

Remedial Natura Impact Statement and AA Screening Report

Meenbog Wind Farm, Co.
Donegal





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Prepared By: **MKO**

Tuam Road

Galway

Ireland

H91 VW84



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1. INTRODUCTION

1.1 Background

This Remedial Natura Impact Statement (rNIS) assesses the effects on European Sites of all works completed to date associated with the Existing Development.

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

The list below provides terminology used in the rNIS. It is consistent with the terminology used in the accompanying rEIAR, as outlined in Section 1.1.1 of the rEIAR.

- 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. It is shown in Figure 2.1 along with the Grid Connection Site.
- The **‘Grid Connection Site’** refers to the area of the Site surrounding the Grid Connection from the Wind Farm Site entrance to the Clogher 110kV substation. It is shown in Figure 1.1 along with the Wind Farm Site.
- The **‘Grid Connection’** 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.
- 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

This rNIS provides the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of the Existing Development.

The Existing 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 rNIS, all Sites (both UK and ROI) have been included in the assessment provided.

1.2 Relevant Guidance and AA Process

1.2.1 Guidance

This rNIS 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 (IROPT¹).

1.3

Structure and Format of this Document

- Section 1 provides an introduction, background information, methodology and statement of authority for the rAASR and rNIS.
- Section 2 provides a full description of all elements of the Existing 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 or have occurred either individually or in combination with other plans and projects as a result of the Existing Development.
- Section 5 of the rNIS provides a detailed consideration of the screened in European Sites and identifies the relevant qualifying features and how they may have been or 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 Existing 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 Existing 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 a 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.

1.5

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 Existing 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 Wind Farm Site and Grid Connection Site have been subject to extensive ecological field surveys carried out as part of the 2017 EIAR. These surveys informed the pre-development baseline and are

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

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 Wind Farm Site and Grid Connection Site were undertaken to inform this rNIS. 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 Wind Farm and Grid Connection 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

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 the Wind Farm and Grid Connection 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 Wind Farm and Grid Connection 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.

1.5.2.1.1 Otter Survey

The findings of the remedial 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 2009⁵). 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, 2013⁵).

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 EIAR. The relevant documents are provided in **Appendix 1** and listed below.

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>

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: 08.01.2026

- 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:

- 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.

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 EXISTING 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, as described in Chapter 1 Introduction of this rEIA, and briefly below. Please note that no activities associated with the Existing Development occurred within the BMEP Site and therefore this site is not discussed further in this rNIS.

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 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 (N15), 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 measures 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); Golland, 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 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 Glendorgan 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 L-2595 Local Road, then proceeds to the L-1985 Local Road where it travels east along the road and through agricultural lands parallel to the local road before continuing along the L-19852 Local Road and finally following a private road to reach the Clogher 110kV substation.

The Clogher 110kV electrical substation is situated approximately 6.5 km southwest of the on-site 110kV electrical substation. The Grid Connection Site traverses the townlands of Ardinawark, Keadew Upper, Keadew Lower, Cullionboy, Cashelnavean, Tawnawully Mountains and Friarsbush.

2.2

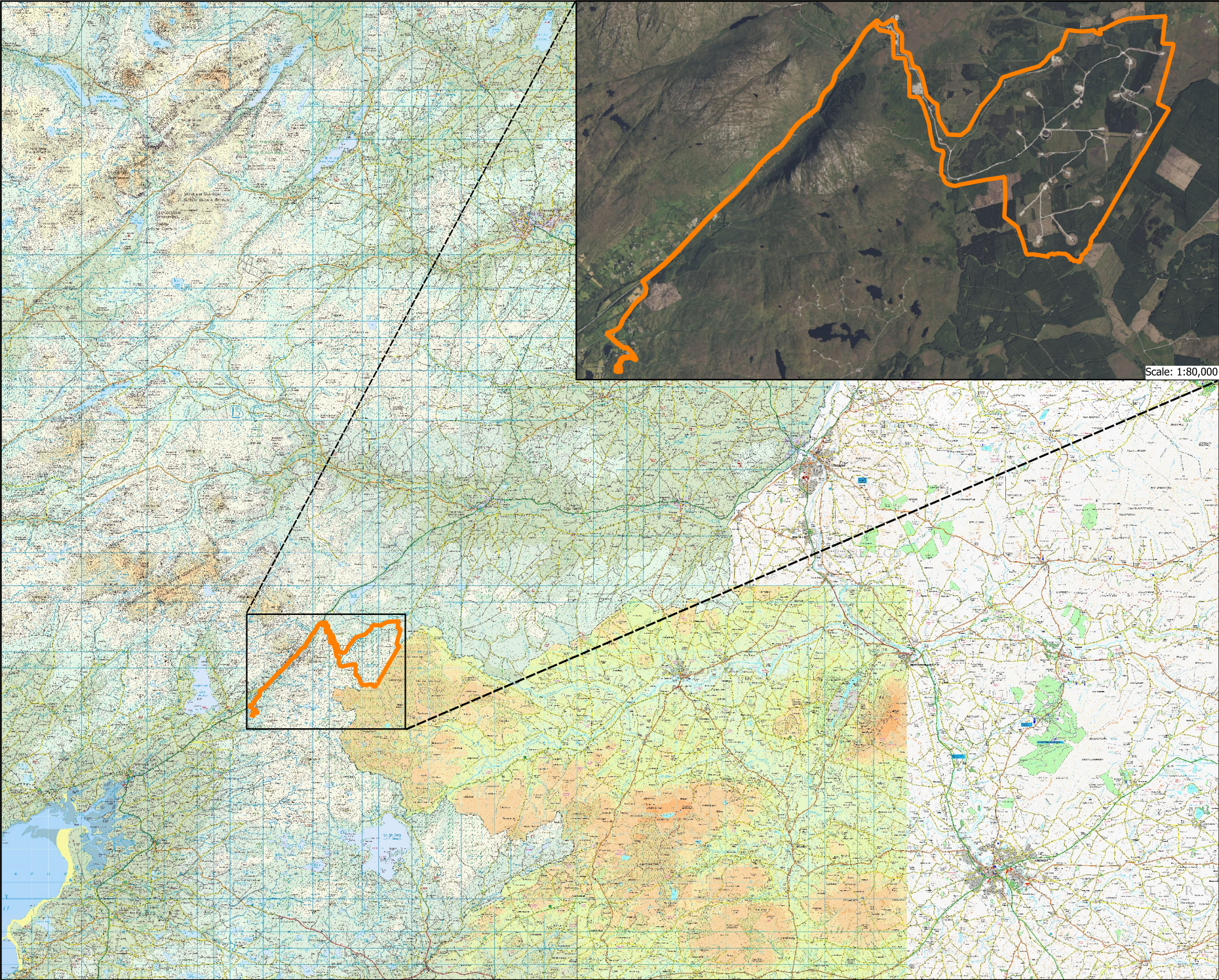
Characteristics of the Existing Development

Full details of the Existing Development are provided in Chapter 4 of the rEIAR that supports this application. This chapter is included as **Appendix 2** to this rNIS. **Figure 2-2** shows the site layout.

For the purpose of this rNIS, the Existing Development consists of the following elements that currently exist and for which substitute consent is sought:

- Upgrading of access junctions, tracks and roads, and construction of new site access roads;
- 18 no. wind turbine foundations and hardstand areas at various stages of development;
- A 110kV Electrical substation with 2 no. control buildings (with a combined floor area of 398.1 sqm) with welfare facilities, associated electrical plant and apparatus, security fencing and underground wastewater holding tank;
- 110kV underground grid connection cabling (including joint bays, communication chambers, earth sheath links, and ancillary works along the underground electrical cabling route) connecting the wind farm 110kV substation to the Clogher Substation in the townland of Cullionboy. This cabling route is primarily located within the public road corridor;
- Internal wind farm underground cabling at various stages of development;
- 2no. temporary construction compounds (including 4 no. temporary site offices with a combined floor area of 66 sqm and 1 no. temporary security cabin with a floor area of 30.5 sqm);
- 3no. borrow pits;
- Peat and spoil management;
- Forestry felling;
- Site drainage and sediment control measures; and
- All associated site development works.

