

Natura Impact Statement and AA Screening Report

Meenbog Wind Farm, Co.
Donegal



1.

INTRODUCTION

1.1

Background

This Natura Impact Statement (NIS) assesses the effects on European Sites of all works required for the completion, operation and decommissioning of the Meenbog Wind Farm which was originally permitted by An Bord Pleanála (the Board) under ABP-300460-17 (amended by ABP-303729-19). Remedial measures associated with the November 2020 Peat Slide are described in this NIS but were assessed and undertaken under a separate procedure.

This NIS informs the substitute consent planning application for all works required for the completion, operation and decommissioning of the Meenbog Wind Farm, i.e. the Prospective Development. A separate remedial EIAR (rEIAR) has been prepared for the Existing Development as part of the same substitute consent planning application for all works completed to date at the Meenbog Wind Farm.

The list below provides terminology used in the NIS.

- › The **'Site'** refers to the application site boundary for the Subject Development as illustrated in red on Figure 2-1. It comprises the Wind Farm Site, Grid Connection Site, and BMEP Site combined.
- › The **'Wind Farm Site'** refers to the area surrounding the wind turbines and associated infrastructure (including the onsite 110kV substation), from the Wind Farm Site entrance off the N15.
- › The **'Grid Connection Site'** refers to the area of the Site surrounding the Grid Connection from the Wind Farm Site entrance off the N15 National Road to the Clogher 110kV substation.
- › **BMEP Site** refers to the areas of the Site to be managed for hen harrier habitat and peatland habitat enhancement.
- › The **'Grid Connection'** refers to the 110kV underground cabling route, joint bays, etc connecting the existing onsite 110kV substation (within the Wind Farm Site) to the Clogher 110kV substation.
- › The **'Permitted Development'** refers to the 19-turbine wind farm and ancillary infrastructure originally granted permission under ABP-300460-17 (and subsequent amendments).
- › The **'Existing Development'** refers to all works carried out to date for the Meenbog Wind Farm.
- › The **'Prospective Development'** refers to all works necessary to complete construction, operate, and ultimately decommission the Meenbog Wind Farm.
- › The **'Subject Development'** comprises both the Existing Development and the Prospective Development and shall be known as the Meenbog Wind Farm.
- › The **'2017 EIAR'** refers to the original EIAR for the Permitted Development granted permission under ABP-300460-17
- › The **'November 2020 Peat Slide'** means the peat slide or peat movement that occurred on 12th November 2020, at the Wind Farm Site
- › The **'proposed turbines'** refers to the 19 no. proposed turbines associated with the Prospective Development
- › The **'proposed turbine locations'** refers to the 19 turbine locations associated with the Subject Development

The application is accompanied by this NIS and an Environmental Impact Assessment Report (EIAR) in relation to the Prospective Development, and a remedial Environmental Impact Assessment Report (rEIAR) and remedial Natura Impact Statement (rNIS) in relation to the Existing Development.

This NIS provides the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of the Prospective Development including required for the completion, operation and decommissioning of the Meenbog Wind Farm

The Prospective Development is located on the border with Northern Ireland (UK) and therefore the potential for adverse effects on areas outside the Republic of Ireland is considered in this report. It is noted that since the UK left the EU, the Natura 2000 network of sites has been re-branded as the 'National Site Network' and is protected under the UK 'Conservation of Species Regulations 2019'. For the purposes of this NIS, all sites (both UK and ROI) have been included in the assessment.

1.2 Relevant Guidance and AA Process

1.2.1 Guidance

This NIS has been prepared in accordance with:

- › European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites. Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2021)
- › Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)
- › Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010)
- › Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland OPR (2021)

1.2.2 Appropriate Assessment Process

Screening - The purpose of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, 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 the site's conservation objectives.

There is no necessity to establish such an effect; it is merely necessary for the Competent Authority to determine that there may be such an effect. The need to apply the precautionary principle in making any key decisions in relation to the tests of Appropriate Assessment has been confirmed by the case law of the Court of Justice of the European Union (CJEU). Plans or projects that have no appreciable effect on a European Site may be excluded. The threshold at this first stage is a very low one and operates as a trigger in order to determine whether Appropriate Assessment of a project is required. Therefore, where significant effects are likely, uncertain or unknown at screening stage, an AA of the project will be required.

Appropriate Assessment - This stage of the process is a focused and detailed examination, analysis and evaluation by the Competent Authority of the implications of the plan or project, either alone or in combination with other plans and projects, on the integrity of a European Site in view of that site's conservation objectives. Case law has established that such an Appropriate Assessment, to be lawfully conducted must:

- (i) identify, in the light of the best scientific knowledge in the field, all aspects of the proposed project which may, by itself or in-combination with other plans or projects, affect the conservation objectives of the European Site;
- (ii) contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and
- (iii) may only include a determination that the proposed project will not adversely affect the integrity of any relevant European Site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of potential adverse effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a European Site cannot be excluded, then the

process must proceed to stage three (assessment of alternative) and, if necessary, stage four (IROPI¹).

1.3

Structure and Format of this Document

- › Section 1 provides an introduction, background information, methodology and statement of authority for the AASR and NIS.
- › Section 2 provides a full description of all elements of the Prospective Development.
- › In Section 3, the characteristics of the receiving environment are fully described.
- › In Section 4, a Stage 1 Screening is undertaken to identify any European Sites upon which there is a potential for a likely significant effect to occur either individually or in combination with other plans and projects as a result of the Prospective Development.
- › Section 5, of the NIS provides a detailed consideration of the Screened-In European Sites and identifies the relevant qualifying features and how they may be affected in light of their conservation objectives. It then provides a detailed assessment of the potential for adverse effects on the identified European Sites as a result of the Prospective Development in light of the conservation objectives of each Site.
- › Section 6 provides an assessment of residual effects taking into consideration the mitigation.
- › In Section 7, the potential in combination effects of the Prospective Development on European Sites, when considered in combination with other plans and projects were assessed.
- › In Section 8, transboundary effects are considered.
- › A concluding statement is provided in Section 9.

1.4

Statement of Authority

This report and associated assessment have been prepared by Pat Roberts (B.Sc. (Env) MCIEEM), and Matthew Kieran (BSc. Env, Eco). Pat is a full member of the Chartered Institute of Ecology and Environmental Management. Pat is highly experienced in the undertaking of Appropriate Assessment Reporting and has over 20 years' post graduate experience in ecological consultancy. Matthew is a qualified ecologist with 2 years post graduate experience.

¹ IROPI - 'imperative reasons of overriding public interest', the test found in Article 6(4) of the *Habitats Directive*.

1.5

Methodology

1.5.1

Desk Study

The desk study undertaken for this assessment included a thorough review of the available ecological data associated with the screened-in European Sites within the likely zone of impact of the Prospective Development. Sources of data included the following:

- Review of NPWS Conservation Objectives supporting documents, site synopsis, standard data forms and supporting documents for European Designated Sites,
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), Environmental Protection Agency (EPA),
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper.

1.5.2

Ecological Survey Methodologies

The Site has been subject to extensive ecological field surveys carried out as part of the 2017 EIAR. These surveys informed the pre-development baseline and are provided in the 2017 EIAR. Prior to commencement of construction of the Permitted Development pre-commencement mammal surveys were also conducted as part of the construction supervision procedures in accordance with the 2017 EIAR, and in particular the updated 2019 CEMP.

Additionally, comprehensive surveys of the Site were undertaken to inform this NIS. The following sections fully describe the surveys that have been undertaken between 2021 and 2026.

1.5.2.1

Ecological Multidisciplinary Walkover Surveys

Multidisciplinary walkover surveys were undertaken within the Site on the dates provided below. These surveys informed the AA Screening assessment that was undertaken and informed the requirement for further, more detailed surveys and assessments where necessary.

- › 03/06/2021, 20/01/2022, 11/09/2023, 23/08/2023, 24/08/2023, 18/12/2023, 19/12/2023, 28/08/2024, 29/08/2024, 11/09/2025, 04/03/2026

Surveys were undertaken following guidelines that are set out in the relevant guidance (NRA, 2009) throughout the year, including within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith *et al.*, 2011)². All habitats recorded on Site and described in this AA Screening Report and NIS have been mapped and classified in accordance with Fossitt (2000)³. A comprehensive walkover of the entire Site was completed with incidental records also incorporated from other dedicated species/habitat specific surveys. During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was conducted.

The walkover surveys were also designed to detect the presence, or likely presence, of a range of protected species. The survey included a search for mammal signs (e.g. otter) and areas of suitable habitat to support these species.

² (Smith *et al* 2011)- *Best Practice Guidance for Habitat Survey and Mapping*. Available at https://www.heritagecouncil.ie/content/files/best_practice_guidance_habitat_survey_mapping_onscreen_version_2011_8mb.pdf

³ (Fossitt 2000)- *A Guide to Habitats in Ireland*. Available at <https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf>

1.5.2.1.1 Otter Survey

The findings of the AA Screening Assessment identified the potential for effects on otter and the requirement for dedicated otter surveys to assess this. The otter surveys were conducted as per NRA (2009)⁴ guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g. spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was considered to comprise part of the otter habitat (NPWS 2009). The dedicated otter survey also followed the guidance as set out in NRA (2008) *'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes'* and following CIEEM best practice competencies for species surveys (CIEEM, 2013)⁵.

1.5.2.2 Aquatic surveys

The findings of the AA Screening Assessment identified the potential for effects on aquatic habitats and species and the requirement for dedicated surveys to assess this.

The baseline aquatic environment was described and characterised in the 2017. The relevant documents are provided in **Appendix 1** and listed below.

- › Meenbog Wind Farm – Fisheries Assessment. Paul Johnson Associates (2017)
- › Aquatic macroinvertebrate survey. MKO (2017)

Additional surveys and assessments have been undertaken in the subsequent years since the Existing Development was constructed and following the November 2020 Peat Slide. Details of these surveys and associated reporting are also provided in Appendix 1 and full details of the methodologies followed are included therein. Appendix 1 includes the following reports:

- › Meenbog Wind Farm – Fisheries Assessment. Paul Johnson Associates (2017)
- › Aquatic macroinvertebrate survey. MKO (2017)
- › Aquatic and Fisheries Assessment of November 2020 Peat Slide impacts on the Mourne Beg River Catchment draining Meenbog Wind Farm, Co. Donegal. Triturus (2022)
 - Electro-fishing
 - Salmonid Habitat Quality
 - Salmonid fry abundance
 - Riverbed Condition Assessment
 - River Hydromorphology
 - Biological Water quality (Q-Sampling)
- › Aquatic baseline report for Meenbog wind farm, Co. Donegal. Triturus (April 2025)
 - Aquatic site surveys
 - Fisheries assessment and habitat appraisal
 - White clawed crayfish survey
 - Biological water quality (Q-Sampling)
 - Lacustrine Macro-invertebrate communities
 - Macrophytes and aquatic bryophytes
 - Otter surveys
- › Aquatic baseline report for Meenbog wind farm, Co. Donegal (October 2025)
 - As per previous report – updated.

⁴ NRA (2009) *Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes*. Dublin: National Roads Authority.

⁵ CIEEM, 2013, *Technical Guidance Series – Competencies for Species Survey*, Online, Available at: <https://cieem.net/resource/competencies-for-species-survey-css/> Accessed: 20.03.2021

In addition, a visual survey for salmonid redds was undertaken on the 7th January 2026. During these surveys, the Mourne Beg river was walked at the locations listed below and any redds observed were counted. The object of the survey was to confirm spawning at traditional spawning areas – as previously identified by the Loughs Agency and Triturus (See Appendix 1). Despite a period of dry weather, water levels were still high and the water was highly coloured, limiting visibility and likely leading to an under recording of redds present. Areas surveyed included:

1. From Croagh Bridge at Grid Ref H 12543 85759, downstream for approximately 1.3km – traditional salmonid spawning area
2. From bridge at Grid Ref: H 352 85183, downstream for approximately 120m – traditional salmonid spawning area.
3. From confluence of Bunadaowen with Mourne Beg at Grid Ref H 08236 87800 for a distance of approximately 500m – recent salmonid spawning area.

In addition to the above, data on the location of salmonid redds and electro-fishing results from surveys carried out by the Loughs Agency between 2021 and 2025 is provided in Appendix 1.

2.

DESCRIPTION OF PROSPECTIVE DEVELOPMENT

2.1

Site Location

The Site, which comprises three distinct elements – the Wind Farm Site, the Grid Connection Site, and the BMEP Site, measures approximately 1,018 hectares (ha) within the townlands of Meenbog, Croaghonagh, Ardinawark, Keadew Upper, Keadew Lower, Cullionboy, Cashelnavean, Tawnawully Mountains, Friarsbush and Tievecloghoge.

Construction work commenced at the Wind Farm Site and Grid Connection Site in November 2019. The majority of the civil engineering works, including wind farm access roads, turbine hardstands, turbine foundations, borrow pits and peat cells, were substantially completed over a 12-month period up to November 2020. Works on the electricity substation and associated underground cabling connection to the national grid continued until the second quarter of 2021. Construction work resumed briefly between July 2022 and September 2022, during which some additional works were carried out on site roads, internal site ducting, hardstanding areas, borrow pits, and peat cells.

2.1.1

Wind Farm Site

The Wind Farm Site, which refers to the area of the Site surrounding the wind turbines and associated infrastructure (including the onsite 110kV substation) from the wind farm site entrance off the N15 National Road, is located in County Donegal, approximately 8 km southwest of the twin towns of Ballybofey and Stranorlar and approximately 12 km northeast of Donegal Town.

The Wind Farm Site covers an area of approximately 892 ha, within the townlands of Meenbog and Croaghonagh. The Wind Farm Site borders County Tyrone in Northern Ireland, specifically the administrative division of Omagh West, Barony of Termonamongan and the townlands of Slievadoo, Meenakeeran, and Sixth Corgary or Second Croagh along the Southeast of the Wind Farm Site boundary. The Wind Farm Site lies within four Electoral Divisions (EDs); Goland, Dooish, Tawnawully and Clogher, in County Donegal. Current land-use at the Wind Farm Site is comprised of the partially constructed Meenbog Wind Farm and areas of commercial forestry and blanket bog. The surrounding land-use predominantly comprises peat bogs, commercial forestry and other seminatural areas with limited residential use along local roads, as well as a quarry adjacent to the Wind Farm Site entrance off the N15 National Road.

The elevation of the Wind Farm Site is between approximately 180 metres above Ordnance Datum (mOD) and 313 mOD, with elevations on the Wind Farm Site generally decreasing and sloping in a north or north-westerly direction. A small section to the south of the Wind Farm Site slopes to the southeast. The Wind Farm Site is generally bordered on all sides by forestry plantations, with the southeastern boundary also being defined by the Northern Ireland border. The Wind Farm Site drains directly to the Bunadownen River and the Shruhanganve stream, which flow to the north, each of which are tributaries of the larger Mourne Beg River that proceeds to flow downstream into the River Derg. The Wind Farm Site also drains into the Glendergan River to the south-southeast, which is also a tributary of the River Derg.

Existing access is from the N15 National Road in the northwest of the Wind Farm Site and the L-6554 Local Road to the north of the Wind Farm Site. The N15 National Road runs south-west to north-east with the Wind Farm Site lying to the east of the road.

There are 3 no. habitable houses located within one kilometre of the proposed turbine locations, the closest being a holiday cottage located 750 metres (m) northwest of the nearest proposed turbine location.

2.1.2 Grid Connection Site

The Grid Connection Site has a total area of approximately 9 ha and extends from the Wind Farm Site entrance along the N15 National Road to the Clogher 110kV substation, approximately 6.5 km southwest of the onsite 110kV substation. Within the Grid Connection Site, the Grid Connection underground cabling route originates at the onsite 110kV substation within the Wind Farm Site and travels to the northwest along an existing wind farm access road. The Grid Connection then exits the Wind Farm Site entrance and follows the N15 southwest for approximately 6 km, before exiting the N15 National Road onto the L-2595 Local Road. It is then routed southeast along the L-1985 Local Road and through agricultural lands adjacent to the L-1985 before continuing along and adjacent to a private road to reach the Clogher 110kV substation.

The Grid Connection Site traverses the townlands of Ardinawark, Keadew Upper, Keadew Lower, Cullionboy, Cashelnavean, Tawnawully Mountains and Friarsbush.

2.1.3 BMEP Site

The Biodiversity Management and Enhancement Site (BMEP Site) covers an area of approximately 117 ha. The BMEP Site is comprised of two parcels of land both contained entirely within the townland of Tievecloghoge, referred to as Parcel 1 (to the east) and Parcel 2 (to the west), which have a combined area of approximately 117 ha, ~108 ha of which are intended for enhancement. Land use on the BMEP Site within Parcel 1 and Parcel 2 currently comprises coniferous forestry and associated forestry access tracks, which is proposed to be felled and converted to peatland and scrub habitats. Site access to Parcel 1 is via a new access track located along the L-65242 Local Road, whilst site access to Parcel 2 is via an existing access track (to be extended and upgraded) located along the L-2974 Local Road. Parcel 2 is located approximately 2.3km east of the Wind Farm Site, and Parcel 1 is located approximately 4.2km east of the Wind Farm Site. There is an elevation difference of 4m (174 mOD elevation SW to 170 mOD elevation NE) on the BMEP Site.

A description of the proposed enhancement/restoration measures to be undertaken at the BMEP Site is contained in Appendix 3 Biodiversity Management and Enhancement Plan of this NIS.

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The Site Location is shown in Figure 2-1.

2.2 Characteristics of the Prospective Development

Full details of the Prospective Development are provided in Chapter 4 of the EIAR that supports this application. This chapter is included as Appendix 2 to this NIS. Figure 2-2 shows the Site layout.

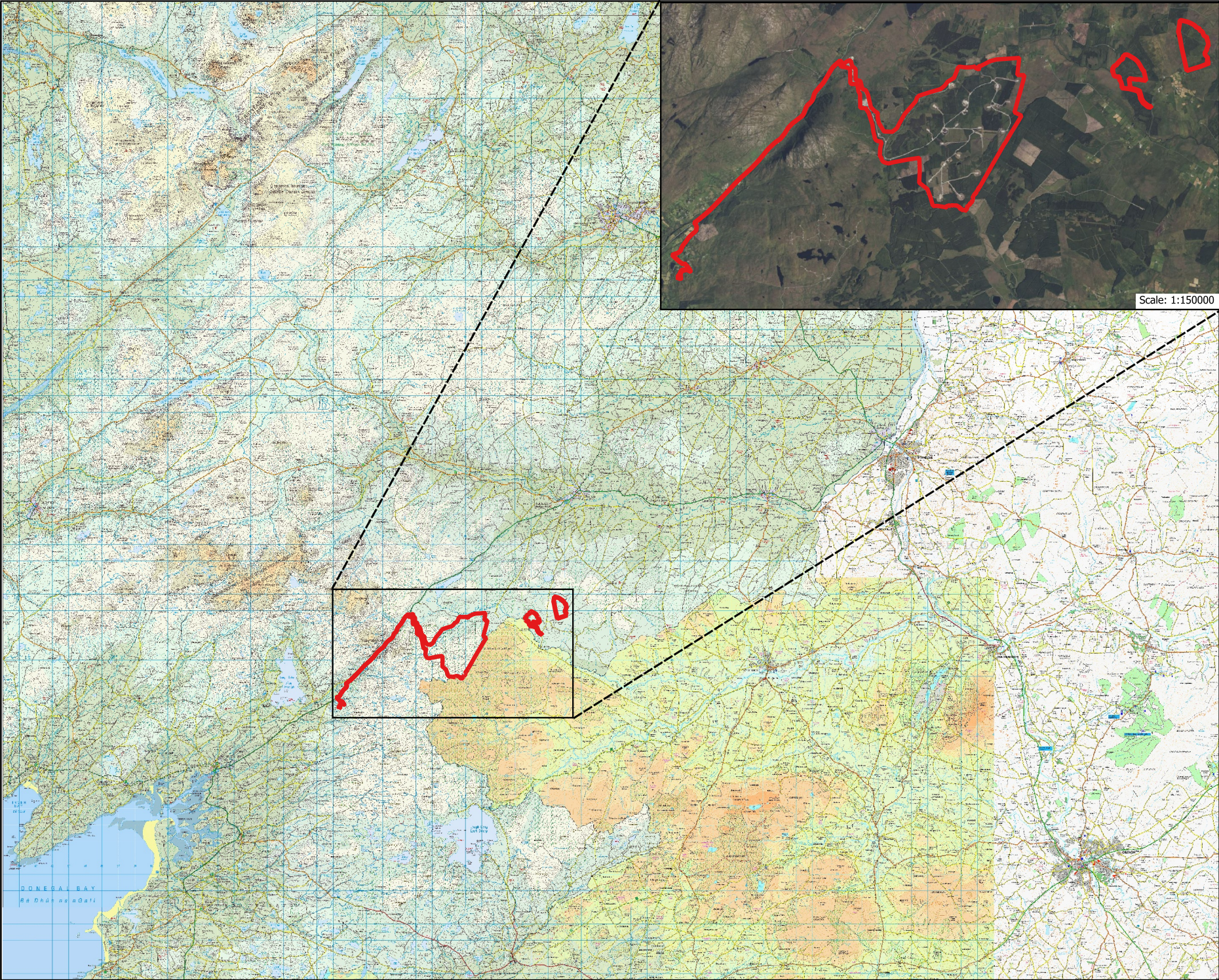
For the purpose of this NIS, the Prospective Development for which permission is being sought consists of the following:

1. 19 no. wind turbines, with an overall tip height of 156.5m, rotor diameter of 133m, and wind turbine hub height of 90m, and 1 no. meteorological mast with a height of 80m, and subsequent decommissioning of the wind turbines and meteorological mast, following a twenty five-year operational period from the date of full commissioning of the wind farm;
2. The completion of upgraded access junctions, tracks and roads, and construction of new site access roads;
3. The completion of construction of all 19 no. wind turbine foundations and hardstand areas, and the construction of a meteorological mast foundation;
4. Completion of internal wind farm underground ducting and cabling;
5. Continued use of and upgrade of 2 no. temporary construction compounds (including 3 no. temporary site offices with a combined floor area of 121.5 sqm);
6. Continued use and extraction at the 3 no. borrow pits;

7. *Peat and spoil management, including site landscaping;*
8. *Forestry felling;*
9. *Site drainage and sediment control measures;*
10. *Biodiversity enhancement measures (including peatland habitat restoration and Hen Harrier habitat areas);*
11. *Recreation and amenity works (including carpark, play, picnic & amenity areas and pedestrian access paths to the wind farm roads);*
12. *Operational stage site signage; and*
13. *All associated site development works.*

This application seeks an operational period of twenty-five-years for the wind turbines, meteorological mast and site signage from the date of full commissioning of the wind farm. Permanent planning permission is being sought for all other works.

