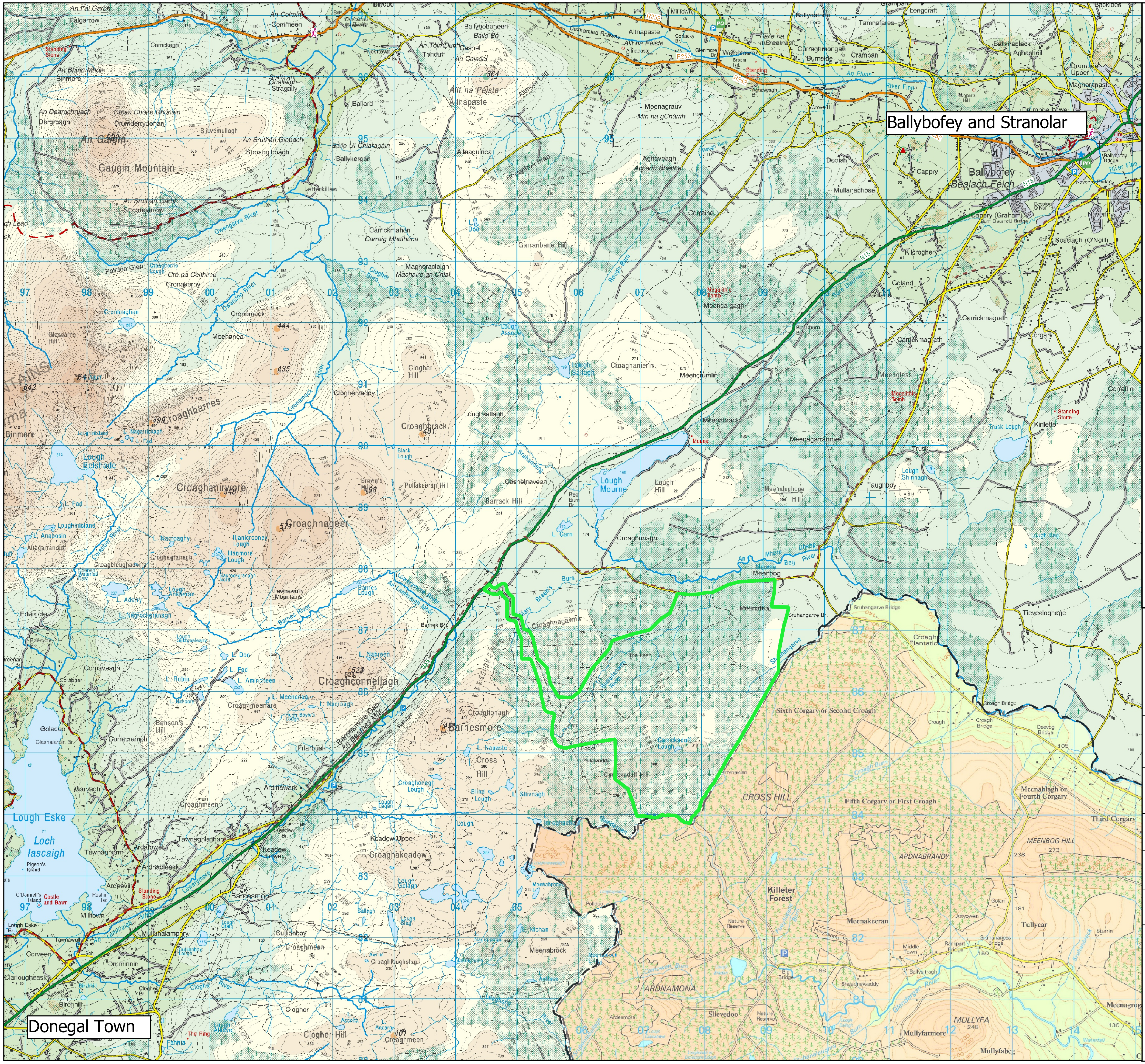
5. BIODIVERSITY

5.1 Introduction

This chapter assesses the potential for the Subject Development to result in or to have resulted in likely significant effects (both alone and cumulatively with other plans and projects) on Biodiversity, Flora, and Fauna. The residual impacts on biodiversity are then assessed. Particular attention has been paid to species and habitats of ecological importance. These include species and habitats with national and international protection under the Wildlife Act 1976 (as amended) (the 'Wildlife Act'), Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as amended) (the 'Habitats Directive)'. The full description of the Subject Development is provided in **Chapter 3- Description** of this remedial Environmental Impact Assessment Report (rEIAR).

The chapter is structured as follows:

- Firstly, a description of the legislation, guidance, and policy context applicable to Biodiversity, Flora, and Fauna is provided.
- This is followed by a comprehensive description of the ecological survey and impact assessment methodologies that were followed to inform the robust assessment of likely significant effects on ecological receptors.
- A description of the existing Ecological Conditions and Receptor Evaluation is then provided. This includes results of the comprehensive desk and field surveys that were undertaken.
- This is followed by an Assessment of the Effects of the 25 deviations, both individually and cumulatively, on biodiversity. The assessment of residual effects follows the impact assessment section.
- The conclusion provides a summary statement on the overall significance of predicted effects on Biodiversity, Flora, and Fauna.



Map Legend

rEIAR Study Area

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Drawing Title Site Location	
Project Title Substitute Consent for Deviations at Meenbog Wind Farm, Co. Donegal	
Drawn By MT	Checked By TB
Project No. 220623	Drawing No. Figure 5-1
Scale 1:60,000	Date 2024-03-04

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5.2 Requirements for Ecological Impact Assessment

National Legislation

Wildlife Act 1976 (as amended), 2000 (the 'Wildlife Act') is a piece of legislation governing protection of wildlife in Ireland. The Wildlife Act provides strict protection for species of conservation value. The Wildlife Act conserves wildlife (including game) and protects certain wild creatures and flora. These species are therefore considered in this report as ecological receptors.

Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) are heritage sites that are designated for the protection of flora, fauna, habitats, and geological sites. Only NHAs are designated under the Wildlife Act. These sites do not form part of the Natura 2000 network of European Sites and the Appropriate Assessment (AA) process, or screening for same, does not apply to NHAs or pNHAs. pNHAs were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated[1] However, these sites are considered to be of significance for wildlife and habitats as they may form statutory designated sites in the future (NPWS, 2020).

The Flora (Protection) Order 2022 S.I. No. 235 lists the species, hybrids and/or subspecies of flora protected under Section 21 of the Wildlife Act. It provides protection to a wide variety of protected plant species in Ireland including vascular plants, mosses, liverworts, lichens, and stoneworts. It is illegal to cut, pick, collect, uproot, or damage, injure, or destroy species listed or their flowers, fruits, seeds, or spores or wilfully damage, alter, destroy, or interfere with their habitat (unless under licence).

National Policy

The 4th National Biodiversity Action Plan 2023-2030 (Department of Culture, Heritage, and the Gaeltacht, 2017) (the "**Plan**") demonstrates Ireland's continuing commitment to meeting and acting on its obligations to protect Ireland's biodiversity for the benefit of future generations through a series of targeted strategies and actions. The main objective of the Plan is to ensure that every citizen, community, business, local authority, semi-state, and state agency has an awareness of biodiversity and its importance, and the implications of its loss, whilst further understanding how they can act to address the biodiversity emergency as part of a renewed national effort to act for nature. Objective 1 (*Adopt a Whole of Government, Whole of Society Approach to Biodiversity*) and Objection 3 (*Secure Nature's Contribution to People)* of the Plan identifies the following relevant measures in relation to the protection of Biodiversity and future developments:

Outcome 1B. ***Organisational capacity and resources for biodiversity have increased at all levels of Government.***

- NPWS will seek multiannual funding for investment in biodiversity.
- NPWS will conduct a review of nature governance in Ireland, including the roles and responsibilities of government departments, bodies, and agencies as they relate to the achievement of biodiversity actions and commitments.
- All relevant Departments and Government Bodies will explore the biodiversity expertise and training requirements across government to ensure the appropriate expertise is available to implement this Plan.
- Department of Public Expenditure NDP Delivery and Reform (DPENDR) will develop and implement systems to track and report expenditure allocations on measures aimed at improving biodiversity.
- DPENDR will develop and implement systems to track and report expenditure allocations on measures that may adversely affect biodiversity.

[1] https://www.npws.ie/protected-Sites/nha (Accessed May 2021).

- NPWS will review the recommendations arising from the Biodiversity Financial Needs Assessment (FNA) research project and propose pathways for their implementation.
- The Biodiversity Forum (BF) will conduct an independent review of the Biodiversity FNA and other relevant financial plans.
- NPWS will implement the Strategic Action Plan resulting from the NPWS Review
- The Heritage Council will work with Local Authorities on establishing a Biodiversity Officer Programme with a dedicated Biodiversity Officer in each Local Authority
- Relevant Departments and Agencies will implement long term measures to support biodiversity conservation and restoration through the Infrastructure, Climate and Nature Fund

Outcome 1C: ***Responsibility for biodiversity is shared across the whole of government.***

- Government will fully consider the conclusions of the Oireachtas Committee on the Citizens' Assembly on Biodiversity Loss
- NPWS will explore the ways in which the rights of nature could be formally recognised, including the potential for constitutional change.
- Departments and Agencies with responsibility for the NBAP will also contribute to the Phase 2 of the National Land Use Review
- OPW will implement its Biodiversity Action Strategy 2022-2026, including the appointment of a Biodiversity Officer, in support of NBAP targets.
- The Heritage Council will publish updated guidelines for the production of Local Biodiversity Action Plans and their integration with City and County Development Plans
- All Local Authorities will have a Biodiversity Action Plan adopted by the end of 2026 which is subject to regular review and revision processes in line with relevant guideline standards.

Outcome 1D: ***Biodiversity initiatives are supported across the whole of society.***

- NPWS and other relevant bodies will build on existing biodiversity and awareness barometers to gauge the public connection to biodiversity.
- Údarás na Gaeltachta will increase awareness and participation on biodiversity issues among Gaeltacht communities via the Community Employment Scheme and Rural Social Scheme
- The NBDC will produce and implement a Biodiversity Citizen Science Strategy to promote citizen engagement with both terrestrial, freshwater and marine biodiversity and to develop greater awareness of the value of local biodiversity.
- NPWS, DAFM, the Department of Rural and Community Development (DRCD) and the Department of the Environment, Climate and Communications (DECC) will continue to build support for community biodiversity initiatives such as EIPs, the Small Recording Projects grant scheme, Community Foundation Ireland Environment and Nature Fund, LEADER, Local Agenda 21, Shared Island Fund, The Community Heritage Grants Scheme, Peatlands Community Engagement Scheme and Geological Survey Ireland (GSI) Geoheritage Grant Scheme
- NPWS will continue to support Local Authorities biodiversity projects through the LBAF, which includes action on invasive alien species, throughout the lifetime of this Plan.
- NPWS and DAFM will fund, support, and promote the work of the Business for Biodiversity Ireland during its initial set up phase of three years.
- Business for Biodiversity Ireland will engage with business to enhance private sector action on biodiversity.
- Business for Biodiversity Ireland will provide a mechanism to match private sector resources with appropriate biodiversity projects.

- The BF will include public engagement and participation facilitators to support inclusivity and representation from diverse sectoral groups.
- NPWS will support the establishment of a Children and Young People's Biodiversity Forum through an appropriate channel.
- Laois-Offaly Education and Training Board (LOETB) with support from the NPWS, OPW and Solas will pilot the Nature Skills Training Programme with a view to extending it nationwide.
- All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue Green infrastructure.
- The Office of the Planning Regulator (OPR) will work to prepare and publish a Case Study Paper examining best practice in integrating green infrastructure, nature-based solutions and ecosystem services into the preparation of land use plans.
- All Regional Spatial and Economic Strategies, City and County Development Plans, Local Area Plans and LBAP's shall be aligned with the objectives of the NBAP, where relevant
- DOT will update transport appraisal guidance and methodologies to include enhanced consideration of local environmental and biodiversity impacts.
- DAFM, DHLGH and other relevant stakeholders will build and enhance engagement with terrestrial, freshwater, coastal and marine stakeholders, and the wider community to promote the benefits of biodiversity and ecosystem services, and the responsible, sustainable use of resources.

Outcome 3C: ***Planning and development will facilitate and secure biodiversity's contributions to people.***

- All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue Green infrastructure
- The Office of the Planning Regulator (OPR) will work to prepare and publish a Case Study Paper examining best practice in integrating green infrastructure, nature-based solutions and ecosystem services into the preparation of land use plans.
- All Regional Spatial and Economic Strategies, City and County Development Plans, Local Area Plans and LBAP's shall be aligned with the objectives of the NBAP, where relevant
- DOT will update transport appraisal guidance and methodologies to include enhanced consideration of local environmental and biodiversity impacts.
-

Such policies have informed the evaluation of ecological features recorded within the Subject Development Site and the ecological assessment process.

European Legislation

The EU Habitats Directive (92/43/EEC) (together with the Birds Directive (79/409/EEC), as subsequently codified by Council Directive 2009/147/EC on the conservation of wild birds (the "**Birds Directive**") forms the cornerstone of Europe's nature conservation within the EU. It is built around two pillars: the Natura 2000 network of protected Sites and the strict system of species protection. The Habitats Directive protects over 1,000 animal and plant species and over 200 "habitat types" (e.g., special types of forests, meadows, wetlands, etc.), which are of European importance. The Habitats Directive and Birds Directive, which were transposed into Irish law through Part XAB of the Planning and Development Acts 2000-2020 (from a land use planning perspective) recognise the significance of protecting rare and endangered species of flora and fauna, and more importantly, their habitats.

Annex I of the Habitats Directive lists habitat types whose conservation requires the designation of Special Areas of Conservation (SAC). Priority habitats, such as Turloughs, which are in danger of

disappearing within the EU territory are also listed in Annex I. Annex II of the Habitats Directive lists animal and plant species (e.g. marsh fritillary, Atlantic salmon, and Killarney fern) whose conservation also requires the designation of SAC. Annex IV lists animal and plant species in need of strict protection such as lesser horseshoe bat and otter, and Annex V lists animal and plant species whose taking in the wild and exploitation may be subject to management measures. In Ireland, species listed under Annex V include Irish hare, common frog, and pine marten. Species can be listed in more than one Annex, as is the case with otter and lesser horseshoe bat which are listed in both Annex II and Annex IV.

The disturbance of species under Article 12 of the Habitats Directive (and in particular avoidance of deliberate disturbance of Annex IV species, particularly during the period of breeding, rearing, hibernation and migration and avoidance of deterioration or destruction of breeding Sites or resting places) has been specifically assessed in this rEIAR.

The **Birds Directive** instructs Member States to take measures to maintain populations of all bird species naturally occurring in the wild state in the EU (Article 2). According to Recital 1 of the Birds Directive, Council Directive 79/409/EEC on the conservation of wild birds was substantially amended several times and in the interests of clarity and rationality, the Birds Directive codifies Council Directive 79/409/EEC. Such measures may include the maintenance and/or re-establishment of habitats in order to sustain these bird populations (Article 3). A subset of bird species has been identified in the Directive and are listed in Annex I as requiring special conservation measures in relation to their habitats. These species have been listed on account of inter alia: their risk of extinction; vulnerability to specific changes in their habitat; and/or due to their relatively small population size or restricted distribution. Special Protection Areas (SPAs) are to be identified and classified for these Annex I listed species and for regularly occurring migratory species, paying particular attention to the protection of wetlands (Article 4).

In summary, the species and habitats provided national and international protection under these legislative and policy documents have been considered in this Remedial Ecological Impact Assessment (rEIAR). A detailed assessment of the likelihood of the Subject Development having either a significant effect or an adverse impact on any relevant European Sites (i.e., SACs, cSACs, SPAs or cSPAs) has been carried out in the Appropriate Assessment Screening Report and Natura Impact Statement. A separate assessment has not been carried out in this chapter, to avoid duplication of assessments. However, the relevant conclusions have been cross-referenced and incorporated.

5.3 Relevant Guidance

The assessment methodology is based primarily upon Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine Version 1.2 (CIEEM, 2022) and the Transport Infrastructure Ireland (TII)'s *Guidelines for Assessment of Ecological Impacts of National Road Schemes Rev 2* (TII, 2009a) (referred to hereafter as the TII Ecological Impact Assessment Guidelines). The survey methodology is based on the TII guidelines on *Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes* (TII, 2009b). Although these survey methodologies relate to road schemes, these standard guidelines are recognised survey methodologies that ensure good practice regardless of the development type.

In addition, the following guidelines were adhered to in the preparation of this document to provide the scope, structure, and content of the assessment:

- Bats and onshore wind turbines: survey, Assessment, and mitigation (NatureScot August 2021)
- NIEA, Natural Environment Division - Guidance on Bat Surveys, Assessment and Mitigation for Onshore Wind Turbine Developments in Northern Ireland (May 2022).
- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Environmental Protection Agency (EPA), 2022).
- Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment. (Department of the Environment, Community and Local Government (DoEHLG), 2013).
- Guidelines for assessment of Ecological Impacts of National Road Schemes, (TII, 2009a).
- Environmental Impact Assessment of National Road Schemes – A Practical Guide (TII, 2008a).
- Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (EPA, 2003).
- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002).
- Guidance on the preparation of the Environmental Impact Assessment Report (European Commission (EC), 2017)

This assessment has been carried out in accordance with the Environmental Impact Assessment guidance as outlined in Chapter 1 of the rEIAR.

In addition to the above, the following legislation applies with respect to habitats, fauna and water quality in Ireland and has been considered in the preparation of this report:

- The International Convention on Wetlands of International Importance especially Waterfowl Habitat (Concluded at Ramsar, Iran on 2 February 1971)
- S.I. No. 272 of 2009: European Communities Environmental Objectives (Surface Waters) Regulations 2009 and S.I. No. 722 of 2003 European Communities (Water Policy) Regulations 2003 which give further effect to EU Water Framework Directive (2000/60/EC).
-

The following legislation applies with respect to non-native species:

- Regulation 49 and 50 of European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).

This assessment has taken into account the various planning policies and strategy guidance documents listed below:

- Donegal County Development Plan 2018-2024
- Strabane Area Plan 1986- 2001 (Still current)
- 4th National Biodiversity Action Plan 2023-2030
- The Regional Planning Guidelines for the West 2010-2022

5.3.1 Statement of Authority

This report and the baseline surveys that inform it have been prepared by Rachel Minogue (B.Sc. (Env.), Colin Murphy (B.Sc (Ecology), M.Sc.) and Pat Roberts (B.Sc. (Env.) MCIEEM). Colin is an experienced ecologist with over four years professional consulting experience. Colin has previous experience in preparing numerous Biodiversity Chapters for EIARs. Pat is a full member of the Chartered Institute of Ecology and Environmental Management. Pat is highly experienced in the undertaking of Ecological Impact Assessments and Habitats Directive Assessments and has over 18 years' post graduate experience in ecological consultancy. The baseline ecological surveys were undertaken across multiple dates in 2021, 2022 and 2023. The most recent survey of the deviations was undertaken on the 18/12/2023 and 19/12/2023.

5.4 Methodology

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological baseline conditions are those existing in the absence of proposed activities (CIEEM, 2018).

The following sections outline the methodologies utilised to establish the ecological condition of the Subject Development Site.

