Planning and Environmental Consultants

Appropriate Assessment Screening Report

Cleanrath Wind Farm

DOCUMENT DETAILS

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1. INTRODUCTION

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for the Appropriate Assessment of operation of the constructed Cleanrath wind farm development, Co. Cork and all associated infrastructure including a grid connection cable and turbine delivery route accommodation works.

A remedial AA Screening Report (rAASR) pertaining to the construction, the short-term operational phase and the current Sleep Mode period pending the outcome of the Substitute Consent process that also accompanies this application in a separate document.

In May 2017, An Board Pleanála granted permission for a wind energy development at the site of the Cleanrath wind farm development(ABP Ref. PL04.246742) (hereafter referred to as the 2017 Permission). An Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) was completed by the Board in their consideration of the application and the decision to grant permission for eleven turbines and associated works (including substation and all grid connection works). The decision to grant permission issued on the 19th May 2017 and subject to 22 no. conditions.

The wind farm development has been constructed, has been operational for a short-term period (December 2019 to the end of April 2020) and is now currently operating in Sleep Mode where the turbines are in a controlled mode which is maintained by the turbine manufacturer and are generally not producing electricity pending the outcome of the Substitute Consent process.

This AA Screening Report (AASR) assesses the potential for significant effects on European Sites arising from the future operational and decommissioning phases.

The application is also accompanied by a remedial AA Screening Report (rAASR). There is a significant overlap in terms of the information contained within both the AASR and the rAASR as it is not always possible or desirable to separate the assessment of effects between the documents.

The development and all associated works is hereafter referred to as the Cleanrath wind farm development Judicial Review proceedings challenging the decision of the Board were instituted in July 2017 and culminated in a Supreme Court judgment delivered on 12th December 2019 which held that it was necessary to quash the decision made by the Board to grant the 2017 permission. Subsequently, by way of Order of the Supreme Court, the order quashing the decision to grant the 2017 permission was stayed pending the decision of the Board on this application for substitute consent, on the undertaking of Cleanrath Windfarm Ltd. not to operate the wind farm development other than in accordance with the terms of its letter dated the 30th day of April 2020. In that letter, Cleanrath Windfarm Ltd. confirmed that:

- with effect from 1 May 2020, Cleanrath Windfarm Limited will not operate the Cleanrath wind farm development pending the decision of An Bord Pleanála on the substitute consent procedure received by the Board on 20 December 2019;
- no electricity whatever will be generated by the nine constructed Cleanrath wind farm turbines for export to the national grid (other than in the context of the Eirgrid testing and the 10% protection mode, as set out below). However, Cleanrath Windfarm Limited will run the Cleanrath turbines in “sleep mode” (FM05), whereby the rotors may turn very slowly and which will not generate any electricity for export.
- in circumstances where there is a series of tests that EirGrid plc, as the Transmission Systems Operator (TSO), needs to carry out on the turbines – including Grid Code Compliance tests – , completed in three or four phases over the course of the year(each phase taking 2 or 3 days) and where EirGrid requires that the turbines are in a fully operational mode and exporting to the grid for the duration of each test phase, in order to enable all testing to be undertaken by EirGrid, the turbines will be

required to be made fully operational for a maximum of 15 days over the period up to 30 April 2021;

- the grid connection between both the Cleanrath and Derragh wind farm developments and the national grid is authorised by the 2017 permission, whilst the construction of the Derragh turbines and onsite infrastructure is authorised pursuant to a separate grant of permission (ref. no. PL02.245082). In order to enable the continuation of export to the national grid of electricity generated by the operation of the six turbines located at the Derragh windfarm development (which has been ongoing since late 2019), it will be necessary to utilise the grid connection authorised under the 2017 permission. In these circumstances, no electricity whatever will be generated from the Cleanrath wind farm turbines and exported to the national grid (other than for the purposes of the Eirgrid testing and the 10% protection mode referenced above). Rather, only electricity generated from the Derragh windfarm turbines will be exported to the national grid via the grid connection from Derragh.

On 20 December 2019, an application was made for leave to apply for substitute in relation to the Cleanrath wind farm development and on the May 5th 2020, An Bord Pleanála granted leave to apply for substitute consent (ABP-306272-19) and directed that a remedial Environmental Impact Assessment and a remedial Natura Impact Statement be prepared and included with the application.