It should be noted that the effects of a November 2020 Peat Slide are considered in the rNIS that accompanies the application not this NIS.



Map Legend

Site Location



Drawing Title

Site Location

Project Title

Substitute for Consent Application for
Meenbog Wind Farm

Drawn By

MK

Checked By

PR

Project No.

240505-a

Drawing No.

Figure 2.1

Scale

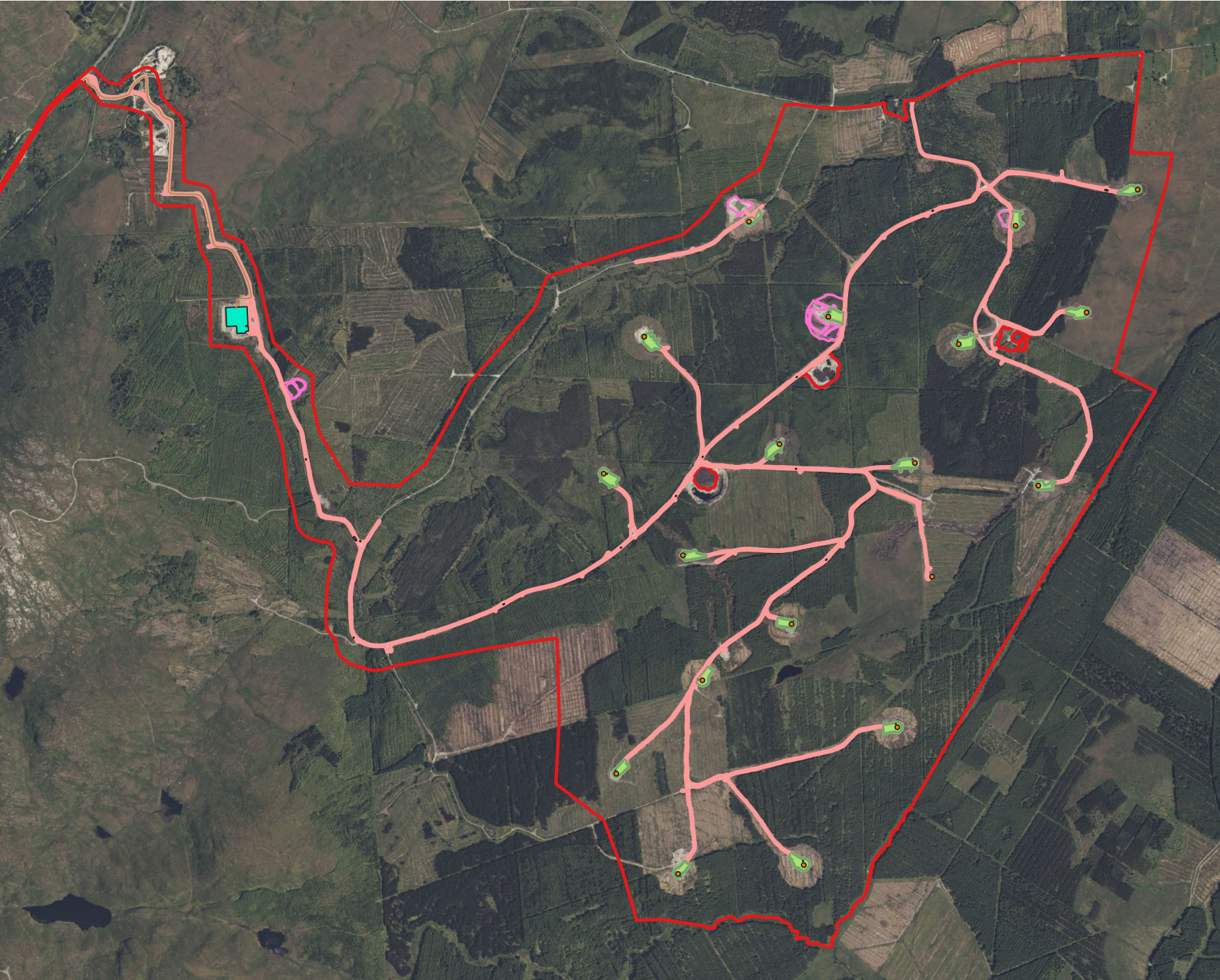
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Date

09.06.2026



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Map Legend

- Site Location
- Turbine Locations
- As Built Hardstand
- As Built Pull Pits
- As Built Substation
- As Built Borrow Pit
- As Built Peat Cell
- As Built Turbine Hardstand



Drawing Title

Site Layout Map

Project Title

Substitute for Consent Application for
Meenbog Wind Farm

Drawn By	Checked By
MK	PR
Project No.	Drawing No.
240505-a	Figure 2.2
Scale	Date
1:22,000	09.06.2026

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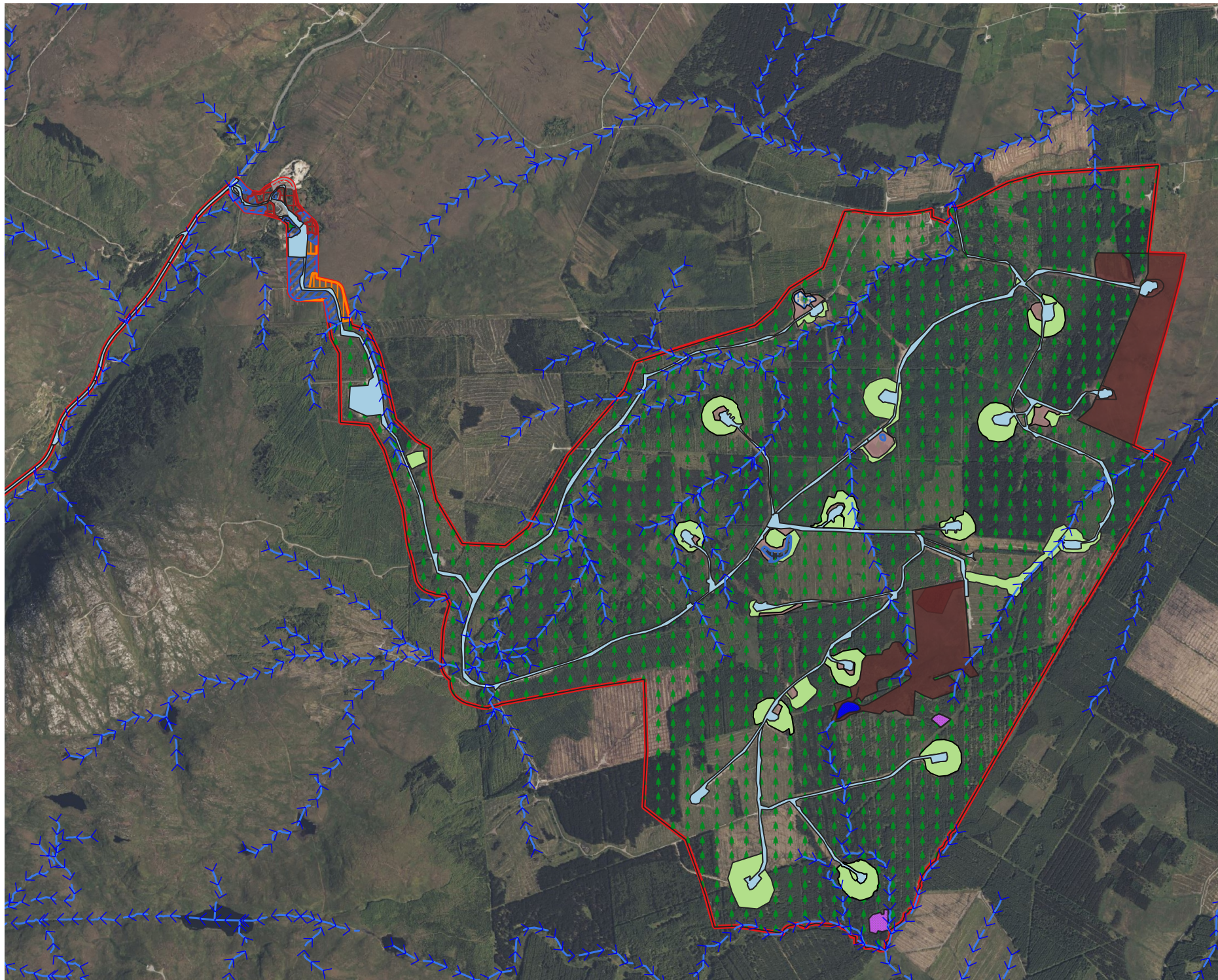
3. CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

3.1 Results of Baseline Ecological Surveys

3.1.1 Floral Habitats and Species

A map showing the habitats as they now exist is shown in **Figure 3-1**. The Grid Connection Site is not included in the map as it is primarily located within built habitats within the existing road network or immediately adjacent to it. A short section of the Grid Connection Site is located immediately adjacent to the road and in a field of improved Wet Grassland (GS4) that was reinstated following construction. There was a small section of scrub located in this area. The pre-construction baseline was described in the NIS for the Permitted Development.

The below paragraphs describe the habitats on the Site as they exist at the current time and how they have changed as a result of the Existing Development and the November 2020 Peat Slide or other processes.



Map Legend

- Site Location
- Eroding/ Upland Rivers (FW1)
- Buildings and artificial surfaces (BL3)
- Spoil and bare ground (ED2)
- Recolonising bare ground (ED3)
- Dystrophic lakes (FL1)
- Other artificial lakes and ponds (FL8)
- Wet grassland/ Wet heath (GS4/HH3)
- Wet heath (HH3)
- Cutover bog (PB4)
- Conifer plantation and Associated habitats (WD4)
- Scrub (WS1)
- Upland blanket bog/ Wet heath (PB2/HH3)



Drawing Title

Habitat Map

Project Title

Substitute for Consent Application for
Meenbog Wind Farm

Drawn By

MK

Checked By

PR

Project No.

240505-a

Drawing No.

Figure 3.1

Scale

1:25,000

Date

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3.1.1.1 Conifer Plantation (WD4)

Conifer plantation (WD4) remains the dominant habitat type recorded on the Wind Farm Site. Conifer plantation was recorded throughout the Wind Farm Site and includes a variety of growth stages from recently clear-felled, through young plantation to closed canopy forest. This is typical of a commercially managed upland coniferous forest. In some areas throughout the Wind Farm Site, the original peatland habitat persists amongst the trees where the trees had grown poorly. Species recorded include Sitka spruce (*Picea sitchensis*), lodgepole pine (*Pinus contorta*), Japanese larch (*Larix kaempferi*) and noble fir (*Abies procera*). Typical conifer plantation habitat from within the Wind Farm Site is shown in Plate 3.1.

In 2016 conifer woodland accounted for approximately 91% of the study area. In 2025 the habitat accounted for approximately 81% of the study area. This change is largely as a result of the Existing Development having been constructed primarily within this habitat. The forestry has largely been replaced, with coniferous forestry having been felled and replaced with habitats associated with the built infrastructure such as Buildings and Artificial Surfaces (BL3), Spoil and Bare Ground (ED2) and Recolonising Bare Ground (ED3) associated with the footprint of the Existing Development as constructed. In addition, conifer plantation has also been replaced with Wet Grassland (GS4)/Wet Heath (HH3) mosaics surrounding the infrastructure where trees have been felled to buffer the turbines and adjacent to infrastructure.

The November 2020 Peat Slide also resulted in the loss of Conifer Plantation. This has been replaced primarily with Recolonising Bare Ground (ED3) and Wet Grassland (GS4). Areas have also been planted with broadleaved tree species including grey willow (*Salix cinerea*) and alder (*Alnus glutinosa*).



Plate 3-1 Example of Immature Conifer Plantation as found throughout the Wind Farm Site

3.1.1.2 Upland Blanket Bog/Wet Heath (PB2/ HH3)

These peatland habitats on the Wind Farm Site include an intimate mosaic of Upland blanket bog (PB2) and Wet Heath (HH3). The Blanket Bog is present on the flatter sections with heath habitat occurring where the ground is more sloping or where there are rock outcrops. This habitat type is shown in Plate 3-2. The northeast corner of the study area forms part of a larger peatland area that stretches further to the north and east. The other section of the study area where this habitat exists is located amongst forestry plantations to the northeast of Carrickaduff Lough.

In this habitat type purple moor-grass (*Molinia caerulea*) and Ling were often either abundant or frequent, while deergrass (*Trichophorum germanicum*) and common cottongrass (*Eriophorum angustifolium*) could be frequent. Other vascular plants that were regularly encountered were harestail cottongrass (*Eriophorum vaginatum*), cross-leaved heath (*Erica tetralix*), bog asphodel (*Narthecium ossifragum*), Round leaved Sundew (*Drosera rotundifolia*), white-beaked sedge (*Rhynchospora alba*) and tormentil (*Potentilla erecta*). The bryophyte flora of these areas included a number of Sphagnum species, with *S. capillifolium* being the commonest, followed by *S. Papillosum*, with *S. magellanicum* and *S. Cuspidatum* also regularly recorded. Other frequently encountered bryophytes were the moss *Racomitrium Lanuginosum* and the liverwort *Pleurozium purpurea*. The lichens *Cladonia portentosa* and *C. uncialis* were regularly encountered also. On the flatter sections, peat depths tended to exceed 0.5m and these communities correspond best to the National Survey of Upland Habitats (NSUH) type BB4 *Trichophorum germanicum* - *Eriophorum angustifolium* blanket bog.

On steeper sections, the peat depth tended not to exceed 0.5m and were classified as wet heath. The major components of the Wet heath vegetation type were ling, deergrass and purple moor grass. Other plants present included cross-leaved heath, tormentil, harestail cottongrass, common cottongrass, heath rush (*Juncus squarrosus*), heath bedstraw (*Galium saxatile*), tormentil, heath milkwort (*Polygala serpyllifolia*), green-ribbed sedge (*Carex binervis*) and bilberry (*Vaccinium myrtillus*). Bryophytes present included *Sphagnum capillifolium*, *Racomitrium lanuginosum* and *Hypnum jutlandicum*. Overall heath cover in these areas exceeded 25% and the depth of peat was less than in the blanket bog areas (often 50 cm or less).

This type of vegetation is best described by the NSUH type WH4b, *Trichophorum germanicum* - *Eriophorum angustifolium* wet heath (with *Calluna vulgaris* frequent). Typical upland blanket bog/ wet heath habitat from within the Wind Farm Site is shown in Plate 3-2.



Plate 3-2 Upland Blanket Bog and Wet Heath Habitat as recorded within and surrounding the Wind Farm Site

Two significant changes to the baseline from 2017 were identified and are described below.

November 2020 Peat Slide

An area of upland blanket bog that is located to the northeast of Carrickaduff Lough was the site of the November 2020 Peat Slide. This directly affected an area of approximately 2.2 hectares. With much of the surface and sub surface peat sliding down the hill to the north, through areas of conifer plantation. The affected habitat is still classified as Blanket Bog (PB2) but is highly degraded with large areas of bare peat, shallow pools and islands of vegetation as shown in Plate 3-3. The recovery in this area has been monitored since 2021. Surveys were undertaken at four locations within the November 2020 Peat Slide area and at four locations adjacent to it. The surveys within the November 2020 Peat Slide area were designed to monitor recovery and recolonisation in the areas that were directly affected. The other surveys were designed to monitor any indirect changes to the habitat that may occur as a result of the peat slide such as drainage and desiccation.

It was noted that in all except one of the survey sites within the peat slide area, slow recolonisation is progressing in the five-year period since the slide occurred. Species such as ling heather, Woolly Fringe moss (*Racomitrium Lanuginosum*), cottongrasses (*Eriophorum spp.*) and purple moor grass are slowly recolonising the bare peat along with some *Sphagnum* species in places, as shown in Plate 3-4.



Plate 3-3 Degraded Blanket Bog at the site of the November 2020 Peat Slide



Plate 3-4 Colonisation of bare peat in November 2020 Peat Slide area with sparse vegetation (*Eriophorum* sp.)

It was further noted that there were no significant differences in the condition of the surrounding habitats during the monitoring period, with a similar species composition being recorded throughout.

As part of the monitoring, consideration was given to:

- The blocking of drains that are located on the bog outside the November 2020 Peat Slide area but run into it from the south. However, there was no flow observed in these drains during any of the surveys, no deterioration of surrounding bog habitats and no clear benefit to the installation of dams.
- Blocking of flow paths within the November 2020 Peat Slide area itself. However, it was noted that the flow path through the November 2020 Peat Slide area actually created small pools and areas with shallow water that would facilitate natural recolonisation.
- Active re-seeding of bare peat. The area is recolonising with species that are typical colonisers of bare peat and whilst it is a slow process, the re-seeding was not considered necessary. This will continue to be monitored and if necessary, seed will be spread.

Wind Farm Infrastructure

The Existing Development has resulted in the loss of approximately 0.8ha of Blanket Bog to facilitate the construction of two turbine bases (T16 and T19), with an approximate 0.1 ha indirectly affected through disturbance. This impact was identified in the 2017 EIAR. The wind farm infrastructure in this area is shown in Plate 3-5.

In addition to the area lost to facilitate the Existing Development, peatland habitats are recorded within the recolonising habitats where forestry has been felled to construct peat management areas. They are highly degraded versions of the habitat and have been mapped primarily as wet grassland given their presence as a mosaic with this habitat. but nonetheless, species such as ling (*Calluna vulgaris*), *Polytrichum* and *Sphagnum* species were starting to recolonise also and are indicators of wet heath. Some of the wetter areas on the peat management areas are developing with *Sphagnum* pools with species such as bog pondweed (*Potamogeton polygonifolius*) as shown in Plate 3-6. Much of the southeastern section

of the Wind Farm Site, where heath vegetation was always present beneath the conifers is recolonising with heath and wet grassland where the conifers have been felled as shown in Plate 3-7.

It is noted that peatland habitats including uncut Upland Blanket Bog exist outside the Wind Farm Site but alongside the Shruhanganve Stream, which was directly affected by the November 2020 Peat Slide.