5.4.1 Desk Study

The desk study undertaken for this assessment included a thorough review of available ecological data including the following:

- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA (Envision), Water Framework Directive (WFD), Geological Survey of Ireland (GSI) & Inland Fisheries Ireland (IFI).
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper.
- Data on potential occurrence of protected bryophytes – as per NPWS online map viewer; Flora Protection Order Map Viewer – Bryophytes2.
- IFI Reports.
- Review of specially requested records from the NPWS Rare and Protected Species Database for the hectad H08 in which the Subject Development Site is located.
- Review of NPWS Article 17 Metadata and GIS Database Files
- Review of Biotic Index of Water Quality (BIWQ) developed by the (EPA).

All online data sources listed above were most recently accessed on the 16th of January 2024.

[2] *NPWS, 2021, Online map viewer; Flora Protection Order Map Viewer – Bryophytes. Online, Available at: http://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=71f8df33693f48edbb70369d7fb26b7e, Accessed: May 2021.*

5.4.1.1 Zone of Influence

Zone of Influence" (ZOI) refers to the zone within which potential effects are anticipated. ZOIs differ depending on the sensitivities of particular habitats and species and were assigned in accordance with best available guidance and through adoption of a precautionary approach.

In many instances, the scale of the works is such that the ZOI extends no further than the subject development areas themselves. In other cases, such as where there is the potential for disturbance or where there is a watercourse to provide downstream connectivity, the ZOI may extend outside the subject development areas.

In relational to European and Nationally Designated Sites, as well as non-designated Sites of national importance, the zone of influence was determined using a source-pathway-receptor model as outlined below: The most up to date GIS spatial datasets for European and Nationally designated Sites and water catchments were downloaded from the NPWS webSite (www.npws.ie) and the EPA webSite (www.epa.ie) on the 16/01/2024. The datasets were utilised to identify Designated Sites which could feasibly be affected by the Subject Development.

- All Designated Sites that could potentially be affected were identified using a source-pathway - receptor model. To provide context for the assessment, European and National Sites surrounding the Subject Development Site are shown on **Figures 5-2 and 5-3** respectively. Information on these Sites according to the Site-specific conservation objectives is provided in **Table 5.3.**
- **Table 5.3** provides details of all relevant designated Sites as identified in the preceding steps and assesses which are within the likely ZOI. All relevant European Designated Sites are also fully described and assessed in the Screening for Appropriate Assessment and Natura Impact Statement reports submitted as part of this planning application. Sites that were further away from the Subject Development were also considered and no potential for impact was identified due to the absence of indirect and direct hydrological connections (e.g., without the Atlantic Ocean as a buffer).
- The designation features of these Sites, as per the NPWS Website (www.npws.ie), were consulted and reviewed at the time of preparing this report 16/01/2024.

Where potential pathways for Significant Effect are identified, the Site is included within the Likely Zone of Influence and further assessment is required.

5.4.2 Scoping and Consultation

A scoping report, providing details of the Subject Development, was prepared by MKO and circulated on the 19th of January 2024. MKO requested the comments of the relevant personnel/bodies in their respective capacities as consultees with regards to the rEIAR process. Responses of consultees are collated in Chapter 2 and were considered in the preparation of this chapter.

For full details on the scoping and consultation process and responses received refer to **Section 2.5,** including **Table 2-3 and 2-4 '**Review of Scoping Responses' available **in Chapter 2- Background** of this rEIAR.

5.4.3 Ecological Field Surveys

The Permitted Development has been subject to extensive ecological field surveys carried out as part of the original Permitted Development planning application submitted in December 2017 (Planning Reference-ABP-300460-17).

A wide range of habitat, flora and fauna surveys were conducted between 2014 to 2017, as part of the original Permitted Development application. Badger, otter, bat, aquatic, habitat and detailed vegetation and protected flora surveys were all carried out. Survey methodologies are described fully in **Section 6.2.4**, and survey results are fully described in **Section 6.3.2** in Chapter 6 of the Original EIAR for the Permitted Development submitted in December 2017 (Planning Reference-ABP-300460-17), and as such are not repeated in this document. All of the ecological surveys were carried out in accordance with the methodology set out in NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009).

Each of the 25 deviations that make up the Subject Development were the subject of several ecological multi-disciplinary walkover surveys and desk studies between 2021 and 2023. The latest and most comprehensive of such surveys was undertaken on the 23rd/24th August 2023 and the 18th/19th of December 2023. Surveys of vegetation were completed within the optimum period for vegetation surveys/habitat mapping, i.e., April to September (Smith et al., 2011). A comprehensive walkover of all Subject Development footprints was completed. Surveys undertaken outside of this period were not used to evaluate habitats.

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 badger setts and areas of suitable habitat, potential features likely to be of significance to bats and additional habitat features for the full range of other protected species that are likely to occur in the vicinity of the Subject Development (e.g., otter etc.). During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (as amended) was conducted.

5.4.3.1.1 Biological Water Quality Assessment (Q-sampling)

Sampling was undertaken at five locations within and downstream of the Permitted Development Site in September 2014 to assess aquatic macroinvertebrates for Q-Value determination prior to construction commencing. Additional aquatic macroinvertebrate sampling for Q-Value determination was undertaken by suitably qualified ecologists in December 2020, October 2021, and October 2023. Sampling in 2020 was undertaken by MKO. Sampling in 2021 was undertaken by Triturus Environmental Ltd, and sampling in 2023 again undertaken by MKO. The sampling method used was the same as that used by the EPA for their national water sampling regime (Toner *et al.* 2005). Full Biological water quality assessment (Q-value) reports for 2020, 2021, and 2023 are provided in Appendices 5-2, 5-3, and 5-4 of this rEIAR respectively.

The surveys undertaken are summarised in **Table 5.1 below.**

Table 5-1 Aquatic Sampling Efforts Carried out in 2020, 2021, and 2023.

Location	Date	Surveying Type	Methodology
• Mourne Beg River and its tributaries. • Bunadaowen River • Shruhangarve Stream	November 2020	• Ecological Walkover Survey • Otter Survey • Kick Sampling for Macro-invertebrates	19 kick samples were undertaken at locations on the Mourne Beg River both upstream and downstream of the Meenbog wind farm, on the Bunadaowen River and the Shruhangarve Stream which discharge water to the Mourne Beg River, and on two un-named tributaries of the Mourne Beg River downstream of the Shruhangarve. Out of the 19 kick sample locations, six were in similar locations as the sampling points for 2021 and 2023.
• Mourne Beg River • Bunadaowen River • Shruhangarve Stream	October 2021	• Q Sampling	A total of 10 riverine survey Sites on the Mourne Beg River (M1-M8), Bunadaowen River (B1) and Shruhangarve (S1) were assessed for biological water quality through Q-sampling.
	October 2023	• Q Sampling	In October 2023, the same 10 riverine survey Sites that were surveyed in 2021 were assessed for biological water quality through Q-sampling. Due to water high water levels at the time of the survey two Sites (M2 and M5) could not be assessed in 2023

5.4.4 Methodology for Assessment of Impacts and Effects

5.4.4.1 Identification of Target Receptors and Key Ecological Receptors

The methodology for assessment followed a precautionary screening approach with regard to the identification of Key Ecological Receptors (KERs). Following a comprehensive desk study, recent Site visits were undertaken at each of the 25 deviations on the 23rd/24th August 2023 and the 18th/19th of December 2023 (not including bat surveys and stakeholder consultation), "Target receptors" likely to occur in the ZOI were identified. The target receptors included habitats and species that were protected under the following legislation:

- Annexes of the EU Habitats Directive
- Qualifying Interests (QIs) of SAC), Special Conservation Interests of (SCIs) of SPAs, NHAs and pNHAs within the likely zone of influence
- Species protected under the Wildlife Act.
- Species protected under the Flora (Protection) Order 2022 S.I. No. 235

5.4.4.2 Determining Importance of Ecological Receptors

The importance of the ecological features identified within the Site was determined with reference to a defined geographical context. This was undertaken following a methodology that is set out in Chapter 3 of the 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009). These guidelines set out the context for the determination of value on a geographic basis with a hierarchy assigned in relation to the importance of any particular receptor. The guidelines provide a basis for determination of whether any particular receptor is of importance on the following scales:

- International
- National
- County
- Local Importance (Higher Value)
- Local Importance (Lower Value)

The Guidelines clearly set out the criteria by which each geographic level of importance can be assigned. Locally Important (lower value) receptors contain habitats and species that are widespread and of low ecological significance and of any importance only in the local area. Internationally Important Sites are either designated for conservation as part of the Natura 2000 Network (SACs or SPAs) or provide the best examples of habitats or internationally important populations of protected flora and fauna. Specific criteria for assigning each of the other levels of importance are set out in the guidelines and have been followed in this assessment. Where appropriate, the geographic frame of reference set out above was adapted to suit local circumstances. In addition, and where appropriate, the conservation status of habitats and species is considered when determining the significance of ecological receptors.

Any ecological receptors that are determined to be of National or International, County or Local importance (Higher Value) following the criteria set out in NRA (2009) are considered to be KERs for the purposes of ecological impact assessment if there is a pathway for effects thereon. Any receptors that are determined to be of Local Importance (Lower Value) are not considered to be KERs.

5.4.4.3 Characterisation of Impacts and Effects

Potential ecological effects of the potential impacts are characterised as per the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018). These guidelines are the industry standard for the completion of Ecological Impact Assessment in the UK and Ireland. This chapter has

also been prepared in accordance with the corresponding EPA guidance (EPA 2022). The headings under which the impacts are characterised follow those listed in the guidance document and are applied where relevant. A summary of the impact characteristics considered in the assessment is provided below:

- **Positive or Negative.** Assessment of whether the Subject Development has resulted in a positive or negative effect on the ecological receptor.
- **Extent.** Description of the spatial area over which the effect has the potential to occur.
- **Magnitude** Refers to size, amount, intensity, and volume. It should be quantified if possible and expressed in absolute or relative terms e.g., the amount of habitat lost, percentage change to habitat area, percentage decline in a species population.
- **Duration** is defined in relation to ecological characteristics (such as the lifecycle of a species) as well as human timeframes. For example, five years, which might seem short-term in the human context or that of other long-lived species, would span at least five generations of some invertebrate species.
- **Frequency and Timing.** This relates to the number of times that an impact occurs and its frequency. A small-scale impact can have a significant effect if it is repeated on numerous occasions over a long period.
- **Reversibility.** This is a consideration of whether an effect is reversible within a 'reasonable' timescale. What is considered to be a reasonable timescale can vary between receptors and is justified where appropriate in the impact assessment section of this report.

5.4.4.4 Determining the Significance of Effects

The ecological significance of the effects of the Subject Development are determined following the precautionary principle and in accordance with the methodology set out in Section 5 of CIEEM (2018).

For the purpose of Ecological Impact Assessment (EcIA), 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated Site) or broad (e.g., national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local (CIEEM, 2018).

When determining significance, consideration is given to whether:

- Any processes or key characteristics of KERs will be removed or changed.
- There will be an effect on the nature, extent, structure, and function of important ecological features.
- There is an effect on the average population size and viability of ecologically important species.
- There is an effect on the conservation status of important ecological habitats and species.

The EPA Guidelines on information to be included in Environmental Impact Assessment Reports (EPA, 2022) and the *Guidelines for assessment of Ecological Impacts of National Road Schemes*, (NRA, 2009) were also adhered to when determining significance and the assessment is in accordance with those guidelines.

The terminology used in the determination of significance follows the suggested language set out in the EPA Guidelines (2022) as shown in

Table 5-2.

Table 5-2 Criteria for determining significance of effect, based on (EPA, 2022) guidelines.

Effect Magnitude	Definition
No change	No discernible change in the ecology of the affected feature.
Imperceptible effect	An effect capable of measurement but without noticeable consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight effect	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate effect	An effect that alters the character of the environment that is consistent with existing and emerging trends.
Significant effect	An effect which, by its character, its magnitude, duration, or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the environment.
Profound effect	An effect which obliterates sensitive characteristics.

As per TII (NRA, 2009) and CIEEM (2018) best practice guidelines, the following key elements should also be examined when determining the significance of effects:

- The likely effects on 'integrity' should be used as a measure to determine whether an impact on a Site is likely to be significant (NRA, 2009).
- A 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives CIEEM(2018).

Integrity

In the context of EcIA, 'integrity' refers to the coherence of the ecological structure and function, across the entirety of a Site, that enables it to sustain all of the ecological resources for which it has been valued (NRA, 2009). Impacts resulting in adverse changes to the nature, extent, structure and function of component habitats and effects on the average population size and viability of component species, would affect the integrity of a Site, if it changes the condition of the ecosystem to unfavourable.

Conservation status

An impact on the conservation status of a habitat or species is considered to be significant if it will result in a change in conservation status. According to CIEEM (2018) guidelines the definition for conservation status in relation to habitats and species are as follows:

- Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure, and functions as well as its distribution and its typical species within a given geographical area.
- Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

As defined in the Habitats Directive the conservation of a habitat is favourable when:

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

The conservation of a species is 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

According to the NRA/CIEEM methodology, if it is determined that the integrity and/or conservation status of an ecological feature will be impacted on, then the level of significance of that impact is related to the geographical scale at which the impact will occur (i.e., local, county, national, international).

5.4.4.5 Limitations

The information provided in this assessment accurately and comprehensively describes the baseline ecological environment following surveys on numerous dates during all seasons and over 4 years in 2020, 2021, 2022 and 2023; provides an accurate description of the likely ecological effects that have occurred or may occur as a result of the Subject Development and describes the residual ecological impacts.

The specialist studies, analysis and reporting have been undertaken in accordance with the appropriate guidelines.

The habitats and species on the Site were readily identifiable and comprehensive assessments were made during the field visits. No significant limitations in the scope, scale or context of the assessment have been identified.

5.5 Establishing the Ecological Baseline

5.5.1 Desk Study

The following sections describe the results of a survey of published material that was consulted as part of the desk study for the purposes of the ecological assessment. It provides a baseline for the ecology of the existing environment in which the Subject Development is situated. Material reviewed includes the Site Synopses for Designated Sites for their conservation importance compiled by the National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht, bird and plant distribution atlases and other research publications.

5.5.1.1 Designated Sites

5.5.1.1.1 *Identification of the Designated Sites within the Likely Zone of Influence of the Subject Development*

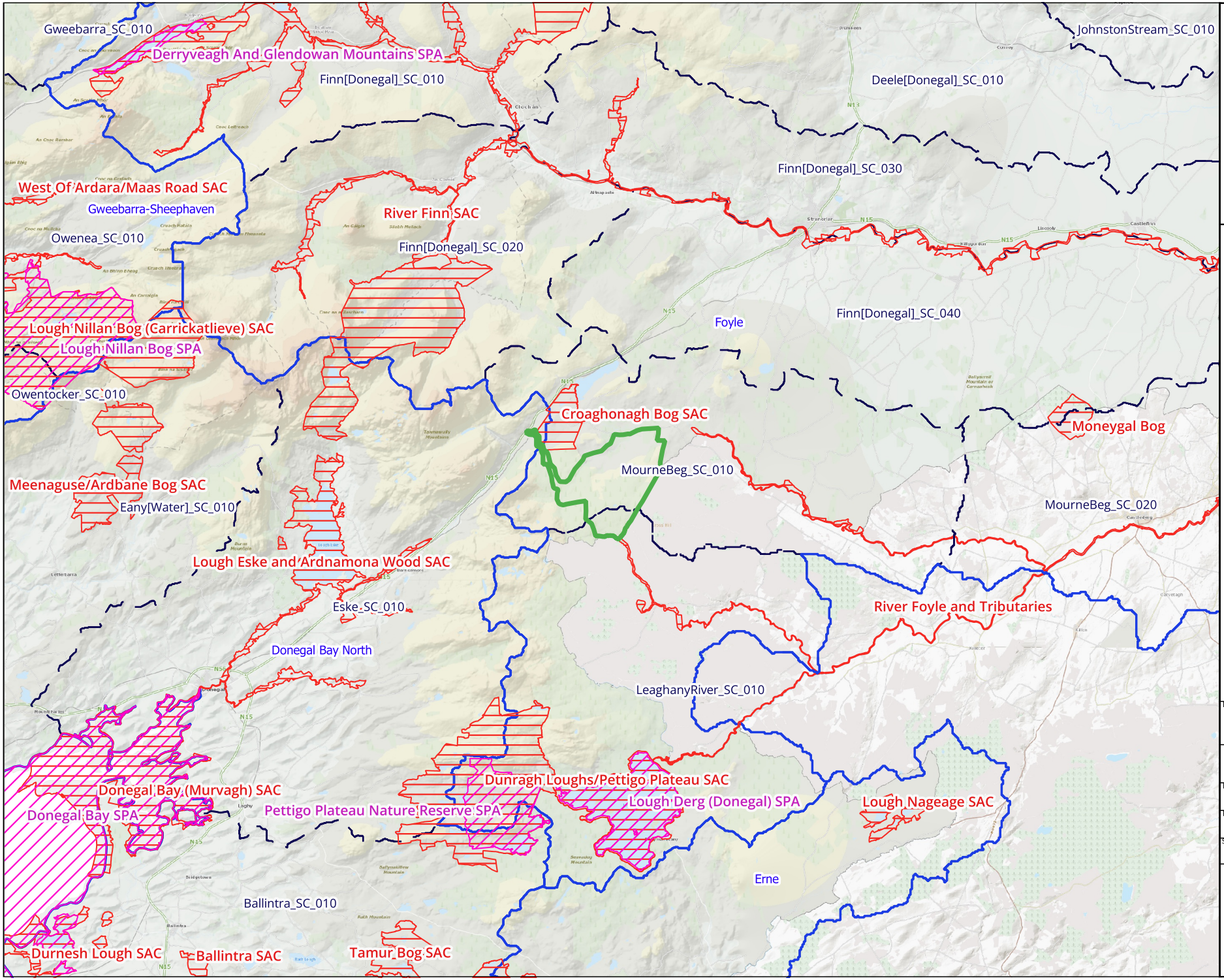
The potential for the Subject Development to impact on Sites that are designated for nature conservation was considered in this rEIAR.

Special Areas of Conservation (SACs) and Special Protection Areas for Birds (SPAs) are designated under the EU Habitats Directive and EU Birds Directive, respectively and are collectively known as 'European Sites'. The potential for significant effects and/or adverse impacts on the integrity of European Sites is fully assessed in the Remedial Natura Impact Statement that accompanies this application. As per EPA Guidance 2022, *"a biodiversity section of an EIAR, should not repeat the detailed assessment of potential effects on European Sites contained in a Natura Impact Statement"* but should *"incorporate their key findings as available and appropriate"*. **Table 5-3** this rEIAR provides a summary of the key assessment findings with regard to European and Nationally Designated Sites.

Natural Heritage Areas (NHAs) are designated under Section 18 the Wildlife (Amendment) Act 2000 and their management and protection is provided for by this legislation and planning policy. The potential for effects on these designated Sites is fully considered in this rEIAR.

Proposed Natural Heritage Areas (pNHAs) were designated on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, the potential for effects on these designated Sites is fully considered in this rEIAR.

The methodology was used to establish which Sites that are designated for nature conservation have the potential to be impacted by the Subject Development is fully described in **Section 5.4.1.1** of this report.