It should be noted that the November 2020 Peat Slide occurred during the construction of the Existing Development and the effects of this are assessed in this rNIS



Map Legend

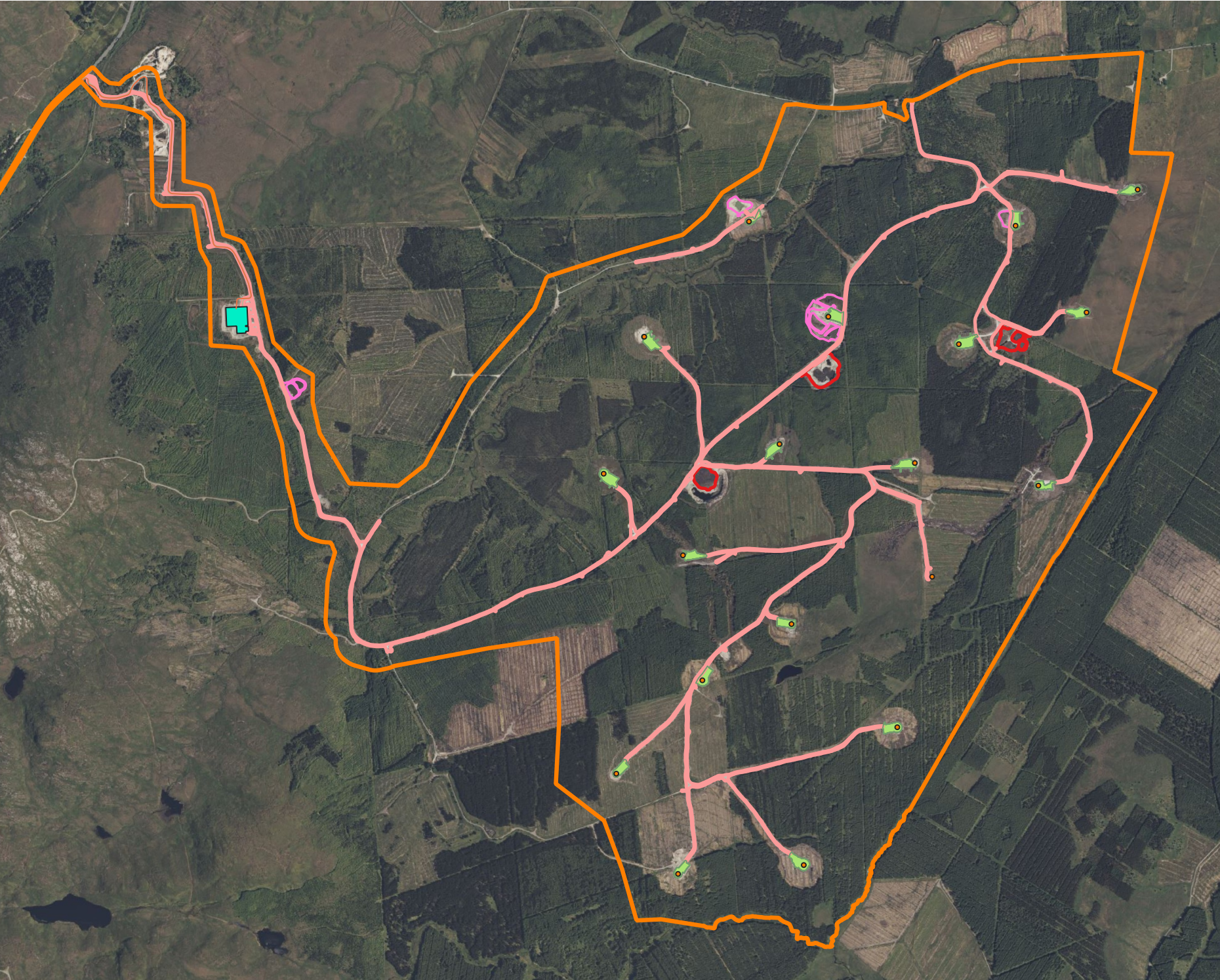
-  Wind Farm Site and Grid Connection Site



Drawing Title	
Site Location	
Project Title	
Substitute for Consent Application for Meenbog Wind Farm	
Drawn By	Checked By
MK	PR
Project No.	Drawing No.
240505-a	Figure 2.1
Scale	Date
1:300,000	10.06.2026



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie



Map Legend

- Wind Farm Site and Grid Connection Site
- 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

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Checked By

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Project No.

240505-a

Drawing No.

Figure 2.2

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MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie

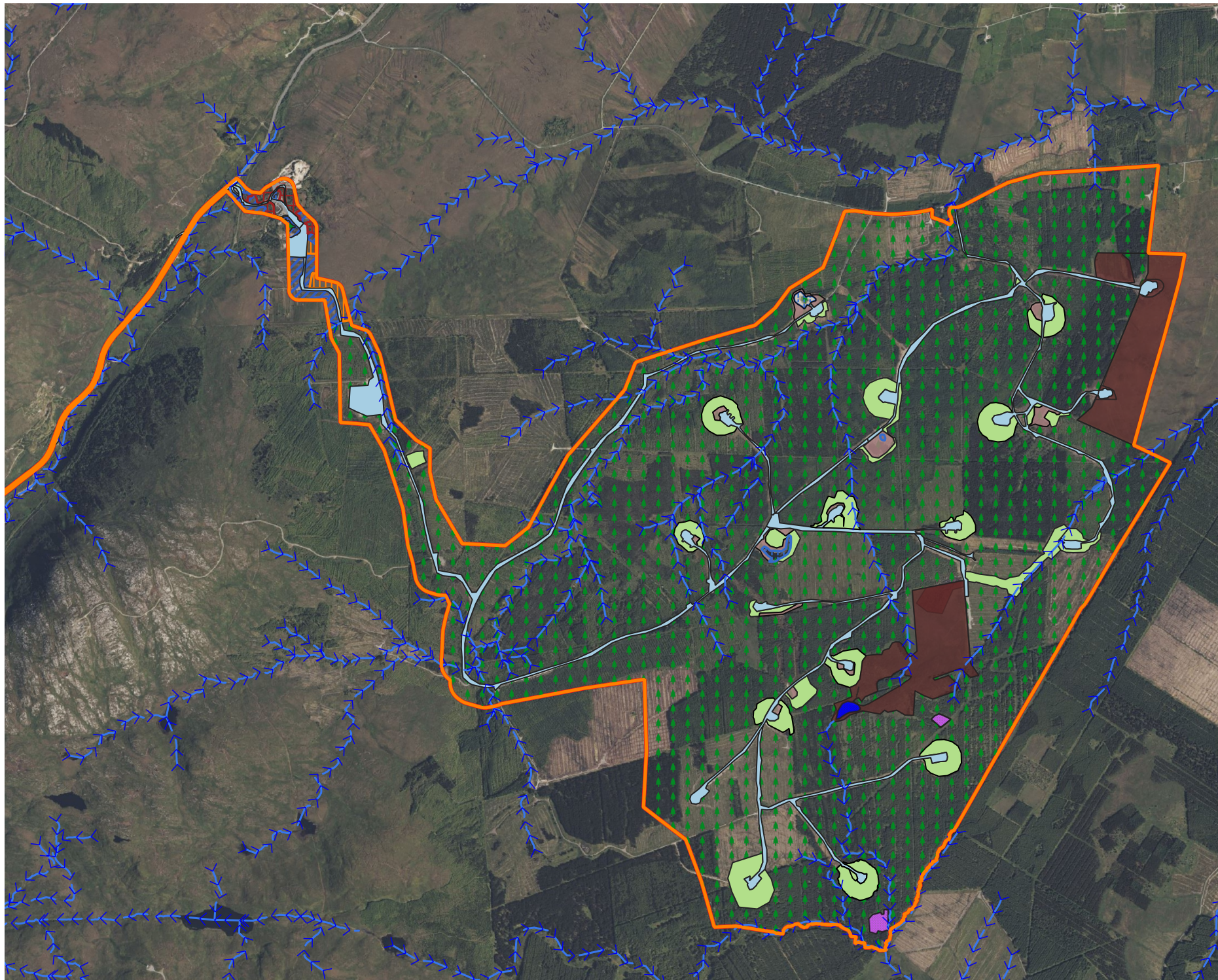
3. **CHARACTERISTICS OF THE RECEIVING ENVIRONMENT**

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 Wind Farm Site and Grid Connection Site as they exist at the current time and how they have changed as a result of the Existing Development or other processes.



Map Legend

-  Wind Farm Site and Grid Connection Site
-  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

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Date

10.06.2026



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie

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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 repository 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 Shruhingarve 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.

3.1.2 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 Wind Farm Site during the walkover surveys and suitable habitat for the species was recorded on all the watercourses throughout the Site. Similarly,