Plate 3-5 Representative photo of the wind farm infrastructure at T19, which is similar at T16



Plate 3-6 Colonisation of bare peat in peat and spoil management areas with Sphagnum and bog pondweed



Plate 3-7 Heath type vegetation colonising where conifers have been felled alongside infrastructure

3.1.1.3 Cutover blanket bog (PB4)

A small area of cutover blanket bog occurs adjacent to the access road in the northwestern section of the Wind Farm Site. This area has been recently cut-over and peat extraction has continued throughout the survey period between 2016 and 2025. This area was characterised by a high occurrence of bare peat. There was a mosaic of revegetating/revegetated BB4 blanket bog (PB2) and more recently cutover wet areas with a high percentage of bare ground, but also frequent/abundant common cottongrass. The latter community is best described the NSUH type HW2i, *Eriophorum angustifolium* - *Sphagnum fallax* hollows (PB2). There have been no significant changes in this habitat since the surveys for the 2017 EIAR were undertaken.

3.1.1.4 Wet Grassland (GS4)

Wet grassland (GS4) was recorded within the Wind Farm Site adjacent to the access road within the northwest of the Wind Farm Site during the surveys for the 2017 EIAR. This type of grassland also occurs naturally, e.g. along river valleys, but most of the grassland classified as this habitat type in the wider area is the result of the modification of peatlands and is associated with agricultural activities, notably sheep grazing. These grasslands were still present during the subsequent surveys up to 2025 and had not been affected by the Existing Development.

Additional areas of Wet Grassland (GS4) have been created around the infrastructure where coniferous forestry has been felled around turbine bases and access roads. It has also developed on recolonising peat repository areas. This recolonised habitat is often dominated by species such as soft rush (*Juncus effusus*) and bulbous rush (*Juncus bulbosus*). Other species including Yorkshire fog (*Holcus lanatus*), creeping bent grass (*Agrostis stolonifera*) and tormentil (*Potentilla erecta*) are frequent. In places, this habitat includes elements of blanket bog (PB4), heath (HH3) and willow scrub (WS1) communities with *Polytrichum* and *Sphagnum* species along with Ling heather and grey willow in places. It is noted that in the drier areas, without management, this grassland is likely to succeed to bramble and grey willow scrub, like the existing habitats alongside the forestry infrastructure around the Wind Farm Site. No areas of Annex I Molinia Meadows habitat were recorded on the Wind Farm Site. An example of the Wet Grassland habitat that has developed around the Existing Development infrastructure is shown in Plate 3-8.



Plate 3-8 Wet grassland (GS4) found commonly throughout the Wind Farm Site

3.1.1.5 Scrub (WS1)

A number of small areas of scrub (WS1) were identified within the Wind Farm Site. This was generally associated with young forestry, along tracks, roads and forestry edges. These are small, fragmented and have not been mapped. Types of scrub encountered included areas with tangled Bramble (*Rubus fruticosus* agg.), as well as gorse (*Ulex europaeus*) and grey willow (*Salix cinerea* ssp. *oleifolia*) scrub patches. These areas can be characterised as areas of habitat dominated by (i.e. at least 50% cover) vigorous shrubs like bramble and gorse, or by small sub-mature trees less than 4-5 metres in height (Plate 3.6). Other plants present in some of these areas of scrub included Ivy (*Hedera helix*), honeysuckle (*Lonicera periclymenum*), holly (*Ilex aquifolium*) and hazel (*Corylus avellana*). There had been no significant changes in the scrub habitats on the Wind Farm Site between 2016 and 2025. However, it was noted that many of the areas where conifers had been felled around infrastructure within the Wind Farm Site had recolonised with wet grassland/heath habitats but in the drier sections, grey willow and bramble were starting to encroach and these areas were likely to succeed to scrub.

3.1.1.6 Eroding/upland rivers (FW1)

Three small catchments, consisting of a number of small rivers or streams arise or flow through the Wind Farm Site. They are all classified as Upland Eroding Rivers (FW1) and are typical of steep upland streams in peaty catchments. Each of the streams were extensively surrounded by coniferous forestry prior to the Existing Development.

Watercourses within these catchments were all described in the *Aquatic Baseline Report for Meenbog Wind Farm (2025)* that is provided as Appendix 1. The fisheries assessment that was provided for the 2017 EIAR is also provided within Appendix 1.

The largest of these channels is the Bunadaowen River, a tributary of the Mourne Beg River (Derg catchment) (See Plate 3-9). This catchment arises in the mountains to the west of the Wind Farm Site and flows through it in a north easterly direction. There are numerous small tributary streams that flow into it, many of which arise on the Wind Farm Site. There were no works undertaken within this watercourse as part of the Existing Development, but the Wind Farm infrastructure crosses the stream on existing forest roads that have been upgraded. Descriptions of the watercourse are provided in Appendix 1. Three aquatic survey locations are located within the Wind Farm Site and one immediately downstream of the confluence of the Bunadaowen and Mourne Beg Rivers. The river has a steep to moderate gradient, with few macrophytes and low cover of bryophytes. The upper reaches of the channel, outside the Wind Farm Site are surrounded by open upland heath habitats. Moving through the Wind Farm Site itself, the surrounding land use is predominantly coniferous forestry. Whilst there is a buffer of wet grassland and bramble/willow scrub between the main stem of the river and the forestry, there is no such buffer surrounding many of the tributaries. There were no significant changes to the watercourses recorded in this catchment between the surveys undertaken for the 2017 EIAR and the subsequent surveys undertaken up to 2025.



Plate 3-8 Bunadaowen River

The Glendergan River arises out of a lough that is located to the west of the Wind Farm Site and flows along the southern boundary of the Wind Farm Site for a distance of approximately 900m. A small tributary of this River arises in Carrickaduff Lough within the Wind Farm Site and flows in a southerly direction before exiting the Wind Farm Site in the southeastern corner, where it joins the Glendergan River. Another short tributary arises within the Wind Farm Site and flows south before joining the Glendergan River slightly further west. All waterbodies described above are narrow, peaty streams that are surrounded, and in many places, shaded by coniferous forestry. Other areas are surrounded by clear felled forestry, bog and heath habitats. A sampling point within this catchment is fully described in Appendix 1 and is located the southeastern corner of the Wind Farm Site. At this point, the stream is approximately 1m wide and is an incised, silty channel with high banks and the upstream tributaries are very small channels within the forestry. The wind farm infrastructure has avoided all instream works in this catchment.

There were no significant changes recorded in this catchment between the surveys undertaken for the 2017 EIAR and the subsequent surveys undertaken up to 2025.

The Shruhangerve River arises within forestry and bog in the eastern sections of the Wind Farm Site and flows in a northerly direction before exiting the Wind Farm Site and flowing through peatland habitats until it converges with the Mourne Beg River. This is a steep, high energy channel with a substrate consisting of large boulders, bedrock and large cobble over much of its length. The November 2020 Peat Slide directly affected this river and resulted in the obscuring of approximately 1km of the channel, all of which was within the Wind Farm Site. It also resulted in large volumes of peat being deposited downstream on the Shruhangerve and its banks along with the Mourne Beg River. A dedicated clean up and restoration programme was undertaken under a separate process following a notice issued by Donegal County Council under Sections 10(5), 12(1) and 23(1) of the Local Government (Water Pollution) Acts. This included the manual removal of peat from the channel and recreation of a flow path, stabilisation of the banks with coir mesh and the planting of native tree species including alder and grey willow along a wide riparian buffer surrounding the stream. In addition, a small pond was created along the river channel. This river restoration has been successful in that in 2025, the Shruhangerve is in

very similar condition to that which was recorded during the 2017 surveys that were undertaken for the permitted application. In addition, it is surrounded by a wide riparian buffer as opposed to being overshadowed by conifer plantation. Plates 3-10 and 3-11 show the Shruhangarve within the Wind Farm Site immediately following the November 2020 Peat Slide and in 2025, following restoration. Downstream of the Wind Farm Site, the Shruhangarve, its banks and the Mourne Beg River have likewise returned to pre-November 2020 Peat Slide conditions. Details of the condition of this river in 2025 are provided in Appendix 1.



Plate 3-10 Shruhangarve immediately after the November 2020 Peat Slide



Plate 3-11 Shruhangarve at similar location in 2025

Mary Breen's Burn (also known as Croaghonagh River) flows close to the entrance road on the Wind Farm Site and discharges to the Mourne Beg catchment. It flows in a north easterly direction from the Wind Farm Site, through the Croaghonagh Bog SAC, which supports Upland Blanket Bog and Wet Heath habitats. It joins the Mourne Beg River approximately 2 km to the northeast of the access road on the Wind Farm Site. It is an upland, peaty channel of up to 2.5m in width. In both the surveys that were carried out for the 2017 EIAR and subsequent survey up to 2025, the river was in poor condition with high levels of filamentous algae recorded (suggesting nutrient enrichment). There were no significant changes recorded in this catchment between the surveys undertaken for the 2017 EIAR and the subsequent surveys undertaken up to 2025. Drainage ditches (FW4)

The Wind Farm Site is bisected with numerous artificial forestry drainage channels. The majority of these support little or no flow and are less than 0.5m in width. They often support dense bryophyte communities with rush dominated banks and iron deposits. This habitat is shown in Plate 3.12.



Plate 3-12 Example of Forestry Drains throughout the Site.

3.1.1.7 Dystrophic lake (FL1)

Carrickaduff Lough is classified as a dystrophic lake. It is located within a peatland section of the Wind Farm Site and has steep banks that comprise of peat rather than stone or mineral soil. Yellow water lily (*Nuphar lutea*) and broadleaved pondweed (*Potamogeton natans*) were recorded from the lake and the Wet Heath/Bog habitat continued right up to the water's edge. This habitat has not been impacted by the existing works and there are no significant changes since the surveys for the 2017 EIAR. This habitat is shown in Plate 3.13.



Plate 3-13 Carrickaduff Lough - Dystrophic Lake

3.1.1.8 **Built and Artificial Habitats**

The amount of built and artificial habitats on the Wind Farm Site has increased as a result of the Existing Development. These habitats mainly include Buildings and Artificial Surfaces (BL3), Spoil and Bare Ground (ED2) and Recolonising Bare Ground (ED3) associated with Wind Farm infrastructure such as turbine bases, access roads and associated ground works. The majority of these habitats are located on lands that were previously coniferous forestry. In 2016, the majority of the built and artificial habitats on the Wind Farm Site were associated with forestry roads that were classified as Spoil and Bare Ground (ED2). Shown in Plate 3-14.



Plate 3-14 Wind farm infrastructure present throughout the Wind Farm Site

There is a quarry close to the Wind Farm Site entrance. The current habitats at this location include Spoil and Bare Ground (ED2), Recolonising Bare Ground (ED3) associated with the ongoing operation of the quarry and the new access road, willow (*Salix cinerea*) and bramble (*Rubus fruticosus*) Scrub (WS1) and Active Quarries and Mines (ED4) in the wider area.

3.1.1.9 Other artificial lakes and ponds (FL8)

Artificial lakes and ponds were recorded throughout the Wind Farm Site during the 2025 surveys. These included ponds that had developed in the borrow pits and open excavations that had been constructed as part of the Existing Development, as shown in Plate 3-15 below.



Plate 3-15. Artificial Pond within borrow pit

In addition, there was a settlement pond recorded close to the Wind Farm Site entrance and classified as Artificial Lakes and Ponds (FL8), this was lined with plastic and was of low ecological value (Plate 5-2). This was an existing artificial settlement pond from an adjacent quarry that had been recorded in the surveys for the 2017 EIAR but had been slightly relocated and lined. An overflow system was observed and was in use at the time of the visit (after several days of heavy rain), with the pond discharging to an existing culvert beneath a wind farm access road that forms part of the Existing Development and an existing and unrelated quarry road and into a drain that forms part of the adjacent quarry drainage network. This pond is shown in Plate 3-16.



Plate 3-16 Artificial Pond close to the quarry entrance

In addition to the above, a pond was created on the Shruhangarve River to provide habitat diversity in the northern section of the Wind Farm Site as part of the river restoration works. This is shown in Plate 6-17.



Plate 3-17 Artificial Pond on the Shruhangarve River to increase habitat diversity

3.1.1.10 Grid Connection Site

The Grid Connection Site primarily follows the public road network in a southerly direction and the development footprint is located within the road infrastructure itself. The N15, in which the Grid Connection is located for over 5km, is surrounded by peatland habitats, coniferous forestry and wet grassland habitats. It crosses the Lowerymore River (within the existing bridge infrastructure) and runs adjacent to it over much of the route.

The Grid Connection Site deviates from the N15 near Keadew Lower and follows local roads including the L 2595 towards the Clogher substation. The road is surrounded by agricultural fields that are bounded by hedges and drainage ditches in the northern sections and wire fences at it continues south. The southernmost sections, surrounding the Clogher Substation are surrounded by acid grasslands and heath habitats.

A short section of approximately 430m in length was located immediately adjacent to the road, in a field of improved wet grassland habitat. This was bounded by a post and wire fence during the walkover surveys and was similarly bounded by a fence in advance of the construction of the Permitted Development, with the exception of a short section of approximately 25m in length, which consisted of immature trees and scrub including ash and birch.

3.1.1.11 Biodiversity Enhancement Site

In addition to the lands within the Wind Farm Site and Grid Connection Site, the Prospective Development will also involve the felling of approximately 108 hectares of conifer forestry that is currently growing on peatland habitats, some sections of which are flat, very wet and suitable for bog restoration. Other areas are drier and sloping but still on peaty substrate. The dominant species is Sitka

spruce throughout. This habitat is shown in Plate 3-17. The Biodiversity Management and Enhancement Plan is provided in Appendix 3.



Plate 3-17 Typical habitat in enhancement lands

3.1.2 Relevant faunal surveys

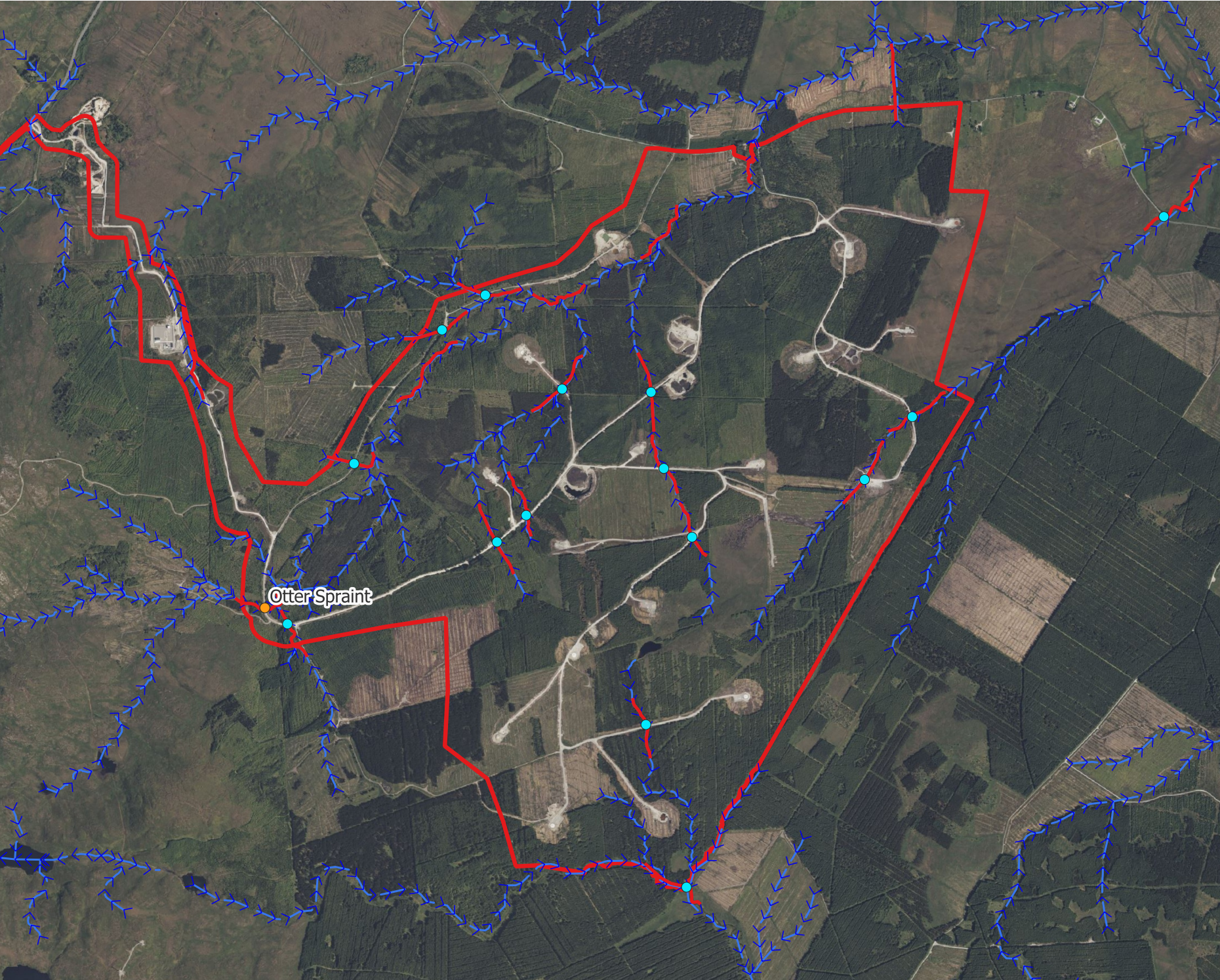
The potential to result in effects on Annex II fauna associated with nearby SACs was assessed during the site walkover surveys and the requirement for further, more targeted surveys was considered. Signs of otter were recorded on the Bunadaowen River within the Site during the walkover surveys and suitable habitat for the species was recorded on all the watercourses throughout the Site. Similarly, suitable habitat for Atlantic salmon was identified. Both these species are listed on Annex II of the EU Habitats Directive and are among the Qualifying Interests of nearby SACs. Dedicated surveys for these species were undertaken.

Whilst extensive bird surveys were undertaken on the Site to inform the rEIAR and EIAR, they are not relevant to this NIS as the potential for the Prospective Development to result in likely significant effects on any SPAs has been excluded in the Screening Assessment that is presented below.

3.1.2.1 Otter Surveys

A dedicated otter survey was undertaken on the Bunadaowen and Shruhangerve Rivers that are within the Site. This involved a walkover of the relevant watercourses where they occur within 150m of the Prospective or Existing Development. Otter spraint was recorded under a bridge over the Bunadaowen River, where the wind farm road crosses it, during each of the dedicated surveys (and during many of the walkover surveys). This bridge was the subject of works to facilitate the Existing Development and is clearly a regularly used sprainting area. No other signs of otter activity were recorded within the Site during any of the surveys undertaken. A map showing the areas surveyed and location of the spraint Site is shown in Figure 3-2.

In addition to the dedicated surveys for otter within the Site, otter were recorded during the aquatic surveys that are provided in Appendix 1 and described in subsequent sections.



Map Legend

- Site Location
- Otter Survey Stretch
- Crossing Points
- Otter Signs
- Rivers



Drawing Title

Otter Survey Map

Project Title

Substitute for Consent Application for
Meenbog Wind Farm

Drawn By	Checked By
MK	PR
Project No.	Drawing No.
240505-a	Figure 3.2
Scale	Date
1:25,000	09.06.2026

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3.1.3 Aquatic Surveys

3.1.3.1 Desk Study

3.1.3.1.1 Local Hydrology and Hydrogeology

The majority of the Site is drained by tributaries (Shruhingarve [01S26], Bunadaowen [01B01]) of the Mourne Beg River which flow north-westerly through the Site. The southern portion of the Site is drained by tributaries of the tributaries/ headwaters of Glendergan River (Segment codes: 01_549, 01_599, and 01_GBN10102037) which flow into Northern Ireland. In the western section of the Site, the Barrack Hill stream [37B16] flows culverted under the road (N15) by the entrance to the Site and flows southwards becoming a tributary of the Lowerymore River [37L01]. Two tributaries to the Mourne Beg River (Croaghonagh [01C31] and a tributary of this stream Segment code: 01_1835) flow in a northerly direction through the west of the Site by the site access track.

The majority of the Site is located within the Foyle (01) Catchment, except the Site access route and grid connection which is within the Donegal Bay North (37) Catchment. Most of the Site is within the MourneBeg_SC_010 sub-catchment draining into the Mourne Beg River system. A small southern section of the Site is within the LeaghanyRiver_SC_010 sub-catchment, draining into Glendergan River system. A small section in the west of the Site is within the Eske_SC_010 sub-catchment which drains into the Lowerymore River system.

