2	3	G
Meadow pipit	3	5	R
Chaffinch	6	7	G
Siskin	0	3	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Table 7: Transect No. 7 (Local road/PS36 to AM34) survey results, 2024.

Species	9th May 2024	20th June 2024	Conservation Status
Mallard	0	0	A
Kestrel	0	0	R
Cuckoo	1	0	G
Hooded crow	3	4	G
Skylark	2	3	A
Swallow	12	4	A
Willow warbler	3	2	A
Whitethroat	1	2	G
Wren	3	3	G
Blackbird	1	3	G
Song thrush	0	1	G
Robin	1	2	G
Stonechat	2	3	G
Meadow pipit	6	8	R
Chaffinch	3	1	G
Reed bunting	1	0	G

Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al., 2020) Conservation Status: R – Red; A – Amber; G – Green

Appendix C - Overarching environmental protective policies and objectives contained within the Galway County Development Plan 2022-2028 (Galway County Council, 2022)

Policy/Objective	Policy/Objective Description (Galway County Development Plan 2022-2028 (Galway County Council, 2022))
WS 3 Water Supply	Support the implementation of the relevant recommendations and measures as outlined in the relevant River Basin Management Plan 2018-2021, and associated Programme of Measures, or any such plan that may supersede same during the lifetime of this plan.
WS 7Water Supply	Require that new development proposals would ensure that there would not be an unacceptable impact on water quality and quantity including surface water, ground water, designated source protection areas, river corridors and associated wetlands.
NHB 1 Natural Heritage and Biodiversity of Designated Sites, Habitats and Species	Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan. Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999). Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ ecological network.
NHB 2 European Sites and Appropriate Assessment	To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant.
NHB 3 Protection of European Sites	No plans, programmes, or projects etc. giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects

Policy/Objective	Policy/Objective Description (Galway County Development Plan 2022-2028 (Galway County Council, 2022))
	shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects.*
NHB 4 Ecological Appraisal of Biodiversity	Ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites. Where appropriate require an ecological appraisal, for development not directly connected with or necessary to the management of European Sites, or a proposed European Site and which are likely to have significant effects on that site either individually or cumulatively.
NHB 5 Ecological Connectivity and Corridors	Support the protection and enhancement of biodiversity and ecological connectivity in non-designated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive.
NHB 6 Implementation of Plans and Strategies	Support the implementation of any relevant recommendations contained in the National Heritage Plan 2030, the National Biodiversity Plan, the All-Ireland Pollinator Plan and the National Peatlands Strategy and any such plans and strategies during the lifetime of this plan.
NHB 7 Mitigation Measures	Require mitigating measures in certain cases where it is evident that biodiversity is likely to be affected. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, hedgerow, tree planting, wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas.
NHB 10 NPWS & Integrated Management Plans	Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done.

Policy/Objective	Policy/Objective Description (Galway County Development Plan 2022-2028 (Galway County Council, 2022))
	Where Integrated Management Plans are being prepared by the NPWS for European sites (or parts thereof), the NPWS shall be engaged with in order to ensure that plans are fully integrated with the Plan and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.
NHB 11 Increases in Visitor Numbers to Semi-Natural Areas, Visitor and Habitat Management	Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Where relevant, the Planning Authority and those receiving permission for development under the Plan shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant effects, including loss of habitat and disturbance. Management measures may include ensuring that new projects and activities are a suitable distance from ecological sensitivities. Visitor/Habitat Management Plans will be required for proposed projects as relevant and appropriate.
WR 1 Water Resources	Protect the water resources in the plan area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the River Basin District Management Plan 2018 – 2021 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans.
WR 2 River Basin Management Plans	It is a policy objective of the Planning Authority to implement the programme of measures developed by the River Basin District Projects under the Water Framework Directive in relation to: Surface and groundwater interaction, Dangerous substances, Hydromorphology, Forestry, On site wastewater treatment systems, Municipal and industrial discharges, Urban pressures, Abstractions.
WTWF 1 Wetland Sites	Protect and conserve the ecological and biodiversity heritage of the wetland sites in the County. Ensure that an appropriate level of assessment is completed in relation to wetland habitats that are subject to proposals which would involve drainage or reclamation that might destroy, fragment or degrade any wetland in the county.

Policy/Objective	Policy/Objective Description (Galway County Development Plan 2022-2028 (Galway County Council, 2022))
	This includes lakes and ponds, turloughs, watercourses, springs and swamps, marshes, fens, heath, peatlands, some woodlands as well as some coastal and marine habitats. Protect Ramsar sites under The Convention on Wetlands of International Importance (especially as Waterfowl Habitat).
P 1 Protection of Peatlands	Ensure that peatland areas which are designated (or proposed for designation) as NHAs, SACs or SPAs are conserved for their ecological, climate regulation, education and culture, archaeological potential including any ancient walkways (toghers) through bogs.
P 2 Best Practice in Peatland conservation and management	Work in partnership with relevant stakeholders on all suitable peatland sites to demonstrate best practice in sustainable peatland conservation, management and restoration techniques and to promote their heritage and educational value subject to Ecological Impact Assessment and Appropriate Assessment Screening, as appropriate.
IS 1 Control of Invasive and Alien Invasive Species	It is a policy objective of the Planning Authority to support measures for the prevention and eradication of invasive species.
IS 2 Invasive Species Management Plan	Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are currently or were previously present, an invasive species management plan will be required. A landscaping plan will be required for developments near water bodies and such plans must not include alien invasive species.