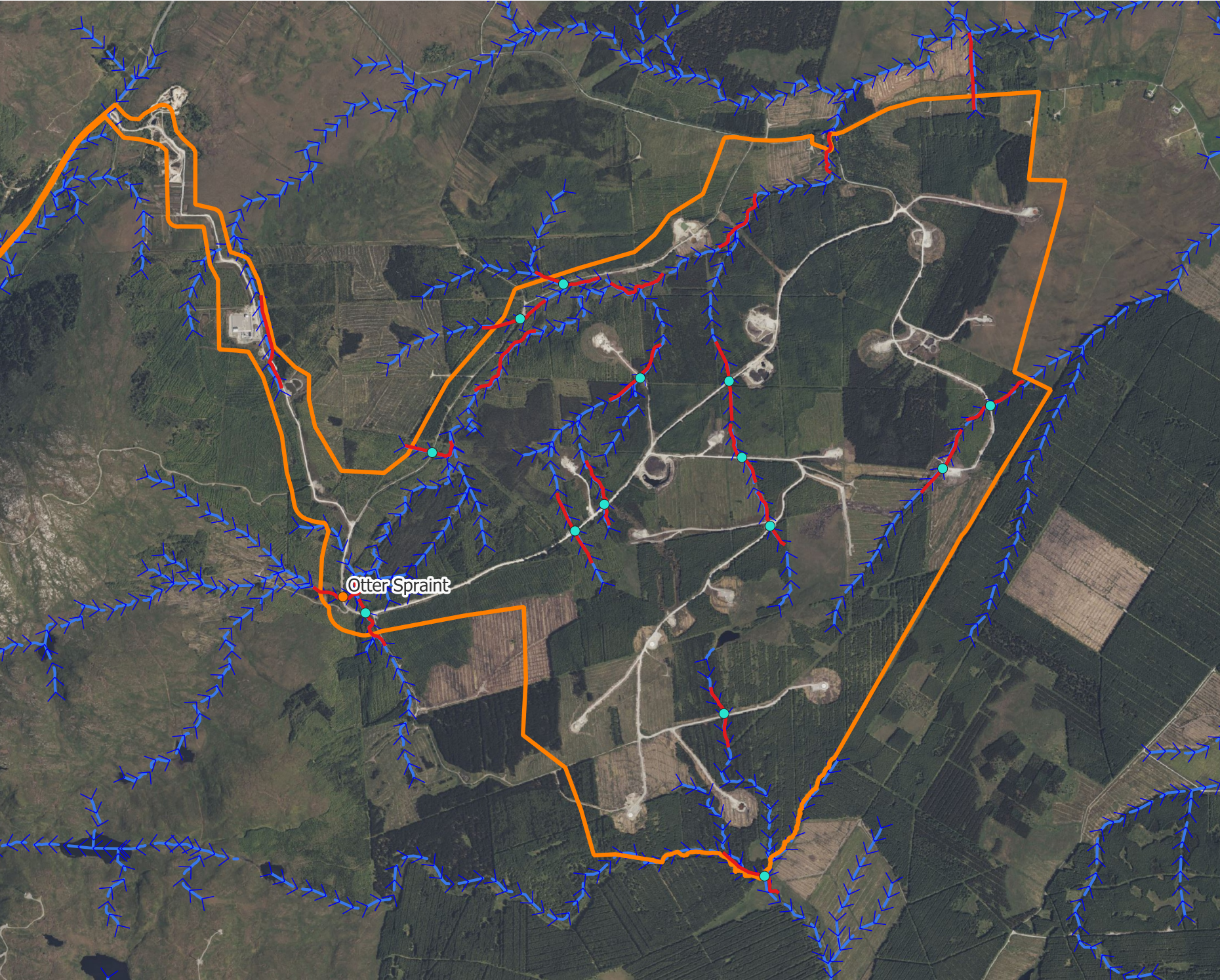
suitable habitat for Atlantic salmon was identified. Both these species are listed on Annex II of the EU Habitats Directive and are among the Qualifying Interests of nearby SACs. Dedicated surveys for these species were undertaken.

Whilst extensive bird surveys were undertaken on the Wind Farm Site to inform the rEIAR and EIAR, they are not relevant to this rNIS as the potential for the Existing Development to have resulted in likely significant effects on any SPAs was 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 Wind Farm Site. This involved a walkover of the relevant watercourses where they occur within 150m of the 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 Wind Farm 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 Wind Farm Site, otter were recorded during the aquatic surveys that are provided in **Appendix 1** and described in subsequent sections.



Map Legend

- Wind Farm Site and Grid Connection Site
- 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.
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MKO
Planning and
Environmental
Consultants

Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: ww.mkofireland.ie

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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 Wind Farm Site is drained by tributaries (Shruhangerve [01S26], Bunadaowen [01B01]) of the Mourne Beg River which flow north-westerly through the Wind Farm Site. The southern portion of the Wind Farm Site is drained by tributaries of the tributaries/ headwaters of Glendergan River (Segment codes: 01_549, 01_599, and 01_GBNI0102037) which flow into Northern Ireland. In the western section of the Wind Farm Site, the Barrack Hill stream [37B16] flows culverted under the road (N15) by the entrance to the Wind Farm 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 Wind Farm Site by the access track.

The majority of the Wind Farm Site is located within the Foyle (01) Catchment. The Wind Farm Site access route and the Grid Connection Site are located within the Donegal Bay North (37) Catchment. Most of the Wind Farm Site is within the MourneBeg_SC_010 sub-catchment draining into the Mourne Beg River system. A small southern section of the Wind Farm Site is within the LeaghanyRiver_SC_010 sub-catchment, draining into Glendergan River system. A small section in the west of the Wind Farm Site, and the Grid Connection 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 Wind Farm Site and Grid Connection Site lies within is classified as 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 Wind Farm Site and Grid Connection Site.

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

Table 3-1 Watercourses on Wind Farm Site and Grid Connection 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 Wind Farm Site through the centre and out through the north of the Wind Farm 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 Wind Farm Site. Two stream systems flow through/from within the Wind Farm Site into this watercourse. Two tributaries of the Mourne Beg flow through the western	Poor	At risk

	edge of the Wind Farm 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 Wind Farm Site in the eastern side of the Wind Farm Site and flows in a northeasterly direction through the Wind Farm Site and becomes a tributary to the Mourne Beg River.	Moderate	At risk
Glendergan River	The headwaters are found within the south of the Wind Farm Site and flows in a southerly direction through the Wind Farm Site and crosses the border into Northern Ireland.	Poor	In review
Lowerymore_020	Flows in a south westerly direction through the Wind Farm Site at the western edge of the Wind Farm Site and along the Grid Connection 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 Wind Farm Site and Grid Connection Site. The sampling stations listed below are downstream of the Wind Farm Site and Grid Connection Site and have the potential to be affected or to have been affected by the Existing Development. EPA sampling stations are situated downstream of the Wind Farm Site and Grid Connection Site in four out of the five subbasins relevant to the Existing 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 Cypermethrin, 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 3-3. EPA monitoring sites are briefly described below.

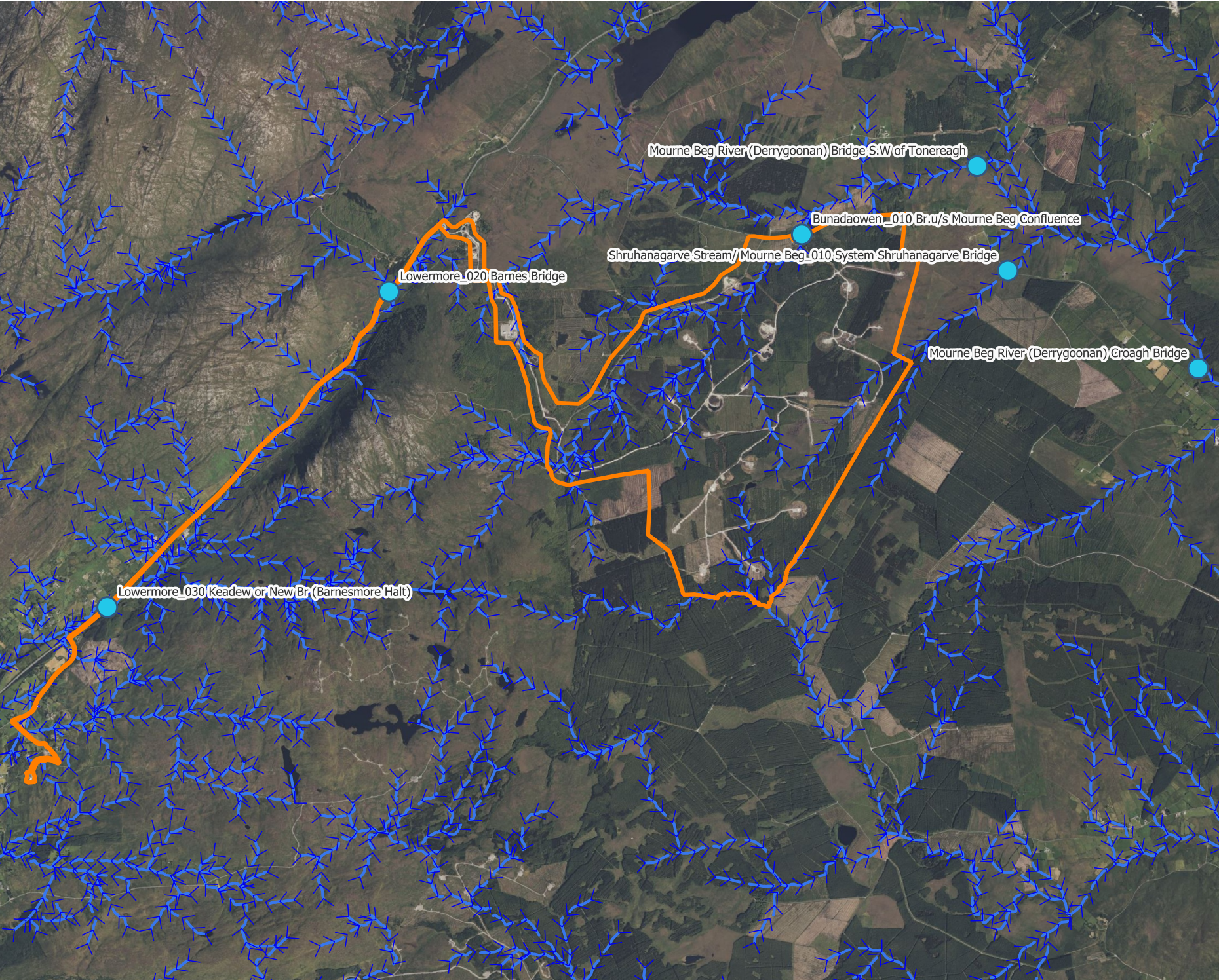
- EPA. Bunadaowen. Br. u/s Mourne Beg Confluence (ITM coordinates 608091E, 887615N), immediately upstream of its confluence with Mourne Beg River. This sampling station is downstream of a large part of the Wind Farm Site but upstream of where the November 2020 Peat Slide entered the Mourne Beg River.
- 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 Wind Farm 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 southeast 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 Wind Farm Site and November 2020 Peat Slide.