As per the latest report on the Foyle Catchment Summary the Castlederg ground waterbody, in which the Existing Development lies, is classified to being in “Good” condition.

3.1.3.1.2 EPA Water Quality Data

River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive. The online EPA Envision map viewer provides access to water quality information at individual waterbody status for all the River Basin Districts in Ireland. The EPA Envision map viewer and catchments.ie mapper was consulted, most recently, on the 4th of March 2026 regarding the water quality status of the rivers which run within and directly adjacent to the Site.

The WFD 3rd cycle River Waterbody Status 2016 – 2021 for the watercourses which flow within, adjacent and downstream of the Site have been reviewed and details of their status and risk are provided in **Table 3-1**.

Table 3-1 Watercourses on Site with relevant water quality statuses

Name	Location	Status	Risk
Bunadaowen _010 system (tributary to the Mourne Beg)	Flows in a northeasterly direction through the western edge of the Site through the centre and out through the north of the Site. Drains into the Mourne Beg flows into the River Finn SAC.	Moderate	At risk
Mourne Beg_010 system	Flows in an easterly direction to the north of the Site. Two stream systems flow through/from within the Site into this watercourse. Two tributaries of the Mourne Beg	Poor	At risk

	flow through the western edge of the Site in a north easterly direction and enter the Croaghonagh Bog SAC and then east into the Mourne Beg River.		
Mourne Beg River (Derrygoonan)	The headwaters are found within the Site in the eastern side of the Site and flows in a northeasterly direction through the Site and becomes a tributary to the Mourne Beg River.	Moderate	At risk
Glendergan River	The headwaters are found within the south of the Site and flows in a southerly direction through the Site and crosses the border into Northern Ireland.	Poor	In review
Lowerymore_020	Flows in a south westerly direction through the Site at the western edge of the Site by the N15. Flows into the Lough Eske and Ardnamona Wood SAC.	High	Not at Risk

The Biotic Index of Water Quality (BIWQ) was developed in Ireland by the Environmental Protection Agency (EPA). Biotic indices (Q-Values) reflect water quality at any location. Q-values are assigned using a combination of habitat characteristics and structure of the macro-invertebrate community within the waterbody. Individual macro-invertebrate families are classified according to their sensitivity to organic pollution and the Q-value is assessed based primarily on their relative abundance within a sample.

The EPA operates a number of Q-value monitoring sites in the vicinity of the Site. The sampling stations listed below are downstream of the Site and have be affected by the Prospective Development. EPA sampling stations are situated downstream of the Site in four out of the five subbasins relevant to the Subject Development.

The Northern Ireland Environment Agency (NIEA), an agency with the Department of Agriculture Environment and Rural Affairs is responsible for water quality monitoring in Northern Ireland. Part of the Existing Development is situated in the Glendergan catchment, which drains across the Northern Irish border into the River Derg. The Northern Ireland Water Framework Directive Statistics Report 2021 ("the 2021 Report") is the latest available water quality report. Water bodies are assessed against a number of elements as required by the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017. For surface waters, ecological status is assessed against five classes: bad; poor; moderate; good; and high. Chemical status surface water bodies are assessed against two classes: good and failing to achieve good.

The status of a water body is determined by the lowest test element and follows the one-out, all-out rule. The ecological status of a river waterbody is consequently assigned as a combination of lowest test element from the chemical testing and biological testing.

In the 2021 Report, uPBT substances, so called 'forever' chemicals, and Cybermethrin, an insecticide, were included for the first time in the chemical classification. Prior to 2021 these criteria were not included in the assessments. Further information on these significant changes in methodology can be found in the 2021 Report.

Therefore, across Northern Ireland, river waterbody ecological status has declined as ‘forever’ chemicals were recorded in all rivers. The NIEA Catchment Data Viewer allows for comparison of river classification without the inclusion of ‘forever’ chemicals, which allows for comparison of pre- and post-construction water quality in the Glendergan river. The relevant monitoring location in the Glendergan catchment is Glendergan River at Scraghcumber (Site code F10049).

The location of the EPA and NIEA monitoring sites are shown in **Figure 3-4**. EPA monitoring sites are briefly described below.

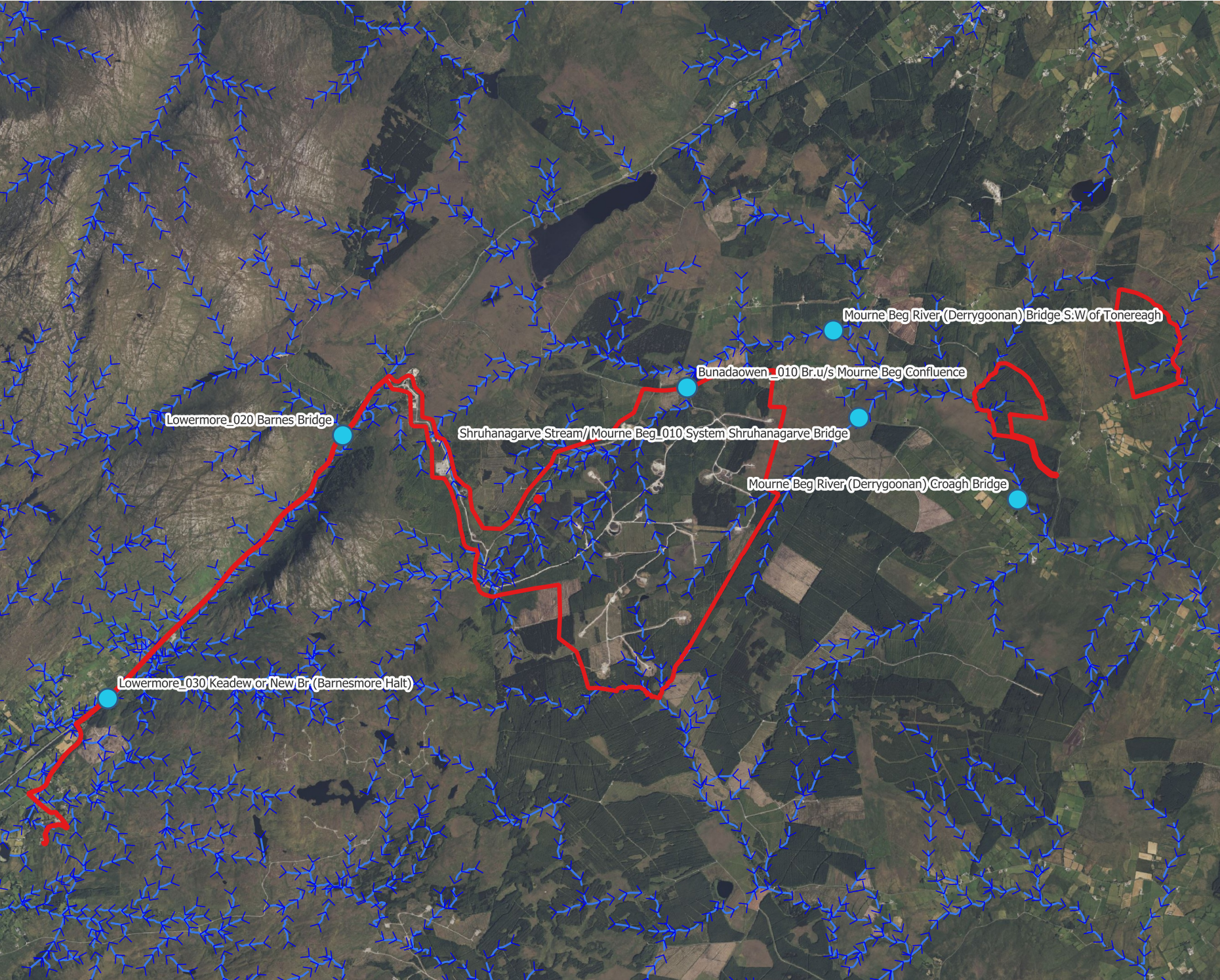
- EPA. Bunadaowen. Br. u/s Mourne Beg Confluence (ITM coordinates 608091E, 887615N), immediately upstream of its confluence with Mourne Beg River. This sampling station is downstream of a large part of the Site but upstream of where the November 2020 Peat Slide entered the Mourne Beg River.
- EPA. Mourne Beg. Bridge SW of Tonreagh (ITM coordinates. 609853E, 888310N), is located downstream of the confluence with the Bunadaowen River and immediately upstream of the River Finn SAC. Data from this sampling station is relevant as it is downstream of the Site and where the November 2020 Peat Slide entered the river.
- EPA Shruhangarve Bridge (ITM coordinates 610179E, 887240N). This is the river that was directly impacted by the November 2020 Peat Slide.
- NIEA Glendergan River At Scraghcumber (Easting: 614538.1, Northing: 879646.3) is located to the south east of the Wind Farm Site and downstream of a section of the Wind Farm Site.
- EPA. Lowerymore River. Barnes Bridge (ITM coordinates 603930E, 887019N) is located downstream and in close proximity to the entrance to the Wind Farm Site and Grid Connection Site.
- EPA. Lowerymore River.- Keadew or New Br (nr Barnsmore Halt) (ITM coordinates 601082E, 883845N), is located downstream from Sampling station “Barnes Bridge” at the beginning of Lough Eske and Ardnamona SAC on the Lowerymore river. This sampling stations samples for potential impacts of the Existing Development on Lough Eske and Ardnamona SAC.
- EPA. Mourne Beg “~150m u/s Croagh Bridge (u/s Croagh Burn trib Conflu)” (ITM coordinates 612419E, 889317N), is located on the Mourne Beg river further downstream of the Site and November 2020 Peat Slide.

Table 3-2 Watercourses within the vicinity of the Site with relevant Q-Values

Name	Location / Date	Q-Values Status
Bunadaowen _010 system (tributary to the Mourne Beg)	Br. u/s Mourne Beg Confluence- 2022 Station Code: RS01B010100 Easting: 208140.55 Northing: 387608.56	2016- Q2 (Poor Status)
		2017- Q2-3 (Poor status)
		2019- Q3-4 (Moderate Status)
		2020- Q4 (Good Status)
		2022- Q4 (Good status)
Shruhangarve Stream/ Mourne Beg_010 system	Shruhangarve Bridge- 2022 Station Code: RS01S260830 Easting: 210229.29	2020- Q1 (Poor Status)
		2023- Q3 (Poor Status)

	Northing: 387230.11	
Mourne Beg River (Derrygoonan)	Bridge S.W. of Tonreagh- 2022 Station Code: RS01M010200 Easting: 209903 Northing: 388300	2020- Q3-4 (Moderate Status)
		2022- Q4 (Good Status)
Mourne Beg River (Derrygoonan)	Croagh Bridge Station Code: RS01M010420 Easting: 212470.33 Northing: 385903.4	2020- Q3-4 (Moderate status)
		2022- Q4 (Good status)
Glendorgan River*	Glendorgan River At Scraghcumber - 2021 Station Code: UKGBNIF10049 Easting: 614538.1, Northing: 879646.3	Poor* (with “forever” chemicals assessment)
		Good* (without “forever” chemicals assessment)
		2013-2018- “Moderate”
		2016-2021-“Poor”
Lowerymore_020	Barnes Bridge - 2021 Station Code: RS37L010100 Easting: 203974.22 Northing: 387034.09	2015- Q3-4 (Moderate Status)
		2018- Q4 (Good Status)
Lowerymore_030	Keadew or New Br (nr Barnesmore Hall) Station Code: RS37L010300 Easting: 201129.83 Northing: 383850.21	2015- Q4-5 (Good Status)
		2018- Q4-5 (Good Status)

* Northern Ireland Environment Agency Monitoring (ecological/chemical) system.



Map Legend

- Site Location
- Water Quality Monitoring Locations
- WFD River Waterbodies

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Drawing Title

EPA/ NIEA Water Quality Monitoring Locations

Project Title

Substitute for Consent Application for Meenbog Wind Farm

Drawn By	Checked By
MK	PR
Project No.	Drawing No.
240505-a	Figure 3.3
Scale	Date
1:60,000	09.06.2026

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3.1.3.2 Aquatic Field Surveys

The results of the aquatic surveys undertaken are provided in full in Appendix 1. To avoid repetition, they are not included here but the main findings of each report are summarised below. Whilst the only species of relevance to this NIS are Atlantic salmon and otter, the fisheries assessments cover other habitats and species such as aquatic macro invertebrates that give an indication of the general health of the rivers in question.

3.1.3.2.1 2017 Report- Meenbog Wind Farm Fisheries Assessment

This report was provided as Appendix 6.3 to the 2017 EIAR and includes a desk study of available information on the Derg catchment as a whole rather than specific information on the Mourne Beg. It also provides more detailed information on the smaller streams within and adjacent to the wind farm Site including the Shruhanganve, Bunadaowen and Mary Breen's Burn. It provides a baseline of the fisheries environment in advance of any works associated with the Existing Development.

The report identifies the known presence of the following fish species within the catchment:

- › Atlantic salmon (*Salmo salar*)
- › Brown trout and sea trout (*Salmon trutta*)
- › Eel (*Anguilla anguilla*)
- › Minnow (*Phoxinus phoxinus*)
- › River/Brook lamprey (*Lampetra spp*)
- › Sea lamprey (*Petromyzon marinus*)
- › Three-spined stickleback (*Gasterosteus aculeatus*)
- › Stone loach (*Noemacheilus barbatula*)
- › Pike (*Esox lucius*)
- › Perch (*Perca fluviatilis*)
- › Roach (*Rutilus rutilus*)
- › Gudgeon (*Gobio gobio*)

It then provides a desk study of relevant data on Salmonids, Lamprey and Freshwater Pearl Mussel (not present in Mourne Beg catchment).

The field surveys included site specific information on each of the streams surveyed:

Shruhanganve

Moderate quality stream with eel the only species recorded.

Bunadaowen

Good Quality stream with brown trout throughout and eel recorded.

Mary Breen's Burn

Poor quality stream but with significant fish stock. Brown trout recorded.

3.1.3.2.2 2017-Aquatic Macroinvertebrate Surveying

This report was included as Appendix 6-2 to the 2017 EIAR and includes information on the macroinvertebrate populations in the watercourses within and downstream of the Existing Development in advance of any associated works. It includes two survey stations on Mary Breen's Burn, one on the Bunadaowen, one on the Mourne Beg (upstream of the November 2020 Peat Slide area) and one on a tributary of the Lowerymore near the wind farm entrance onto the N15.

There were no surveys undertaken on the Mourne Beg downstream of the Shruhanganve confluence or on the Shruhanganve River.

In all samples, the recorded Q value was 3-4, indicating moderate water quality. None of the sampled streams achieved ‘Good’ status during the pre-works baseline survey.

3.1.3.2.3 2021 – Aquatic & Fisheries Assessment of November 2020 Peat Slide

An excerpt from the non-technical summary of the report that is included within Appendix 1 is provided below.

Triturus Environmental Ltd. in conjunction with McCarthy Keville O’Sullivan, the Lough’s Agency and RIVUS Ltd., undertook a fisheries and aquatic habitat assessment of the Mourne Beg catchment draining Meenbog wind farm near Ballybofey, Co. Donegal. Following a significant peat-slide event that occurred at the site in November 2020, the surveys focused on the Shruhangarve (peat slide pathway) and downstream Mourne Beg River to determine impacts to fish populations, fish spawning and nursery habitat. The assessment also considered direct impacts to riverbed condition in addition to biological water quality and hydromorphology. Long-term Loughs Agency fisheries data and salmonid spawning (redd count) data was also reviewed and used to inform our assessment. A total of 18.95km of riverine channel was surveyed, both upstream and downstream of the peat impact zone, in July and October 2021.

The July 2021 site surveys found that siltation impacts (from peat) were evident throughout the length of our Mourne Beg River survey area some 8 months after peat slide event, extending to >14km downstream of the Shruhangarve confluence. Siltation, in terms of riverbed surface cover, infiltration into riverine gravels and oxygen exchange (redox) was often severe. This resulted in significant reductions in the quality of habitat for salmonids and macro-invertebrates. Whilst siltation was evident in almost all areas of the peat impact zone (including shallow, fast-flowing reaches), the most significant volumes were present in depositional slow-moving glide and pool areas. Reductions in riverbed condition also impacted the hydromorphology of the river, mainly through the deterioration of bed condition, albeit much of the survey area retained hydromorphology equivalent to WFD good status (as would be expected for a natural upland river system).

Based on long term monitoring data (2011-2021), there was a significant restriction in the distribution of salmonid spawning areas (redds) in the first spawning season peat slide. This was primarily due to the (often severe) siltation of routinely used spawning areas. However, despite a considerable reduction, salmonid spawning was confirmed in several impacted areas of the Mourne Beg River in the December 2020-January 2021 period. Of note was the marked increase in spawning in the upper Mourne Beg River, upstream of the peat impact zone, in December 2020-January 2021. Despite evident impacts, numbers of juvenile Atlantic salmon (recorded via electro-fishing) increased in 2021 compared to the previous year (before the peat slide), thus indicating successful spawning and recruitment within the system. However, the increasing numbers of juvenile salmon may also be explained by a parallel reduction in trout consequential of the peat slippage event. Juvenile brown trout numbers were noticeably reduced within the impact zone in 2021 and this is thought to be linked to a higher degree of impact due to an earlier (than salmon) spawning season that likely coincided with the peat slide event causing significant mortality.

A swift recovery in biological water quality of the impact zone was observed (as assessed by Q-sampling of macro-invertebrates). Most sites sampled on the Mourne Beg River had recovered to Q4 (good status) water quality by October 2021, having been significantly worse in December 2020 (when some sites supported an absence macro-invertebrate life due to severe siltation impacts). An increased diversity of clean water indicator species, such as mayflies and stoneflies, were recorded in October 2021 demonstrating an improvement in biological water quality. The Shruhangarve, where peat slide impacts were most severe, was failing to meet Q4 (good status) thresholds in October 2021. In conclusion, the Meenbog peat slide caused and continues to cause considerable impacts to the quality of aquatic habitats within the Shruhangarve and Mourne Beg River. Whilst there is evidence of considerable recovery, impacts are predicted to last long-term. Given the large volumes of peat present within the system as a result of the peat slide, the spate nature of the Shruhangarve and Mourne Beg River will likely result in medium-term resuspension and flushing of peat downstream, providing a lasting source of peat and associated impacts to fisheries and aquatic habitats. Other sources of impact to aquatic habitats

and water quality, namely coniferous afforestation and agriculture, were identified during the 2021 surveys.

3.1.3.2.4 2024/2025 Aquatic Baseline Reports

Aquatic surveys were undertaken in both 2024 and 2025 and full details of these are provided in Appendix 1. The main conclusions are summarised below as they pertain to habitats within European Sites.

Fisheries

A typical diversity of fish species for the Mourne Beg_SC_010, Mourne Beg_SC_020, and Eske_SC_010 river sub-catchments was recorded during the electro-fishing survey, with Atlantic salmon, brown trout, stone loach, minnow, three-spined stickleback and Red-listed European eel captured. In contrast to previous surveys, an anadromous sea trout (also *Salmo trutta*) was also recorded at a site on the upper reaches of the Mourne Beg River.

Salmonid populations were widespread in vicinity of Meenbog wind farm, being present at all except one survey site. Annex II Atlantic salmon were recorded from a total of 11 no. sites on the Croaghonagh River, lower Bunadownen River, Lowerymore River and all survey sites on the Mourne Beg River.

The highest salmonid densities were recorded from the Mourne Beg River which represents the most valuable salmonid watercourse in vicinity of the wind farm. As per previous surveys, no lamprey ammocoetes (*Lampetra* sp.) were recorded, reflecting the poor habitat suitability across the survey area (Appendix A of the report in Appendix 1). Low densities of Red-listed European eel were recorded the Bunadownen River and Shruhangerve River in addition to 5 no. sites on the Mourne Beg River. Siltation pressures (mostly from peat escapement) and eutrophication pressures (e.g. afforestation) were evident throughout much of the survey area, particularly on the Bunadownen, Mourne Beg and Glendergan rivers, and were impacting the quality of fisheries habitat.

Annex I Aquatic Habitats

Although not diverse examples, the Annex I habitat 'Water courses of plain to montane levels, with submerged or floating vegetation of the *Ranunculion fluitantis* and *Callitriche-Batrachion* (low water level during summer) or aquatic mosses (3260)' (aka floating river vegetation) was present on the Mourne Beg River.