Map Legend

- rEIAR Study Area
- EPA Hydrological Catchments
- EPA Hydrological Subcatchments
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

Drawing Title
European Designated Sites Within the Likely Zone of Influence

Project Title
Substitute Consent for Deviations at Meenbog Windfarm

Drawn By	Checked By
RM	CM
Project No.	Drawing No.
220623	Figure 5-2
Scale	Date
1:175,817	28/03/2024

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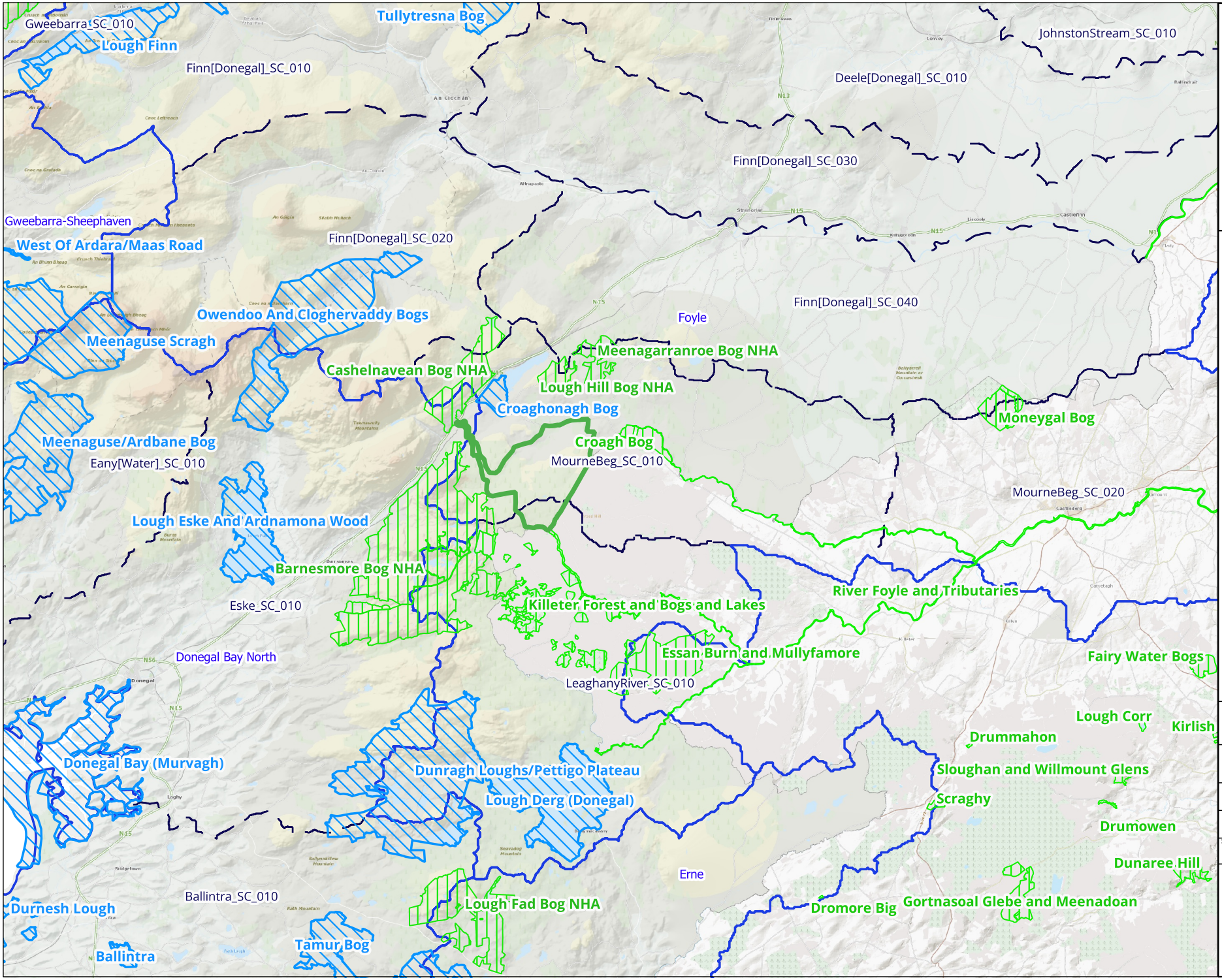

Map Legend

- rEIAR Study Area
- EPA Hydrological Catchments
- EPA Hydrological Subcatchments
- Natural Heritage Area (NHA)
- Proposed Natural Heritage Area (pNHA)

Drawing Title
Nationally Designated Sites Within the Likely Zone of Influence

Project Title
Substitute Consent for Deviations at Meenbog Windfarm

Drawn By	Checked By
RM	CM
Project No.	Drawing No.
220623	Figure 5-3
Scale	Date
1:175,817	28/03/2024

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Table 5-3 Identification of Relevant Designated Sites

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Special Areas of Conservation (SAC)			
River Finn SAC [002301] **Distance:** 1.1km	Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] Northern Atlantic wet heaths with *Erica tetralix* [4010] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140] *Salmo salar* (Salmon) [1106] *Lutra lutra* (Otter) [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	The Subject Development is located entirely outside this European Site, with the rEIAR study area separated from it by a minimum distance of 1.1km. There is no potential for the any of the deviations to result or have resulted in any direct effect on this European Site. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development proposal. The Subject Development does not give rise to the need for any additional mitigation or best practice measures to be applied to avoid or reduce impacts on designated sites. However, following a precautionary approach, a complete source pathway receptor chain was identified in the form of surface water connectivity between a number of the identified deviations that are located in the Bunadaowen and Shruhangarve Catchments and the River Finn SAC. No other pathway for Likely Significant Effects on this SAC was identified. **Due to the presence of a source-pathway- receptor chain in the form of potential surface water connection, the potential for likely significant effects**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			on this SAC as a result of the Subject Development both on its own and in combination with other plans and projects cannot be excluded.
River Foyle and Tributaries SAC [UK0030320] **Distance:** Adjacent to the Subject Development Study Area	*Salmo salar* (Salmon) [1106] *Lutra lutra* (Otter) [1355] Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callicricho-Batrachion* vegetation	Maintain and if possible expand existing population numbers and distribution (preferably through natural recruitment), and improve age structure of population. 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. (DOENI V3, 2017)	The Subject Development is located entirely outside this European Site and although the Subject Development study area is located adjacent to this European Site, none of the deviations are located in the vicinity of this boundary. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development proposal. The small-scale alterations do not give rise to the need for any additional mitigation or best practice measures to be applied to avoid or reduce impacts on designated sites. However, following a precautionary approach, a complete source pathway receptor chain was identified in the form of surface water connectivity between a number of the identified deviations that are located in the Glendergan catchment and the River Foyle and Tributaries SAC No other pathway for Likely Significant Effects on this SAC was identified. **Due to the presence of a source-pathway- receptor chain in the form of potential surface water connection, the potential for likely significant effects on this SAC as a result of the Subject Development both on its own and in combination with other plans and projects cannot be excluded.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Croaghonagh Bog SAC [000129] **Distance:** Adjacent to the Subject Development Study Area	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	The Subject Development is located entirely outside this European Site and although the Subject Development study area is located adjacent to this European Site, none of the deviations are located within the SAC. There is no potential for the Subject Development to result or have resulted in any direct effect on this European Site. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development proposal. The alterations do not give rise to the need for any additional mitigation or best practice measures to be applied to avoid or reduce impacts on designated sites. The works were undertaken at a lower elevation than the SAC, further away from the SAC than the Permitted Development and buffered from it by the existing road. No complete source-pathway-receptor chain for the works to result or have resulted in any Likely Significant Effects on this SAC were identified **The potential for the Subject Development to result or have resulted in any Likely Significant Effects on the integrity of this SAC either on its own and in combination with other plans and projects can be excluded.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Lough Eske and Ardnamona Wood SAC [000163] **Distance:** 4.7km (6.4km surface water distance)	Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] Petrifying springs with tufa formation (*Cratoneurion*) [7220] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] Salmo salar (Salmon) [1106] *Trichomanes speciosum* (Killarney Fern) [1421]	Detailed conservation objectives for this site (Version 1, September 2019) were reviewed as part of the assessment and are available at www.npws.ie	The Subject Development is located entirely outside this European Site and are separated from it by a distance of at least approximately 6.4km (surface water distance). There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development proposal. The alterations do not give rise to the need for any additional mitigation or best practice measures to be applied to avoid or reduce impacts on designated sites. However, following a precautionary approach, a complete source pathway receptor chain was identified in the form of surface water connectivity between a number of the identified deviations that are located in the Loweymore catchment and the River Foyle and Tributaries SAC No other pathway for Likely Significant Effects on this SAC was identified. **Due to the presence of a source-pathway- receptor chain in the form of potential surface water connection, the potential for likely significant effects on this SAC as a result of the Subject Development both on its own and in combination with other plans and projects cannot be excluded.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Dunragh Loughs/Pettigo Plateau SAC [001125] **Distance:** 6.2km	Northern Atlantic wet heaths with *Erica tetralix* [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	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 6.2km. There is no potential for the Subject Development to result or have resulted in any direct effect on this European Site. **This European Site has no hydrological connectivity with the study area. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**
Moneygal Bog SAC [UK0030211] **Distance:** 13.6km	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the *Rhynchosporion* [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	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 13.6km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. **This European Site is located in a separate hydrological catchment. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
		and quality of other habitats associated with the active raised bog, e.g. acid grassland, fen and swamp, especially where these exhibit natural transition to the raised bog. Maintain the hydrology of the raised bog peat mass. Seek nature conservation management over suitable areas immediately outside the SAC where there may be potential for lowland raised bog rehabilitation.	
Lough Nageage SAC [002135] **Distance:** 12.9km	*Austropotamobius pallipes* (White-clawed Crayfish) [1092]	Detailed conservation objectives for this site (Version 1, March 2021) were reviewed as part of the assessment and are available at **Error! Hyperlink reference not valid.**	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 12.9km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. **This European Site is located in a separate hydrological catchment. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**
Meenaguse Scragh SAC [001880]	Northern Atlantic wet heaths with Erica tetralix [4010]	Detailed conservation objectives for this site (Version 1, September 2019)	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 12.1km. There is no

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Distance: 12.1km		were reviewed as part of the assessment and are available at **Error! Hyperlink reference not valid.**	potential for the Subject Development to result or to have resulted in any direct effect on this European Site. **This European Site is located in a separate hydrological catchment. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**
Meenaguse/Ardbane Bog SAC [000172] **Distance:** 13.0km	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	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 13.0km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. **This European Site is located in a separate hydrological catchment. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**
Lough Nillan Bog (Carrickatlieve) SAC [000165]	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]	Detailed conservation objectives for this site (Version 1, September 2016) were reviewed as part of the	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 14.2km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Distance: 14.2km	Blanket bogs (* if active bog) [7130]	assessment and are available at www.npws.ie	**This European Site is located in a separate hydrological catchment. No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**
Donegal Bay (Murvagh) SAC **Distance:** 14.3km	Mudflats and sandflats not covered by seawater at low tide [1140] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170] Humid dune slacks [2190] *Phoca vitulina* (Harbour Seal) [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	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 14.3km. There is no potential for the Subject Development to have resulted or to result in any direct effect on this European Site. This European Site is located in coastal and marine habitats that are significantly removed from the Subject Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any Likely Significant Effect on the SAC **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SAC was identified.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Special Protection Area (SPA)			
Lough Derg (Donegal) SPA [004057] **Distance:** 7.6km	Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184]	The generic Conservation Objectives for this European Site (Version 8, 23/03/2021) are: *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA* *To maintain or restore the favourable conservation condition of the wetland habitat at Lough Derg (Shannon) SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.*	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 7.6km. There is no potential for the Subject Development to have resulted or to result in any direct effect on this European Site. The sites of the individual deviations do not provide any significant habitat for the SCI species as they are located in conifer plantation and immediately adjacent to the infrastructure of the Permitted Development. **No complete source-pathway-receptor chain for the Subject Development to result or to have resulted in Likely Significant Effects on this SPA was identified.**
Pettigo Plateau Nature Reserve SPA [004099] **Distance:** 8.7km	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]	The generic Conservation Objective for this European Site (Version 8, 23/03/2021) is: *To maintain or restore the favourable conservation condition of the bird*	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 8.7km. There is no potential for the Subject Development to have resulted or to result in any direct effect on this European Site.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
		species listed as Special Conservation Interests for this SPA	This European Site is located in a separate hydrological catchment. The Subject Development has no potential to have resulted or to result in any significant impact on bird species. The sites of the individual deviations do not provide any significant habitat for the SCI species as they are located in conifer plantation and immediately adjacent to the infrastructure of the Permitted Development. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SPA was identified.**
Lough Nillan Bog SPA [004110] **Distance:** 14.2km	Merlin (*Falco columbarius*) [A098] Golden Plover (*Pluvialis apricaria*) [A140] Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395] Dunlin (*Calidris alpina schinzii*) [A466]	The generic Conservation Objective for this European Site (Version 8, 23/03/2021) is: *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 14.2km. There is no potential for the Subject Development to have resulted or to result in any direct effect on this European Site. This European Site is located in a separate hydrological catchment. The Subject Development has no potential to have resulted or to result in any significant impact on bird species. No potential pathway for the Subject Development to result or have resulted in effects on this site was identified.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			The sites of the individual deviations do not provide any significant habitat for the SCI species as they are located in conifer plantation and immediately adjacent to the infrastructure of the Permitted Development. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SPA was identified.**
Donegal Bay SPA [004151] **Distance:** 14.3km	Great Northern Diver (*Gavia immer*) [A003] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Common Scoter (*Melanitta nigra*) [A065] Sanderling (*Calidris alba*) [A144] Wetland and Waterbirds [A999]	Detailed conservation objectives for this site (Version 1, May 2012) were reviewed as part of the assessment and are available at www.npws.ie	The Subject Development is located entirely outside this European Site and is separated from it by a distance of 14.3km. There is no potential for the Subject Development to have resulted or to result in any direct effect on this European Site. This European Site is located in coastal and marine habitats that are significantly removed from the Subject Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact on bird species. The sites of the individual deviations do not provide any significant habitat for the SCI species as they are located in conifer plantation and immediately adjacent to the infrastructure of the Permitted Development.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this SPA was identified.
Natural Heritage Areas (NHA)			
Cashelnavean Bog NHA (000122) **Distance**: 188m	**Feature of Interest: Peatlands**	**N/A**	The Subject Development is located entirely outside this Nationally Designated Site and the Subject Development is mostly located adjacent to this Nationally Designated Site. There is no potential for the Subject Development to result or have resulted in any direct effect on this Nationally Designated Site. The Subject Development consists primarily of minor alterations to the Permitted Development. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is buffered from the NHA by a distance of the N15 road and the Lowerymore River and is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this NHA. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this NHA was identified.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Barnesmore Bog Complex NHA (002375) **Distance:** 475m	**Feature of Interest: Peatlands**		The Subject Development is located entirely outside this Nationally Designated Site and is separated from it by a distance of 475m. There is no potential for the Subject Development to result or have resulted in any direct effect on this Nationally Designated Site. Deviation 2 (peat cell) is located approx. 475m east of this NHA. The Subject Development occurs further away from the NHA than the Permitted Development and is buffered from it by an existing conifer plantation, and access road. The Subject Development consists primarily of minor alterations to the Permitted Development. The Subject Development elements are further from the NHA than the Permitted Development and buffered from it by approximately 475 meters, the existing access road and a conifer plantation. It is commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this NHA. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this NHA was identified.**
Lough Hill Bog NHA (002452) **Distance:** 1.7km	**Feature of Interest: Peatlands**		The Subject Development is located entirely outside this Nationally Designated Site and is separated from it by a distance of 1.7km. There is no potential for the Subject Development to result or have resulted in any direct effect on this European Site.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this NHA was identified. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it had no potential to have resulted or to result in any significant impact to this NHA. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this NHA was identified.**
Meenagarranroe Bog NHA (002437) **Distance:** 2km	**Feature of Interest: Peatlands**		The Subject Development is located entirely outside this Nationally Designated Site and is separated from it by a distance of 2km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this NHA was identified. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this NHA.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this NHA was identified.
Lough Fad Bog Complex NHA (001159) **Distance:**12.7 km	**Feature of Interest: Peatlands**		The Subject Development is located entirely outside this Nationally Designated Site and is separated from it by a distance of 12.7km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this NHA was identified. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that ithas no potential to have resulted or to result in any significant impact to this NHA. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this NHA was identified**
Proposed Natural Heritage Areas (pNHA)			
Croaghonagh Bog pNHA (000129) **Distance:** 1km	**N/A**	**N/A**	The Subject Development is located entirely outside this Nationally Designated Site. There is no potential for the Subject Development to result or have resulted in any direct effect on this Nationally Designated Site.

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			This pNHA Site overlaps with Croaghonagh Bog SAC. Deviation1 (hairpin bend) is located approx 1km southwest of this pNHA. The Subject Development occurs at a lower elevation than the pNHA, further away from the pNHA than the Permitted Development and buffered from it by existing peatland habitat, and access roads. The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this pNHA was identified. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this pNHA **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**
Owendoo and Cloghervaddy Bogs pNHA (002046) **Distance:** 6.6km			The Subject Development is located entirely outside this Nationally Designated Site and is separated from it by a distance of 6.6km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this pNHA was identified The Subject Development elements

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
			are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this pNHA. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**
Dunragh Loughs/Pettigo Plateau pNHA (001125) **Distance:** 6.6km			This SitepNHA overlaps with Lough Dunragh Loughs/Pettigo Plateau SPA. Potential for impacts from the Subject Development on the pNHA are considered under SPA designation of this Site and so described in detail above. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**
Lough Eske and Ardnamona Wood pNHA (000163) **Distance:** 7.8km			This SitepNHA overlaps with Lough Eske and Ardnamona Wood SAC. Potential for impacts from the Subject Development on the pNHA are considered under SAC designation of this Site and so described in detail above. **Due to the presence of a source-pathway- receptor chain in the form of potential surface water connection, the potential for likely significant effects on this pNHA as a result of the Subject Development both on its own and in combination with other plans and projects cannot be excluded.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Lough Derg (Donegal) pNHA (001992) **Distance:** 8km			This SitepNHA overlaps with Lough Derg (Donegal) SPA. Potential for impacts from the Subject Development on the pNHA are considered under SPA designation of this Site and so described in detail above. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**
Meenaguse Scragh pNHA (0018800) **Distance**: 12.3km			The Subject Development is located entirely outside this Nationally Designated Site and are separated from it by a distance of 12.3km. There is no potential for the Subject Development to result or to have resulted in any direct effect on this European Site. The Subject Development consists primarily of minor alterations to the Permitted Development. No pathway for the Subject Development to impact on this pNHA was identified. The Subject Development elements are commensurate with those previously assessed as part of the Permitted Development. The Subject Development is of a nature and scale such that it has no potential to have resulted or to result in any significant impact to this pNHA **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**

European Sites and distance from Subject Development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, on the 20/10/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain
Lough Nillan Bog pNHA (Carrickatlieve) (004110) **Distance:** 14.4km			This SitepNHA overlaps with Lough Nillan Bog SPA. Potential for impacts from the Subject Development on the pNHA are considered under SPA designation of this Site and so described in detail above. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**
Donegal Bay (Murvagh) pNHA (004151) Distance: 15km			This pNHA overlaps with Donegal Bay SPA. Potential for impacts from the Subject Development on the pNHA are considered under SPA designation of this Site and so described in detail above. **No complete source-pathway-receptor chain for the Subject Development to result or have resulted in Likely Significant Effects on this pNHA was identified.**

Table 5-4 NI Designated Sites within the Likely Zone of Influence

Areas of Special Scientific Interest (ASSI)	Distance	Identification of Source-Pathway-Receptor chain
Croagh Bog (ASSI378)	0.9km	There is potential hydrological connectivity via the subject development site and the Croagh Bog ASSI via the Mourne Beg River. However, no pathway for impact on the terrestrial peatland habitats associated with this ASSI were identified.
Killeter Forest and Bogs and Lakes (ASSI357)	1.3km	No pathways by which the Subject Development could affect this terrestrial ASSI were identified during the assessment.
River Foyle and Tributaries (ASSI229)	1.8km	This designated site overlaps with River Foyle and Tributaries SAC. Potential for impacts on the ASSI are considered under the SAC designation.
Essan Burn and Mullyfamore (ASSI134)	5.2km	No pathways by which the Subject Development could affect this ASSI were identified during the assessment.