Table 3-2 Watercourses within the vicinity of the Wind Farm Site and Grid Connection 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	2016- Q2 (Poor Status)
	Station Code: RS01B010100	2017- Q2-3 (Poor status)
	Easting: 208140.55	2019- Q3-4 (Moderate Status)
	Northing: 387608.56	2020- Q4 (Good Status)
		2022- Q4 (Good status)
Shruhanagarve Stream/ Mourne Beg_010 system	Shruhangarve Bridge- 2022	2020- Q1 (Poor Status)
	Station Code: RS01S260830	2023- Q3 (Poor Status)
	Easting: 210229.29 Northing: 387230.11	
Mourne Beg River (Derrygoonan)	Bridge S.W. of Tonreagh- 2022 Station Code: RS01M010200	2020- Q3-4 (Moderate Status)

	Easting: 209903 Northing: 388300	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)
Glendergan River*	Glendergan 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

- Wind Farm Site and Grid Connection Site
- Water Quality Monitoring Locations
- WFD River Waterbodies

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
1:50,000	10.06.2026

MKO
Planning and Environmental Consultants

Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: ww.mkofireland.ie

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 rNIS 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 Shruhangerve, 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 sp*)
- > 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:

Shruhangerve

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 Shruhangerve confluence or on the Shruhangerve 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 boatmen *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 redds around Grid Ref: E214359 N385072 and two unconfirmed redds 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 redds confirmed throughout section – good visibility, shallower water and narrower stream than downstream. Numerous unconfirmed redds.

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 85072



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.

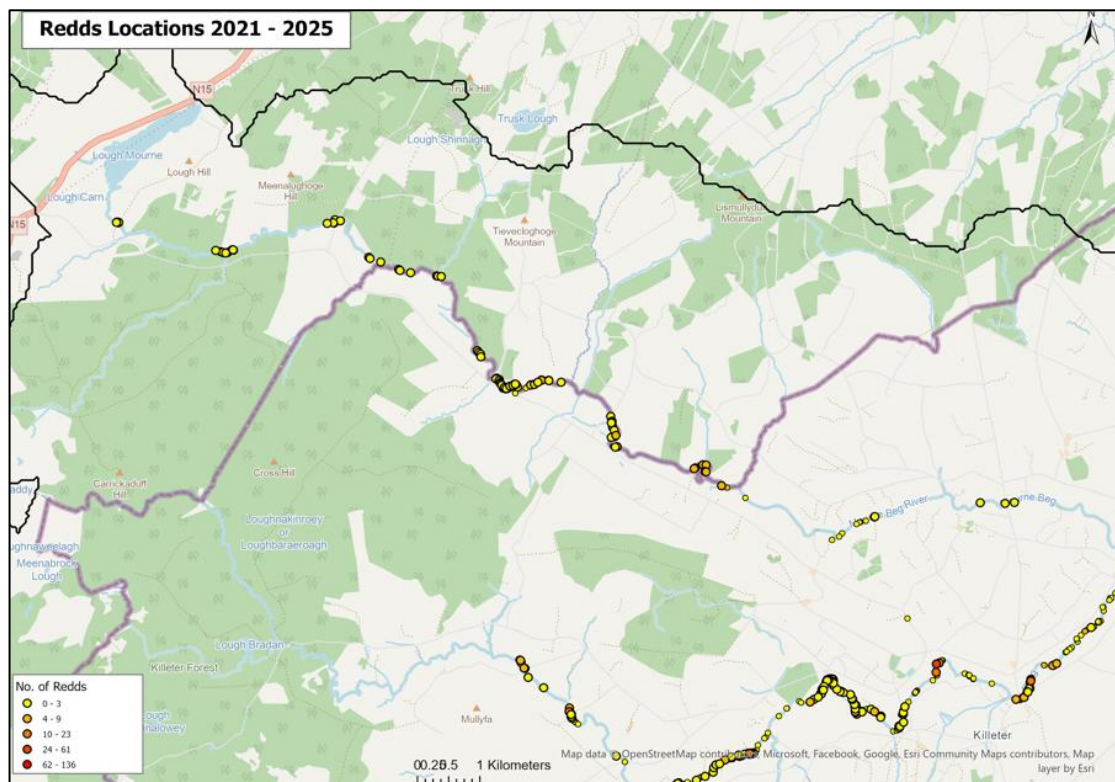
Redd Survey Data

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 Shruhangerve 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 Shruhangerve 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 Shruhangerve 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 or have occurred either individually or in combination with other plans and projects as a result of the Existing 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 Wind Farm Site and Grid Connection Site are shown on **Figure 4-1**. Information on these European Sites according to the site-specific conservation objectives is provided in **Table 4-1**. Sites that were further away from the Existing 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 Existing 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 Development 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 Existing 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 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 this rNIS.
- The potential for the Existing 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 3**.

Table 4-1 Identification of European Sites within the Likely Zone of Influence

European Sites and distance from the Wind Farm Site and Grid Connection 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	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 or have occurred as the development footprint (area where physical works took place) is located within and immediately adjacent to with the pre-existing site road network and entirely 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 Existing Development both on its own and in combination with other plans and projects cannot be excluded.	Yes
River Foyle and Tributaries SAC [UK0030320] Distance: 0km from Wind Farm Site 4.8km from Grid Connection 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	Detailed conservation objectives for this site, (Version 4, 6 September 2024), were reviewed as part of the assessment and are available here	There is no potential for direct effects to occur or have occurred as, whilst adjacent to it, the Wind Farm Site and Grid Connection Site are 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, Shruhanganarve and Bunadaowen Rivers. A source-pathway-receptor for likely significant effects was identified.	Yes

European Sites and distance from the Wind Farm Site and Grid Connection 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
	<i>Callicricho- Batrachion</i> vegetation		The potential for likely significant effects on this SAC as a result of the Existing Development both on its own and in combination with other plans and projects cannot be excluded.	
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] › Blanket bogs (* if active bog) [7130] › Transition mires and quaking bogs [7140] › Salmon (<i>Salmo salar</i>) [1106] › Otter (<i>Lutra lutra</i>) [1355]	Detailed conservation objectives for this site, (Version 1, November 2017), were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are 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. The potential for likely significant effects on this SAC as a result of the Existing Development both on its own and in combination with other plans and projects cannot be excluded.	Yes
Lough Eske and Ardnamona Wood SAC [000163]	› Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]	Detailed conservation objectives for this site (Version 1, September 2019) were reviewed as part	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 4 km from the Wind Farm Site and adjacent to the Grid Connection Site.	Yes

European Sites and distance from the Wind Farm Site and Grid Connection 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: 4.7km from Wind Farm Site Adjoins southwestern boundary of the Grid Connection Site	➤ 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] ➤ Killarney Fern (<i>Trichomanes speciosum</i>) [1421]	of the assessment and are available at www.npws.ie	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 Existing Development both on its own and in combination with other plans and projects cannot be excluded.	
Dunragh Loughs/Pettigo Plateau SAC [001125] Distance: 6.2km (From Wind Farm Site) 4.8km from Grid Connection 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) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 4km 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 effect on this European Site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects.	No

European Sites and distance from the Wind Farm Site and Grid Connection 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
Moneygal Bog SAC [UK0030211] Distance: 13.6 km	➤ 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 2014. 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 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	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 13 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 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

European Sites and distance from the Wind Farm Site and Grid Connection 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
		peat mass. Seek nature conservation management over suitable areas immediately outside the SAC where there may be potential for lowland raised bog rehabilitation		
Meenaguse Scragh SAC [001880] Distance: 12.1km from Wind Farm Site 10.2 from Grid Connection Site	➤ Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]	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 or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 10km 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 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
Lough Nageage SAC [002135] Distance: 12.9km	➤ White-clawed Crayfish (<i>Austropotamobius pallipes</i>) [1092]	Detailed conservation objectives for this site (Version 1, March 2021) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are 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

European Sites and distance from the Wind Farm Site and Grid Connection 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
			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/Ardbane Bog SAC [000172] Distance: 13km From Wind Farm Site 9.6km from Grid Connection Site	Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this site (Version 1, May 2017) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 9km 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 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
Lough Nillan Bog (Carrickatlieve) SAC [000165] Distance: 14.2km From Wind Farm Site 12.6 from Grid Connection Site	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia unillorae</i>) [3110] Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this site (Version 1, September 2016) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are 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

European Sites and distance from the Wind Farm Site and Grid Connection 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
			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.	
Donegal Bay (Murvagh) SAC Distance: 14.1km From Wind Farm Site 8.2km from Grid Connection 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 ssp. 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 2012) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 8.2km from it. This European Site is located over 10km (hydrological distance) downstream of the Grid Connection Site and is separated from it by 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 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.	No
Special Protection Area (SPA)				
Lough Derg (Donegal) SPA [004057]	> Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]	Detailed conservation objectives for this site (Version 1, March 2025) were reviewed as part of the	There is no potential for direct effects to occur or have occurred as the Wind Farm Site and Grid Connection Site are located entirely outside the SAC boundary and over 7.6km from it.	No

European Sites and distance from the Wind Farm Site and Grid Connection 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: 7.6km	> Herring Gull (<i>Larus argentatus</i>) [A184]	assessment and are available at www.npws.ie	No evidence that the site provides significant habitat for the species was recorded during any of the surveys undertaken and the nature and scale of the works associated with the Existing 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 Existing 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 6.3km (from Grid Connection Site)	> Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	Detailed conservation objectives for this site (Version 1, 18 th April 2025) were reviewed as part of the assessment and are available at www.npws.ie	The existing works on the Wind Farm Site are located entirely outside this European Site and are separated from it by a distance of 8.7km. There is no potential for the existing works to have resulted or 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 Site 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 Wind Farm and Grid Connection Site during any of the surveys undertaken.	No

European Sites and distance from the Wind Farm Site and Grid Connection 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
			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.	