Screening for Appropriate Assessment is required pursuant to Article 6(3) of Directive 92/43/EEC (the Habitats Directive) and Part XAB of the Planning and Development Act 2000, as amended. Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The Project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

The data underpinning this AA Screening Report was obtained through a desk study and field surveys undertaken in 2010, 2011, 2015, 2018 and 2020. Using this data, MKO has assessed whether the Cleanrath wind farm development has the potential to have a significant effect on European sites during its potential operational lifetime (subject to consent of planning permission). This assessment was undertaken without taking into account any best practice, mitigation or preventative measures.

This Appropriate Assessment Screening Report has been prepared in compliance with Part XAB of the Planning and Development Acts 2000 – 2019, the Planning and Development Regulation 2001 - 2019 and relevant jurisprudence of the European and Irish Courts. It was also prepared in accordance with the European Commission's *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2002),*Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018) as well as the Department of the Environment's *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (December 2009, amended 11February2010) where relevant.

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*

4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*
5. *CIEEM (2018) Guidelines for Ecological Impact Assessment.*

1.1 Steps in Appropriate Assessment Process

1.1.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. As per Section 177U of the Planning and Development Act, 2000, as amended '*A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site*'. The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, then a Stage 2 Appropriate Assessment is required.

Where an Appropriate Assessment is required, the developer is required to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation[1]. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

This Article 6(3) Appropriate Assessment Screening Report has been prepared in order to enable the Board as competent authority to carry out a Screening for Appropriate Assessment in compliance with the provisions of section 177U of the Planning and Development Act 2000 as amended.

1.1.2 Statement of Authority

This report has been prepared by Sarah Mullen (B.Sc., Ph.D., ACIEEM), David McNicholas and Pat Roberts (B.Sc. Environmental Science, MCIEEM). Pat has over 15 years' experience in ecological management and assessment. David McNicholas has over 9 years' professional ecological consultancy experience and is a full member of the Chartered Institute of Ecology and Environmental Management. Sarah has 4 years' professional ecological consultancy experience.

[1] As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for the European site in view of its conservation objectives

Ecological surveys were conducted by McCarthy Keville O'Sullivan (MKO) ecologists; Pat Roberts (B.Sc., MCIEEM), David McNicholas (B.Sc., M.Sc., MCIEEM), Julie O'Sullivan (B.Sc., M.Sc.), Claire Stephens (B.Sc (Env.)) and Luke Dodebier (B.Sc. (Ecol.) All surveyors have relevant academic qualifications and experience in undertaking the ecological surveys and assessments that they undertook.

Multi-disciplinary ecological walkover surveys were undertaken of the Cleanrath wind farm development site including the turbine delivery route and grid connection route on various dates between 2010 and 2020 in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). The walkover surveys were undertaken in October 2010, March, May and October, November and December 2011, January-March 2012, February-December 2015, 27th November 2018 and 20th December 2018. Additional surveys were also undertaken on the 3rd, 4th & 28th January 2019, 7th, 8th, 20th and 21st March 2019 and 30th March & 14th May 2020. The surveys provided baseline data on the ecology of the study area prior to, during and after construction. They enabled an assessment of whether further, more detailed habitat or species-specific ecological surveys were required. The multi-disciplinary ecological walkover surveys comprehensively covered the study area of the wind farm, including all elements of the development and grid connection.

Habitats were classified in accordance with the Heritage Council's '*A Guide to Habitats in Ireland*' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in '*Best Practice Guidance for Habitat Survey and Mapping*' (Smith et al., 2011).

Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follow '*Mosses and Liverworts of Britain and Ireland - a field guide*' (British Bryological Society, 2010).

The walkover surveys were designed to detect the presence, or suitable habitat for a range of protected faunal species that may occur in the vicinity of the development.

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS), with a focus on those listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011), was also conducted.

Ecological surveys were undertaken by Dixon Brosnan ecological consultants to inform the EIS for the project that was submitted for planning in 2015. These surveys and assessments are referred to in this document and were ground truthed and updated by the surveyors listed above.