5.5.1.1.2 *Designated Sites within the Likely Zone of Influence*

Potential for effects on European Designated Sites is summarised in this report in **Table 5.3** above and is fully addressed in the remedial Natura Impact Statement (rNIS) submitted as part of this substitute consent process. Where Nationally Designated Sites (NHA/ pNHA), overlap with the boundary of a European Designated Site, i.e. (SAC/cSAC/SPA), the potential for impacts has been considered under the European designation.

Following the precautionary principle, the rNIS that accompanies this application identifies the potential for likely significant effects to occur or to have occurred on the following European Sites:

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

In addition, the following pNHA has been included within the Likely Zone of Influence for further assessment.

- Lough Eske and Ardnamona Wood pNHA (000163)

As the pNHA has also been designated as an SAC, impacts on this Site are fully considered under the European designation within the rNIS. Impacts on the pNHA are also considered in **Section 5.7.2** below.

5.5.1.2 NPWS Article 17 Reporting

A review of the Irish Reports for Article 17 of the Habitats Directive (92/42/EEC), including the Heath, Bogs and Mires, Irish Semi-Natural Grassland Survey datasets, National Survey of Native Woodlands and Ancient and Long-Established Woodland datasets were conducted prior to undertaking the multi-disciplinary ecological walkover surveys of the Site. The results of the survey undertaken are provided below.

A search of the NPWS Article 17 datasets[3], was undertaken on 15/01/2024 as part of the desk study for the Site boundary, in which the Subject Development is located. Previously mapped areas of [7130] Active Blanket bog is found in the west of the Site along the entrance route within the Site and in the southeast of the Site. [7130] Active Blanket bog, [7140] Transition Mires and [4041] Wet Heath and [4030] Dry Heath have been previously mapped <2km to the northeast, north and northwest of the Site. [7130] Active Blanket bog, [7140] Transition Mires and [4041] Wet Heath [4030] Dry Heath] [4060] Alpine and Sub Alpine Heath and [7230] Alkaline Fens have been mapped to the <2km to the west and south of the Site.

Following a review of the Irish Semi-Natural Grassland Survey database, there are no previously mapped semi-natural grassland habitats within the Site. The nearest mapped habitats within this data base are found 3.5km to the west of the Site and are classified as Dry-humid acid grassland (GS3) and Wet Grassland (GS4).

There are no Native Woodlands and Ancient and Long-Established Woodlands within the Site according to both datasets. The nearest woodland mapped in these datasets is located approx. 5km southwest of the Site and is classified as (WN1) Oak-Birch-Holly woodland.

Distribution of relevant Article 17 habitat records is seen below **in Figure 5-4.**

[3] *Including bog 2012 and 2019 datasets, Online, Available at: https://www.npws.ie/publications/article-17-reports*

Map Legend

- rEIAR Study Area
- Subject Development Footprint
- Permitted Development Footprint
- Permitted Development Turbine Locations

Article 17 Habitats

- Active Blanket Bog Poly
- Alpine and Subalpine Heath Poly
- Dry Heath Poly
- Wet Heath Poly
- EPA River Waterbodies

Drawing Title

Distribution of Relevant Article 17 Habitats

Project Title

Substitute Consent for Deviations at Meenbog Wind Farm, Co. Donegal

Drawn By	Checked By
RM	CM
Project No.	**Drawing No.**
220623	Figure 5-4
Scale	**Date**
1:17,000	2024-03-29

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5.5.1.3 Vascular plants

A search was made in the New Atlas of the British and Irish Flora (Preston *et al*, 2002) to investigate whether any rare or unusual plant species listed under Annex I of the EU Habitats Directive, The Irish Red Data Book, 1, Vascular Plants (Curtis, 1988) or the Flora (Protection) Order (1999, as amended 2015 & 2022) had been recorded in the relevant 10km squares in which the Subject Development is situated (H08). Each hectad contains 100 whole 1km squares containing terrestrial habitats. No species of conservation concern were recorded within this hectad.

5.5.1.4 Bryophytes

A search of the NPWS online database for bryophytes (non-vascular land plants comprising of mosses, hornworts, and liverworts) was also undertaken on the 15/01/2024 with no protected bryophytes recorded within hectad H08, in which the Subject Development is situated in, or adjacent to the Site boundary (NPWS, 2020). No protected bryophytes were recorded from within the Site. *Gymnomitrion concinnatum* was recorded just outside the boundary of Meenaguse Scragh SAC Bog SAC [001880] 13km to the west of the SSite *Gymnomitrion concinnatum* was recorded within Meenaguse Scragh SAC Bog SAC 13km northwest of the Site. *Kiaeria falcata* was recorded outside of the same SAC 12.7km northwest from the Site.

5.5.1.5 National Biodiversity Data Centre (NBDC) Records

A search of the National Biodiversity Data Centre (NBDC) records on the 15/01/2024 for the relevant hectad, H08, in which the Subject Development is situated in, provided records on a number of fauna species of conservation concern, excluding marine species and bird species. These are provided in **Table 5-5.** The Invasive Species recorded within the hectad H08 are provided in **Table 5.6 below.**

Table 5-5 NBDC Records for Species of Conservation Interest in hectad H08

Species	Scientific Name	Red List Status	Habitats Directive
Common frog	*Rana temporaria*	LC	Annex V
Irish Hare	*Lepus timidus subsp. hibernicus*	LC	Annex V, WA
Hedgehog	*Erinaceus europaeus*	LC	WA
Pine marten	*Martes martes*	LC	Annex V, WA
Badger	*Meles meles*	LC	WA
Red Deer	*Cervus elaphus*	LC	WA
Sika Deer	*Cervus nippon*	NA	WA
Marsh Fritillary	*Euphydrya aurinia*	VU	Annex II
Soprano pipistrelle	*Pipistrellus pygmaeus*	LC	Annex IV, WA

Annex II, Annex IV, Annex V – Of EU Habitats Directive, WA - Wildlife Act), LC – Least concern, NT – Near threatened, VU - Vulnerable.

Table 5-6 NBDC records for Invasive Species in hectad H08.

Common Name	Scientific Name
Japnese Knotweed	*Fallopia japonica*
Rhododendron	*Rhododendron ponticum*
Feral Goat	*Capra hircus*
Sika Deer	*Cervus nippon*
Grey Squirrel	*Sciurus carolinensis*
Sycamore	*Acer pseudoplatanus*

5.5.1.5.1 Bat Conservation Ireland Database

The National Bat Database of Ireland was searched for records of bat activity and roosts within a 10 km radius of the central point of the Site (IG Ref: E202166, N384898). A number of observations have been recorded including roosts (n=2), transects (n=3) and ad-hoc observations (n=8). At least four of Ireland's nine resident bat species were recorded within 10 km of the Subject Development, including common pipistrelle, soprano pipistrelle, Leisler's bat and Daubenton's bat. The results of the database search are provided in **Table 5-7.**

Table 5-7 BCI data within 10km radius of the Subject Development (Grid Ref: E202166, N384898).

Survey Type	Location	Species	Survey	Designation
Roost	Donegal Town, Co. Donegal	Roost type: Bridge. Species: Daubenton's bat	Unknown	Annex IV
	Donegal Town, Co. Donegal	Roost type: Tree. Species: Leisler's bat	Unknown	Annex IV
Transect	Donegal Town, Co. Donegal	Daubenton's bat	Waterways Survey	Annex IV
	Belcoo, Co. Fermanagh	*Myotis* spp., common pipistrelle, soprano pipistrelle	Car-based Bat Monitoring	Annex IV
Ad-hoc Observation	Lough Mourne, Co. Donegal	*Myotis* spp.	BATLAS 2010	Annex IV
	Lough Eske, Co. Donegal	Daubenton's bat, *Myotis* spp., Leisler's bat, soprano pipistrelle	BATLAS 2010	Annex IV

	Clogheravaddy, Co. Donegal	Leisler's bat, common pipistrelle, soprano pipistrelle	EIA Survey	Annex IV
	Co. Donegal	Common pipistrelle, soprano pipistrelle	Visiting bat specialist	Annex IV
	Co. Donegal	Common pipistrelle	Visiting bat specialist	Annex IV
	Co. Donegal	*Myotis* spp., common pipistrelle, soprano pipistrelle	Visiting bat specialist	Annex IV
	Co. Donegal	Common pipistrelle, soprano pipistrelle	Visiting bat specialist	Annex IV
	Co. Donegal	Soprano pipistrelle	Visiting bat specialist	Annex IV

5.5.1.6 NPWS

National Parks and Wildlife Service (NPWS) online records were searched to see if any rare or protected species of flora or fauna have been recorded from hectad H08 in which the Subject Development is situated. An information request was also sent to the NPWS requesting records from the Rare and Protected Species Database on the 13/04/2023. **Table 5-8** lists rare and protected species records obtained from NPWS, as received on the 14/04/2023, as well as those recorded available through the online NPWS map viewer.

Table 5-8 National Parks and Wildlife Service Map Viewer Records

Common name	Scientific name	Red List Status	Flora Protection Order/Red List	Habitats Directive/Birds Directive/Wildlife Act
Common Frog	*Rana temporaria*	LC	N/A	Annex V, WA 1976 (as amended)
Marsh Fritillary	*Eurodryas aurinia*	VU	N/A	Annex II, WA 1976 (as amended)
Irish Hare	*Lepus timidus hibernicus*	LC	N/A	Annex V, WA 1976 (as amended)
Pine Marten	*Martes martes*	LC	N/A	Annex V, WA 1976 (as amended)
Badger	*Meles meles*	LC	N/A	WA 1976 (as amended)
Red Deer	*Cervus elaphus*	LC	N/A	WA 1976 (as amended)
Hedgehog	*Erinaceus europaeus*	LC	N/A	WA 1976 (as amended)

5.5.1.6.1 Freshwater Pearl Mussel (Margaritifera margaritifera)

Deviation 1 (hairpin bend) located to the west of the Site along the entrance road off the N15, is located within the *Eske Margaritifera* Sensitive Area. The *Eske* is categorized as *catchments of SAC populations listed in S.I. 296 of 2009.* In terms of the Subject Development, only deviation 1 is situated in the Eske catchment with all other parts of the Subject Development located in the Foyle catchment. A population of freshwater pearl mussels is known to occur within the River Eske. This is more than 9 kilometers (approx 9.6km) downstream of Deviation 1. The River Eske flows out from Lough Eske to reach the sea at Donegal town. Lough Eske lies between the Subject Development and the SAC mussel population. An information request was sent to the NPWS regarding the current distribution of *Margaritifera* Species within this catchment. The information provided by NPWS from the *Margaritifera records dataset 2014_v11* indicated that the nearest record for Pearl Mussel is within Lough Eske, located approximately 9.6km (surface water distance) from the Site at its nearest point.

5.5.1.7 NBDC Aquatic Data

Three species of bony fish have been recorded in hectad H08 in which the Subject Development is situated, on the NBDC Lake Browser. These included the European Eel (*Anguilla Anguilla*), a species classified as 'critically endangered' in 'Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish' (King et al., 2011). These records were obtained in Lough Golagh, approximately 2.1 kilometres west of the Site in the Mourne (Mourne Beg/Derg) catchment. The Foyle River catchment (which includes the River Derg and the River Finn catchments in which the Site is located) is known to contain an internationally important population of spawning Atlantic Salmon (*Salmo salar*), a species classified as 'vulnerable' in 'Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish' (King et al., 2011) and listed in Annex II of the EU Habitats Directive. Research has indicated that sub-catchments within the River Foyle system can have genetically distinct salmon populations, and it is estimated that the annual number of salmon returning to the river was recently in excess of 40,000, making it one of the most important salmon rivers in the British Isles. The majority of salmon returning are Grilse (single wintering salmon), while a smaller but important number of spring salmon (multi-wintering) also return. In 2011, the River Derg and River Finn were known to have 269 and 107 salmon spawning redds respectively. Angling is permitted in the rivers only on a catch and release basis. The river system (including the River Derg and River Finn) is also known to contain the European Eel, Brook Lamprey (*Lampetra planeri*), and spawning River Lamprey (*Lampetra fluviatilis*), with the latter two being listed in Annex II of the EU Habitats Directive.

5.5.1.8 Local Hydrology and Hydrogeology

The majority of the Site is drained by tributaries (Shruhangarve [01S26], Bunadaowen [01B01]) of the Mourne Beg River which flow north-westerly through the Site. The southern portion of the Site is drained by tributaries of the tributaries/ headwaters of Glendergan River (Segment codes: 01_549, 01_599, and 01_GBNI0102037) which flow in a southerly direction into Northern Ireland. At the west of the Site, the Barrack Hill stream [37B16] flows culverted under the road (N15) by the entrance of the Site and flows southwards becoming a tributary to the Lowerymore River [37L01]. Two tributaries to the Mourne Beg River (Croaghonagh [01C31] and a tributary to this stream Segment code: 01_1835) flow in a northerly direction through the west of the Site by the entry route.

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

5.5.1.9 Water Quality

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 was consulted, most recently on the 15th of January 2024, regarding the water quality status of the rivers which run within and directly adjacent to the Site. The WFD 3rd cycle River Waterbody Status 2016 – 2021 for the watercourses which flow through the Site have been assessed in **Table 5-9.** Associated Q-Values for these watercourses are found below in **Table 5-10.** Hydrological features pertaining to the Site along with 2014 MKO conducted biological water quality assessment (Q-Value) locations are shown below in **Figure 5-5.**

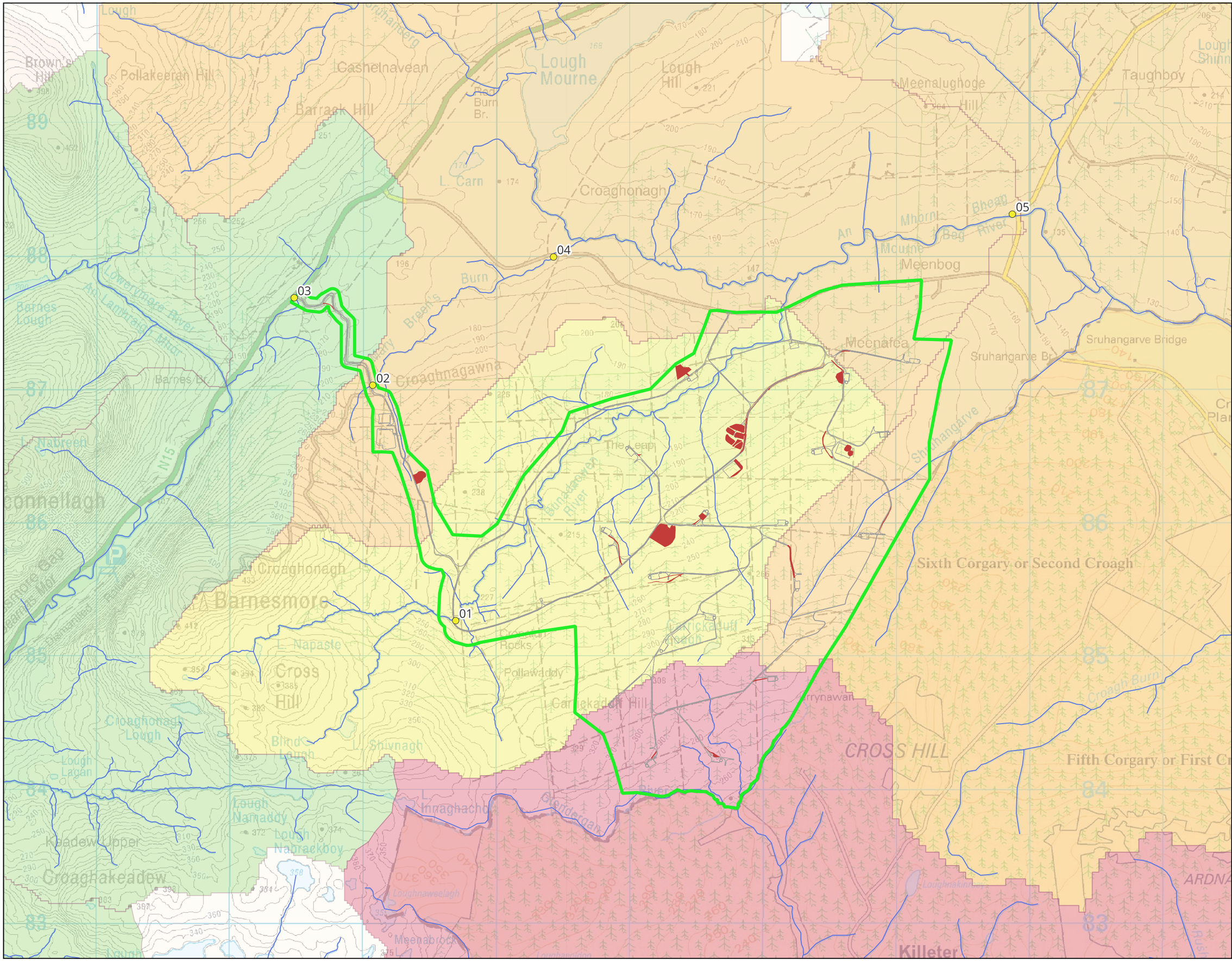
Table 5-9 Watercourses on Site with relevant water quality statuses

Name	Location	Status	Risk
Bunadaowen _010 system (tributary to the Mourne Beg)	Flows in a northeasterly direction through the western edge of the Site though the centre and out through the north of the Site. Drains into the Mourne Beg flows into the River Finn SAC.	Moderate	At risk
Mourne Beg_010 system	Flows in an easterly direction to the north of the Site. Two stream systems flow through/from within the Site into this watercourse. Two tributaries of the Mourne Beg flow through the western edge of the Site in a north easterly direction and enter the Croaghonagh Bog SAC and then east into the Mourne Beg River.	Poor	At risk
Mourne Beg River (Derrygoonan)	The headwaters are found within the Site in the eastern side of the Site and flows in a northeasterly direction through the Site and becomes a tributary to the Mourne Beg River.	Moderate	At risk
Glendergan River	The headwaters are found within the south of the Site and flows in a southerly direction through the Site and crosses the border into Northern Ireland.	Poor	In review
Lowerymore_020	Flows in a south westerly direction through the Site at the western edge of the Site by the N15. flows into the Lough Eske and Ardnamona Wood SAC.	High	Not at Risk

Table 5-10 Watercourses on Site with relevant Q-Values

Name	Location / Date	Q-Values Status
Bunadaowen _010 system (tributary to the Mourne Beg)	Br. u/s Mourne Beg Confluence– 2022 Station Code: RS01B010100 Easting: 208140.55 Northing: 387608.56	4 (Good Status)
Mourne Beg_010 system	Shruhangarve Bridge– 2022 Station Code: RS01S260830 Easting: 210229.29 Northing: 387230.11	3 (Poor Status)
Mourne Beg River (Derrygoonan)	Bridge S.W. of Tonreagh– 2022 Station Code: RS01M010200 Easting: 209903 Northing: 388300	4 (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)
Lowerymore_020	Barnes Bridge – 2021 Station Code: RS37L010100 Easting: 203974.22 Northing: 387034.09	3-4 (Moderate Status)

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



Map Legend

- Meenbog Windfarm Q-Value Baseline Monitoring Locations
- Meenbog Windfarm
- rEIAR Study Area
- Permitted Development Footprint
- Subject Development Footprint
- Rivers and Streams
- WFD River Sub Basins
- Bunadaowen
- Glendergan River
- Lowerymore
- Mourne Beg

Drawing Title
Local Hydrology and 2014 Q-Value Sample Locations

Project Title
Substitute Consent for Deviations at Meenbog Windfarm, Co. Donegal

Drawn By	Checked By
MT	TB
Project No.	Drawing No.
220623	Figure 5-5
Scale	Date
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5.5.2 Conclusions of the Desk Study

The desktop study has provided information about the existing environment in the hectad H08, within which the Subject Development is located. The mammal species recorded within the relevant hectad H08 have widespread range and distributions in Ireland and are likely to be recorded frequently throughout Ireland (Marnell et al, 20094). At least four of Ireland's nine resident bat species were recorded within 10 km of the Subject Development. Bat records within 10km of the Subject Development revealed that the wider area has been studied for bats. This suggests that the area offers potential for foraging and commuting bat species.