European Sites and distance from the Wind Farm Site and Grid Connection 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	➤ 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 2025) were reviewed as part of the assessment and are available at www.npws.ie	The Wind Farm Site and Grid Connection Site are located entirely outside this European Site and are separated from it by a distance of 14.2km (12.6 for Grid Connection Site). There is no potential for the existing works to have resulted or 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]	> Great Northern Diver (<i>Gavia immer</i>) [A003]	Detailed conservation objectives for this site (Version 1, May 2012) were	The Wind Farm Site and Grid Connection Site are located entirely outside this European Site and is separated from it by a distance of 14.3km. There is no potential for the Existing	No

European Sites and distance from the Wind Farm Site and Grid Connection 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: 14.3km From Wind Farm Site 8.2km from Grid Connection Site	> 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]	reviewed as part of the assessment and are available at www.npws.ie	Development to have resulted or 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 Wind Farm and Grid Connection Site during the surveys undertaken. This European Site is located over 10km (hydrological distance) downstream of the Grid Connection Site and is separated from it by 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 likely significant effects 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

Remedial 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 Existing Development, individually or in combination with other plans and projects, has the potential to have, or have had, 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 Existing Development is required. Information to enable the competent authority to carry out an AA of the Existing 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, or have been adversely affected by the Existing 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 Existing 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 or have occurred.

Table 5-1 Assessment of Qualifying Interests potentially affected

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017*)	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 Existing Development and following the precautionary principle, a potential source-pathway-receptor chain for significant effect exists	Yes

* https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf

5.1.1.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form⁹ 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 Existing Development. These are provided in Table 5-2 below.

Table 5-2 Site-specific threats, pressures and activities for the Croaghonagh Bog SAC

Rank	Negative Threats and Pressures (* Items in bold are of relevance to the proposed project)
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 Existing Development to have affected or 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, 2013¹⁰), 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 Existing Development follows a previously 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 works in this area involved the upgrade of the existing forest road, but no drainage or encroachment onto the bog or highly degraded and cut over habitat close to the border with the road.

Mitigation as set out in the 2017 EIAR and NIS for the Permitted Development was also undertaken during the construction phase of the Existing Development to prevent impacts on water quality and other potential effects.

In addition, the hydrology and hydrogeology chapter of the rEIAR that supports this application finds:

‘The residual effects on the Lough Eske SAC and the Croaghonagh Bog SAC/pNHA would have been at worst, negative, imperceptible, indirect, short-term effects.’

Following the construction of the Existing Development, the Wind Farm Site and Grid Connection Site have been stabilised with all infrastructure left in a condition where there is no potential for significant erosion or run off of pollutants. The Wind Farm Site continues to be monitored to ensure that it remains

⁹ <https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000129&release=62>

¹⁰ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000129.pdf>

stable in this regard. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities.

Following the surveys undertaken, there is no evidence of any ongoing impact on peatland QIs as a result of the Existing Development. In addition, the peat stability report that is provided in support of this application (Appendix 8-1 to the rEIAR) finds that the Wind Farm Site is stable and at low risk of peat failure as a result of the Existing Development.

The European Site is Screened In on a highly precautionary basis and considered below.

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

5.1.1.3.1 [7130] Blanket Bog

The potential for adverse effects to occur or have occurred 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	Potential for Existing Development to Undermine or have Undermined Conservation Objective Target following the Implementation of Mitigation
Habitat area	Area stable or increasing, subject to natural processes	The Existing Development does not have the potential to result or have resulted in any effect on the habitat area within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Habitat distribution	No decline, subject to natural processes	The Existing Development does not have the potential to result or have resulted in any effect on the habitat distribution within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Ecosystem function: soil nutrients	Maintain soil nutrient status within natural range	The Existing Development does not have the potential to result or have resulted in any effect on soil nutrients within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Ecosystem function: peat formation	At least 99% of the total Annex I blanket bog area is active	The Existing Development does not have the potential to result or have resulted in any effect on the peat formation within the SAC. The Existing Development has not undermined this conservation

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

Vegetation composition: native trees and shrubs	Cover of scattered native trees and shrubs less than 10%	The Existing Development does not have the potential to result or have resulted in any effect on trees and shrubs within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Vegetation composition: potential dominant species	Cover of each of the potential dominant species less than 75%	The Existing Development does not have the potential to result or have resulted in any effect on the potential dominant species within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any effect on signs of browsing within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any effect on the burning within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Vegetation structure: <i>Sphagnum</i> condition	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	The Existing Development does not have the potential to result or have resulted in any effect on sphagnum condition within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%	The Existing Development does not have the potential to result or have resulted in any effect on disturbed bare ground within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Physical structure: drainage	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	The Existing Development does not have the potential to result or have

		resulted in any effect on drainage within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Physical structure: erosion	Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas	The Existing Development does not have the potential to result or have resulted in any effect on erosion within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	The Existing Development does not have the potential to result or have resulted in any effect on the indicators of local distinctiveness within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.

5.1.1.3.2 Croaghonagh Bog SAC - Impact Assessment Conclusion

Having considered the potential for the Existing 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 Existing Development has not and 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 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 Existing Development that are located in the Bunadownen, 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 complete source-pathway-receptor chain, by which adverse effects may occur or have occurred.

Table 5-4 Assessment of Qualifying Interests potentially affected.

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017 ¹¹)	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 Existing Development and any lakes within the SAC and therefore, no potential for any adverse effect on this habitat as a result of the Existing Development exists	No
Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]	To restore the favourable conservation condition of Northern Atlantic wet heaths with <i>Erica tetralix</i> in River Finn SAC	The SAC is located over 1km from the Wind Farm and Grid Connection Site. No complete-source-pathway-receptor chain between the Existing Development and these terrestrial habitats within the SAC was identified and therefore, no potential for any adverse effect on these habitats as a result of the Existing Development exists	No

¹¹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf

Qualifying feature	Conservation Objective (NPWS, Version 1, May2017 ⁴)	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 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 complete-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 complete-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. Following the otter surveys undertaken in the area, no evidence of any decline or other significant effect on the species was identified.	Yes

5.1.2.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form¹² 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 Existing 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 Existing 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 were undertaken 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 Mary Breen's Burn the Shruhingarve and Bunadaowen River catchments, which provide a connection from the Wind Farm Site to the SAC. Potential impacts arising included run off of pollutants such as peat, silt, hydrocarbons and cementitious material.

Excluding the November 2020 Peat Slide, no impacts that could have resulted in significant effect on any of the QI species was recorded as a result of the Existing Development.

The November 2020 Peat Slide led to extensive siltation within the Mourne Beg River within the SAC. These effects were recorded for over 14km until the confluence with the River Derg, with severe siltation on the upstream sections, gradually decreasing downstream.

¹² <https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0002162>

These impacts affected QIs including Atlantic salmon, and otter.

The 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 November 2020 Peat Slide within 11 months of the slide. In addition, there was an increase in salmon fry recorded during electro-fishing undertaken in 2021. 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. The distribution and numbers had recovered in the following years. There was a decrease in salmon numbers recorded in 2023 (3 years after the November 2020 Peat Slide) with no clear cause identified.

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 throughout the period 2021 - 2025. 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.

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. Following the otter surveys undertaken in the area, no evidence of any decline or other significant effect on the species was identified.

Following the construction of the Existing Development, the Wind Farm Site and Grid Connection Site have been stabilised with all infrastructure left in a condition where there is no potential for significant erosion or run off of pollutants. The Wind Farm Site continues to be monitored to ensure that it remains stable in this regard. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities. The November 2020 Peat Slide area is stable, recolonising slowly and monitored on an annual basis.

There is no evidence of any ongoing impact on any QI habitats and species as a result of the Existing Development. In addition, the peat stability report (Appendix 8-1 of the rEIAR) that is provided in support of this application finds that the Wind Farm Site is stable and at low risk of peat failure as a result of the Existing Development.

Mitigation Employed

Measures were undertaken to mitigate the effects of the November 2020 Peat Slide under a separate process following a notice issued by Donegal County Council under Sections 12 of the Local Government (Water Pollution) Acts. They included the peat removal, stream channel restoration, bank stabilisation and tree planting works that are described above.

In addition, the Loughs Agency undertook gravel cleaning works in suitable spawning habitat in the Mourne Beg River. This was not associated with the Existing Development and followed a standard procedure that was subject to a separate environmental assessment. The Loughs Agency routinely carry out these works in the rivers under their jurisdiction but did additional work in the Mourne Beg following the November 2020 Peat Slide.