Here, several indicator species (EC, 2013) were present including water crowfoot (*Ranunculus* sp.), various-leaved pondweed (*Potamogeton gramineus*), alternate milfoil (*Myriophyllum alterniflorum*) and well-developed aquatic bryophytes communities supporting *Fontinalis antipyretica*, *Fontinalis squamosa* and *Chiloscyphus polyanthos*. These sites also supported 3260 habitat in July 2024.

Biological Water Quality & Macro-invertebrates

No rare or protected macro-invertebrate species (according to national red lists) were recorded in the biological water quality or sweep samples taken from a total of 19 no. sites in July 2025, i.e. none of greater than Least Concern. The water boatman *Hesperocorixa moesta* was recorded in moderate numbers from Carrickaduff Lough. Whilst not protected or Red-listed, this is a rare and poorly understood corixid species in Ireland (Mantell & Anderson, 2020) with a paucity of records (NBDC data). It was not recorded during the 2024 surveys.

Biological water quality recorded a slight overall upward trend observed in the Mourne Beg River downstream of the Shruhangerve confluence, as well as an improvement in the Shruhangerve River itself between the 2024 and 2025 surveys.

Eight of the survey sites as shown in Figure 4.1 of the 2025 aquatic baseline report in Appendix 1 achieved Q4 (good status) in 2025. These included all survey locations on the Mourne Beg that are located downstream of the November 2020 Peat Slide except at the confluence with the Shruhangerve where there was a slight decrease from 2024 (Q3 2025 and Q4 in 2025). The other areas that achieved 'Good' status were on an unnamed Croaghonagh River tributary, Barrack Hill River and the Lowerymore River.

The other 10 survey sites were either valued at Q 3/4 (Moderate) or Q3 (Poor) and were located primarily on small streams upstream of the November 2020 Peat Slide and in many cases, not connected to the Existing Development.

Macro-invertebrate abundance, species diversity and taxon richness per site was broadly similar in both the 2024 and 2025 surveys. A swift recovery in biological water quality (mostly to Q4) of the Mourne Beg River occurred following the November 2020 Peat Slide event and, despite other ongoing impacts, much of the watercourse is currently achieving good status as of July 2025.

The Shruhangerve River, was failing to meet Q4 (good status) thresholds in October 2021 (Triturus, 2022) and in July 2024 (Triturus, 2025a). However, the macroinvertebrate community has continued to recover in the interim period, with a greater proportion of pollution sensitive species present in 2025, including the EPA group A stonefly species *Protonemura meyeri* and group B mayfly *Paraleptophlebia cincta* which were both absent in 2024. The biological water quality of the Shruhangerve had improved to Q3-4 (moderate status) in July 2025.

As per previous surveys (2021 and 2024), both eutrophication (primarily from coniferous afforestation) and peat escapement (siltation) pressures were evident throughout the survey area. Clear-felling activities had occurred along the Mourne Beg River since the previous survey, likely leading to nutrient escapement to the watercourse.

3.1.3.2.5 2026 Redd Surveys

The findings of the 2026 Redd surveys are provided below and shown on Figure 3-5

Croagh Bridge (Grid Ref E212540 N385755), downstream for approximately 1.3km.

Confirmed Redds at Grid Refs E212848 N385636 and E213047 N385674, Potential Redd at E212620 N385627 (unconfirmed due to poor visibility)

Bridge at Grid Ref: E2352 N385183, downstream for approximately 120m.

Two confirmed reds around Grid Ref: E214359 N385072 and two unconfirmed reds around E214363 N385115 (unconfirmed due to poor visibility).

From confluence of Bunadaowen with Mourne Beg (Grid Ref: E208296 N387861) upstream for a distance of approximately 500m.

Seven reds confirmed throughout section – good visibility, shallower water and narrower stream than downstream. Numerous unconfirmed reds.

In total, four redds were recorded within the 1.42km surveyed downstream of the November 2020 Peat Slide and seven were recorded in the 500m surveyed upstream of the confluence with the Bunadaowen. It is highly likely that this is an underestimation due to the poor visibility at time of surveying. It does however, confirm that spawning is occurring throughout the Mourne Beg system. Representative photographs of redds are provided below.



Plate 3-17 Confirmed Redd downstream of bridge at H 14359 8.5072



Plate 3.18. Confirmed Redd upstream of Bunadaowen Confluence

3.1.3.2.6 Loughs Agency data 2012 -2025

Raw data was received from redd and electro-fishing surveys undertaken by the Loughs Agency from 2012 - 2025.

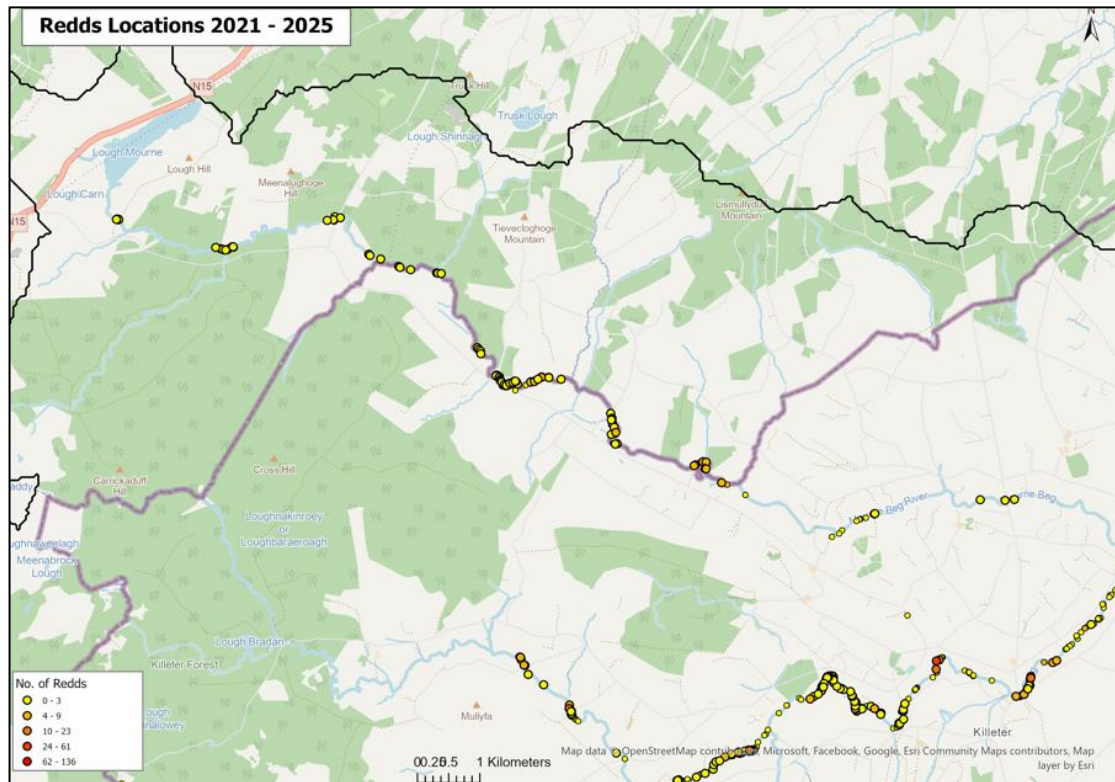
Redd Survey Data

The surveys show redds distributed widely throughout the Mourne Beg system. A map is provided in in **Figure 3-4** below. The distribution is comparable with previous redd surveys as shown in the. Redd numbers recorded are as follows:

>	2012 - 7
>	2013 - 12
>	2015 - 32
>	2016 - 4
>	2017 - 44
>	2018 - 32
>	2019 - 69
>	2020 - 41
>	2021 - 74
>	2022 - 83
>	2024 - 56
>	2025 - 24

Whilst there was a decline in redds in 2025, it is still comparable with redd count data from prior to the Existing Development. There is a high level of variability in the number of redds recorded annually.

Figure 3-4 Location of Redds on the Mourne Beg and Derg system 2021 - 2025



Electro Fishing Data

The electro fishing data received from the Lough's Agency is provided in Appendix 1. It shows low numbers of brown trout recorded throughout the system in 2022 and low numbers of Atlantic salmon recorded in 2023. This trend occurs throughout the system, both upstream and downstream of the Existing Development. Both species are recorded in good numbers in the 2024 and 2025 surveys.

3.1.3.2.7 Summary of Aquatic Survey Results

In summary, the relevant findings of the aquatic surveys undertaken are shown below.

No evidence of deterioration of the aquatic environment having occurred as a result of the construction of the Existing Development has been recorded, with the exception of the November 2020 Peat Slide.

Impacts of the November 2020 Peat Slide were recorded from the Shruhangarve River and downstream in the Mourne Beg River for a distance of >14km. These effects included excessive siltation and associated decline in water quality and salmonid spawning habitat. Despite this, the water quality within the river recovered to good status (Q4) in all surveyed areas downstream of the confluence between the Shruhangarve and the Mourne Beg (including all areas within the River Finn SAC and River Foyle and Tributaries SAC) within 11 months of the November 2020 Peat Slide. In addition, there was an increase in salmon fry recorded during electro-fishing undertaken in 2021. There was however, a decrease in brown trout numbers. Whilst salmonid redds were recorded downstream of the November 2020 Peat Slide in the 2021 surveys, their number was reduced, with a marked increase in redds recorded upstream of the November 2020 Peat Slide in the Mourne Beg upstream of its confluence with the Bunadaowen during that year. Loughs Agency data revealed widespread use of the river for spawning between 2021 and 2025. Electro fishing undertaken by the Loughs Agency between 2021 and 2025 appeared to show low numbers of trout in 2022 and low numbers of Atlantic salmon in 2023. Numbers of both species increased in 2024 and 2025.

Surveys undertaken in 2024 and 2025 recorded continued good water quality in the November 2020 Peat Slide affected area and typical ratios of salmonid and trout fry. In addition, redd surveys have confirmed

continued spawning throughout the system. The 2024 and 2025 surveys were undertaken four seasons after the November 2020 Peat Slide event and showed no signs of reduced productivity. Such a reduction would be expected if there had been a significant effect on productivity in 2020. This would have led to a reduction in adults returning from migration four years later and a resultant impact on productivity.

Ongoing pressures from siltation and nutrient enrichment have been noted throughout the system (including areas that are not hydrologically linked to the Existing Development) but no evidence of this occurring as a result of the Existing Development were recorded.

The Shruhingarve River has shown steady improvement over the years between 2020 and 2025 and the restoration works undertaken following the November 2020 Peat Slide event have successfully stabilised the river and its banks. It was not surveyed for water quality before the construction of the Existing Development but it is possible that (like all the other small streams surveyed) it did not meet 'good' water quality standards at that time.

4.

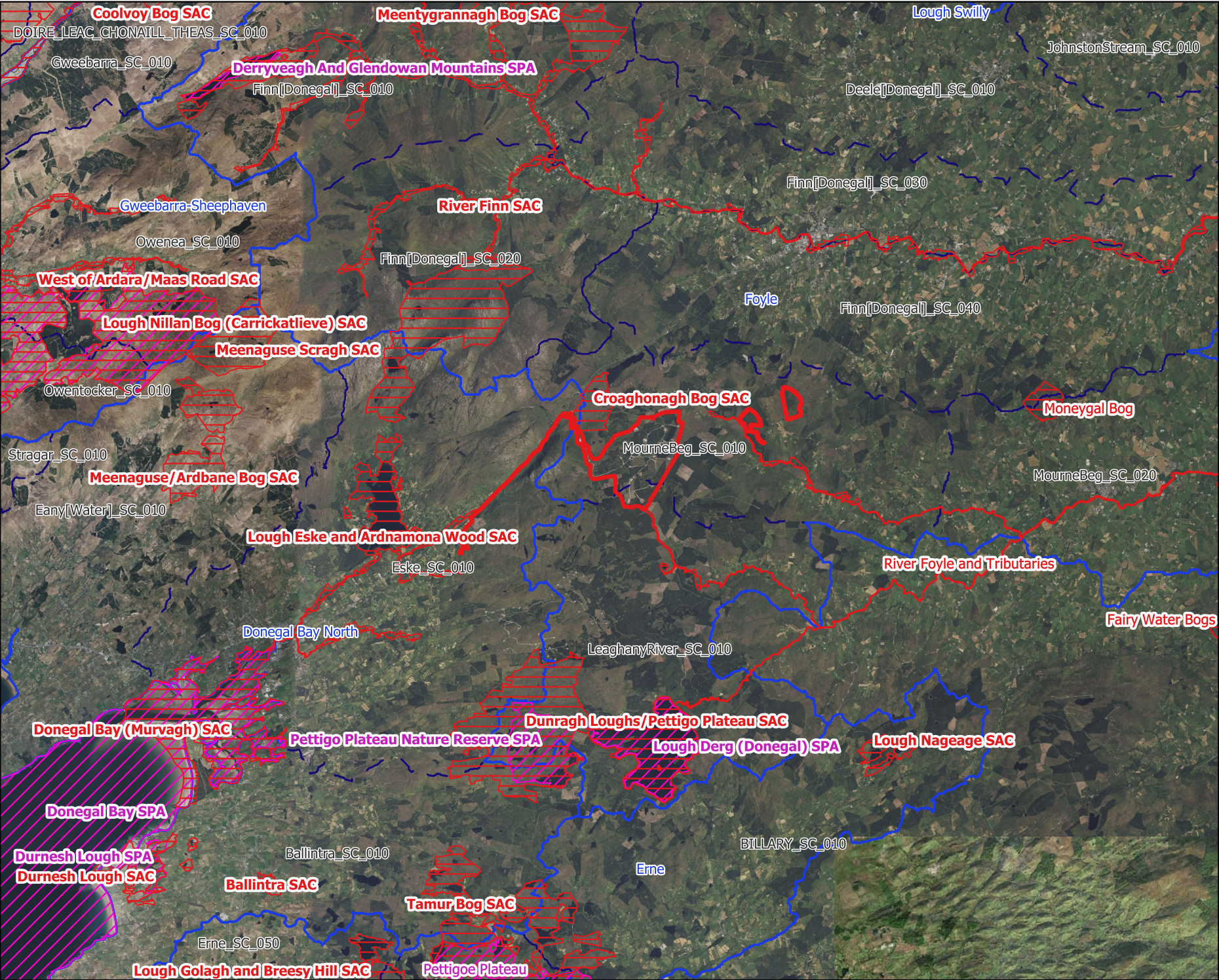
APPROPRIATE ASSESSMENT SCREENING

4.1

Identification of Relevant European Sites

The following methodology was used to establish any European Sites upon which there is a potential for a likely significant effect to occur either individually or in combination with other plans and projects as a result of the Prospective Development:

- › Initially the most up to date GIS spatial datasets for European Designated Sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie).
- › All European Sites that could potentially be or have been affected were identified using a source-pathway - receptor model. To provide context for the assessment, European Sites surrounding the Site are shown on **Figure 4-1**. Information on these sites according to the site-specific conservation objectives is provided in **Table 4-1**. Sites that were further away from the Prospective Development were also considered and no complete source-pathway-receptor chain for significant effect was identified for any other European Site.
- › The catchment mapping was used to establish or discount potential hydrological connectivity between the Site of the Prospective Development and any European Sites. The hydrological catchments are also shown in **Figure 4-1**.
- › In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such Sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between the existing project and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- › **Table 4-1** provides details of all relevant European Sites as identified in the preceding steps and assesses the potential for likely significant effects on each.
- › The assessment considers any likely direct or indirect impacts of the Prospective Development, both alone and in combination with other plans and projects, on European Sites by virtue of criteria including the following: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this assessment.
- › The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.
- › Where potential pathways for Likely Significant Effect are identified, the European Site is included within the Likely Zone of Influence and further assessment is required within the NIS.
- › The potential for the Prospective Development to result or have resulted in cumulative impacts on any European Sites in combination with other plans and projects was considered in the assessment that is presented in Table 4-1. Plans and projects considered include those that are listed in Appendix 4.



Map Legend

- Site location
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- NI Special Areas of Conservation (SACs)
- NI Special Protection Areas (SPAs)
- WFD Hydrological Catchments
- WFD Hydrological Subcatchments



Drawing Title
European and Northern Ireland
Designated sites within the likely zone of
Influence

Project Title
Substitute for Consent Application for
Meenbog Wind Farm

Drawn By	Checked By
MK	PR
Project No.	Drawing No.
240505-a	Figure 4.1
Scale	Date
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Table 4-1 Identification of European Sites within the Likely Zone of Influence

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
Special Areas of Conservation (SAC)				
Croaghonagh Bog SAC [000129] Distance: 0km from Wind Farm Site and Grid Connection Site 5km from BMEP Site	Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this Site, (Version 1, May 2017⁶), were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the development footprint (area where physical work will take place) is located within and immediately adjacent to the pre-existing site road network, outside the SAC boundary and separated from it by a fence. Following the precautionary principle, due to the proximity between the entrance road to the Wind Farm Site and the SAC, a complete source-pathway-receptor chain for likely significant effect was identified. The potential for likely significant effects on this SAC as a result of the Prospective Development both on its own and in combination with other plans and projects cannot be excluded.	Yes

⁶ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000129.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
River Foyle and Tributaries SAC [UK0030320] Distance: 0km from Wind Farm Site 4.8km from Grid Connection Site Adjoins the western boundary of the BMEP Site	➤ Salmon (<i>Salmo salar</i>) [1106] ➤ Otter (<i>Lutra lutra</i>) [1355] ➤ Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Detailed conservation objectives for this Site, (Version 4, 6 September 2024⁷), were reviewed as part of the assessment and are available here	There is no potential for direct effects to occur as, whilst adjacent to it, the Site is located entirely outside the SAC boundary. In addition, the closest works are located over 260m from the SAC boundary. There is direct hydrological connectivity to this SAC via Mary Breen's Burn, the Glendergan, Shruhangarve and Bunadaowen Rivers. A source-pathway-receptor for likely significant effects was identified. The potential for likely significant effects on this SAC as a result of the Prospective Development both on its own and in combination with other plans and projects cannot be excluded.	Yes
River Finn SAC [002301] Distance: 1.1km from Wind Farm Site 5.8km from Grid Connection Site	➤ Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] ➤ Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]	Detailed conservation objectives for this Site, (Version 1, November 2017⁸), were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 1km from it. There is direct hydrological connectivity to this SAC via Mary Breen's Burn, the Shruhangarve and Bunadaowen Rivers. A source-pathway-receptor for likely significant effects was identified.	Yes

⁷ <https://www.daera-ni.gov.uk/sites/default/files/publications/doc/Conservation%20Objectives%20%282024%29%20River%20Foyle%20%26%20Tributaries%20SAC.%20FINAL.pdf>
⁸ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002301.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
Adjoins the western boundary of the BMEP Site	- Blanket bogs (* if active bog) [7130] - Transition mires and quaking bogs [7140] - Salmon (<i>Salmo salar</i>) [1106] - Otter (<i>Lutra lutra</i>) [1355]		The potential for likely significant effects on this SAC as a result of the Prospective Development both on its own and in combination with other plans and projects cannot be excluded.	
Lough Eske and Ardnamona Wood SAC [000163] Distance: 4.7km from Wind Farm Site Adjoins southwestern boundary of the Grid Connection Site 11.1km from BMEP Site	- Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] - Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] - Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) [1029] - Atlantic salmon (<i>Salmo salar</i>) [1106]	Detailed conservation objectives for this Site (Version 1, September 2019) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary, 4.7 km from the Wind Farm Site and adjacent to the Grid Connection Site. There is hydrological connectivity to this SAC via the Lowerymore River, which flows close to the Grid Connection Site and is crossed by it. A source-pathway-receptor for likely significant effects was identified. The potential for likely significant effects on this SAC as a result of the Prospective Development both on its own and in combination with other plans and projects cannot be excluded.	Yes

⁹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000163.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
	Killarney Fern (<i>Trichomanes speciosum</i>) [1421]			
Dunragh Loughs/Pettigo Plateau SAC [001125] Distance: 6.2km from Wind Farm Site 4.8km from Grid Connection Site 11.4km from BMEP Site	- Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] - Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this Site (Version 1, May 2017 ¹⁰) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 4 km from it. This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for likely significant effect on this European Site was identified. No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No
Moneygal Bog SAC [UK0030211] Distance: 13.6km from Wind Farm Site 18.5km from Grid Connection Site 8.9km from BMEP Site	- Active raised bogs [7110] - Degraded raised bogs still capable of natural regeneration [7120] - Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]	Conservation objective document V2 2014¹¹. Maintain the extent of intact lowland raised bog and actively regenerating raised bog vegetation. Maintain and enhance the quality of the lowland raised bog community types including the presence of	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 8 km from it. This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for significant effect on this European Site was identified.	No