As part of the desk study, no Habitats Directive Annex I habitats were recorded at the footprints of the Subject Development. However [7130] Active Blanket bog was mapped adjacent to deviation 1 (but separated from it by the existing access road). Other Annex I habitats were recorded within the general vicinity of the Subject Development, but none within the Site or immediately adjacent. Whilst none of the components of the Subject Development involve works within any natural watercourse, there are potential connections via forestry drains and overland flow. Thus, there is the potential for pollution in various forms to enter the watercourses and flow downstream to the following downstream European Designated Sites, and are further considered in the rNIS prepared for the Subject Development:

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

Taking a precautionary approach, the following pNHA has been included within the Likely Zone of Influence for further assessment.

- Lough Eske and Ardnamona Wood pNHA (000163)

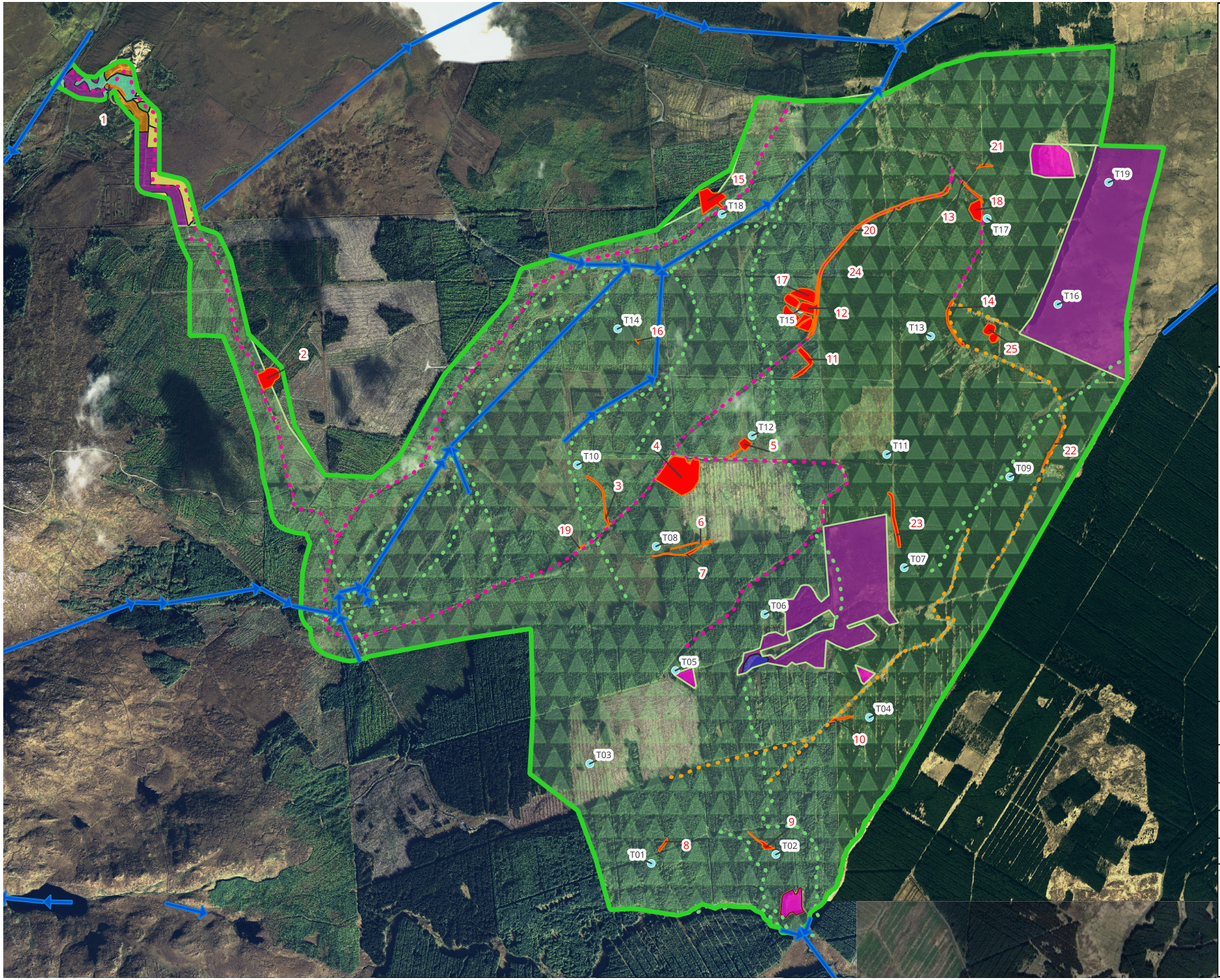
As the pNHA have also been designated as an SAC, impacts on this Site is fully considered under the European designation within the NIS, and fully assessed in **Section 5.7.2** in this rEIAR.

The desk study identified that a variety of protected floral and faunal species are known to occur within the Subject Development, including Bats, Otter, Badger, Pine marten, and Marsh Fritillary. The desk study informed the survey methodologies undertaken during the Site visits. The desk study also provided useful information to inform the ecological surveys undertaken on Site as well as the identification of pathways for potential impact on sensitive ecological receptors.

[4] *Marnell, F., Kingston, N. & Looney, D. (2009) Ireland Red List No. 3: Terrestrial Mammals, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.*

5.5.3 Results of the Baseline Ecological Surveys

The locations of all the components of the Subject Development are shown in relation to the habitats as identified in the EIAR for the Permitted Development in **Figure 5.6**. Each of the deviations are described below in terms of their current ecological conditions and pre-construction habitats/environment.



Drawing Title

Habitats Recorded Within the Site

Project Title

Substitute Consent for Deviations at Meenbog Wiindfarm

Drawn By	Checked By
OM	TB
Project No.	Drawing No.
220623	Figure 5-6
Scale	Date
1:22,000	28/03/2024

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5.5.3.1 Deviation 1 Entrance Road off N15 (the Hairpin Bend)

5.5.3.1.1 *Current Conditions*

The site of the deviation was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current habitats at the site of Deviation 1 include Spoil and Bare Ground (ED2), Recolonising Bare Ground (ED3) associated with the ongoing operation of the quarry and the new access road (Plate 5-1), willow (*Salix cinerea*) and bramble (*Rubus fruticosus*) Scrub (WS1) and Active Quarries and Mines (ED4) in the wider area. In addition, the relocated settlement pond was observed and classified as Artificial Lakes and Ponds (FL8), this was lined with plastic and was of low ecological value (Plate 5-2). The 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 the new road and an existing quarry road and into a drain that forms part of the original quarry drainage network. No significant habitat for any of the Key Ecological Receptors (KERs) or Key Ornithological Receptors (KORs) or KORs that were identified in the Submitted EIAR or the NIS which was lodged with the application for the Permitted Development ("the Submitted NIS") were recorded at the site of Deviations 1 and no additional significant faunal habitat was recorded. The site of Deviation 1 was assessed by AFRY Engineers (2023) as stable.

Plate 5-1: Deviated section of access road as viewed from the southeast – facing northwest towards the N15 (August 2023).

Plate 5-2: Relocated and plastic lined settlement pond showing overflow pipe (August 2023).

5.5.3.1.2 Pre-Construction Habitat/ Environment

The receiving environment at the site Deviation 1 prior to any works being undertaken included existing quarry infrastructure with scrub and bare ground, an artificial pond and an active quarry with associated access roads. The area is mapped as Artificial Lakes and Ponds (FL8), Scrub (WS1) and Active Quarries and Mines (ED4) on the habitat map that was provided in Figure 6.4 of the Submitted EIAR (See Figure 5-6). The area is described in relation to Active Quarries and Mines (ED4)/Spoil and Bare Ground (ED2) and Other Artificial Lakes and Ponds (FL8) on pages 6-29 and 6-30 respectively of the Submitted EIAR. No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken. Subsoils on the site of Deviation 1 were blanket peat with a peat depth of 0-1.5m (Ionic, 2021 Report).

An overflow system was in place in the form of one concrete pipe that redirected any water overtopping the pond into an existing quarry drainage network.

5.5.3.2 Deviation 2 Peat Cell southeast of Substation

5.5.3.2.1 *Current Conditions*

The site of the Deviation 2 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site are described below. Peat arisings were deposited in the peat cells up until July 2020. Since that time the surface of the deposited peat has revegetated with species including soft rush (*Juncus effusus*), ling (*Calluna vulgaris*), and tormentil (*Potentilla erecta*). Some grey willow (*Salix cinerea*) and Sphagnum species were starting to recolonise also. It was best classified as wet heath (HH3). A stone bank formed the western boundary of the peat cell. Plates 5-3 and 5-4 below show the progression of site revegetation from 2021 to present. Conifer plantation (WD4) surrounded the site to the north, east and south. No evidence of any overtopping or run off from the peat storage area was recorded during the site visit and the peat was firm underfoot with wet pools present throughout. No watercourses or running drains were recorded on the site of Deviation 2. There were dry drains associated with the road and a small watercourse located on the opposite side of the road from the deviation and removed from it by approximately 25metres. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR or the Submitted NIS were recorded at the site of Deviation 2 and no additional significant faunal habitat was recorded. A sitewide geotechnical stability assessment was carried out in October 2023 by AFRY. The assessment found that the peat cells are stable works are complete at this deviation.

Plate 5-3: Peat Surface after Peat Deposition (2021).

Plate 5-4:Revegetated Peat Surface (2023).

5.5.3.2.2 Pre-Construction Habitat/ Environment

The receiving environment at the site of Deviation 2 prior to any works being undertaken was located partially within the EIAR for the Permitted Development and the area was shown on the Habitat Map (EIAR for the Permitted Development- **See Figure 5-6**) as primarily Conifer Plantation (WD4). A review of aerial photography and an assessment of the surrounding area confirms that the area that was outside the Subject Development Site is likely to have been similar Conifer Plantation habitat with poorly performing Sitka spruce and heath type vegetation beneath. A Habitat map showing the pre-construction habitat types is provided in **Figure 5-6.**

5.5.3.3 Deviation 3 T10 access road

5.5.3.3.1 *Current Conditions*

The site of the Deviation 3 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions at the site of Deviation 3 are described below. The deviation involved a slight realignment of the access road to T10. This may have resulted in additional loss of trees. However the habitats at the site of the deviation include a new access road in a slightly altered position that is classified as Buildings and Artificial Surfaces (BL3) and an area that has been cleared of Conifer Forestry and is now recolonising with vegetation that is dominated by soft rush (Juncus effuses) and bulbous rush (*Juncus bulbosus*). There are also numerous grey willow (*Salix cinerea*) seedlings in this area and it is likely that it will ultimately succeed to willow scrub (WS1) and woodland habitat. The site of Deviation 3 is completely surrounded by Conifer Plantation (WD4). There is a tributary of the Bunadaowen located approximately 35m to the west of Deviation 3. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR or the Submitted NIS were recorded at this site and no additional significant faunal habitat was recorded. The recolonising habitats will likely provide good broadleaved woodland and scrub habitat. The existing site conditions are shown in Plate 5-5.

Plate 5-5: Rushy vegetation dominating the habitat at Deviation 4.

5.5.3.3.2 *Pre-Construction Habitat/ Environment*

The receiving environment on the site of Deviation 3 is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (See Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4). It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.4 Deviation 4 Borrow Pit southwest of T12

5.5.3.4.1 *Current conditions*

The site of Deviation 4 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 4 are described below. Since the cessation of peat deposition in the cell, the surface of the deposited peat has revegetated with species including soft rush (*Juncus effusus*), bulbous rush (*Juncus bulbosus*), Yorkshire fog (*Holcus lanatus*) and tormentil (*Potentilla erecta*). Some ling (*Calluna vulgaris*), Polytrichum and Sphagnum species were starting to recolonise also. It was best classified as wet heath (HH3) (Plates 5-6 and 5-7). A constructed stone bank formed the north western boundary of the peat cell and sections of the borrow pit that have not been fully reinstated with peat support bare rock habitat (ED4) (Plate 5-8). The surrounding areas include the main wind farm spine road to the north west, another wind farm/forestry road (BL3) to the north and young Conifer Plantation (WD4) on shallow peats to the south and east. Heath vegetation was evident beneath the conifer trees. No evidence of any overtopping or run off from the peat storage area was recorded during the site visit and the peat was firm underfoot with wet pools present throughout. No watercourses or running drains were recorded on the site of Deviation 4. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR or the Submitted NIS were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells provided good habitat for reptiles and amphibians. A sitewide geotechnical stability assessment was carried out in October 2023. The assessment found that the peat cells are stable (AFRY, 2023).

Plate 5-6: Revegetating surface of peat cell.

Plate 5-7: Close up of revegetating surface of peat cell.

Plate 5-8: Unfilled section of peat cell and conifer plantation on shallow peats in the surrounding area.

5.5.3.4.2 Pre-Construction Habitat/ Environment

The receiving environment on the site of Deviation 4 is located entirely within the Submitted EIAR study area and is fully described in the Submitted EIAR. There was an existing borrow pit surrounded by a conifer plantation with a small artificial pond within the pit as shown in Plate 5-9 and described in Section 6.3.2.1 of the Submitted EIAR. The artificial pond was artificially created and was part of forestry infrastructure. It was not assigned as a KER. The Habitat Map (See Figure 5-6) shows the area as conifer plantation (WD4). The existing borrow pit was considered to be insignificant in the context of the overall conifer plantation in the area and the use of this existing borrow pit was assessed and permitted. Thise deviation from the Permitted Development was within the forestry plantation that surrounded the existing forestry borrow pit. The subsoils in this area were made up of blanket peat at a depth of 0.1-1.5m (Ionic, 2021 Report).

Plate 5-9: Pre – existing borrow pit at the location of Deviation 5.

5.5.3.5 Deviation 7 T8 Access Road

5.5.3.5.1 *Current conditions*

The site of the Deviation 7 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 7 are described below. The deviation involved a slight realignment of the access road to T08 following the construction of a containment berm in the area. The road was constructed closer to the berm than originally proposed and avoided additional loss of trees. The habitats at the site of the deviation include a new access road in a slightly altered position that is classified as Buildings and Artificial Surfaces (BL3) and an area on both sides of the access road that has been cleared of Conifer Forestry and is now recolonising with vegetation that is dominated by bryophytes with soft rush (*Juncus effuses*) and bulbous rush (*Juncus bulbosus*). Ling (*Calluna vulgaris*) and foxglove (*Digitalis purpurea*) were among the species that were recolonising close to the retained forestry plantation. It is likely that it will ultimately succeed to willow scrub (WS1) and woodland habitat. The site of Deviation 7 is completely surrounded by Conifer Plantation (WD4) There is a tributary of the Bunadaowen located approximately 190m to the north west of the deviation. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR or the Submitted NIS were recorded at the site of Deviation 7 and no additional significant faunal habitat was recorded. The recolonising habitats will provide likely provide good broadleaved woodland and scrub habitat. The existing site conditions are shown in Plates 5-10. and 5-11.

Plate 5-10: Containment berm on left of plate, with amended road to the right. Recolonising habitats visible where conifer forestry has been felled.

Plate 5-11: Amended road. Recolonising habitats visible where conifer forestry has been felled.

5.5.3.5.2 Pre-Construction Habitat/ Environment

The receiving environment on the site of Deviation 7 is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR, It is shown on the Habitat Map (See Figure 5-6)) within the Submitted EIAR as comprising of Conifer Plantation (WD4). It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.6 Deviation 10 T4 Access Road

5.5.3.6.1 *Current Conditions*

The site of Deviation 10 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 10 are described below. The deviation involved a slight realignment of the access road to T04. This resulted in a minor additional loss of trees. However the habitats at the site of the deviation include a new access road in a slightly altered position that is classified as Buildings and Artificial Surfaces (BL3) and an area that has been cleared of Conifer Forestry and is now recolonising with vegetation that is dominated by soft rush (Juncus effuses) but also includes heath vegetation including Sphagnum mosses, and Ling (*Calluna vulgaris*). It is likely that heath vegetation will dominate in this area. The site of Deviation 10 is completely surrounded by Conifer Plantation (WD4) and clear felled forestry. There is a tributary of the Glendergan River located approximately 400m to the west of the deviation, though indirect connectivity to this may be provided through forestry drains in the area. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR or the Submitted NIS were recorded at the site of Deviation 10 and no additional significant faunal habitat was recorded. The recolonising habitats will provide likely provide wet heath habitat in the future. The existing site conditions are shown in Plate 5-12.

Plate 5-12: Slight amendment to location of access road, showing heath habitats recolonising where the conifer forestry has been felled.

5.5.3.6.2 *Pre-Construction Habitat/ Environment*

The receiving environment on the site of Deviation 10 is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4). It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is

consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.7 Deviation 11 Borrow Pit (BP2) south of T15

5.5.3.7.1 *Current Conditions*

The site of the Deviation 11 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 11 are described below. Since the cessation of peat deposition in the cell, the surface of the deposited peat has begun to revegetate with species including soft rush (*Juncus effusus*), Yorkshire fog (*Holcus lanatus*), creeping bent grass (*Agrostis stolonifera*) and tormentil (*Potentilla erecta*) It was best classified as recolonising bare ground but is likely to succeed to Wet Grassland (GS4) and wet heath (HH3). No sphagnum development was recorded on the site of Deviation 10. The bund walls consisted primarily of bare rock with some revegetation. They were best classified as Recolonising Bare Ground (ED3). Whilst there are forestry drains in the area, there were no obvious flowing drains recorded and no signs of overtopping or pollution. There is a tributary of the Bunadaowen located approximately 60m to the west of the deviation. An unfilled section of the pit exists in the north eastern section of the site. This supports bare rock and a pool that is classified as Artificial Lakes and Ponds (FL8). No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells will provide good habitat for reptiles and amphibians in the future. The existing site conditions are shown in Plates 5-13 and 5-14. A sitewide geotechnical stability assessment was carried out in October 2023 by AFRY. The assessment found that the peat cells are stable.