Mitigation as set out in the 2017 NIS and EIAR for the Permitted Development was also undertaken during the construction phase of the Existing Development to prevent impacts on water quality. An emergency response to the November 2020 Peat Slide was undertaken in line with the protocols that were set out in the 2017 EIAR. These involved the construction of three stone barrage walls, which were constructed in the immediate aftermath of the peat slide and contained much of the peat on the Wind Farm Site, preventing further damage to sensitive downstream watercourses.

5.1.2.3.2 [1106] Atlantic salmon (*Salmo salar*) (only in fresh water)

According to the Site Synopsis document for the River Finn SAC (NPWS, 2024¹³), the River Finn system is one of Ireland's premier salmon waters. Surveys undertaken are reviewed as part of this assessment have not recorded the species within the Wind Farm Site and Grid Connection Site (either before or after construction) but have recorded it throughout the Mourne Beg catchment both up and downstream of the Wind Farm Site and on the Bunadaowen River outside the Wind Farm Site. The River Finn SAC is located on the Mourne Beg River downstream of the Wind Farm 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 or have occurred is assessed below.

Table 5-6 Targets and attributes associated with the site-specific conservation objectives for Salmon

Attribute	Target	Potential for Existing Development to Undermine or have Undermined Conservation Objective Target following the Implementation of Mitigation
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	The Existing Development has not resulted in any barrier to accessibility. Neither the works undertaken nor the November 2020 Peat Slide resulted in any barrier to fish passage. The Existing Development has not undermined this conservation objective and has no potential to do so.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	The Existing Development did not result in any reduction in the numbers of adult spawning fish in the Mourne Beg System. The Existing Development has not undermined this conservation objective and has no potential to do so.
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	The Existing Development did not result in a decrease in Salmon fry abundance. Numbers increased in 2021 (when compared to 2020), following the November 2020 Peat Slide. Whilst the Lough's Agency data shows a decline in 2023 (3 years after the November 2020 Peat Slide), there was no activity on the Wind Farm Site at this time and no indication that the decline was caused by the Existing Development. In 2024 and 2025, Loughs Agency data shows the abundance threshold clearly exceeding 17 at 10 out of 17 surveys and a mean abundance of 19.7. The Existing Development has not undermined this conservation objective and has no potential to do so.

¹³ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Out-migrating smolt abundance	No significant decline	Given that no significant effects on spawning or fry abundance was recorded as a result of the Existing Development, and there were no barriers to migration identified, it is unlikely that the Existing Development resulted in any effect on outgoing smolt abundance. The Existing Development has not undermined this conservation objective and has no potential to do so.
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	There was no recorded decline in redds as a result of the Existing Development and no potential for it to result in any loss in the future. Whilst there was a temporary reduction in the number of redds recorded downstream of the November 2020 Peat Slide in 2020/2021, no evidence of such an effect was recorded in subsequent years. The Existing Development has not undermined this conservation objective and has no potential to do so.
Water quality	At least Q4 at all sites sampled by EPA	There was a temporary decline in water quality in the Mourne Beg River following the November 2020 Peat Slide event. However, within 11 months of the event, water quality throughout the SAC within the Mourne Beg had returned to Q4 throughout. Water quality has consistently remained at Q4 or above within the SAC since then. The Existing Development has not undermined this conservation objective and has no potential to do so.

5.1.2.3.3 [1355] Otter *Lutra lutra*

According to the Site Synopsis document for the River Finn SAC (NPWS, 2024¹⁹), otter distribution is widespread throughout the system. Signs of otter were recorded within the Wind Farm Site in the form of regular spraints under a bridge on the Bunadaowen River. No holts or couches were recorded within the Wind Farm Site or the Grid Connection 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'.

¹⁹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

The potential for adverse effects to occur or have occurred is assessed below.

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

Attribute	Target	Potential for Existing Development to Undermine or have Undermined Conservation Objective Target following the Implementation of Mitigation
Distribution	No significant decline	No evidence of effects on the distribution of otter in catchment was recorded. Evidence of the presence of otter was recorded throughout the catchment both prior to and following construction of the Existing Development. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development did not involve any works within the SAC and did not have any effect on terrestrial habitats within it. No potential for additional effects to occur in the future has been identified. The Existing Development has not undermined this conservation objective and has no potential to do so.
Extent of marine habitat	No significant decline. Area mapped and calculated as 857.7ha	The Existing Development did not involve any works within the SAC and did not have any effect on marine habitats within it. No potential for additional effects to occur in the future has been identified. The Existing Development has not undermined this conservation objective and has no potential to do so.
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 616.6km	The Existing Development did not involve any works within the SAC and whilst there was an effect on freshwater habitat within the SAC as a result of the November 2020 Peat Slide, no habitat was lost and, water quality quickly recovered. No potential for additional effects to occur in the future has been identified. The Existing Development has not undermined this conservation objective and has no potential to do so.
Extent of freshwater (lake) habitat	No significant decline. Area mapped and calculated as 2.6ha	The Existing Development did not involve any works within the SAC and did not have any effect on lake habitats within it. No potential for additional effects to occur in the future has been identified.

		The Existing Development has not undermined this conservation objective and has no potential to do so.
Couching sites and holts	No significant decline	The Existing Development did not involve any works within the SAC and did not have any effect on couching or holt sites within it. No potential for additional effects to occur in the future has been identified. The Existing Development has not undermined this conservation objective and has no potential to do so.
Fish biomass available	No significant decline	There was no evidence of the construction of the Existing Development having any significant effect on the Mourne Beg River. The November 2020 Peat Slide undoubtedly did have an effect. However, the results of the electro-fishing surveys show that, whilst there were fluctuations in the amount of salmon and trout within the river, any such fluctuations were not significant in terms of fish availability and any decline was temporary, with numbers increased in 2024 and 2025. The Existing Development has not undermined this conservation objective and has no potential to do so.

5.1.2.3.4 **River Finn SAC - Impact Assessment Conclusion**

Having considered the potential for the Existing 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 Existing Development has not and will not adversely affect the integrity of River Finn SAC.

5.1.3 River Foyle and Tributaries SAC (UK)

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 Existing Development that are located in the Bunadown, Shruhingarve 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 or have occurred.

Table 5-8 Assessment of Qualifying Interests potentially affected.

Qualifying feature	Conservation Objective (DAERA, 2022 ¹⁵)	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 complete-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 <i>Callicicho- Batrachion</i> vegetation	To maintain (or restore where appropriate) the conservation status of Watercourses of plain to montane levels to favourable condition	A complete-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
Otter (<i>Lutra lutra</i>) [1355]	To maintain (or restore where appropriate) the conservation status of otter to favourable condition	A complete-source-pathway receptor chain for effects on otter in the downstream aquatic environment was identified in the form of water pollution.	Yes

¹⁵ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004233.pdf

5.1.3.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form¹⁶ 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 Existing 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 Existing 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).

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 Wind Farm Site drains to the Glendorgan River, which connects with the River Foyle and Tributaries SAC at the boundary. However, no works were undertaken within 260m of this SAC and it was not affected by the November 2020 Peat Slide. No evidence of impacts that could have resulted in significant effect on any of the QI species was recorded as a result of the Existing Development.

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, 2024¹⁷), the River Foyle system holds one of the largest populations of Salmon in Europe. Surveys undertaken are reviewed as part of this assessment have not recorded the species within the Wind Farm Site and Grid Connection Site (either before or after construction) but have recorded it throughout the

¹⁶ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030320.pdf>

¹⁷ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Mourne Beg catchment both up and downstream of the Wind Farm Site and on the Bunadaowen River outside the Wind Farm Site. The River Foyle and Tributaries SAC is located on the Mourne Beg River downstream of the Wind Farm 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 Salmon

Objective	Potential for Existing Development to Undermine or have Undermined Conservation Objective Target following the Implementation of Mitigation
Maintain and if possible, expand existing population numbers and distribution (preferably through natural recruitment), and improve age structure of population.	The Existing Development did not result in a decrease in Salmon fry abundance. Numbers increased in 2021 (when compared to 2020), following the November 2020 Peat Slide. Whilst the Lough's Agency data shows a decline in 2023 (3 years after the November 2020 Peat Slide), there was no activity on the Wind Farm Site at this time and no indication that the decline was caused by the Existing Development. In 2024 and 2025, Loughs Agency data shows a clear increase in populations of salmon fry when compared to the previous years. There was no recorded decline in redds as a result of the Existing Development and no potential for it to result in any loss in the future. Whilst there was a temporary reduction in the number of redds recorded downstream of the November 2020 Peat Slide in 2020/2021, no evidence of such an effect was recorded in subsequent years. The Existing Development has not undermined this conservation objective and has no potential to do so.
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.	There was as temporary decline in water quality in the Mourne Beg River following the November 2020 Peat Slide event. However, within 11 months of the event, water quality throughout the SAC within the Mourne Beg had returned to Q4 throughout. Water quality has consistently remained at Q4 or above within the SAC. Salmonid habitat was temporarily affected by siltation following the November 2020 Peat Slide. However, within one-year, spawning habitat had recovered in the Mourne Beg River and fisheries habitats in general have made a strong recovery in the intervening period with no significant effect of the November 2020 Peat Slide remaining. No evidence of the construction of the Existing Development (excluding the November 2020 Peat Slide) having resulted in any effect on the SAC Mourne Beg River has been recorded. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so.