¹⁰ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001125.pdf
¹¹ <https://www.daera-ni.gov.uk/sites/default/files/publications/doc/land-information-moneygal-bog-conservation-objectives-2015.pdf>

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
		notable species. Seek to expand the extent of actively regenerating raised bog vegetation into degraded (non-active) areas of cutover bog. Maintain the diversity and quality of other habitats associated with the active raised bog, e.g. acid grassland, fen and swamp, especially where these exhibit natural transition to the raised bog. Maintain the hydrology of the raised bog peat mass. Seek nature conservation management over suitable areas immediately outside the SAC where there may be potential for lowland raised bog rehabilitation	No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	
Meenaguse Scragh SAC [001880]	 Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]	Detailed conservation objectives for this Site (Version 1, September 2019 ¹²) were reviewed as part	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 10km from it.	No

¹² https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001880.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
Distance: 12.1 km from Wind Farm Site 10.2 km from Grid Connection Site 19.1km from BMEP Site		of the assessment and are available at www.npws.ie	This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for likely significant effects on this European Site was identified. No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	
Lough Nageage SAC [002135] Distance: 12.9 km from Wind Farm Site 17.7 km from Grid Connection Site 12.7 km from BMEP Site	 White-clawed Crayfish (<i>Austropotamobius pallipes</i>) [1092]	Detailed conservation objectives for this Site (Version 1, March 2021 ¹³) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 12km from it. This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for likely significant effects on this European Site was identified. No pathway for likely significant effects on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No
Meenaguse/Ardbane Bog SAC [000172] Distance: 13 km from Wind Farm Site 9.6 km from Grid Connection Site	 Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this Site (Version 1, May 2017 ¹⁴) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 9 km from it. This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for likely significant effects on this European Site was identified.	No

¹³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002135.pdf
¹⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000172.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
20 km from BMEP Site			No pathway for likely significant effects on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	
Lough Nillan Bog (Carrickatlieve) SAC [000165] Distance: 14.2 km from Wind Farm Site 12.6 km from Grid Connection Site 21.1 km from BMEP Site	› Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] › Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this Site (Version 1, September 2016¹⁵) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 12 km from it. This European Site is located in a separate hydrological catchment and no source-pathway-receptor chain for significant effect on this European Site was identified. No pathway for likely significant effects on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No

¹⁵ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000165.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
Donegal Bay (Murvagh) SAC Distance: 14.1 km From Wind Farm Site 8.2 km from Grid Connection Site 20.8 km from BMEP Site	> Mudflats and sandflats not covered by seawater at low tide [1140] > Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] > Dunes with <i>Salix repens</i> ssp. <i>Argentea</i> (<i>Salicion arenariae</i>) [2170] > Humid dune slacks [2190] > Harbour seal (<i>Phoca vitulina</i>) [1365]	Detailed conservation objectives for this Site (Version 1, July 2012¹⁶) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 8 km from it. This European Site is located over 10 km (hydrological distance) downstream of the Grid Connection Site and is separated from it by Lough Eske. Given the small-scale nature of the works proposed in the catchment, the buffering and diluting properties of the Lowerymore River and Lough Eske and the marine nature of the Qualifying Interests of the SAC, no source-pathway-receptor chain for significant effect on this European Site was identified. No pathway for likely significant effects on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No
Special Protection Area (SPA)				
Lough Derg (Donegal) SPA [004057] Distance: 7.6 km from Wind Farm Site	> Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] > Herring Gull (<i>Larus argentatus</i>) [A184]	Detailed conservation objectives for this Site (Version 1, March 2025¹⁷) were reviewed as part of the	There is no potential for direct effects to occur as the Site is located entirely outside the SAC boundary and over 7.6 km from it. No evidence that the Site provides significant habitat for the species was recorded during any of the surveys undertaken and the nature	No

¹⁶ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000133.pdf
¹⁷ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004057.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
8.5 km from Grid Connection Site 11 km from BMEP Site		assessment and are available at www.npws.ie	and scale of the works associated with the Prospective Development are such that there is no potential for them to result in likely significant effects on these species. Ongoing bird activity surveys have not revealed the Site of the Prospective Development to be of significance to the SCI species. Only one observation of Lesser Black-backed Gull was recorded and Herring Gull was never recorded. No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	
Pettigo Plateau Nature Reserve SPA [004099] Distance: 8.7km From Wind Farm Site 6.3 km from Grid Connection Site 13.8 km from BMEP Site	> Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	Detailed conservation objectives for this Site (Version 1, 18 th April 2025 ¹⁸) were reviewed as part of the assessment and are available at www.npws.ie	The proposed works on the wind farm Site are located entirely outside this European Site and are separated from it by a distance of 8.7 km. There is no potential for the Prospective Development to result in any direct effect on this European Site. The Wind Farm Site is outside the core foraging range for the species (SNH, 2016) and the works associated with the grid connection are located at closest 6.3km from the SPA but are of a nature, location and scale such that no pathway for significant effect was identified. The species was not recorded on the Site during any of the surveys undertaken. No pathway for likely significant effects on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No

¹⁸ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004099.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
Lough Nillan Bog SPA [004110] Distance: 14.2km From Wind Farm Site 12.6km from Grid Connection Site 21.1km from BMEP Site	➤ Merlin (<i>Falco columbarius</i>) [A098] ➤ Golden Plover (<i>Pluvialis apricaria</i>) [A140] ➤ Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] ➤ Dunlin (<i>Calidris alpina schinzii</i>) [A466]	Detailed conservation objectives for this Site (Version 1, 25th April 2025¹⁹) were reviewed as part of the assessment and are available at www.npws.ie	The Prospective Development is located entirely outside this European Site and are separated from it by a distance of over 14 km (12.6 km for grid connection). There is no potential for the Prospective Development to result in any direct effect on this European Site. The core foraging ranges for these SCI species are as follows; 5km for merlin, 6km for golden plover, 5-8km for Greenland white-fronted geese and 0.5km for Dunlin. The Site is outside the core foraging ranges for all of these SCI species (SNH, 2016). No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	No
Donegal Bay SPA [004151] Distance: 14.3km From Wind Farm Site 8.2km from Grid Connection Site 20.8km from BMEP Site	> Great Northern Diver (<i>Gavia immer</i>) [A003] > Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] > Common Scoter (<i>Melanitta nigra</i>) [A065] > Sanderling (<i>Calidris alba</i>) [A144] > Wetland and Waterbirds [A999]	Detailed conservation objectives for this Site (Version 1, May 2012²⁰) were reviewed as part of the assessment and are available at www.npws.ie	The Prospective Development is located entirely outside this European Site and separated from it by a distance of 14.3 km. There is no potential for the Prospective Development to result in any direct effect on this European Site. The SCI species for which the SPA is designated are all marine or coastal species and were not recorded on the Site during the surveys undertaken. This European Site is located over 10km (hydrological distance) downstream of the grid connection and is separated from it by	No

¹⁹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004110.pdf
²⁰ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004151.pdf

European Sites and distance from the Site	Qualify Interests/Special Conservation Interests for which the European Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)	Conservation Objectives	Identification of Source-Pathway-Receptor chain	Potential for Likely Significant Effects (LSEs) Yes/No
			Lough Eske. Given the small-scale nature of the works undertaken in the catchment, the buffering and diluting properties of the Lowerymore River and Lough Eske and the marine nature of the Qualifying Interests of the SAC, no source-pathway-receptor chain for significant effect on this European Site via surface water was identified. No pathway for likely significant effect on this European Site was identified, when considered in the absence of any mitigation, individually or in combination with other plans or projects.	

4.2

Appropriate Assessment Screening Conclusion

It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European Sites, that the Prospective Development, individually or in combination with other plans and projects, has the potential to have likely significant effects on the following European Sites:

- > Croaghonagh Bog SAC [000129]
- > River Finn SAC [002301]
- > River Foyle and Tributaries SAC [UK0030320]
- > Lough Eske and Ardnamona Wood SAC [000163]

As a result, an Appropriate Assessment (AA) of the Prospective Development is required. Information to enable the competent authority to carry out an AA of the Prospective Development is presented in Sections 5 - 9 of this report.

5.

INFORMATION TO INFORM APPROPRIATE ASSESSMENT

The potential for likely significant effects on the following European Sites in the absence of any mitigation, individually or cumulatively with other plans or projects, was identified in the preceding section:

- > Croaghonagh Bog SAC [000129]
- > River Finn SAC [002301]
- > River Foyle and Tributaries SAC [UK0030320]
- > Lough Eske and Ardnamona Wood SAC [000163]

The following sections consider each European Site individually to assess the potential for adverse effects on the integrity of the Site in light of the Site-Specific Conservation Objectives.

The assessment firstly identifies the individual qualifying features that have the potential to be adversely affected by the Prospective Development. It then provides information with regard to the main pressures and threats on the European Sites. Finally, the potential for adverse effects on each relevant qualifying feature is assessed in light of its Conservation Objectives.

5.1.1 Croaghonagh Bog SAC

The potential for Likely Significant Effects on this SAC was identified above. The identified pathways for effect include the following:

- A potential pathway for indirect effects on the qualifying interest (QIs) habitat of the SAC has been identified following the precautionary principle due to the proximity of the SAC to the entrance road to the Prospective Development.

5.1.1.1 Identification of relevant Qualifying Features

Table 5-1 below lists the QIs of this European Site and determines, in light of their Conservation Objectives, whether there is any source-pathway-receptor chain, by which adverse effects may occur.

Table 5-1 Assessment of Qualifying Interests potentially affected

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017 ²¹)	Rationale	Potential for Adverse Effects Yes/No
Blanket bogs (* if active bog) [7130]	To restore the favourable conservation condition of Blanket bogs (* if active bog) in Croaghonagh Bog SAC	This habitat is found adjacent to the entrance road to the Prospective Development and following the precautionary principle, a potential source-pathway-receptor chain for significant effect exists	Yes

²¹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000129.pdf

5.1.1.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form²² for the Croaghonagh Bog SAC the site-specific threats, pressures and activities with potential to impact on the European Site were reviewed and considered in relation to the Prospective Development. These are provided in **Table 5-2** below.

Table 5-2 Site-specific threats, pressures and activities for the River Barrow and River Finn SAC

Rank	Negative Threats and Pressures (* Items in bold are of relevance to the Prospective Development)
High	Intensive sheep grazing
	Peat extraction
Medium	Sand and gravel extraction
	Disposal of household/ recreational facility waste
	Flooding
Low	Fire and fire suppression
Rank	Activities, Management for positive impact
High	Raising the groundwater table /artificial recharge of groundwater

No potential pathways for the Prospective Development to affect the SAC with regard to site-specific threats, pressures and activities have been identified.

5.1.1.3 Assessment of Effects

According to the Site Synopsis document for the Croaghonagh Bog SAC (NPWS, 2017²³), Croaghonagh Bog is a small but quite intact blanket bog, whose margins have been affected by turbary, particularly at the south and south-eastern sides. It is noted that the Prospective Development will utilise and maintain the existing track along the southwestern boundary of the SAC. The track is separated from the SAC by pre-existing fencing and drainage over the majority of the route, and by active or inactive turf cutting in all other areas. There is no intact bog adjacent to the wind farm access track. The Prospective Development will not involve drainage or encroachment onto the bog and highly degraded and cut over habitat close to the border with the road.

²² <https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000129&release=62>

²³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000129.pdf

The Prospective Development includes a range of mitigation measures to ensure that there are no indirect effects on lands outside the development footprint. In this area, there will be no additional land take and the access road will be fenced off from the SAC (where it is not already fenced).

In periods of extended dry weather, dust suppression may be necessary. Sporadic wetting of the road will be carried out during the construction phase to minimise movement of dust particles to the air to ensure dust does not cause a nuisance.

There will be no drainage works required and there is no potential for any significant run off to the SAC. There will be no additional works during the operational phase with the exception of maintenance, which will involve periodic placement of a clean stone surface on the existing track.

5.1.1.3.1 [7130] Blanket Bog

The potential for adverse effects to occur is assessed in **Table 5-3** below in light of the conservation objectives for the SAC.

Table 5-3 Targets and attributes associated with the site-specific conservation objectives for Blanket Bog

Attribute	Target	Assessment of Whether the Existing Project has Undermined the Conservation Objective Target, or has the potential to do so in the future
Habitat area	Area stable or increasing, subject to natural processes	The Prospective Development does not have the potential to result in any effect on the habitat area within the SAC. The Prospective Development has no potential to undermine this conservation objective
Habitat distribution	No decline, subject to natural processes	The Prospective Development does not have the potential to result in any effect on the habitat distribution within the SAC. The Prospective Development has no potential to undermine this conservation objective
Ecosystem function: soil nutrients	Maintain soil nutrient status within natural range	The Prospective Development does not have the potential to result in any effect on soil nutrients within the SAC. The Prospective Development has no potential to undermine this conservation objective
Ecosystem function: peat formation	At least 99% of the total Annex I blanket bog area is active	The Prospective Development does not have the potential to result in any effect on peat formation within the SAC. The Prospective Development has no potential to undermine this conservation objective

Ecosystem function: hydrology	Natural hydrology unaffected by drains and erosion	The Prospective Development does not have the potential to result in any effect on hydrology within the SAC. The Prospective Development has no potential to undermine this conservation objective
Community diversity	Maintain variety of vegetation communities, subject to natural processes	The Prospective Development does not have the potential to result in any effect on community diversity within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: positive indicator species	Number of positive indicator species present at each monitoring stop is at least seven	The Prospective Development does not have the potential to result in any effect on positive indicator species within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: lichens and bryophytes	Cover of bryophytes or lichens, excluding <i>Sphagnum fallax</i> , at least 10%	The Prospective Development does not have the potential to result in any effect on lichens and bryophytes within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: negative indicator species	Total cover of negative indicator species less than 1%	The Prospective Development does not have the potential to result in any effect on negative indicator species within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: non-native species	Cover of non-native species less than 1%	The Prospective Development does not have the potential to result in any effect on non-native species within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: native trees and shrubs	Cover of scattered native trees and shrubs less than 10%	The Prospective Development does not have the potential to result in any effect on native trees and shrubs within the SAC.

		The Prospective Development has no potential to undermine this conservation objective
Vegetation composition: potential dominant species	Cover of each of the potential dominant species less than 75%	The Prospective Development does not have the potential to result in any effect on potential dominant species within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation structure: signs of browsing	Last complete growing season's shoots of ericoids, crowberry (<i>Empetrum nigrum</i>) and bog-myrtle (<i>Myrica gale</i>) showing signs of browsing collectively less than 33%	The Prospective Development does not have the potential to result in any effect on signs of browsing within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation structure: burning	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	The Prospective Development does not have the potential to result in any effect on burning within the SAC. The Prospective Development has no potential to undermine this conservation objective
Vegetation structure: <i>Sphagnum</i> condition	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	The Prospective Development does not have the potential to result in any effect on sphagnum condition within the SAC. The Prospective Development has no potential to undermine this conservation objective
Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%	The Prospective Development does not have the potential to result in any effect on bare ground within the SAC. The Prospective Development has no potential to undermine this conservation objective
Physical structure: drainage	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	The Prospective Development does not have the potential to result in any effect on drainage within the SAC. The Prospective Development has no potential to undermine this conservation objective
Physical structure: erosion	Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas	The Prospective Development does not have the potential to result in any effect on erosion within the SAC.

		The Prospective Development has no potential to undermine this conservation objective
Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	The Prospective Development does not have the potential to result in any effect on local distinctiveness within the SAC. The Prospective Development has no potential to undermine this conservation objective

5.1.1.3.2 **Croaghonagh Bog SAC - Impact Assessment Conclusion**

Having considered the potential for the Prospective Development to result in adverse effects on this SAC in light of the site-specific conservation objectives, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Prospective Development will not adversely affect the integrity of Croaghonagh Bog SAC.

5.1.2 River Finn SAC

The potential for Likely Significant Effects on this SAC were identified above. The identified pathways for effect include the following:

- ▶ A pathway for indirect effects on the aquatic qualifying interest (QIs) species and habitats of the SAC exists via surface water connectivity between the components of the Prospective Development that are located in the Bunadowen, Shruhangerve and Mary Breen's Burn Catchments. These rivers flow into the Mourne Beg, which is designated as part of the River Finn SAC.

5.1.2.1 Identification of Relevant Qualifying Features

Table 5-4 below lists the QIs of this European Site and determines, in the light of their Conservation Objectives, whether there is any source-pathway-receptor chain, by which adverse effects may occur.

Table 5-4 Assessment of Qualifying Interests potentially affected.

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017 ²⁴)	Rationale	Potential for Adverse Effects Yes/No
Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]	To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) in River Finn SAC	This habitat is found in lakes within the SAC. There is no Source-Pathway-Receptor chain between the Prospective Development and any lakes within the SAC and therefore, no potential for any adverse effect on this habitat as a result of the Prospective Development exists	No
Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]	To restore the favourable conservation condition of Northern	The SAC is located over 1km from the Site. No source-pathway-receptor chain between the Prospective Development and these terrestrial habitats within the SAC was identified and	No

²⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002301.pdf

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017*)	Rationale	Potential for Adverse Effects Yes/No
	Atlantic wet heaths with <i>Erica tetralix</i> in River Finn SAC	therefore, no potential for any adverse effect on these habitats as a result of the Prospective Development exists.	
Blanket bogs (* if active bog) [7130]	To restore the favourable conservation condition of Blanket bogs (*if active bog) in River Finn SAC		
Transition mires and quaking bogs [7140]	To restore the favourable conservation condition of Transition mires and quaking bogs in River Finn SAC		
Salmon (<i>Salmo salar</i>) [1106]	To maintain the favourable conservation condition of Atlantic Salmon in River Finn SAC	A source-pathway receptor chain for effects on salmon in the downstream aquatic environment was identified in the form of water pollution.	Yes
Otter (<i>Lutra lutra</i>) [1355]	To maintain the favourable conservation condition of Otter in River Finn SAC	A source-pathway receptor chain for effects on otter in the downstream aquatic environment was identified in the form of water pollution. No evidence of otter breeding or resting places was identified within 150m of any works in this catchment and no potential for significant disturbance was identified.	Yes

5.1.2.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form²⁵ for the River Finn SAC the site-specific threats, pressures and activities with potential to impact on the European Site were reviewed and considered in relation to the Prospective Development. These are provided in **Table 5-5** below.

Table 5-5 Site-specific threats, pressures and activities for the River Barrow and River Finn SAC

Rank	Negative Threats and Pressures (* Items in bold are of relevance to the Prospective Development)
High	Forestry Clearance
	Hand cutting of peat
	Intensive grazing
	Sand and gravel extraction
Medium	Diffuse pollution to surface waters due to agricultural and forestry activities
	Disposal of household/ recreational facility waste
	Erosion
Low	Poaching
	Structures, buildings in the landscape
Rank	Activities, Management for positive impact
High	Forestry replanting (native trees)
Medium	Modification of hydrographic functioning, general

Potential pathways for effect with regard to site-specific threats, pressures and activities have been identified in relation to forestry felling (high), diffuse pollution (Medium) and erosion (Medium).

5.1.2.3 Assessment of effects

No works are proposed within the SAC and no potential for direct effects was identified.

²⁵ <https://natura2000.eea.europa.eu/Natura2000/sdl/#/sdl?site=IE0002301&release=62>

The identified pathway for indirect effects on the SAC is via surface water in Mary Breen's Burn, the Shruhangarve and Bunadaowen River catchments, which provide a connection from the Site to the SAC.

5.1.2.3.1 **Effects during Construction**

The Prospective Development has the potential to result in indirect impacts on the above watercourses as a result of run off of pollutants such as silt, hydrocarbons and cementitious material as a result of tree felling and construction activity. Such impacts could result in habitat deterioration for QI species otter and Atlantic salmon in the form of siltation, eutrophication and reduction in water quality. The peat stability report as provided in support of this application finds the Site to be stable and at a low risk of peat failure

No evidence of otter breeding or resting places was identified within 150m of any works in this catchment and no potential for significant disturbance was identified. However, given that they are a mobile species, the possibility that they may migrate into the Site has been considered.

5.1.2.3.2 **Effects during Operation**

The Prospective Development will lead to an increased amount of hard standing/impermeable surfaces associated with the wind farm infrastructure. This has the potential to lead to faster run off of surface waters from the Site into the watercourses causing potential hydrological change. It may also include periodic maintenance works, which could lead to small scale pollution as a result of siltation, hydrocarbons, cementitious material or other pollutants. The onsite 110kV substation will have toilet facilities but these will be managed within a sealed and monitored system and emptied by a licenced contractor.