Plate 5-13: Recolonising Bare Ground inside peat cell.

Plate 5-14: Unfilled section of peat cell with artificial pond.

5.5.3.7.2 Pre-Construction Habitat/ Environment

The receiving environment on the site of this deviation is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4) with associated road and track infrastructure. It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.8 Deviation 15 Peat Cells NW of T18

5.5.3.8.1 *Current Conditions*

The site of the Deviation 15 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current habitats at the site of Deviation 15 include clear felled conifer plantation (WD4). It was felled as part of consent for bat mitigation around T18 and thus included in planning consent for the Permitted Development. The rock has been excavated from this peat cell, but the deposition of peat has not commenced. The resultant pit has filled with water with no sign of overtopping, and the adjacent turbine base is also flooded. The cell is classified as Spoil and Bare Ground (ED2) Artificial Pond (FL8). An existing forestry track is located to the south of the deviation and there are forestry drains associated with it. No signs of pollution or run-off into the drains were recorded during the site visit. The surrounding habitats include Conifer Plantation to the north, east and west, with the infrastructure associated with T18 located to the south. The Bunadaowen River is located, at closest, 80 meters from this deviation and there is an indirect link with it via forestry drains. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells provided good habitat for reptiles and amphibians. Plate 5-15 shows the nature of Deviation 15. A sitewide geotechnical stability assessment was carried out in October 2023 and found the site to be stable.

Plate 5-15: excavated peat cell at Deviation 15.

5.5.3.8.2 *Pre-Construction Habitat/ Environment*

The receiving environment at the site of Deviation 15 prior to any works being undertaken was located partially within the Submitted EIAR study area as set out in the EIAR and the area was shown on the Habitat Map (Reproduced in Figure 5-6) as primarily Conifer Plantation (WD4) with an existing borrow pit and trackway also present. A review of aerial photography and an assessment of the

surrounding area confirms that the area that was outside the study area is likely to have been similar Conifer Plantation habitat with dense Sitka spruce and heath type vegetation beneath.

5.5.3.9 Deviation 17 Peat Cells near T15

5.5.3.9.1 *Current Conditions*

The site of Deviation 17 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 17 are described below. Since the cessation of peat deposition in the cell, the surface of the deposited peat has revegetated with species including soft rush (*Juncus effusus*) and bulbous rush (*Juncus bulbosus*), which are dominant in the drier areas, particularly in the southern sections of the site of this deviation. In other areas, there is a wetter and more varied flora including Yorkshire fog (*Holcus lanatus*), tormentil (*Potentilla erecta*), ling (*Calluna vulgaris*), Polytrichum and Sphagnum species. There were pools developing on the surface with species such as bog pondweed (*Potamogeton polygonifolius*) It was best classified as Wet Grassland (GS4) in the drier areas and wet heath (HH3)/Blanket Bog(PB2) in the wetter areas. Three forestry drains were recorded flowing north west out of the site of Deviation 17 and ultimately into a tributary of the Bunadaowen River after a surface water distance of approximately 180m. Whilst no signs of significant pollution were recorded, there was some silt at the base of the cell bunds. The bund walls consisted of earth and rock and were best classified as Recolonising Bare Ground (ED3). No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells provided good habitat for reptiles and amphibians. The existing site conditions are shown in Plates 5-16, 5-17, and 5-18. There were some signs of cracking within the bund walls. However, a sitewide geotechnical stability assessment was carried out in October 2023. The assessment found that the peat cells are stable.

Plate 5-16: Drier, rush dominated sections of the site.

Plate 5-17: Wet pool developing on top of peat cell.

Plate 5-18: Forestry Drain running out of site. Small accumulation of silt at base of bund – no signs of any effects thereafter.

5.5.3.9.2 *Pre-Construction Habitat/ Environment*

The receiving environment on the site of Deviation 17 is located entirely within the Permitted Development Site and was assessed in the submitted EIAR for the Permitted Development. It is shown on the Habitat Map within the EIAR for the Permitted Development as comprising of Conifer Plantation (WD4) (**See Figure 5-6).** It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

5.5.3.10 Deviation 18 Peat Cells near T17

5.5.3.10.1 *Current Conditions*

The site of Deviation 18 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 18 are described below. Since the cessation of peat deposition in the cell, the surface of the deposited peat has revegetated with species including soft rush (*Juncus effusus*) and bulbous rush (*Juncus bulbosus*), which are dominant throughout. Other species including Yorkshire fog (*Holcus lanatus*), creeping bent grass (Agrostis stolonifera), tormentil (*Potentilla erecta*), ling (*Calluna vulgaris*), Polytrichum and Sphagnum species. It was best classified as Wet Grassland (GS4) and wet heath (HH3). There were pools developing on the surface of the cell, which supported abundant growth of Sphagnum species. The bund walls consisted primarily of bare rock with some revegetation. They were best classified as Recolonising Bare Ground (ED3). Whilst there are forestry drains in the area, there were no obvious flowing drains recorded and no signs of overtopping or pollution. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells provided good habitat for reptiles and amphibians. The existing site conditions are shown in Plates 5-19 and 5-20. There were some signs of cracking within the bund walls. However, a sitewide geotechnical stability assessment was carried out in October 2023. The assessment found that the peat cells are stable.

Plate 5-19: Rush dominated section of the revegetated peat cell.

Plate 5-20: Sphagnum dominated pool within the revegetated peat cell.

5.5.3.10.2 Pre-Construction Habitat/ Environment

The receiving environment on the site of this deviation is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4) with associated road and track infrastructure. It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.11 Deviation 19 Layby south of T10 with welfare facilities

5.5.3.11.1 *Current Conditions*

The site of Deviation 18 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 18 are described below. The deviation involved a slight enlargement of an existing layby on a forestry road. This may have resulted in additional loss of trees. However, the habitats at the site of this deviation include slightly enlarged layby that is classified as Buildings and Artificial Surfaces (BL3). The site of Deviation 18 is surrounded to the north by Conifer Plantation (WD4) and to the south, by the existing and permitted spine road. There is a forestry drain running north from the layby and a tributary of the Bunadaowen is located approximately 20m to the west of the deviation. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded.

5.5.3.11.2 *Pre-Construction Habitat/ Environment*

The receiving environment on the site of Deviation 18 is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4) with track and associated infrastructure. It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.12 Deviation 24 Roadside berms and settlement ponds

5.5.3.12.1 *Current Conditions*

The site of Deviation 24 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 24 are described below. Thise deviation involved the inclusion of water protection measures alongside the permitted infrastructure but outside the permitted footprint. This may have resulted in additional loss of coniferous trees. However the habitats at the site of this deviation include low roadside berms that are recolonising with that is dominated by soft rush (*Juncus effuses*) and bulbous rush (*Juncus bulbosus*). There are also numerous grey willow (*Salix cinerea*) seedlings on these berms and it is likely that it will ultimately succeed to willow scrub (WS1) and woodland habitat. The settlement ponds and aquatic features are best classified as drainage ditches a(FW4) and small Artificial Ponds (FL8). The elements of this deviation almost all surrounded by Conifer Plantation (WD4) but are strongly associated and contiguous with the permitted infrastructure. They are located in the Bunadaowen catchment. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The recolonising habitats will provide likely provide scrub and wetlands that will provide good habitat for amphibians and reptiles. Plate 5-22 below shows the roadside berms in December 2023.

Plate 5-21 Revegetated roadside berm, December 2023.

5.5.3.12.2 *Pre-Construction Habitat/ Environment*

The receiving environment on the site of Deviation 24 is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4) along with forestry roads and infrastructure. The area was not identified as a KER habitat or an area that provided

significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.3.13 Deviation 25 Additional excavated borrow pit and peat storage cell at T13

5.5.3.13.1 *Current Conditions*

The site of Deviation 25 was the subject of a comprehensive ecological walkover survey on the 23rd August 2023. The current conditions on the site of Deviation 25 are described below. Since the cessation of peat deposition in the cell, the surface of the deposited peat has revegetated with species including soft rush (*Juncus effusus*) and bulbous rush (*Juncus bulbosus*), which are dominant throughout. Other species including Yorkshire fog (*Holcus lanatus*), creeping bent grass (Agrostis stolonifera), tormentil (*Potentilla erecta*), ling (*Calluna vulgaris*), Polytrichum and Sphagnum species. It was best classified as Wet Grassland (GS4) and wet heath (HH3). There were pools developing on the surface of the cell, which supported abundant growth of Sphagnum species. The bund walls consisted primarily of bare rock with some revegetation. They were best classified as Recolonising Bare Ground (ED3). Whilst there are forestry drains in the area, there were no obvious flowing drains recorded and no signs of overtopping or pollution. No significant habitat for any of the KERs or KORs that were identified in the Submitted EIAR were recorded at this site and no additional significant faunal habitat was recorded. The revegetating cells provided good habitat for reptiles and amphibians. A sitewide geotechnical stability assessment was carried out in October 2023. The assessment found that the borrow pit and peat cells are stable.

5.5.3.13.2 *Existing Pre-Construction Habitat/ Environment*

The receiving environment on the site of this deviation is located entirely within the Submitted EIAR study area and was assessed in the Submitted EIAR. It is shown on the Habitat Map (Reproduced in Figure 5-6) within the Submitted EIAR as comprising of Conifer Plantation (WD4) with associated road and track infrastructure. It was not identified as a KER habitat or an area that provided significant habitat for KER or KOR species. This is consistent with the surrounding habitats in the area, which comprise Sitka spruce dominated conifer plantation.

No invasive alien species (IAS) listed on the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) were identified in this area during the baseline surveys undertaken.

5.5.4 Results of Faunal Surveys

The results of the faunal surveys carried out as part of the Permitted Development have been fully described in Section 6.3.2 in Chapter 6 of the EIAR for the Permitted Development submitted in December 2017 (Planning Reference-ABP-300460-17) and summarised below in relation to the Subject Development. This summary also includes results of the walkover surveys undertaken between 2021 and 2023.

5.5.4.1 Badger

No Badger (*Meles meles)* setts or evidence of the species was recorded within the Site, either during the surveys undertaken for the Permitted Development or during the multi-disciplinary surveys undertaken at the Subject Development between 2021 and 2023. Given that the Subject Development Site provides good quality habitat for the species and that it is known from the wider area, it is highly likely that it occurs within the Site, at least on occasion, though no signs were recorded, and it is unlikely that any of the Sites of the subject development are of significance to the species.

5.5.4.2 Otter

An otter spraint was recorded at the Bunadaowen Bridge, located within the Permitted Development boundary on the 19/12/2023 by MKO ecologists. This is not in close proximity to any of deviations components of the Subject Development, with the closest being deviation 2, located approx. 1km north of the recorded otter spraint. No signs of the species were recorded within the Subject Development Site, either during the surveys undertaken for the Permitted Development or during the multi-disciplinary surveys undertaken at the Subject Development between 2021 and 2023. However, it is likely that the species uses the watercourses that are in the vicinity of the Subject Development Site, and the lakes in the wider area. In addition, the species is known from the downstream catchments where it is among the Qualifying Interests of the River Finn SAC and the Qualifying features (non-primary) of the River Foyle & Tributaries SAC.

5.5.4.3 Other Species

During the ecological walkover surveys that were carried out of the deviations between 2021 and 2023 and most recently on the 23rd/24th August 2023 and the 18th/19th of December 2023, the Site was searched for signs of other protected species such as red squirrel *(Scuirus vulgaris*), marsh fritillary *(Euphydryas aurinia*) and bird species. The habitats recorded within the Site consists primarily of Conifer plantation (WD4), Buildings and Artificial Surfaces (BL3), Spoil and Bare Ground (ED2), and Recolonising Bare Ground (ED3). No significant supporting habitat for any other protected faunal species was recorded at any the locations of components of the Subject Development. The presence of potential habitat for breeding hen harrier was noted in the wider area in the form of open canopy young forestry. However, the sites of the deviations were all contiguous with the submitted development and no suitable habitat was recorded at the deviation sites due to the high level of disturbance associated with the existing tracks, wind farm infrastructure and ongoing forestry activities.

5.5.4.4 Aquatic Surveys

5.5.4.4.1 *Biological Water Quality Assessment (Q-value) Results*

Biological water quality assessment (Q-value) was undertaken in in 2020, 2021 and 2023. Full Biological water quality assessment (Q-value) reports for 2020, 2021, and 2023 are provided in Appendices 5-2, 5-3, and 5-4 of this rEIAR and summarised in **Table 5-11 below.**

Table 5-11 Biological Water Quality Assessment (Q-value) conducted in 2020, 2021, and 2023.

Name	Location / Date	Q-Values Status
Bunadaowen River	Baseline Status (2014)	3-4 (Moderate Status)
	2020	Q4 (Good status)
	2021	Q4 (Good status)
	2023	Q4 (Good status)
Mourne Beg River (M1)	Baseline Status (2014)	3-4 (Moderate Status)
	2020	N/A*
	2021	3-4 (Moderate Status)
	2023	Q4 (Good status)
Mourne Beg River (M2)	Baseline Status (2014)	3-4 (Moderate Status)
	2020	Q4 (Good status)
	2021	Q4 (Good status)
	2023	N/A*
Mourne Beg River (M3)	Baseline Status (2014)	3-4 (Moderate Status)
	2020	Q4 (Good status)
	2021	Q4 (Good status)
	2023	Q4-5 (High Status)
Mourne Beg River (M4)	Baseline Status (2014)	3-4 (Moderate Status)
	2020	Q4 (Good status)
	2021	Q4-5 (High Status)
	2023	N/A*
Mourne Beg River (M5)	Baseline Status (2014)	3-4 (Moderate Status)
	2020	3-4 (Moderate Status)
	2021	Q4-5 (High Status)
	2023	Q4-5 (High Status)
Mourne Beg River (overall average of sites)	2020	Q4 (Good status)
	2021	Q4 (Good status)
	2023	Q4 (Good status)

Shruhangarve stream	Baseline Status (2014)	3-4 (Moderate Status)
	2020	N/A*
	2021	3-4 (Moderate Status)
	2023	Q4 (Good status)

* Not recorded due to high water levels.

5.5.5 Importance of Ecological Receptors

Table 5.12 lists all identified receptors and assigns them an ecological importance in accordance with the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009). This table also provides the rationale for this determination and identifies the habitats that are **KERs**. These ecological receptors are considered in **Section 5.6** of this report and mitigation/ measures have been incorporated into the Subject Development where required, to avoid potential significant impacts on the features, that are located partially within, adjacent to or ecologically connected to the Subject Development.

Table 5-12 Key Ecological Receptors identified during the assessment.

Ecological feature or species	Reason for inclusion as a KER	KER
Designated Sites	**Nationally Designated Sites** The following nationally designated sites has been identified as being within the likely Zone of Impact: • Lough Eske and Ardnamona Wood pNHA (000163) This site is assigned **National Importance** and included as a KER as there is potential for indirect effects on them via habitat degradation and water pollution.	Yes
	European Designated Sites The following Special Areas of Conservation are identified in the AA Screening as being within the Likely Zone of Impact and are assessed fully in the NIS that accompanies this application: › River Finn SAC [002301] › River Foyle and Tributaries SAC [UK0030320] › Lough Eske and Ardnamona Wood SAC [000163] These sites are assigned **International Importance** and included as a KER as the potential for indirect effects on them via water pollution resulting from the proposed deviations has been considered.	Yes
Aquatic Habitats and related species	**Eroding/upland rivers (FW1)** A number of natural watercourses and large rivers were located within the Subject Development Site. These watercourses include: • Mourne Beg River and its tributaries. • Bunadaowen River • Shruhangarve Stream • Glendergan River • These Rivers and Streams have been assigned **Local Importance (Higher Value)** as they are of high biodiversity value and connect to downstream waterbodies in the local area.	Yes

Ecological feature or species	Reason for inclusion as a KER	KER
	Aquatic and Fisheries Species The aquatic species that are associated with the rivers that are located within and surrounding the Site are assigned **Local Importance (Higher Value)** in that they have a high biodiversity value in the local context. The downstream watercourses and fauna within them have been assigned as of **Local Importance (Higher Value)** due to the known populations of salmon, trout, and lamprey species along with otter. Some of the downstream watercourses, including the Lowerymore, Mourne Beg River, Glendergan River, and the Bunadaowen and the associated fauna has also been assigned **International Importance** due to them being located within SACs. The potential for the proposed works to result in indirect effects on aquatic habitats (and associated species) as a result of water pollution was assessed. Following the precautionary principle, there is potential for the works, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. As such, aquatic habitats and associated species have been identified as a KER.	Yes
Conifer plantation (WD4)	Conifer Plantation (WD4) is the most abundant habitat type in the Subject Development Site. This habitat is heavy modified, and common and widespread in the wider landscape, with no potential for the loss associated with the Subject Development to result or have resulted in significant effects on biodiversity. This is classified as **Local Importance (Lower Value)**. For these reasons, this habitat has not been identified as a KER.	No
Peatlands and associated habitats	**Upland Blanket Bog (PB2) / Wet Heath (HH3)** A mosaic of Blanket Bog/Wet Heath habitat occurs within the wider Site, previously assessed as part of the Permitted Development. This habitat has been identified to conform to Annex I habitats Active Blanket Bog [7130* priority) and Atlantic Wet Heaths with *Erica tetralix (*4010). None of the works associated with the Subject Development have the potential to have resulted or to result in the loss or deterioration of Blanket Bog/Wet Heath. As such, this habitat has not been included as a KER.	No
Scrub, Other Artificial Lakes and Ponds and Active Quarries and Mines.	The habitats recorded in the Site included Scrub, Other Artificial Lakes and Ponds and Active Quarries and Mines. None of the above habitats were identified as KERs. The loss of small areas of these habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale.	No
Birds	Conifer Plantation (WD4) is the most abundant habitat type in the Site. This habitat is heavy modified, and common and widespread in the wider landscape. However, whilst the construction of the permitted development was underway, a nesting pair of hen harrier were present in the worksarea in the vicinity of a number of the deviations, requiring that mitigation was put in place to protect them. This was undertaken in accordance with the provisions	Yes

Ecological feature or species	Reason for inclusion as a KER	KER
	of the permitted development Further, all deviation works were subject to mitigation measures as set out in **Appendix 5.1** of this report. Whilst all the deviations are contiguous with the permitted development, and no additional mitigation was necessary over and above that which is set out in the EIAR for the permitted development, the impact on birds was considered in this EIAR and hen harrier are included as a KER	
Other fauna	Conifer Plantation (WD4) is the most abundant habitat type in the Site. This habitat is heavy modified, and common and widespread in the wider landscape, and does not provide significant supporting habitat for bird species with no potential for the loss associated with the components of the Subject Development to result or have resulted in significant effects to other faunal species. Further, all Subject Development works were subject to mitigation measures as set out in **Appendix 5.1** of this report. As such, none of the works associated with the Subject Development have the potential to have resulted or to result in the significant effects to local faunal species. As such, other fauna has not been included as a KER.	No