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, 2024¹⁸), 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 are 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 Wind Farm 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 Salmon

Objective	Potential for Existing Development to Undermine or have undermined the Conservation Objective following implementation of mitigation
Maintain and if possible enhance extent and composition of community	Whilst the November 2020 Peat Slide resulted in a temporary decrease in water quality and increase in siltation, it did not result in long term hydrological or water quality changes that would result in significant changes to this habitat. No evidence of such changes was recorded in the surveys undertaken as presented in Appendix 1 and Section 3.1.3 of this rNIS. No potential for changes to the extent and composition of this habitat were recorded and no evidence of any such change was observed during the surveys that were undertaken to inform this rNIS. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so.
Improve water quality	There was as temporary decline in water quality in the Mourne Beg River following the November 2020 Peat Slide event. However, within 11 months of the event, water quality throughout the SAC within the Mourne Beg had returned to Q4 throughout. Water quality has consistently remained at Q4 or above within the SAC. No evidence of the construction of the Existing Development (excluding the November 2020 Peat Slide) having resulted in any effect on the SAC Mourne Beg River has been recorded. Similarly, no evidence of the Existing Development resulting in any ongoing effect on water quality has been recorded. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so. It is noted that there are other pressures on the water quality in the catchment, but the Existing Development has not and will not prevent the achieving of this objective.

¹⁸ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Improve channel substrate quality by reducing siltation.	The channel of the Mourne Beg River was temporarily affected by siltation following the November 2020 Peat Slide. However, within one-year, the aquatic habitats have made a strong recovery in the intervening period with no significant effect of the November 2020 Peat Slide remaining and no evidence of the Existing Development resulting in any ongoing effect on the river. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so. It has not and will not prevent the achieving of this objective.
Maintain and if feasible enhance the river morphology	The Existing Development (including the November 2020 Peat Slide) has not resulted in any significant effect on river morphology, has not undermined this conservation objective and has no potential to do so. It has not and will not prevent the achieving of this objective.

5.1.3.3.3 [1355] Otter *Lutra lutra*

According to the Conservation Objectives Document for the River Foyle and Tributaries SAC (NIEA, 2024¹⁹), otter distribution is widespread throughout the system. Signs of otter were recorded within the Wind Farm Site in the form of regular spraints under a bridge on the Bunadaowen River. No holts or couches were recorded within the Wind Farm 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 or have occurred is assessed below.

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

Objective	Potential for Existing Development to Undermine Conservation Objective
Maintain and if possible increase population numbers and distribution.	No evidence of effects on the population numbers or distribution of otter in the catchment during the surveys undertaken was recorded. Evidence of the presence of otter was recorded throughout the catchment both prior to and following construction of the Existing Development. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so. It has not and will not prevent the achieving of this objective.

¹⁹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

Maintain the extent and quality of suitable Otter habitat, in particular the chemical and biological quality of the water and all associated wetland habitats	There was as temporary decline in water quality in the Mourne Beg River following the November 2020 Peat Slide event. However, within 11 months of the event, water quality throughout the SAC within the Mourne Beg had returned to Q4 throughout. Water quality has consistently remained at Q4 or above within the SAC. The channel of the Mourne Beg River was temporarily affected by siltation following the November 2020 Peat Slide. However, within one-year, the aquatic habitats have made a strong recovery in the intervening period and no evidence of the Existing Development resulting in any ongoing effect on the river. No significant effect on bankside habitats was recorded as a result of the Existing Development. No evidence of the construction of the Existing Development (excluding the November 2020 Peat Slide) having resulted in any effect on the SAC Mourne Beg River has been recorded. Similarly, no evidence of the Existing Development resulting in any ongoing effect on water quality has been recorded. The Existing Development (including the November 2020 Peat Slide) has not undermined this conservation objective and has no potential to do so. It is noted that there are other pressures on the water quality in the catchment, but that the Existing Development has not and will not prevent the achieving of this objective.
Improve channel substrate quality by reducing siltation.	The channel of the Mourne Beg River was temporarily affected by siltation following the November 2020 Peat Slide. However, within one-year, the aquatic habitats have made a strong recovery in the intervening period and no evidence of the Existing Development resulting in any ongoing effect on the river. The Existing Development has not undermined this conservation objective and has no potential to do so. It has not and will not prevent the achieving of this objective.
Maintain and if feasible enhance the river morphology	The Existing Development has not resulted in any significant effect on river morphology, has not undermined this conservation objective and has no potential to do so. It has not and will not prevent the achieving of this objective.

5.1.3.3.4 River Foyle and Tributaries SAC - Impact Assessment Conclusion

Having considered the potential for the Existing 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 Existing Development has not and will not adversely affect the integrity of River Foyle and Tributaries SAC.

5.1.4 Lough Eske and Ardnamona Wood SAC [000163]

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 Existing Development that are located in the Lowerymore Catchment. This includes western section of the entrance road to the Wind Farm Site and the Grid Connection Site. 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 Site.

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 ²⁰)	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 Existing Development and any lakes within the SAC and therefore, no potential for any adverse effect on this habitat as a result of the Existing Development exists	No
Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]	To maintain the favourable conservation condition of Petrifying springs with tufa formation (<i>Cratoneurion</i>)* in Lough Eske and Ardnamona Wood SAC	No source-pathway-receptor chain between the Existing 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 or have resulted in any adverse effect on this habitat	No
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	No -source-pathway-receptor chain between the Existing Development and this terrestrial habitat was identified and therefore, there is no potential for it to result or have resulted in any adverse effect on this habitat	No

²⁰ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf

Qualifying feature	Conservation Objective (NPWS, Version 1, July 2011 ²⁰)	Rationale	Potential for Adverse Effects Yes/No
	the British Isles in Lough Eske and Ardnamona Wood SAC		
Margaritifera margaritifera (<i>Freshwater Pearl Mussel</i>) [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 freshwater pearl mussel 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 Existing Development and this terrestrial species was identified and therefore, there is no potential for it to result or have resulted in any adverse effect on this species.	No

5.1.4.1 Site Specific Pressures and Threats

As per the Natura 2000 Data Form²¹ 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 Existing 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 Existing 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 were undertaken 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 north-western end of the Wind Farm Site to the SAC via overland flow and drainage. In addition, the Grid Connection Site 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 were undertaken at the crossing of the SAC. Potential impacts arising include run off of pollutants such as peat, silt, hydrocarbons and cementitious material.

However, no evidence of impacts that could have resulted in significant effects on any of the QI species was recorded as a result of the Existing Development during any of the desk and field surveys that were undertaken.

Mitigation as set out in the 2017 EIAR and the NIS for the Permitted Development was also undertaken during the construction phase of the Existing Development to prevent impacts on water quality and other potential effects.

In addition, the hydrology and hydrogeology chapter of the rEIAR that accompanies this application finds:

'The residual effects on the Lough Eske SAC and the Croaghonagh Bog SAC/pNHA would have been at worst, negative, imperceptible, indirect, short-term effects.'

Following the construction of the Existing Development, the Wind Farm Site and Grid Connection Site have been stabilised with all infrastructure left in a condition where there is no potential for significant

²¹ <https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000163&release=62>

erosion or run off of pollutants. The Wind Farm Site continues to be monitored to ensure that it remains stable in this regard. Forestry activity continues on the Wind Farm Site with regular felling, planting, removal of timber and other forestry related activities.

There is no evidence of any ongoing impact on the QIs as a result of the Existing Development. In addition, the peat stability report that is provided in support of this application (Appendix 8-1 to the rEIAR) finds that the Wind Farm Site is stable and at low risk of peat failure as a result of the Existing Development.

The site is Screened In on a precautionary basis and considered below in respect of the impact on the individual relevant QIs.

5.1.4.2.1 [1029] freshwater pearl mussel *Margaritifera margaritifera*

According to the Site-Specific Conservation Objectives Document for the Lough Eske and Ardnamona Woods SAC (NPWS, 2015²⁹), 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 Site. This accords with the findings of the freshwater pearl mussel survey of the Lowerymore River that was undertaken to support the 2017 EIAR and the NIS for the Permitted Development, 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 or have occurred is assessed in Table 5.15 below in light of the conservation objectives for the species.

²⁹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

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

Attribute	Target	Potential for Existing Development to Undermine or have Undermined Conservation Objective Target following the Implementation of Mitigation
Distribution	Maintain/restore distribution at 6.08km. See map 5	The Existing Development does not have the potential to result or have resulted in any effect on distribution within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Population size	Restore population to at least 200,000 adult mussels	The Existing Development does not have the potential to result or have resulted in any effect on population size within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any effect on recruitment within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any effect on adult mortality within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any effect on habitat extent within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Suitable habitat: condition	Restore condition of suitable habitat	The Existing Development does not have the potential to result or have resulted in any effect on habitat condition within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
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 Existing Development does not have the potential to result or have resulted in any significant effect on water quality within the SAC that could affect this target. The Existing Development has not undermined this conservation objective and has no potential to do so.

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

5.1.4.2.2 [1106] Atlantic salmon (*Salmo salar*) (only in fresh water)

According to the Site Synopsis document for the Lough Eske and Ardnamona Woods SAC (NPWS, 2015²⁹), the Eske system has a good 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'.

²⁹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

The potential for adverse effects to occur or have occurred is assessed below.