Given that the majority of the infrastructure is already in place as a result of the Existing Development (with no evidence of operational effects recorded) and that the works associated with the Prospective Development will not result in a large increase in hard standing or infrastructure, any effect on the Aquatic QIs would likely be slight.

Given the location of the infrastructure, buffering from watercourses and infrequent nature of operational activity, there is no potential for adverse effects as a result of disturbance to otter.

5.1.2.3.3 Mitigation

The Prospective Development includes a comprehensive suite of mitigation to protect water quality. This is provided in full in Appendix 5 and summarised below.

Measures employed during construction:

- › Avoidance and buffering of Watercourses (with the exception of one culvert replacement)
- › Control of surface waters through construction areas in accordance with a detailed drainage plan
- › Silt fences and bags
- › Settlement ponds
- › Level Spreaders and vegetation filters
- › Timing of sensitive works to avoid periods of high rainfall
- › Monitoring and maintenance plan – construction phase
- › Tree felling in line with Coillte and DAFM Guidance Documents
- › Specific mitigations to control waters on the Site during felling operations
- › Application of felling buffers around watercourses
- › Operational drainage plan
- › Bespoke measures where maintenance is required during operation
- › Sealed toilet facilities, maintained by licenced contractor

Measures Employed During Operation

- › Interceptor drains will be installed up-gradient of all proposed infrastructure to collect clean surface runoff, in order to minimise the amount of runoff reaching areas where suspended sediment could become entrained. It will then be directed to areas where it can be re-distributed over the ground by means of a level spreader;
- › Swales/road side drains will be used to collect runoff from access roads and turbine hardstanding areas of the Site, likely to have entrained suspended sediment, and channel it to settlement ponds for sediment settling;
- › On steep sections of access road transverse drains ('grips') will be constructed in the surface layer of the road to divert any runoff off the road into swales/road side drains;
- › Check dams will be used along sections of access road drains to intercept silts at source. Check dams will be constructed from a 4/40mm non-friable crushed rock;
- › Settlement ponds, emplaced downstream of road swale sections and at turbine locations, will buffer volumes of runoff discharging from the drainage system during periods of high rainfall, by retaining water until the storm hydrograph has receded, thus reducing the hydraulic loading to watercourses; and,
- › Settlement ponds have been designed in consideration of the greenfield runoff rate.

Whilst no otter breeding or resting places were recorded on the Site during the surveys undertaken and no significant disturbance related effects are anticipated, a pre commencement survey for otter will be undertaken in advance of construction to ensure that the species is treated appropriately, should it migrate into the Site. If possible, any such areas will be avoided while they are in use by otter or if this is not possible, measures will be put in place to ensure their protection.

5.1.2.3.4 [1106] Atlantic salmon (*Salmo salar*) (only in fresh water)

According to the Site Synopsis document for the River Finn SAC (NPWS, 2024²⁶), the River Finn system is one of Ireland's premier salmon waters. Surveys undertaken and which have been reviewed as part of this assessment have not recorded the species within the Site (either before or after construction) but have recorded it throughout the Mourne Beg catchment both up and downstream of the Site and on the

²⁶ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Bunadaowen River outside the Site. The River Finn SAC is located on the Mourne Beg River downstream of the Site.

According to the Article 17 Report (NPWS 2025), the overall Conservation Status for this species is ‘Bad’ and the overall Conservation Trend is ‘deteriorating’.

The potential for adverse effects to occur is assessed below.

Table 5-6 Targets and attributes associated with the site-specific conservation objectives for Atlantic Salmon (*Salmo salar*) (only in freshwater)

Attribute	Target	Assessment of Whether the Prospective Development has the Potential to Undermine the Conservation Objective Target following Implementation of mitigation
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	The Prospective Development will not result in any barrier to accessibility. The Prospective Development will not undermine this conservation objective.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	The Prospective Development will not result in any effect on spawning fish. The Prospective Development will not undermine this conservation objective.
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	The Prospective Development will not result in any effect on salmon fry abundance. The Prospective Development will not undermine this conservation objective.
Out-migrating smolt abundance	No significant decline	The Prospective Development will not result in any effect on out migrating smolt abundance. The Prospective Development will not undermine this conservation objective.
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	The Prospective Development will not result in any effect on distribution of redds. The Prospective Development will not undermine this conservation objective.
Water quality	At least Q4 at all sites sampled by EPA	The Prospective Development will not result in any effect on water quality. The Prospective Development will not undermine this conservation objective.

5.1.2.3.5 [1355] Otter *Lutra lutra*

According to the Site Synopsis document for the River Finn SAC (NPWS, 2024²⁷), otter distribution is widespread throughout the system. Signs of otter were recorded within the Site in the form of regular spraints under a bridge on the Bunadaowen River. No holts or couches were recorded within the Site. They were also recorded throughout the wider area of the Mourne Beg Catchment. Such signs were recorded before during and after construction of the existing development.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this species is 'Favourable' with the trend being 'Stable'.

The potential for adverse effects to occur is assessed below.

Table 5-7 Targets and attributes associated with the site-specific conservation objectives for Otter

Attribute	Target	Potential for Prospective Development to Undermine Conservation Objective Target following implementation of mitigation
Distribution	No significant decline	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on distribution. The Prospective Development will not undermine this conservation objective.
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 122.8ha above high water mark (HWM); 1136.0ha along riverbanks / around ponds	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on terrestrial habitat. The Prospective Development will not undermine this conservation objective.
Extent of marine habitat	No significant decline. Area mapped and calculated as 857.7ha	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on marine habitat. The Prospective Development will not undermine this conservation objective.
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 616.6km	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on the extent of freshwater habitat. The Prospective Development will not undermine this conservation objective.

²⁷ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002301.pdf>

Extent of freshwater (lake) habitat	No significant decline. Area mapped and calculated as 2.6ha	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on freshwater lake habitat. The Prospective Development will not undermine this conservation objective.
Couching sites and holts	No significant decline	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on couching sites or holts. The Prospective Development will not undermine this conservation objective.
Fish biomass available	No significant decline	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on fish biomass availability. The Prospective Development will not undermine this conservation objective.

5.1.2.3.6 River Finn SAC - Impact Assessment Conclusion

Having considered the potential for the Prospective Development to result in adverse effects on this SAC in light of the site-specific conservation objectives, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Prospective Development will not adversely affect the integrity of the River Finn SAC.

5.1.3 River Foyle and Tributaries SAC (UK)

The potential for Likely Significant Effects on this SAC were identified above. The identified pathways for effect include the following:

- › A pathway for indirect effects on the aquatic qualifying interest (QIs) species and habitats of the SAC exists via surface water connectivity between the components of the Prospective Development that are located in the Bunadown, Shruhangerve and Glendergan Catchments. These rivers flow into the Mourne Beg and Derg, which is designated as part of the River Foyle and Tributaries SAC.

5.1.3.1 Identification of Relevant Qualifying Features

Table 5-8 below lists the qualifying interests of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

Table 5-8 Assessment of Qualifying Interests potentially affected

Qualifying feature	Conservation Objective (DAERA, 2022 ²⁸)	Rationale	Potential for Adverse Effects Yes/No
Salmon (<i>Salmo salar</i>) [1106]	To maintain (or restore where appropriate) the conservation status of Atlantic salmon (<i>Salmo salar</i>) to favourable condition.	A source-pathway receptor chain for effects on salmon in the downstream aquatic environment was identified in the form of water pollution.	Yes
Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and	To maintain (or restore where appropriate) the conservation status of	A source-pathway receptor chain for effects on Watercourses of plain to montane levels in the downstream aquatic environment was identified in the form of water pollution.	Yes

²⁸ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002301.pdf

Qualifying feature	Conservation Objective (DAERA, 2022 ²⁶)	Rationale	Potential for Adverse Effects Yes/No
<i>Callitriche- Batrachion</i> vegetation	Watercourses of plain to montane levels to favourable condition		
Otter (<i>Lutra lutra</i>) [1355]	To maintain (or restore where appropriate) the conservation status of otter to favourable condition	A source-pathway receptor chain for effects on <i>otter</i> in the downstream aquatic environment was identified in the form of water pollution.	Yes

5.1.3.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form²⁹ for the River Foyle and Tributaries SAC, the site-specific threats, pressures and activities with potential to impact on the European Site were reviewed and considered in relation to the Prospective Development. These are provided in **Table 5-9** below.

Table 5-9 Site-specific threats, pressures and activities for the River Foyle and Tributaries SAC

Negative Impacts	
Rank	Threats and Pressures (* Items in bold are of relevance to the Prospective Development)
High	Forest plantation, management and use
	Changes in abiotic conditions
	Pollution to surface waters (limnic, terrestrial, marine & brackish)
	Invasive non-native species
	Fire and fire suppression
Medium	Renewable abiotic energy use
	Mining and quarrying
	Fishing and harvesting aquatic resources
Rank	Activities, Management for positive impact
High	Fishing and harvesting aquatic resources
	Human induced changes in hydraulic conditions

Potential pathways for effect with regard to site-specific threats, pressures and activities have been identified in relation to forest plantation, management and use, pollution to surface waters (High) mining and quarrying (Medium) and renewable energy use (Medium).

²⁹ <https://jncc.gov.uk/jncc-assets/SAC-N2K/uk0030320.pdf>

5.1.3.3 Assessment of Effects

The potential for effects is the same as for the River Finn SAC with the same pathways for effect. Thus, to avoid repetition, the general (non-QI specific) assessment is not included in this section.

The only exception is that a small area in the southeastern section of the Site drains to the Glendergan River, which connects with the River Foyle and Tributaries SAC at the boundary. However, no works are proposed within 260m of this SAC.

5.1.3.3.1 [1106] Atlantic salmon (*Salmo salar*) (only in fresh water)

According to the Conservation Objectives Document for the River Foyle and Tributaries SAC (NIEA, 2024³⁰), the River Foyle system holds one of the largest populations of Salmon in Europe. Surveys undertaken and which have been reviewed as part of this assessment have not recorded the species within the Site of the Prospective Development (either before or after construction) but have recorded it throughout the Mourne Beg catchment both up and downstream of the Site and on the Bunadaowen River outside the Site. The River Foyle and Tributaries SAC is located on the Mourne Beg River downstream of the Site.

According to the Article 17 Report (NPWS 2025), the overall Conservation Status for this species is 'Bad' and the overall Conservation Trend is 'deteriorating'.

Table 5-10 Site-specific conservation objectives for Atlantic Salmon (*Salmo salar*) (only in freshwater)

Objective	Potential for Prospective Development to Undermine Conservation Objective
Maintain and if possible, expand existing population numbers and distribution (preferably through natural recruitment), and improve age structure of population.	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on population numbers, distribution or age structure The Prospective Development will not undermine this conservation objective.
Maintain and if possible enhance the extent and quality of suitable Salmon habitat - particularly the chemical and biological quality of the water and the condition of the river channel and substrate.	The Prospective Development is not located within the SAC, includes measures to mitigate any potential indirect effects and will not result in any effect on salmon habitat The Prospective Development will not undermine this conservation objective.

³⁰ <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/Conservation%20Objectives%20%282024%29%20River%20Foyle%20%26%20Tributaries%20SAC.%20FINAL.pdf>

5.1.3.3.2 [3260] Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation

According to the Conservation Objectives Document for the River Foyle and Tributaries SAC (NIEA, 2024³¹), the internationally important communities of this habitat, are found in lower sections of the River Derg and Mourne Beg River and along the Strule and Mourne Rivers down to Strabane. Surveys undertaken which have been reviewed as part of this assessment have recorded the habitat primarily on the lower reaches of the Mourne Beg River. The River Finn SAC is located on the Mourne Beg River downstream of the Site.

According to the Article 17 Report (NPWS 2025), the overall Conservation Status for this habitat is 'Inadequate' and the overall Conservation Trend is 'deteriorating'.

Table 5-11 Site-specific conservation objectives for Watercourses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation

Objective	Potential for Prospective Development to Undermine Conservation Objective
Maintain and if possible enhance extent and composition of community	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on extent and composition of this community. The Prospective Development will not undermine this conservation objective.
Improve water quality	The Prospective Development is not located within the SAC, includes measures to mitigate any potential indirect effects and will not result in any effect on on water quality. The Prospective Development will not undermine this conservation objective.
Improve channel substrate quality by reducing siltation.	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on siltation. The Prospective Development will not undermine this conservation objective.

³¹ <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/Conservation%20Objectives%20%282024%29%20River%20Foyle%20%26%20Tributaries%20SAC.%20FINAL.pdf>

Maintain and if feasible enhance the river morphology	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on river morphology. The Prospective Development will not undermine this conservation objective.
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5.1.3.3.3 [1355] Otter *Lutra lutra*

According to the Conservation Objectives Document for the River Foyle and Tributaries SAC (NIEA, 2024³²), otter distribution is widespread throughout the system. Signs of otter were recorded within the Site of the Prospective Development in the form of regular spraints under a bridge on the Bunadaowen River. No holts or couches were recorded within the Site. They were also recorded throughout the wider area of the Mourne Beg Catchment. Such signs were recorded before during and after construction of the Existing Development.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this species is 'Favourable' with the trend being 'Stable'.

The potential for adverse effects to occur is assessed below.

Table 5-12 Targets and attributes associated with the site-specific conservation objectives for Otter

Objective	Potential for Prospective Development to Undermine Conservation Objective
Maintain and if possible increase population numbers and distribution.	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on population numbers and distribution. The Prospective Development will not undermine this conservation objective.
Maintain the extent and quality of suitable Otter habitat, in particular the chemical and biological quality of the water and all associated wetland habitats	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on otter habitat. The Prospective Development will not undermine this conservation objective.

³² <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/Conservation%20Objectives%20%282024%29%20River%20Foyle%20%26%20Tributaries%20SAC.%20FINAL.pdf>

Improve channel substrate quality by reducing siltation.	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on channel substrate. The Prospective Development will not undermine this conservation objective.
Maintain and if feasible enhance the river morphology	The Prospective Development is not located within the SAC, does not propose instream works and will not result in any effect on river morphology. The Prospective Development will not undermine this conservation objective.

5.1.3.3.4 **River Foyle and Tributaries SAC - Impact Assessment Conclusion**

Having considered the potential for the Prospective Development to result in adverse effects on this SAC in light of the site-specific conservation objectives, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Prospective Development will not adversely affect the integrity of the River Foyle and Tributaries SAC.

5.1.4 Lough Eske and Ardnamona Wood SAC [000163]

The potential for Likely Significant Effects on this SAC was identified above. The identified pathways for effect include the following:

- › A pathway for indirect effects on the aquatic qualifying interest (QIs) species and habitats of the SAC exists via surface water connectivity between the components of the Prospective Development that are located in the Lowerymore Catchment. This includes western section of the entrance road to the Site and the grid connection route. The Lowerymore River is designated as the Lough Eske and Ardnamona Wood SAC downstream of the Wind Farm Site and adjacent to the southern section of the grid connection route.

Table 5-13 below lists the QIs of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

Table 5-13 Assessment of Qualifying Interests potentially affected.

Qualifying feature	Conservation Objective (NPWS, Version 1, July 2011 ³³)	Rationale	Potential for Adverse Effects Yes/No
Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]	To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) in Lough Eske and Ardnamona Wood SAC	This habitat is found in lakes within the SAC. There is no source-pathway-receptor chain between the Prospective Development and any lakes within the SAC and therefore, no potential for any adverse effect on this habitat as a result of the exists	No
Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]	To maintain the favourable conservation condition of Petrifying springs with tufa formation	No source-pathway-receptor chain between the Prospective Development and this habitat that is not associated with surface water downstream of the Subject Development was identified and therefore, there is no potential for it to result in any adverse effect on this habitat.	No

³³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000163.pdf

Qualifying feature	Conservation Objective (NPWS, Version 1, July 2011 ⁸⁹)	Rationale	Potential for Adverse Effects Yes/No
	(<i>Cratoneurion</i>)* in Lough Eske and Ardnamona Wood SAC		
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	To maintain the favourable conservation condition of Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles in Lough Eske and Ardnamona Wood SAC	No source-pathway-receptor chain between the Prospective Development and this terrestrial habitat was identified and therefore, there is no potential for it to result in any adverse effect on this habitat.	No
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	To restore the favourable conservation condition of Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) in Lough Eske and Ardnamona Wood SAC	A source-pathway receptor chain for effects on salmon in the downstream aquatic environment was identified.	Yes
Salmon (<i>Salmo salar</i>) [1106]	To maintain the favourable conservation condition of Atlantic Salmon in River Finn SAC	A source-pathway receptor chain for effects on salmon in the downstream aquatic environment was identified.	Yes
Killarney fern (<i>Trichomanes speciosum</i>) [1421]	To maintain the favourable conservation condition of Killarney Fern (<i>Vandenboschia speciosa</i>) in Lough Eske and Ardnamona Wood SAC	No source-pathway-receptor chain between the Prospective Development and this terrestrial species was identified and therefore, there is no potential for it to result in any adverse effect on this species.	No

5.1.4.1 Site Specific Pressures and Threats

As per the Natura 2000 Data Form³⁴ for the Lough Eske and Ardnamona Woods SAC the site-specific threats, pressures and activities with potential to impact on the European Site were reviewed and considered in relation to the Prospective Development. These are provided in **Table 5-14** below.

Table 5-14 Site-specific threats, pressures and activities for the Lough Eske & Ardnamona Woods SAC

Rank	Threats and Pressures (* Items in bold are of relevance to the Prospective Development)
High	Diffuse pollution to surface waters due to agricultural and forestry activities
	Invasive non-native species
	Other forms of taking animals
Medium	Human induced changes in hydraulic conditions
Low	Dispersed habitation
Rank	Activities, Management for positive impact
Medium	Forestry replanting (native trees)
	Grazing
	Grazing in forests/ woodland

5.1.4.2 Assessment of Effects

No works are proposed in the SAC and no potential for direct effects was identified.

The identified pathway for indirect effects on the SAC is via surface water in the Lowerymore River catchment. There is indirect hydrological connection from a small section at the south-western end of the Site to the SAC via overland flow and drainage. In addition, the grid connection route is located within existing road infrastructure in the N15 and local roads that are in close proximity to (and cross within the existing road) the Lowerymore River where it is adjacent to, and upstream of, the SAC. No instream works are proposed and no works on the grid connection as part of the Prospective Development.

³⁴ <https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000163>

5.1.4.2.1 **Effects during Construction**

The Prospective Development has the potential to result in indirect impacts on the above watercourse as a result of run off of pollutants such as silt, hydrocarbons and cementitious material as a result of tree felling and construction activity. Such impacts could result in habitat deterioration for QI species freshwater pearl mussel and Atlantic salmon in the form of siltation, eutrophication and reduction in water quality. The peat stability report as provided in support of this application finds the Site to be stable and at a low risk of peat failure. No instream works are proposed as part of the construction of the Prospective Development and works in this section of the Site will be very minor.

5.1.4.2.2 **Effects during Operation**

The Prospective Development will lead to an increased amount of hard standing/impermeable surfaces associated with the wind farm infrastructure. This has the potential to lead to faster run off of surface waters from the Site into the watercourses causing potential hydrological change. It may also include periodic maintenance works, which could lead to small scale pollution as a result of siltation, hydrocarbons, cementitious material or other pollutants. The operating wind farm substation will have toilet facilities but these will be managed within a sealed and monitored system and emptied by a licenced contractor.

Given that the majority of the infrastructure is already in place as a result of the Existing Development (with no evidence of operational effects recorded) and the Prospective Development will not result in a large increase in hard standing or infrastructure, any effect on the Aquatic QIs would likely be slight.

5.1.4.2.3 **Mitigation**

The Prospective Development includes a comprehensive suite of mitigation to protect water quality. This is provided in full in Appendix 5 and summarised above in relation to the River Finn SAC.

5.1.4.2.4 **[1029] Freshwater pearl mussel *Margaritifera margaritifera***

According to the Site-Specific Conservation Objectives Document for the Lough Eske and Ardnamona Woods SAC (NPWS, 2015³⁵), freshwater pearl mussel is located in the River Eske downstream of Lough Eske. The suitable habitat and distribution targets apply to that river, with no relevant targets set for the Lowerymore River, upstream of the lake, where it is adjacent to the grid connection. This accords with the findings of the freshwater pearl mussel survey of the Lowerymore River that was undertaken to support the 2017 EIAR, where no mussels were recorded in the Lowerymore River.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this species is ‘Bad’ with the trend being ‘Deteriorating’.