1.1.3 Data Collected to Carry Out Assessment

In preparation of the report, the following sources were used to gather information:

- Review of NPWS Site Synopses, Conservation Objectives for the European Sites
- Review of 2019, 2013 and 2007 EU Habitats Directive (Article 17) Reports.
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA, Water Framework Directive (WFD),
- Review of specially requested records from the NPWS Rare and Protected Species Database for the hectads which overlap with the study area.
- Review of OS maps and aerial photographs of the site of the Cleanrath wind farm project.
- Review of relevant databases including National Biodiversity Ireland Database and available literature of previous surveys conducted in the area.
- Review of other plans and projects within the area.
- Ecological field assessments carried out by Dixon Brosnan and MKO between 2010 and 2020 and as provided in full in the rEIAR and NIS.

2. DESCRIPTION OF THE CLEANRATH WIND FARM DEVELOPMENT

2.1 Site Location

The Cleanrath wind farm development site is located approximately 2.7 km south of the village of Reanaree, Co. Cork. The majority of the cable route is located in County Cork with a relatively short portion (2 km) located in County Kerry. The townlands within which the windfarm development are listed below in Table 2-1. The Grid Reference co-ordinates for the approximate centre of the site are E120,520 N69,583. The town of Macroom is located approximately 12 kilometres north east of the study area and Inchigeelagh is located approximately 2.5 kilometres to the south. The site location including the grid connection route is shown in Figure 2-1.

Table 2-1 Townlands within which the Cleanrath wind farm development is located

Townland	
Reananerree	Cloontycarthy
Cleanrath North	Derrineanig
Cleanrath South	Milmorane
Coombilane	Rathgaskig
Augeris	Gorteenakilla
Carrignadoura	Gurteenowen
Gurteenflugh	Lyrenageeha
Lackabaun	

2.2 Characteristics of the Cleanrath wind farm Development

2.2.1 Description of the Project

The Development comprises:

1. *9 No. wind turbines with a ground to blade tip height of 150 metres and all associated foundations and hard-standing areas.*
2. *All associated underground electrical (33kV & 38kV) and communications cabling connecting the turbines to the national electricity grid.*
3. *Upgrade of existing access junctions and roads.*
4. *Upgrade of existing and provision of new site access roads.*
5. *Borrow pit.*
6. *Temporary construction compound.*
7. *Accommodation works along the turbine delivery route*
8. *Temporary roadway to facilitate turbine delivery.*

9. *Forestry Felling*
10. *Site Drainage*
11. *The operation of the wind farm for a period of 25 years.*
12. *The decommissioning of the wind farm, removal of turbines and restoration of the site.*
13. *All associated site development and ancillary works.*