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

Attribute	Target	
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	The Existing Development does not have the potential to result or have resulted in any effect on accessibility within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	The Existing Development does not have the potential to result or have resulted in any effect on adult spawning fish within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	The Existing Development does not have the potential to result or have resulted in any effect on salmon fry abundance within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Out-migrating smolt abundance	No significant decline	The Existing Development does not have the potential to result or have resulted in any effect on migrating smolt abundance within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	The Existing Development does not have the potential to result or have resulted in any effect on the number and distribution of redds within the SAC. The Existing Development has not undermined this conservation objective and has no potential to do so.
Water quality	At least Q4 at all sites sampled by EPA	The Existing Development does not have the potential to result or have resulted in any significant effect on water quality within the SAC that could affect this target. The Existing Development has not undermined this conservation objective and has no potential to do so.

5.1.4.2.3 Lough Eske and Ardnamona Woods SAC - Impact Assessment Conclusion

Having considered the potential for the Existing 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 Existing Development has not and will not adversely affect the integrity of Lough Eske and Ardnamona Woods SAC.

5.1.5

Invasive Alien Species

Rhododendron was recorded occasionally throughout the Wind Farm Site during all surveys. The 2017 NIS and EIAR that were submitted for the Permitted Development included an outline plan for invasive species management within the CEMP. Whilst it was anticipated that all invasive species could be avoided during the construction of the development, it required that detailed invasive species surveys be carried out in advance of the construction works and that, if required, specific management plans be made to ensure that any species encountered was treated in accordance with best practice and in line with the legislation of the time (Wildlife Acts, 1976-2012. Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) (S.I. 477 of 2015)). The ISMP was implemented during the construction of the Existing Development and no invasive species were affected or spread during the construction of the Existing Development or subsequently. No evidence of the spread of invasive species throughout the Wind Farm Site and Grid Connection Site as a result of the Existing Development was recorded during the multidisciplinary surveys undertaken to inform this rNIS. Rhododendron was still present on the Wind Farm Site but its status of being found as single bushes or small clumps throughout the Wind Farm Site was unchanged.

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 effect on the conservation objectives of the Screened In SACs and their relevant QIs as defined by their targets and attributes to occur or have occurred. Potential pathways for effect were mitigated through measures to avoid impacts and the incorporation of best practice/mitigation measures.

It is acknowledged that temporary negative effects occurred within the Mourne Beg catchment, affecting the QI species Atlantic salmon (River Finn SAC and River Foyle and Tributaries SAC), potentially Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation (River Foyle and Tributaries SAC) and otter (River Finn SAC and River Foyle and Tributaries SAC). However, the extensive surveys undertaken by the applicant, the Loughs Agency and the EPA have shown any such effects to be temporary, short term in duration and not to have undermined the conservation objectives for the individual QIs or the European Sites as a whole.

The Existing Development has not and 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 Existing Development has not and 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 Existing Development in cumulation with the Prospective 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 Existing Development on its own. The potential for adverse effects on the identified European Sites associated with the Existing Development to occur when considered in cumulation with the Prospective 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 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.

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 Wind Farm 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. 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 such, there is no potential for adverse in cumulation effects on these European Sites.

Effects on River Finn and River Foyle and Tributaries SAC

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.

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 to ensure that such effects do not occur.

As such, there is no potential for adverse in cumulation effects on aquatic habitats and species to occur.

Effects on Invasive Species

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.

The Prospective Development does not anticipate any interaction with invasive species, but includes robust biosecurity measures to ensure that it will not result in the spread of invasive species

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

7.2

Cumulative and In Combination Effects

The potential for the Existing Development and Subject Development to result or have resulted in significant effects on European Sites was assessed cumulatively and in combination with other projects and land uses

7.2.1

Surrounding Land Uses

The land surrounding the Wind Farm Site and Grid Connection Site is dominated by conifer forestry with upland grasslands that are grazed with sheep and cattle. There are quarrying and peat harvesting activities ongoing in the wider area. The potential for the Existing Development and Subject Development to contribute or have contributed 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 Croaghonagh Bog SAC and Lough Eske and Ardnamona Wood SAC

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 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 Site. However, the Existing Development does not, and the Subject Development will not contribute to any such pressure or threat.

Effects on River Finn and River Foyle and Tributaries SAC

No adverse effects on these SACs were recorded as a result of the construction of the Existing Development (excluding the November 2020 Peat Slide) and no evidence of the Existing Development contributing to the existing pressures on the catchment from other land uses was recorded.

Temporary effects on the conservation objectives of the QI habitats and species as a result of the November 2020 Peat Slide, which affected the habitats and species in the Shruhangarve and the Mourne Beg Rivers for a distance of approximately 14km until it's confluence with the River Derg. It is clear that the November 2020 Peat Slide did contribute to the existing pressures on the catchment from surrounding land uses such as forestry and agriculture. However, the effects were temporary and no significant, ongoing or residual effects resulting from the Existing Development were identified. The Subject 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 29/5/2026 with regard to recently permitted or constructed developments within the area.

Projects considered included 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 3**.

As with the assessment of the surrounding land uses that are described above, no potential for the Existing Development (excluding the November 2020 Peat Slide) to contribute or have contributed to any significant effects on European Sites was identified as there were no residual effects on any sensitive receptors.

The effects of the November 2020 Peat Slide undoubtedly contributed to existing pressures on the aquatic habitats and species in the Mourne Beg catchment (River Fin and River Foyle and Tributaries SACs), which may have originated from existing land uses, but also from some of the projects reviewed (although none in particular were identified as sources of pollution). However, any identified effects were temporary and no significant, ongoing or residual effects resulting from the Existing Development were identified.

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 5.27 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: (i) the overall use of the development site by Special Conservation Interest birds and	The Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to European Sites. The Existing Development was undertaken in accordance with the mitigation measures and protocols set out in the 2017 NIS and EIAR for the Permitted Development and with the exception of effects associated with the November 2020 Peat Slide, no residual or ongoing effects on any European Site was identified. The November 2020 Peat Slide did result in effects on European Sites in the area, but the impacts were temporary and short term and did not undermine the conservation objectives of any Site. The Existing Development is located outside of any Designated Sites.

	(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: - there are no alternative solutions; and	No part of the Existing 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 rNIS confirm that the relevant policy has been complied with and there is no potential for in combination effects resulting from the Existing Development.

	- 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. 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	The Existing Development was undertaken in accordance with the mitigation measures and protocols set out in the 2017 NIS and EIAR for the Permitted Development and with the exception of effects associated with the November 2020 Peat Slide, no residual or ongoing effects on any European Site was identified. The November 2020 Peat Slide did result in effects on European Sites in the area, but the impacts were temporary and short term and did not undermine the conservation objectives of any Site. The Existing Development is located outside of any Designated Sites. No potential for negative in combination impacts when considered in conjunction with the Existing Development were identified.

	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 Existing Development was undertaken in accordance with the mitigation measures and protocols set out in the 2017 NIS and EIAR for the Permitted Development and with the exception of effects associated with the November 2020 Peat Slide, no residual or ongoing effects on any European Site was identified. The November 2020 Peat Slide did result in effects on European Sites in the area, but the impacts were temporary and did not undermine the conservation objectives of any Site. The Existing Development is located outside of any Designated Sites. No potential for negative in combination impacts when considered in conjunction with the Existing Development were identified.

Conclusion of Assessment of In Combination Effects

Following the detailed assessment provided in the preceding sections, it is concluded that, the Existing Development has not and 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 Existing Development or when considered in cumulation with the Prospective Development.

8.

TRANSBOUNDARY EFFECTS

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

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

In consideration of potential indirect transboundary effects on biodiversity, a single pathway for effect was identified – surface water. The Wind Farm Site is located mainly within the River Derg catchment, which flows through Northern Ireland. The Wind Farm Site is connected to this catchment via the Glendergan, Bunadaowen, Shruhangarve Rivers and Mary Breen's Burn.

The Existing Development has not and will not result in significant effects on the Glendergan and Bunadaowen catchments and transboundary effects can be excluded in these areas.

However, the November 2020 Peat Slide occurred in the Shruhangarve catchment, which is connected to the Mourne Beg River in Northern Ireland. Temporary negative effects on the River Finn and River Foyle and Tributaries SACs were identified and are described in detail in the preceding sections of this report. Whilst temporary negative transboundary effects were identified, no significant, ongoing or residual transboundary effects resulting from the Existing Development were identified. The relevant authorities in Northern Ireland were notified of the incident.

The Prospective Development will also be located outside Northern Ireland but within the Glendergan, Bunadaowen and Shruhangarve catchments and thus the same hydrological pathway for transboundary effects exists. 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 for the Prospective Development concludes that the Wind Farm 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 Subject Development (Existing and Prospective Developments combined) will not result in any adverse residual transboundary effect on European Sites..

9.

CONCLUDING STATEMENT

This rNIS 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 Prospective Development.

No adverse effects on the Croaghonagh Bog SAC or the Lough Eske and Ardnamona Wood SAC were recorded. While negative effects on the River Finn SAC and the River Foyle and Tributaries SAC were recorded following the November 2020 Peat Slide event, such effects were temporary short term and did not undermine the integrity of these European Sites as defined by their conservation objectives. No significant ongoing or residual effects resulting from the Existing Development were recorded and no potential for it to result in any effect on European Sites into the future was identified.

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

10.

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