5.6 Ecological Impact Assessment

5.6.1 Site Roads and Hardstand Areas

The components of the Subject Development assessed below in **Table 5.13,** including 5, 8, 9, 12, 13, 14, 16, 20, 21, 22, and 23, are all similar in nature and scale, and are concerned with either slightly relocated/realigned access roads or deviations that were built using the same methodology such as laybys (Deviation 20) or turning heads (Deviation 16). All of these were visited, surveyed and assessed but are all very similar in nature and located in close alignment with the permitted infrastructure. They are not individually described in this section but are grouped together and represent slight deviations from the permitted infrastructure with little potential for resultant ecological effects. All other Deviations are assessed individually below, in the **Tables 5.14 to 5.27.**

Table 5-13 Biodiversity Impact Matrix for Deviations (5, 8, 9, 12, 13, 14, 16, 20, 21, 22, 23)

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The sites of the deviations were surveyed in the EIAR for the Permitted Development that was submitted and are within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the Sites included Conifer Plantation (WD4), Buildings and Artificial Surfaces (BL3) (which has been largely retained). The loss of the Conifer Plantation habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale.	The methodology for the construction of the deviations that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the Site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (as set out in Chapters 6 and 9 of the EIAR for the Permitted Development and in the submitted CEMP), there is no potential for significant residual effects to have occurred.	The Subject Development has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The Subject Development has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
The potential for the Subject Development to result, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the Subject Development, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the Subject Development, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	during the post construction surveys that were undertaken.		
Fauna:			
The Sites of the Subject Development was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviations have been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, nesting hen harrier were located within 500m of deviations 5 and 12. However, potential for the Subject Development to result or have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the Subject Development as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. Mitigation was employed in respect on nesting hen harrier by avoiding all works within 500m of the identified nest for the duration of the breeding season. The methodology for the work that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection Appendix 5-1), there is no potential for significant residual effects to have occurred.	The Subject Development has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The Subject Development has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
species and European eel. However, Given the nature, scale and location of the Subject Development, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the Subject Development. Whilst the Site of the Subject Development was not identified in the EIAR for the Permitted Development as being of significance for target bird species, some components of the Subject Development involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	to avoid significant effects on any of the species on the Site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

5.6.2 Individual Deviations Considered

5.6.3 Deviation 1

Deviation No.1 concerns the entrance road off N15 (the hairpin bend). Works were required to construct a bypass access link here in lieu of upgrading the existing hairpin bend access road. This provides a safer and more sensible approach to the Site by eliminating a sharp, blind bend in the main entrance road to the Site. The deviation added approximately 60m of new access road built to solid formation, instead of upgrading and significantly widening an existing road with a length of 190m on a more difficult alignment. In order to construct the new access road, it was necessary to excavate, pump dry and relocate the old quarry water retention pond, since the new access road was covering ground previously occupied by a small area of the pond. The concrete pipes under the quarry entrance were extended up through the original pond (now road) to the new pond.

Table 5-14: Deviation No.1 Biodiversity Impact Matrix

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The Site was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the footprint of same. The habitats recorded in the Site included Scrub, Other Artificial Lakes and Ponds and Active Quarries and Mines. None of the above habitats were identified as KERs The loss of small areas of these habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to have or have had a negative effect on Annex I Blanket Bog Habitat that is	The methodology for the construction of the road, including ancillary works is set out in the CEMP in Appendix 3-2, which was in place during the construction of the Meenbog Windfarm demonstrates how best practice was used to avoid significant effects on any of the habitats on the Site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.**	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of the construction of roads and ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred. Similarly, the method used to relocate the pond included mitigation to avoid the potential for significant effects on biodiversity and as such there is no potential for	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. Similarly, the settlement pond has been constructed specifically to prevent run off or pollutants/silt from quarrying operations. The deviation has been designed specifically to

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
located approximately 10m from the deviation and within the Croaghonagh Bog SAC was considered. However, it was determined that the deviation was undertaken at a lower elevation than the SAC, further away from the SAC than the Permitted Development and buffered from it by the existing road. There was no potential for significant effects as a result of dust deposition to have occurred. In addition, they followed the same methodology with associated mitigation as set out in the EIAR for the Permitted Development and associated CEMP and therefore would not result or have not resulted in any adverse effects on this habitat. The potential for the deviation to result in indirect effects on aquatic habitats (and associated species) as a result of water pollution was assessed. Following the precautionary principle, there was potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	No evidence of any significant ecological effects having occurred as a result of the deviation was identified during the post construction surveys that were undertaken.	significant residual effects to have occurred.	avoid any significant effects on any ecological receptors during their ongoing operation.
Fauna:			
The Site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the footprint of same and no significant habitat for any protected faunal species was recorded in the area where the i deviation has been undertaken during any of the surveys	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the works as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of the construction of roads and ecological protection (Appendix 5-1), there is	The deviation road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, the potential for the deviation to result or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, and freshwater pearl mussel. However, given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. Whilst the Site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of scrub. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	The scrub and vegetation clearance were undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. The methodology for the construction of the road along with excavation and relocation of the pond that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the Site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.	no potential for significant residual effects to have occurred. Similarly, the method used to relocate the pond included mitigation to avoid the potential for significant effects on biodiversity and as such there is no potential for significant residual effects to have occurred.	Development. Similarly, the settlement pond has been constructed specifically to prevent run off or pollutants/silt from quarrying operations. The works have been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

5.6.4 Deviation 2

Deviation No.2 concerns the peat cell southeast of the substation. The peat cells were created as part of the evolving plans for peat deposition for the Meenbog Windfarm.

Table 5-15: Deviation 2 Biodiversity Impact Matrix

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within and immediately adjacent to the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the area included Conifer Plantation with associated tracks etc. The loss of small areas of these habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result, or to have resulted, in indirect effects on aquatic habitats (and associated species) as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in Appendix 5.1. There was a small natural watercourse located within 25m of the deviation however this was separated from the deviation by an existing road and associated windfarm/forestry drainage and no evidence of any impact on this watercourse was recorded during the Site surveys. No evidence of any significant ecological effects having occurred as a result of the deviation were	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
scenario, in the absence of any mitigation, they could have resulted in anything more a short term, moderate, negative effect on aquatic receptors during either construction or operation.	identified during the post construction surveys that were undertaken.		
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within and immediately adjacent to the study area of the Permitted Development and adjacent to the footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The scrub and vegetation clearance were undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. The methodology for the construction of the peat cell that is set out in Chapter 3 of this rEIAR demonstrate how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has proven to be stable and not at risk of failure. (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
significance for target bird species, the deviation involved the removal of scrub. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	identified during the post construction surveys that were undertaken.		

5.6.5 Deviation 3

Deviation No.3 concerns the T10 access road. The realigned road relates to a minor modification that was constructed to follow more favourable ground and natural topography. The deviation reduced the development footprint by not constructing a consented turning head. This deviation was a consented element, constructed partially outside the consented footprint. The deviation involved the road being moved to the east a maximum of 10-15m and for a maximum length of 200m. The habitat that would have been affected along the approved alignment and the as built alignment was the same.

Table 5-16: Deviation 3 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The Site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted	The methodology for the construction of the road and the felling of the trees that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation was undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. The methodology for the construction road that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the species on the Site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.**	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section 6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

5.6.6 Deviation 4

Deviation No. 4 concerns the borrow pit southwest of T12. The ITM An existing forestry borrow pit was expanded to win stone on-site ahead of gaining access to the wind farm borrow pits. Excavation of the existing forestry borrow pit continued in lieu of excavation at the permitted BP1 borrow pit which was not used due to peat stability concerns.

Following the completion of rock extraction, the borrow pit was subsequently partially restored by backfilling with peat from elsewhere on the Site. This was consistent with the consented construction methodology for borrow pits. Restoration was accomplished by creating a cell to store excavated peat with a berm constructed along the downslope (north-west) edge of the borrow pit. The borrow pit is bounded to the west and north by internal access roads which are constructed to solid formation. Detailed planning drawings of this borrow pit are provided in Appendix 3-1 to this rEIAR.

Table 5-17: Deviation 4 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the area included Conifer Plantation with associated borrow pit and an artificial pond etc. The pond was an artificial pooling of water associated with forestry infrastructure. The loss of small areas of these habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale.	The methodology for the construction of the borrow pit is set out in Chapter 3 of this rEIAR and in the CEMP demonstrates how best practice was used to avoid significant effects on any of the habitats on the Site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The borrow pit has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023) The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter,	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the works as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The scrub and vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. The methodology for the construction of the borrow pit that is set out in Chapter 3 of this EIAR demonstrate how best practice was used to avoid significant effects on any of the species on the Site or downstream in the wider area.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The borrow pit has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has proven to be stable and not at risk of failure. (AFRY, 2023). The works have been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Atlantic salmon, lamprey species and European eel. However, Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section 6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the small artificial pond assessed as part of the permitted application and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of scrub. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on	The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
nesting birds that could have been significant at the local scale.			

5.6.7 Deviation 6

Deviation No. 6 concerns a berm which was constructed to the south of T8 as a peat containment safety measure prior to constructing T8. The berm was extended from stable ground on the east side and continued to just beyond the turbine foundation at the west side. This berm is located on the uphill side of T8 spur road, hardstand and foundation. The containment berm was constructed in July 2020 in response to a peat movement that occurred upslope from T8, preventing further movement. The ITM coordinates of this deviation are 6072522E, 885562N Detailed planning drawings of Deviation 6 are provided in Appendix 3-1 to this rEIAR.

Table 5-18: Deviation 6 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale	The methodology for berm construction and the felling of the trees that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The berm has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. The methodology for the construction road that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The berm has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
With respect to reptiles and amphibians, the impacts on these taxa were considered in Section 6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.			

5.6.8 Deviation 7

Deviation No.7 concerns the T8 access road. The access road to T8 was amended to align with the Containment Berm (Deviation 6). The deviation involved that the access road to T8 was moved to the south of the T8 hardstand rather than joining with the north side. Around 250m of access road have been constructed outside the consented footprint about 25m south of the permitted alignment at its furthest point. A turning head (smaller than consented) has also been constructed c.90m east of the consented location. The access road deviation did not increase the Permitted Development footprint. This deviation was a consented element, constructed partially outside the consented footprint and about the same extent. The receiving environment along the approved alignment and the as built alignment is the same.

Table 5-19: Deviation 7 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result, or have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats.	The methodology for the construction of the road and the felling of the trees that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result or have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. The methodology for the construction road that is set out in chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.**	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

5.6.9 Deviation 10

Deviation No.10 concerns the T4 access road. The approach to T4 was slightly amended to provide a more effective alignment for delivery vehicles. As built road is adjacent to permitted access road, alignment moved south by c.10m for c.100m. This deviation was a consented element, constructed partially outside the consented footprint and the access road deviation reduced the development footprint slightly. The receiving environment along the approved alignment was equivalent to the built alignment.

Table 5-20: Deviation 10 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the Site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale	The methodology for the construction of the road and the felling of the trees that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the Site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1**. No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. The methodology for the construction road that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.			

5.6.10 Deviation 11

Deviation No. 11 concerns the consented borrow pit 2 south of T15. Borrow pit 2 (also referred to Borrow Pit A in the planning documents) is located south of T15 and adjacent to an internal wind farm access road. The borrow pit was excavated into existing ground, commencing at the southern end of the borrow pit. This borrow pit was indicated on the planning drawings for the Permitted Development but has been expanded slightly beyond the originally illustrated footprint. Detailed planning drawings of this borrow pit are provided in Appendix 3-1 to this rEIAR.

Table 5-21: Deviation 11 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1**. No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The borrow pithas been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development It has been demonstrated that the borrow pit is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more thana short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, nesting hen harrier were located within 500m of this deviation. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The scrub and vegetation clearance were undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. Mitigation was employed in respect on nesting hen harrier by avoiding all works within 500m of the identified nest for the duration of the breeding season.The methodology for the construction of the peat cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.**	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The borrow pit has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has proven to be stable and not at risk of failure. (AFRY, 2023) The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section 6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

5.6.11 Deviation 15

Deviation No.15 concerns the unfinished peat cell Northwest of T18. A peat storage cell is currently under construction north of T18. It was offset from the site road to allow space for wind turbine blade deliveries. The cell was formed by constructing a berm to contain an area of sloping ground to the north of the road. The cell was bounded to the east, west and south by the berm. The berm and road were constructed to solid formation. The peat cell has not yet been backfilled with peat. Upon recommencement of works, the prepared peat cell will be completed, backfilled with peat and allowed to revegetate. Peat storage cells were excavated to a competent stratum and retaining berms constructed prior to being filled with peat. Detailed planning drawings of the peat cell is provided in Appendix 3-1 to this rEIAR.

Table 5-22: Deviation 15 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within and immediately adjacent to the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the area included Conifer Plantation with associated tracks etc. The loss of small areas of these habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) as a result of water pollution was assessed. Following the precautionary principle, there is potential for the	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1**. No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY,2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within and immediately adjacent to the study area of the Permitted Development and adjacent to the footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, nesting hen harrier were located within 500m of this deviation. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The scrub and vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. Mitigation was employed in respect on nesting hen harrier by avoiding all works within 500m of the identified nest for the duration of the breeding season. The methodology for the construction of the peat cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has proven to be stable and not at risk of failure. (AFRY,2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, Given the nature, scale, and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of scrub. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant	EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
individual effects on nesting birds that could have been significant at the local scale.			

5.6.12 Deviation 17

Deviation No.17 concerns the Peat cells North, West and South of T15.These peat storage cells are located to the north and south of turbine T15. The cells are approximately 2 ha in size and are within an 84m radius of the turbine. Peat storage cells were formed by constructing berms to contain areas of sloping ground to the west of an internal access road road. Note that Cell B has not been constructed to date as a peat cell but remains a potential peat storage area if required. Cell A is bounded on all sides by a berm and the site road to the east. Cell C is bounded on the north, east and west sides by berms. The berms, road and hardstand are constructed to solid formation.

Table 5-23: Deviation 17 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, nesting hen harrier were located within 500m of this deviation.However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR and no protected species such as badger were present in the area. The scrub and vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR. Mitigation was employed in respect on nesting hen harrier by avoiding all works within 500m of the identified nest for the duration of the breeding season. The methodology for the construction of the peat cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.**	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has proven to be stable and not at risk of failure. (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the loss of the conifer plantation and the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of scrub. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale.	No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

5.6.13 Deviation 18

Deviation No.18 concerns the Peat cell West of T17. This peat storage cell has an approximate area of 0.32ha and is located to the west of T17 and adjacent to the site road. The cell was formed by constructing a berm to contain an area of sloping ground to the west of the road. The cell is bounded to the north, west and south by the berm and the site road to the east. The berm and road are constructed to solid formation. This is a peat cell of c.0.32ha, constructed with a rock/fine retaining wall within an area of forestry cleared of trees for bat mitigation around the turbine base, as per Deviation 17.

Table 5-24: Deviation 18 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted, in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1**. No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			

5.6.14 Deviation 19

Deviation 19 concerns a layby with containers stored and welfare services southwest of T10. This was an existing forestry access for harvesting, which was repurposed for locating site office and welfare facilities, which will be removed upon completion of construction.

Table 5-25: Deviation 19 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Buildings and Artificial Surfaces (BL3) (which has been retained) and a negligible amount of Conifer Plantation (WD4) The loss of the Conifer Plantation habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any	The methodology for the extension of the layby and its use as a compound that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that:	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the deviation as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. The methodology for the construction road that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area. The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The layby has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'. This conclusion is equally valid in relation to the deviation. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant individual effects on nesting birds that could have been significant at the local scale (with the exception of a short term, negative effect on water quality in the Mourne Beg River downstream of the Shruhangarve as a result of the peat slide in 2020, results since then have shown a recovering trend in water quality such that the Mourne Beg River now exceeds pre-construction baseline water quality).	identified during the post construction surveys that were undertaken.		

5.6.15 Deviation 24

Deviation No.24 concerns additional surface water hydrology mitigation measures. The deviation relates to hydrology mitigation measures as outlined in the EIAR for the Permitted Development submitted with the original planning application such as settlement ponds Additional low level roadside berms, both side of the access road northeast of T15, settlement ponds/silt fencing along roadsides and within roadside drains/river courses northeast of T15 and silt trap per drainage plan in water course west of T16. Small, low-level roadside berms were used to contain mud within the road corridor surface and prevent run-off into the wind farm drainage system or settlement ponds, check dams and silt fences. Settlement ponds are entirely consistent with the permitted wind farm's drainage design but were not shown on planning drawings and therefore may appear to have been outside the permitted footprint. The deviations are located directly adjacent to permitted structures or in drains that are part of the Permitted Development.

Table 5-26: Deviation 24 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in, or to have resulted in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle,	The methodology for the construction of the site drainage that is set out in Chapter 3 of this EIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The deviation has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more thana short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. No significant habitat for any protected faunal species was recorded in the area where the deviation has been undertaken during any of the surveys that were undertaken to inform the EIAR for the Permitted Development. It does not provide significant habitat for any of the identified KERs or KORs. However, nesting hen harrier were located within 500m of this deviation. However, potential for the deviation to result in or to have resulted in indirect effects on aquatic species that are located downstream in the catchment as a result of water pollution was	Pre-construction mammal surveys were carried out throughout the entire construction area in advance of the works as per Section 6.5.3.3 of the EIAR for the Permitted Development and no protected species such as badger were present in the area. The vegetation clearance was undertaken outside the bird nesting season (1st March to 31st August) as per Section 6.5.3.1 of the EIAR for the Permitted Development. Mitigation was employed in respect on nesting hen harrier by avoiding all works within 500m of the identified nest for the duration of the breeding season. The methodology for the drainage works that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the species on the site or downstream in the wider area.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The road has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. The works have been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
assessed. These include otter, Atlantic salmon, lamprey species and European eel. However, Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation. With respect to reptiles and amphibians, the impacts on these taxa were considered in Section6.3.2.2.3 of the submitted EIAR for the Permitted Development and it is concluded that: *'The Proposed Development will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary'.* This conclusion is equally valid in relation to the deviation – with the creation of vegetated berms and drainage features, the completed works providing suitable habitats for these taxa. Whilst the site of the deviation was not identified in the EIAR for the Permitted Development as being of significance for target bird species, the deviation involved the removal of vegetation. If this was undertaken during the bird nesting season, it has the potential to have resulted in significant	The Subject Development was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviations were identified during the post construction surveys that were undertaken.		

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
individual effects on nesting birds that could have been significant at the local scale.			

5.6.16 Deviation 25

Deviation No.25 concerns the consented borrow pit 3 and peat storage cells/ borrow pit backfilling. The consented borrow pit was slightly repositioned to suit local topography. Borrow pit 3 is located between T13 and T16. Two pits were excavated on the eastern side of the borrow pit area and these were subsequently used to store excavated peat in accordance with the approved construction methodology for borrow pits. The remainder of the consented borrow pit has not been completed to date, however will be completed in accordance with the plans for the Permitted Development.