The potential for adverse effects to occur is assessed in **Table 5.15** below in light of the conservation objectives for the species.

³⁵ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000163.pdf>

Table 5-15 Targets and attributes associated with the site-specific conservation objectives for Freshwater pearl mussel

Attribute	Target	Potential for Prospective Development to Undermine Conservation Objective Target following implementation of Mitigation
Distribution	Maintain/restore distribution at 6.08km. See map 5	The Prospective Development does not have the potential to result in any effect on distribution within the SAC as no works are proposed in the SAC and mitigation is in place to avoid indirect effects. The Prospective Development will not undermine this conservation objective.
Population size	Restore population to at least 200,000 adult mussels	The Prospective Development does not have the potential to result in any effect on population size within the SAC. The Prospective Development will not undermine this conservation objective.
Population structure: recruitment	Restore to at least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length	The Prospective Development does not have the potential to result in any effect on recruitment within the SAC. The Prospective Development will not undermine this conservation objective.
Population structure: adult mortality	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	The Prospective Development does not have the potential to result in any effect on adult mortality within the SAC. The Prospective Development will not undermine this conservation objective.
Suitable habitat: extent	Restore suitable habitat in more than 6.08km in the Eske system (see map 5) and any additional stretches necessary for salmonid spawning	The Prospective Development does not have the potential to result in any effect on the extent of suitable habitat within the SAC. The Prospective Development will not undermine this conservation objective.
Suitable habitat: condition	Restore condition of suitable habitat	The Prospective Development does not have the potential to result in any effect on habitat condition within the SAC. The Prospective Development will not undermine this conservation objective.
Water quality: macroinvertebrate and phytobenthos (diatoms)	Restore water quality - macroinvertebrates: EQR greater than 0.90 (Q4-5 or Q5); phytobenthos: EQR greater than 0.93	The Prospective Development does not have the potential to result in any effect on water quality within the SAC following implementation of mitigation to avoid water pollution. The Prospective Development will not undermine this conservation objective.
Substratum quality: filamentous algae (macroalgae); macrophytes	Restore substratum quality- filamentous algae: absent or trace (less than 5%); macrophytes: absent or trace (less than 5%)	The Prospective Development does not have the potential to result in any effect on substratum quality within the SAC.

(rooted higher plants)		The Prospective Development will not undermine this conservation objective.
Substratum quality: sediment	Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment	The Prospective Development does not have the potential to result in any effect on sediment within the SAC. The Prospective Development will not undermine this conservation objective.
Substratum quality: oxygen availability	Restore to no more than 20% decline from water column to 5cm depth in substrate	The Prospective Development does not have the potential to result in any effect on oxygen availability within the SAC. The Prospective Development will not undermine this conservation objective.
Hydrological regime: flow variability	Restore appropriate hydrological regime	The Prospective Development does not have the potential to result in any effect on flow variability within the SAC. The Prospective Development will not undermine this conservation objective.
Host fish	Maintain sufficient juvenile salmonids to host glochidial larvae	The Prospective Development does not have the potential to result in any effect on host fish within the SAC. The Prospective Development will not undermine this conservation objective.
Fringing habitat: area and condition	Maintain the area and condition of fringing habitats necessary to support the population	The Prospective Development does not have the potential to result in any effect on fringing habitat within the SAC. The Prospective Development will not undermine this conservation objective.

5.1.4.2.5 [1106] Atlantic salmon (*Salmo salar*) (only in fresh water)

According to the Site Synopsis document for the Lough Eske and Ardnamona Woods SAC (NPWS, 2015³⁶), the Eske system has a population of Atlantic salmon with an important multi-sea-winter (spring salmon) stock, one of the few rivers nationally to hold 3-seawinter fish over 20 lb. The surveys undertaken to support this application recorded Atlantic salmon and suitable habitat for the species in the Lowerymore River also.

According to the Article 17 Report (NPWS 2025), the overall Conservation Status for this species is 'Bad' and the overall Conservation Trend is 'deteriorating'.

The potential for adverse effects to occur is assessed below.

³⁶ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Table 5-16 Targets and attributes associated with the site-specific conservation objectives for Atlantic Salmon (*Salmo salar*) (only in freshwater)

Attribute	Target	Potential for Prospective Development to Undermine Conservation Objective Target
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	The Prospective Development does not have the potential to result in any effect on distribution within the SAC as all works are undertaken outside the SAC and will not result in any barriers to connectivity. The Prospective Development will not undermine this conservation objective.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	The Prospective Development does not have the potential to result in any effect on adult spawning fish within the SAC. The Prospective Development will not undermine this conservation objective.
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	The Prospective Development does not have the potential to result in any effect on salmon fry abundance within the SAC. The Prospective Development will not undermine this conservation objective.
Out-migrating smolt abundance	No significant decline	The Prospective Development does not have the potential to result in any effect on out migrating smolt within the SAC. The Prospective Development will not undermine this conservation objective.
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	The Prospective Development does not have the potential to result in any effect on number and distribution of redds within the SAC. The Prospective Development will not undermine this conservation objective.
Water quality	At least Q4 at all sites sampled by EPA	The Prospective Development does not have the potential to result in any effect on water quality within the SAC. The Prospective Development will not undermine this conservation objective.

5.1.4.2.6 **Lough Eske and Ardnamona Woods SAC - Impact Assessment Conclusion**

Having considered the potential for the Prospective Development to result or have resulted in adverse effects on this SAC in light of the site-specific conservation objectives, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Prospective Development will not adversely affect the integrity of Lough Eske and Ardnamona Woods SAC.

5.1.5 **Invasive Alien Species**

Rhododendron was identified as a KER and was recorded occasionally throughout the Site during all surveys. No requirement for interaction with rhododendron was identified during the walkover surveys as, with the exception of the BMEP, there will be limited habitat loss associated with the Prospective Development and the species is occasional throughout the Site.

Notwithstanding the above, a detailed IAS survey will be undertaken prior to commencement of the Prospective Development to update the surveys previously undertaken. This will identify any invasive alien species listed on the First Schedule of the S.I. No. 374/2024 - European Union (Invasive Alien Species) Regulations 2024. The locations of any such species will be recorded and their locations mapped. Should any be located within or adjacent to the footprint of the Prospective Development, the measures set out in the Invasive Species Management Plan (ISMP) that is included as Appendix 6 will be adhered to. In addition, the ISMP sets out site hygiene biosecurity measures that will be adhered to at all times.

6.

ASSESSMENT OF RESIDUAL EFFECTS

Based on the above, in view of best scientific knowledge and on the basis of objective information, there is no potential for adverse effects on the conservation objectives of the Screened-In SACs and their relevant QIs as defined by their targets and attributes to occur. Potential pathways for effect are mitigated through measures to avoid impacts and the incorporation of best practice/mitigation measures.

The Prospective Development will not prevent the QIs of any European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

‘conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as ‘favourable’ 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.’*

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Prospective Development will not adversely affect the integrity of any European Site in regard of its Conservation Objectives.

7.

ASSESSMENT OF IN CUMULATION AND CUMULATIVE EFFECTS

7.1

In Cumulation Effects

This section considers the potential for additional impacts to arise when considering the Prospective Development in cumulation with the Existing Development (i.e. the effects of the Subject Development) on European Sites.

No residual adverse effects on the integrity of any European Site were identified as a result of the Prospective Development on its own. The potential for adverse effects on the identified European Sites associated with the Prospective Development to occur when considered in cumulation with the Existing Development are considered below. No additional European Sites or relevant QIs were identified as a result of the in cumulation assessment.

Effects on Croaghonagh Bog SAC and Lough Eske and Ardnamona Wood SAC

The Prospective Development will not result in any works within the SACs. However, the existing access road to the wind farm will be utilised to access the Site and could possibly (following the precautionary principle) result in effects on the surrounding cut over and degraded peatland habitats within the SAC in that area. In addition, there is the potential for surface water pollution to result in indirect effects. However, measures will be in place to ensure that no such effects occur (e.g. dust suppression, surface water control, road maintenance, fencing etc. as listed in Appendix 5).

As described in Sections 5.1.1 and 5.1.4 of the rNIS and this NIS, the Existing Development has not and will not result in any effects that could impact on the conservation objectives of these European Sites and cannot contribute to any in cumulation impacts in this regard.

As such, there is no potential for adverse in cumulation effects on these European Sites to occur.

Effects on River Finn SAC and River Foyle and Tributaries SAC

As described in Sections 5.1.2 and 5.1.3 of the rNIS and this NI, in the absence of mitigation, the Prospective Development does have the potential to result in significant effects on the SACs. However, a robust suite of measures are provided in the NIS and Appendix 5 to ensure that such effects do not occur and no potential for residual effects remains.

Whilst temporary effects on the conservation objectives of the QI habitats and species were identified as a result of the November 2020 Peat Slide, no ongoing or residual effects resulting from the Existing Development were identified. As such, the Existing Development cannot contribute to any effect in cumulation with the Prospective Development in this regard.

As such, there is no potential for adverse in cumulation effects on these European Sites to occur.

Effects on Invasive Species

The Prospective Development does not anticipate any significant interaction with invasive species but includes a robust Invasive Species Management Plan and biosecurity measures to ensure that it will not result in the spread of invasive species.

As concluded in Section 5.1.5 of the rNIS, the Existing Development has not and will not result in the spread of invasive species and cannot contribute to any in cumulation impacts in this regard.

As such, there is no potential for adverse in cumulation effects as a result of the spread of invasive species to occur.

7.2 In Combination Effects

The potential for the Prospective Development to result in significant effects on European Sites was assessed in combination with other projects and land uses.

7.2.1 Surrounding Land Uses

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

Effects on Screened In European Sites

The Prospective Development will not result in any effects that could impact on the conservation objectives of these European Sites and cannot contribute to any in combination impacts in this regard.

The surrounding land uses such as sheep grazing, diffuse water pollution, peat extraction and sand and gravel quarrying are among the identified high-and medium ranking pressures and threats identified for the European Sites. However, the Prospective Development will not contribute to any such pressure or threat.

7.2.2 Other Projects

The planning registers for both Donegal and Tyrone County Councils were consulted on the 29/05/2026 with regard to recently permitted or constructed developments within the area.

Projects considered include those within approximately 1.5km of the Mourne Beg River, Lowerymore River and the Glendergan River subbasins until Lough Eske downstream of the Lowerymore and River Derg downstream of the Glendergan and Mourne Beg, downstream of the Subject Development. The planning history search was compiled via a desk-based study in which the Donegal County Council (DCC) Planning Portal, the An Coimisiún Pleanála website, and Northern Ireland Planning Portal were consulted.

Details of projects considered in this assessment are provided in Appendix 4.

As with the assessment of the surrounding land uses that are described above, no potential for the Prospective Development to contribute to any significant effects on European Sites was identified as there are no potential residual adverse effects on any relevant Qualifying Interests.

7.2.3 Plans Assessed

Relevant plans including the Donegal County Development Plan 2018 - 2024, the Derry & Strabane District Council - Local Development Plan (LDP 2032), 4th National Biodiversity Action Plan 2023-2030 and Northern and Western Regional Spatial and Economic Strategy 2020 - 2032 were also considered, as described in **Table 7.1** below.

Table 7-1 List of Plans and Projects

Plans	Key Policies and Objectives directly related to European Sites and Biodiversity in the Zone of Influence	Assessment of Potential Impact on European Sites
Donegal County Development Plan 2024-2030	Natural Heritage Objectives: BIO-O-1: To preserve and enhance the biodiversity of the County in accordance with the relevant EU policies and national legislation. Natural Heritage Policies BIO-P-1: To require all developments to comply with the requirements of the EU Habitats Directive and EU Bird Directive, including ensuring that development proposals: a. Do not adversely affect the integrity of any European/Natura 2000 site (i.e. Special Areas of Conservation and Special Protection Areas) including effects on ex-situ but functionally linked habitats, and species (e.g. Pearl Mussel) save where a plan must be carried out for imperative reasons of overriding public interest (IROPI). Wind Energy Policies c. impacts on nature conservation designations, archaeological areas, county geological sites, historic structures, public rights of way and walking routes. WE-P-8: To ensure that the assessment of Wind Energy Development Proposals have regard to the following Specific Biodiversity Related Requirement: a. Loss of functionally linked habitat: Developers of wind energy proposals on greenfield sites shall undertake a preconstruction appraisal of habitats. Should habitats suitable for supporting Special Conservation Interest bird species be present, developers will be required to undertake pre-construction bird surveys to confirm whether the site supports a significant proportion of bird populations (typically taken to be 1% of the population of a SPA, at time of designation). b. Mortality due to collision with operational wind turbines: Wind energy development proposals shall demonstrate that they can be delivered without resulting in adverse effects on the integrity of European Sites. Vantage point surveys will be required to establish:	The Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to European Sites. The Prospective Development will be undertaken in accordance with the mitigation measures and protocols set out in the NIS and no residual or ongoing effects on any European Site was identified. The Subject Development is located outside of any Designated Sites.

	(i) the overall use of the development site by Special Conservation Interest birds and (ii) more detailed usage by Special Conservation Interest birds of the turbine swept area taking account of specifications such as turbine height, blade length, nacelle (blade hub) rotation speed and the number of turbines. Mitigation measures may need to be delivered to ensure that any residual risks are appropriately avoided or reduced. c. Disturbance displacement: To avoid potential permanent disturbance displacement impacts on Special Conservation Interest bird species, Donegal County Council will generally not support wind energy proposals within 1km of Special Protection Areas unless clear evidence from the applicant or scheme promoter can demonstrate no adverse effect on site integrity will arise. d. Water Quality: Any wind energy developments within 1 km of sensitive SPAs / SACs shall ensure that potential adverse impacts on the European sites due to water quality impacts are assessed and, where required, mitigated. Mitigation measures include, but are not limited to, water quality and ecological baseline studies, run-off / leachate modelling, delivery of Construction Environmental Management Plans (CEMPs) and Water Management Plans (WMPs) and compliance with industry good practice.	
Derry & Strabane District Council – Local Development Plan (LDP 2032)	NE 1: Nature Conservation Sites European / International Sites Planning permission will only be granted for a development proposal that, either individually or in combination with existing and / or proposed plans or projects, is not likely to have a significant effect on: a European Site (Special Protection Area - SPA, proposed Special Protection Area- pSPA; Special Areas of Conservation - SAC, candidate Special Areas of Conservation - cSAC; & Sites of Community Importance or; a listed or proposed Ramsar Site: Where a development proposal is likely to have a significant effect (either alone or in combination) or reasonable scientific doubt remains, the Council shall make an appropriate assessment of the implications for the site in view of the site's conservation objectives. Appropriate mitigation measures in the form of planning conditions may be imposed. In light of the conclusions of the assessment, the Council shall agree to the development only having ascertained that it will not adversely affect the integrity of the site. In exceptional circumstances, a development proposal which could adversely affect the integrity of a European listed or proposed Ramsar Site may only be permitted where:	No part of the subject development is located in Derry or Strabane. However, this plan was considered in relation to transboundary effects. The Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to European Sites. The assessments carried out and presented in this NIS confirm that the relevant policy has been complied with and there is no potential for cumulative effects resulting from the Prospective Development

	- there are no alternative solutions; and - the proposed development is required for imperative reasons of overriding public interest; and - Compensatory measures are agreed and fully secured. As part of the consideration of exceptional circumstances, where a European or Ramsar site hosts a priority habitat or priority species listed in Annex I or II of the Habitats Directive, a development proposal will only be permitted when: - it is necessary for reasons of human health or public safety or there is a beneficial consequence of primary importance to the environment; or - agreed in advance with the Department of Agriculture, Environment & Rural Affairs (DAERA N	
4th National Biodiversity Action Plan 2023-2030	Objective 1: Adopt a Whole-of Government, Whole of-Society Approach to Biodiversity. Proposed actions include capacity and resource reviews across Government; determining responsibilities for the expanding biodiversity agenda providing support for communities, citizen scientists and business; and mechanisms for the governance and review of this National Biodiversity Action Plan. Objective 2: Meet Urgent Conservation and Restoration Needs. Supporting actions will build on existing conservation measures. Efforts to tackle Invasive Alien Species will be elevated. The protected area network will be expanded to include the Marine Protected Areas. The ambition of the EU Biodiversity Strategy will be considered as part of an evolving work programme across Government. Objective 3: Secure Nature's Contribution to People. Actions highlight the relationship between nature and people in Ireland. These include recognising the tangible and intangible values of biodiversity, promoting nature's importance to our culture and heritage and recognising how biodiversity supports our society and our economy. Objective 4: Enhance the Evidence Base for Action on Biodiversity. This objective focuses on biodiversity research needs, as well as the development and strengthening of long-term monitoring programmes that will underpin and strengthen future decision-making. Action will also focus on collaboration to advance ecosystem accounting that will contribute towards natural capital accounts.	The Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to European Sites. The Prospective Development will be undertaken in accordance with the mitigation measures and protocols set out in the NIS and no residual or ongoing effects on any European Site was identified. The Subject Development is located outside of any Designated Sites.

	Objective 5: Strengthen Ireland's Contribution to International Biodiversity Initiatives. Collaboration with other countries and across the island of Ireland will play a key role in the realisation of this Objective. Ireland will strengthen its contribution to international biodiversity initiatives and international governance processes, such as the United Nations Convention on Biological Diversity.	
Northern and Western Regional Spatial and Economic Strategy 2020 - 2032	Regional Policy Objectives: RPO 5.4 Encourage the prioritisation of Site-Specific Conservation Objectives (SSCO) for all sites of Conservation Value, designated in EU Directive (i.e. SACs, SPAs) to integrate with the development objectives of this Strategy. RPO 5.5 Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage area. Conserve and protect European sites and their integrity. RPO 5.7 Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.	The Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to European Sites. The Prospective Development will be undertaken in accordance with the mitigation measures and protocols set out in the NIS and no residual or ongoing effects on any European Site was identified. The Subject Development is located outside of any Designated Sites.

7.3

Conclusion of Assessment of In Combination Effects

Following the detailed assessment provided in the preceding sections, it is concluded that, the Prospective Development will not result in any residual adverse effects on the integrity of any European Site as defined in its conservation objectives, when considered on its own.

In the review of the plans and projects that was undertaken, no connection, that could potentially result in additional or in combination effects was identified. Neither was any potential for different (new) effects resulting from the combination of the various projects and plans in association with the Prospective Development or when considered in cumulation with the Existing Development.

8.

TRANSBOUNDARY EFFECTS

Given the location of the Prospective Development, close to the border with Northern Ireland, this section considers the potential for transboundary effects as a result of the Prospective Development on its own, in cumulation with the Existing Development and in combination with other land uses and projects.

As the Subject Development is located entirely within the Republic of Ireland, there is no potential for direct transboundary effects to occur either alone or in combination with other projects and land uses.

In consideration of potential indirect transboundary effects on biodiversity, a single pathway for effect was identified – surface water. The Site is located mainly within the River Derg catchment, which flows through Northern Ireland. The Site is connected to this catchment via the Glendergan, Bunadaowen and Shruhangerve Rivers and Mary Breen's Burn. However, there is a comprehensive suite of measures in place to ensure that any potential effects are effectively mitigated. In addition, the Geotechnical and Peat Stability Report that is provided in support of the application concludes that the Site has an acceptable margin of safety and therefore is considered to be at low risk of peat failure subject to the specified mitigation measures and is suitable for the Prospective Development.

The Prospective Development will not result in significant effects on these catchments and transboundary effects can be excluded in these areas.

The Subject Development (Existing and Prospective Developments combined) will not result in any residual transboundary effect on European Sites.

9.

CONCLUDING STATEMENT

This NIS has provided an assessment of all potential direct or indirect adverse effects on the integrity of European Sites as defined in their conservation objectives. It has also assessed the potential for in-combination effects on European Sites with other plans and projects and in cumulation effects, when considered alongside the Existing Development.

The potential for likely significant effects on Croaghonagh Bog SAC or the Lough Eske and Ardnamona Wood SAC, River Finn SAC and the River Foyle and Tributaries SAC was identified.

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been mitigated through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the Prospective Development does not adversely affect the integrity of European Sites.

Therefore, it can be objectively concluded that the Prospective Development, individually or in-combination with other plans or projects, will not adversely affect the integrity of any European Site.

Transboundary effects between the Republic of Ireland and Northern Ireland were considered in the assessment and no residual effects on European Sites were identified.

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