Table 5-27: Deviation 25 Biodiversity Impact Matrix.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
Habitats:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in or to have resulted in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the	The methodology for the construction of the peat storage cell that is set out in Chapter 3 of this rEIAR demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

Potential Impacts Pre-Mitigation	Mitigation Measures Employed	Impact Assessment and Residual Effects (Construction Phase)	Residual Effects (Operational Phase)
absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.			
Fauna:			
The site of the deviation was surveyed in the EIAR for the Permitted Development that was submitted and is within the study area of the Permitted Development and adjacent to the permitted footprint of same. The habitats recorded in the site included Conifer Plantation (WD4) The loss of this habitats is a permanent, direct, negligible, negative effect on habitats of low ecological importance. These direct effects are not significant at any geographic scale. The potential for the deviation to result in or to have resulted in indirect effects on aquatic habitats (and associated species) in downstream watercourses as a result of water pollution was assessed. Following the precautionary principle, there is potential for the deviation, if undertaken without mitigation, to have resulted in a negative effect on aquatic habitats. Given the nature, scale and location of the deviation, it is unlikely that even in a worst-case scenario, in the absence of any mitigation, they could have resulted in anything more than a short term, moderate, negative effect on aquatic receptors during either construction or operation.	The methodology for the construction of the peat storage cell that is set out above demonstrates how best practice was used to avoid significant effects on any of the habitats on the site or downstream in the wider area. The deviation was undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1.** No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.	Following the implementation of the mitigation that was set out in the submitted EIAR for the Permitted Development in respect of ecological protection (Appendix 5-1), there is no potential for significant residual effects to have occurred.	The peat cell has been designed in accordance with the design and drainage principles as set out in the submitted EIAR for the Permitted Development. It has been demonstrated that the peat cell is stable and is unlikely to fail (AFRY, 2023). The deviation has been designed specifically to avoid any significant effects on any ecological receptors during their ongoing operation.

5.7 Impacts on Designated Sites

The EPA Guidance 2022 states:

> *"A biodiversity section of an EIAR, should not repeat the detailed assessment of potential effects on European Sites contained in a Natura Impact Statement"* but should *"incorporate their key findings as available and appropriate"*.

This section provides a summary of the key assessment findings with regard to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

5.7.1 Impacts on European Designated Sites

Potential indirect impacts on European Designated Sites (SACs and SPAs) are assessed within a separate remedial Natura Impact Statement accompanying this application.

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 rNIS:

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

The rNIS identified a potential pathway for impact on the River Finn SAC [002301], the River Foyle and Tributaries SAC [UK0030320], and Lough Eske and Ardnamona Wood SAC [000163] in the form of deterioration of water quality resulting from potential hydrological connectivity via the surface water connection between components of the Subject Development and the three identified SACs that are located downstream. Whilst none of the deviations involve works within any natural watercourse, there are potential connections via forestry drains and overland flow. Thus, there is the potential for pollution in various forms to enter the watercourses and flow downstream to these SACs.

As such, taking a precautionary approach, a complete source pathway receptor chain was identified in the form of surface water connectivity between components of the Subject Development that are located in the:

- Bunadaowen and Shruhangarve Catchments that flow into the Mourne Beg, which is designated as part of the River Finn SAC
- Glendergan Catchment that is designated as part of the River Foyle and Tributaries SAC
- Lowerymore catchment (Deviation 1), the downstream sections of which are designated as part of the Lough Eske and Ardnamona Wood SAC [000163]

The rNIS objectively concluded that components of the Subject Development, individually or in combination with other plans or projects, have not resulted in any adverse effect on the integrity of any European Site and do not have potential to result in any such adverse effect.

The rNIS states:

> *"This rNIS has provided an assessment of all potential direct or indirect adverse effects on European Sites.*
>
> *"Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur or have occurred has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this*

report and its appendices. The measures ensure that the construction and operation of the proposed development does not adversely affect the integrity of European Sites.

Therefore, it can be objectively concluded that the identified deviations, individually or in combination with other plans or projects, have not and will not adversely affect the integrity of any European Site".

5.7.2 Impacts on Nationally Designated Sites

Impacts on nationally designated Sites including NHAs and pNHAs are considered in this section of the report.

The Subject Development is located entirely outside any European Site and there is no potential for significant effects on any such Site.

Taking a precautionary approach, a potential pathway for indirect effects on Lough Eske and Ardnamona Wood pNHA (000163) was identified in the form of deterioration of water quality resulting from potential hydrological connectivity via Deviation 1 that is located in the Lowerymore catchment, part of which of is designated as the Lough Eske and Ardnamona Wood pNHA (000163). This nationally designated Site is also designated as part of Lough Eske and Ardnamona Wood SAC [000163]. No pathway for potential indirect effects on any other Nationally Designated Site was identified.

However, the works were undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in **Appendix 5.1**.

As such, there is no potential for significant indirect effects on this pNHA to have occurred as a result of deviation 1 or any other deviation.

Therefore, the components of the Subject Development, individually or in combination with other plans or projects, has not resulted and does not have the potential to result in any adverse effect on the integrity of any Nationally Designated Site.

No evidence of any significant ecological effects having occurred as a result of the deviation were identified during the post construction surveys that were undertaken.

5.7.3 Residual Impact Assessment from Deviations

In conclusion, each deviation was assessed, and no evidence of any significant negative ecological effects having occurred or having the potential to occur as a result of the Subject Development was recorded.

5.7.4 Do-Nothing Effect

Under the assessed Do Nothing Scenario, the 25 deviations that comprise the Subject Development would be removed and restored to the greatest extent practicable. The Meenbog Wind Farm would then be completed in accordance with the current planning permission (ABP Ref: PA05E.300460). This approach may lead to environmental effects due to the potentially extensive groundworks required to remove and restore the existing peat cells, portions of access roads, laybys, hardstands, and peat containment berm. New access road sections and hardstands would then have to be constructed in the slightly different, and less optimal, locations shown on the plans for the Permitted Development. The borrow pits which form part of the Subject Development would be backfilled to the greatest extent possible with spoil and peat and revegetated. The peat cells which form part of the Subject

Development would be dismantled and the stored peat material would be removed from the Site for disposal elsewhere.

The 'Do-Nothing; Alternative would have a greater environmental effect than regularising the selected option of optimizing the wind farm layout based on site conditions. The construction phase of the Subject Development has been successfully completed, did not cause any significant environmental effects during construction, and will not cause any significant environmental effects by leaving it in place.

5.8 Cumulative Impact

The potential for the Subject Development to result or to have resulted in significant effects on Biodiversity was assessed cumulatively and in combination with other plans and projects, including the Permitted Development (both as built and yet to be constructed)~~wind farm~~ and a peat slide event that occurred in December 2020 together with the emergency works associated with it and all subsequent remediation works (Phases 1A, 1B & 2). In addition, the components of the Subject Development have been considered cumulatively and in-combination with other land uses in the area as detailed below.

5.8.1 Cumulative Effects when considered in combination with the Permitted Development (ABP Ref: PA05E.300460)

The components of the Subject Development are located within or immediately adjacent to the Permitted Development boundary The deviations are entirely contiguous with the Permitted Development and are commensurate with works that have already been assessed in the EIAR and NIS for the Permitted Development. They do not require any additional mitigation or best practice and are of a nature and scale such that there is no potential for them to contribute or have contributed to any cumulative effect when considered in combination with the Permitted Development.

As such, following the implementation of mitigation measures as set out in the submitted EIAR for the Permitted Development (as provided in **Appendix 5-1**), there is no evidence to suggest that the components of the Subject Development have the potential to result or have resulted in likely significant effects on biodiversity, the identified KERs or Designated Sites was identified.

5.8.2 Cumulative Effects When Considered in Combination with Peat Movements on the Site including the November 2020 Peat Slide and all subsequent remediation Works.

The components of the Subject Development were considered cumulatively with peat movements on the site including a peat slide event that occurred in November 2020 and subsequent consequential remediation works. With respect to the peat slide event, there was a noted deterioration in water quality within the Mourne Beg River, which is identified as a KER in **Section 5.5.5** of this rEIAR, and designated as part of the River Finn SAC, immediately following the event. However, results since then have shown a recovering trend in water quality such that the Mourne Beg River now exceeds pre-construction baseline water quality. Following, the peat slide event, emergency stabilisation and remediation works were undertaken on the site of the Permitted Development, and on the Shruhangarve River, which is also identified as a KER in **Section 5.5.5** of this rEIAR. These works were the subject of an ecological assessment and Screening for Appropriate Assessment. These documents were reviewed and taken into account as part of this cumulative assessment. Relevant information pertaining to the peat slide and subsequent remediation and monitoring undertaken is provided in Appendix 2-3.

No evidence of the components of the Subject Development having led to any adverse effects on the Mourne Beg River was identified during any of the surveys and assessments undertaken. As such, following the implementation of mitigation measures as set out in the submitted EIAR for the Permitted Development (as provided in **Appendix 5-1**), there is no evidence to suggest that the components of the Subject Development have the potential have resulted in likely significant cumulative effects on the

identified KERs was identified when considered in combination with the November 2020 peat slide and all subsequent remediation works.

There is, therefore, no potential for any cumulative effects in this regard.

5.8.3 Cumulative Plans and Projects Considered.

Following the implementation of the mitigation measures as detailed in the submitted EIAR for the Permitted Development (as provided in **Appendix 5-1**), there is no evidence to suggest that the components of the Subject Development have the potential to result or have resulted in likely significant effects on biodiversity, the identified KERs or Designated Sites was identified when considered on their own.

However, following the precautionary principle, the planning registers for both Donegal and Tyrone County Councils were consulted 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 Bord Pleanála website, and Northern Ireland Planning Portal were consulted.

Relevant plans including the Donegal County Development Plan 2018 – 2024, the Strabane Area Plan 1986 – 2001 (still current) 4th National Biodiversity Action Plan 2023-2030 and The Regional Planning Guidelines for the West 2010-2022 were also considered, as described in **Table 5.27** below.

Details of projects considered in this assessment are provided in **Appendix 2.1 of Chapter 2,** described fully in **Section 2.7- Cumulative Impact Assessment in Chapter 2** of this rEIAR.

Table 5-28 Review of plans

Plans	Key Policies and Objectives directly related to European Sites and Biodiversity in the Zone of Influence	Assessment of Potential Impact on European Sites
Adopted Donegal County Development Plan 2018-2024	**Natural Heritage Objectives:** **NH-O-1:** To protect, sustainably manage and enhance the rich biodiversity of County Donegal for present and future generations. **NH-O-2:** To comply with Article 6 of the Habitats Directive (92/43/EEC) and have regard to the relevant conservation objectives, management plans, qualifying interests, and threats to the integrity of Natura 2000 sites. **NH-O-3:** To maintain the conservation value of all existing and/or proposed SACs, SPAs, NHAs and RAMSAR sites including those plant and animal species that have been identified for protection under the EU Habitats Directive (92/43/EEC), EU Birds Directive (79/409/EEC as amended by 2009/147/EC), the Wildlife Acts (1976-2014) and the Flora Protection Order (2015). **NH-O-4**: To ensure the protection and management of the landscape in accordance with current legislation, ministerial and regional guidelines and having regard to the European Landscape Convention 2000. **NH-O-5**: To protect, manage and conserve the character, quality and value of the landscape having regard to the proper planning and development of the area, including consideration of the scenic amenity designations of this plan, the preservation of views and prospects and the amenities of places and features of natural, cultural, social, or historic interest. County Donegal Development Plan 2018-2024 Part B: Objectives and Policies of the Plan Chapter 7: The Natural and Built Heritage Page 131 **NH-O-6:** To protect and improve the integrity and quality of Designated Shellfish Waters, and Freshwater Pearl Mussel Basins and to take account of any relevant Shellfish Reduction Program or Fresh Water Pearl Mussel Sub-basin Plan. **NH-O-7:** To protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments.	The Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the biodiversity, protected species and designated sites. The components of the Subject Development were undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in Appendix 5.1. The Subject Development is located outside of any Designated sites. No potential for negative cumulative impacts when considered in conjunction with the current proposal were identified. No developments or projects identified within the Development Plan were found to occur in the wider area surrounding the Subject Development.

	NH-O-8: To ensure where appropriate the protection and conservation of hedgerows, stone walls and traditional field boundaries as natural heritage corridors and migration routes for wildlife where they are shown to play a significant heritage role. **NH-O-9:** To promote and implement sustainable forest management principles and to ensure that the establishment of new woodlands and forests protect and enhance the environment. **NH-O-10**: To maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity and to meet the EU's target to halt biodiversity loss by 2020 through the implementation of the EU Biodiversity Strategy (2011) or as updated. **NH-O-11**: To ensure the conservation and management of Peatlands in the County **Natural Heritage Polices** **NH-P-1**: It is a policy of the Council to ensure that development proposals do not damage or destroy any sites of international or national importance, designated for their wildlife/habitat significance in accordance with European and National legislation including SACs, Special SPAs, NHAs, Ramsar Sites and Statutory Nature Reserves. **Extractive Industry and Geology Objectives** **EX-O-1:** To conserve and protect the environment, including in particular, the archaeological and natural heritage and conservation and protection of European designated sites and any other sites, which are prescribed. **EX-O-3:** To protect and preserve the quality of the environment so as to ensure no significant adverse effects including the prevention, limitation, elimination, abatement or reduction of environmental pollution and the protection of waters, groundwater, the seashore and the atmosphere. **Wind Energy Objectives** **E-P-11:** It is a policy of the Council to consider the development of renewable energy, through the development of on offshore wind energy proposals, in accordance with the proper planning and sustainable development of the area.	

	E-P-18: It is a policy of the Council that potential impacts on natural, built and cultural heritage including impacts on archaeological monuments and watercourses are assessed as part of renewable development proposals. Where such impacts are identified, mitigation measures such as buffer zones, separation distances and access arrangements should be employed as appropriate. **E-P-21**: It is the policy of the Council that all applications for renewable energy projects will ensure that details of the proposed grid connection and all associated infrastructure are considered in the Environmental Impact Statement (EIS) and Natura Impact Statement as may be required.	

Strabane Area Plan 1986- 2001 (Still current)	• Control rural development and protect the countryside from inappropriate development.
	• When determining planning applications within the rural area, the Department will seek to achieve these objectives by having regard for the following planning criteria:
	•
	  • The amenity of the countryside
	  • The need to safeguard features of the historic landscape.
	  • The need to safeguard restricted zones such as mineral deposits and water catchment areas
	• The Department will base its consideration of proposals for development in the Rural Remainder on recognised planning principles and in particular on location, sitting and design. It will ensure that new development blends into the landscape and proposals which give rise to traffic hazards or public health nuisance will be resisted.
	• To the west of the District two small contrasting areas of bog containing a number of Sphagnum species are protected within the Killeter Forest Nature Reserve. The Moneygal Bog Area of Special Scientific Interest has been designated as such in view of its value as a fine example of a western raised bog. No
		The Development Plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the biodiversity, protected species and designated sites.
		
		The components of the Subject Development were undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in Appendix 5.1.
		
		The Subject Development is located outside of any Designated sites.
		
		No potential for negative cumulative impacts when considered in conjunction with the current proposal were identified.
		
		No developments or projects identified within the Development Plan were found to occur in the wider area surrounding the Subject Development.

	development which would result in a diminution of the scientific interest or resource of these sites will be acceptable.	
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 will strengthen its contribution to international biodiversity initiatives and international governance processes, such as the United Nations Convention on Biological Diversity.	There will be no adverse effects on designated sites or biodiversity as a result of the Subject Development. The components of the Subject Development were undertaken in accordance with the mitigation measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in Appendix 5.1. The Subject Development is located outside of any Designated sites. No potential for negative cumulative impacts when considered in conjunction with the current proposal were identified. No developments or projects identified within the Development Plan were found to occur in the wider area surrounding the Subject Development
The Regional Planning Guidelines for the West 2010-2022	**EAP13:** To support the protection of Natural Heritage Areas, Special Protection Areas, Special Areas of Conservation, Nature Reserves, Ramsar Sites (Wetlands), Wildfowl Sanctuaries, National Parks, Nature Reserves and the biodiversity designated under the Habitats Directive, Birds Directive, Wildlife Act, Flora Protection Order and other designated or future designated sites.	The Subject Development will not result in significant effects on habitat and features of ecological importance. The components of the Subject Development were undertaken in accordance with the mitigation

	EAO18: Support the achievement of favourable conservation status of Annex I habitats, Annex II species, Annex I bird species and other regularly occurring migratory bird species and their habitats in the region.	measures and protocols set out in the EIAR for the Permitted Development. The relevant measures from Chapter 6 (Biodiversity) of that EIAR are provided for reference in Appendix 5.1. The Subject Development is located outside of any Designated sites. No potential for negative cumulative impacts when considered in conjunction with the current proposal were identified. No developments or projects identified within the Development Plan were found to occur in the wider area surrounding the Subject Development

5.8.4 Surrounding Land Uses

The land surrounding the Subject Development is dominated by conifer forestry with upland grasslands and peatland in the wider area. The potential for the Subject Development to contribute to cumulative effects on European Sites when considered alongside these land uses was assessed.

However, the deviations which comprise of the Subject Development are all located within conifer plantation and related habitats that are not of particular ecological sensitivity and will not result in any significant habitat loss and none were within or adjacent to any EPA named watercourse or European Site.

Similarly, no evidence of the Subject Development having led to any adverse effects on the Mourne Beg River (River Finn SAC), the Lowerymore River (Lough Eske and Ardnamona Woods SAC) or the Glendergan River (River Foyle and Tributaries SAC) was identified during any of the surveys and assessments undertaken. Following the implementation of mitigation as set out in the EIAR for the Permitted Development, there is no complete source pathway receptor chain by which the Subject Development could have resulted in cumulative effects when considered in combination with surrounding land uses. There is therefore, no potential for any cumulative effects in this regard.

5.8.5 Conclusion of Cumulative Assessment

The assessment takes into account all associated potential effects on any identified KERs as a result of the Subject Development cumulatively and in combination with all other relevant plans , projects, events and land uses. No potential for the Subject Development to have resulted or to result in any significant effects on any Biodiversity was identified when considered individually. The Subject Development is entirely contiguous with the Permitted Development and is commensurate with works that have already been assessed in the EIAR and NIS for the Permitted Development. They do not require any additional mitigation or best practice and are of a nature and scale such that there is no potential for them to contribute or have contributed to any cumulative effect when considered in combination with any other plan, project, event or activity. No additional pathways for effect on any of the identified KERs were identified when the deviations were considered in combination with any other plans, projects, events, land uses or works.

5.9 Conclusion

Following the assessment undertaken, it is concluded that, following the implementation of the mitigation and best practice considered, the Subject Development does not have the potential to result or have resulted in any significant effects on Biodiversity at any geographic scale either individually or in combination with other plans, projects and land uses. The potential for effects on the European designated Sites are fully described in the rNIS that accompanies this application. The rNIS concludes that in view of best scientific knowledge and on the basis of objective information, the components of the Subject Development, either individually or in combination with other plans or projects, are not likely to have resulted in significant effects on the European Sites that were assessed as part of the Appropriate Assessment process.

This rEIAR concludes in the view of best scientific knowledge and on the basis of objective information, the components of the Subject Development, either individually or in combination with other plans or projects, are not likely to have resulted in significant effects on the Nationally Designated Sites that were assessed within this rEIAR.

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