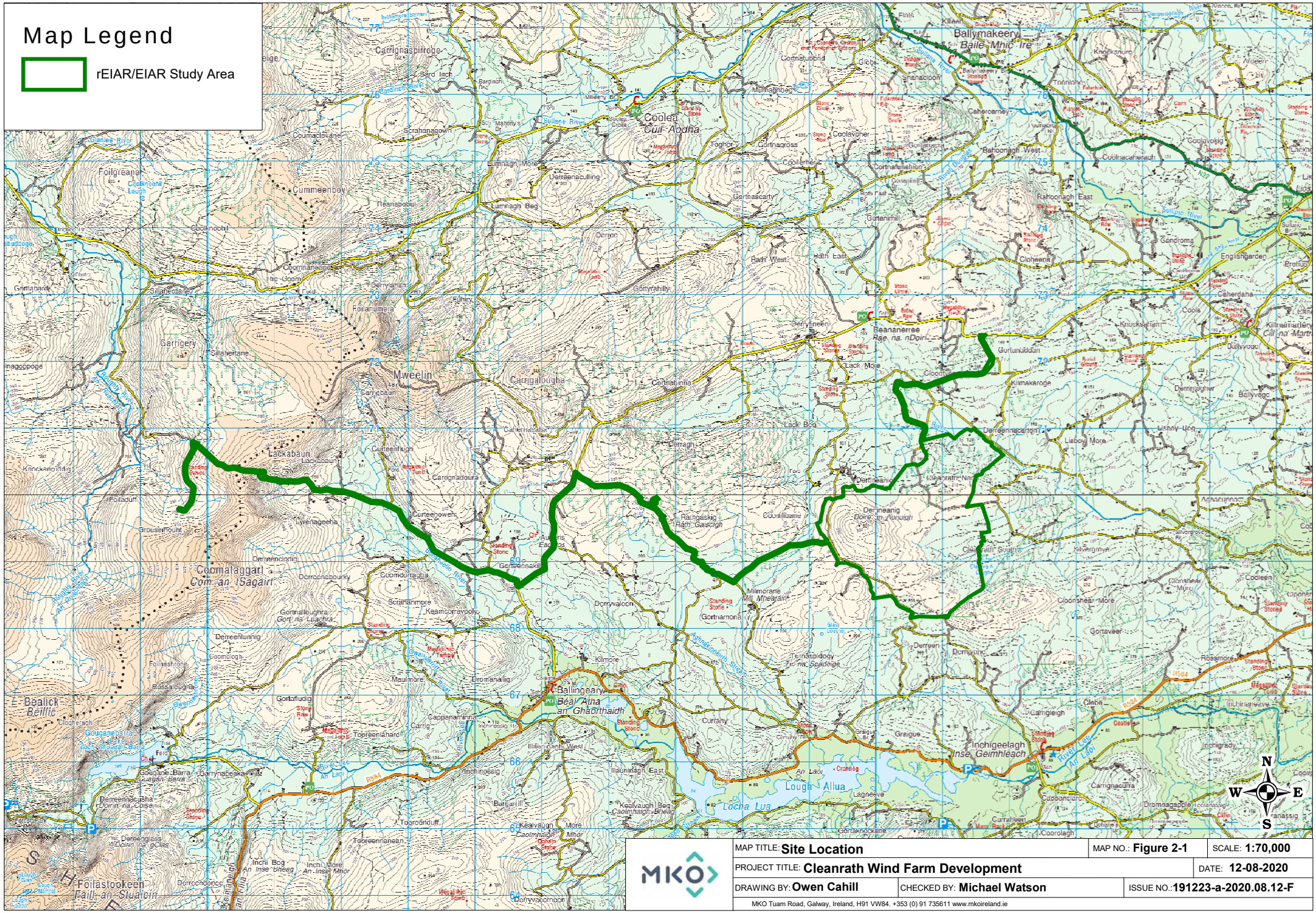
The application for consent for the operation of Cleanrath wind farm development includes the connection to the national electricity grid. All elements of the Cleanrath wind farm development, including grid connection and any works completed on public roads to accommodate turbine delivery, have been assessed. Any effects associated with the ongoing operation of the wind farm and its decommissioning have been assessed.

This application seeks substitute consent for 25-year operational life from the date of commissioning of the entire wind farm.

The overall layout of the Cleanrath wind farm development is shown on Figure 2-2 and 2-3. This drawing shows the locations of the constructed wind turbines , borrow pit, internal roads layout, the main site entrance and temporary construction compound. The route of the underground cable connection to the Derragh Substation, the Derragh Substation itself and the underground connection to the Coomataggart Substation are shown on Figure 2-1.

2.2.2 Description of the Baseline Ecological Environment

The wind farm site (excluding the grid connection route) is located in an area that is dominated by upland coniferous forestry and a mosaic of exposed siliceous rock and peatland habitats. The northern section of the wind farm site consists predominantly of conifer plantation (WD4) with a range of other associated habitats located within the plantation (Plate 2-1). The southern half of the wind farm site consists predominantly of a mosaic of peatland habitats including Wet Heath (HH3), Exposed siliceous rock (ER1), Dry Heath (HH1) and small areas of Upland blanket bog (PB2), where deeper peat occurs between bands of rock (Plate 2-2). In addition, a number of small areas of conifer plantation (WD4) and agricultural grassland occur in this area. The following text provides a description of the habitats on the site prior to the construction of the wind farm as described in surveys that were undertaken from 2015 and throughout the pre-commencement and construction phase up to 2020. A habitat map of the site, with the infrastructure footprint overlain, is provided in Figure 2-4.



MAP TITLE: **Site Location**		MAP NO.: **Figure 2-1**	SCALE: **1:70,000**
PROJECT TITLE: **Cleanrath Wind Farm Development**			DATE: **12-08-2020**
DRAWING BY: **Owen Cahill**	CHECKED BY: **Michael Watson**		ISSUE NO.: **191223-a-2020.08.12-F**

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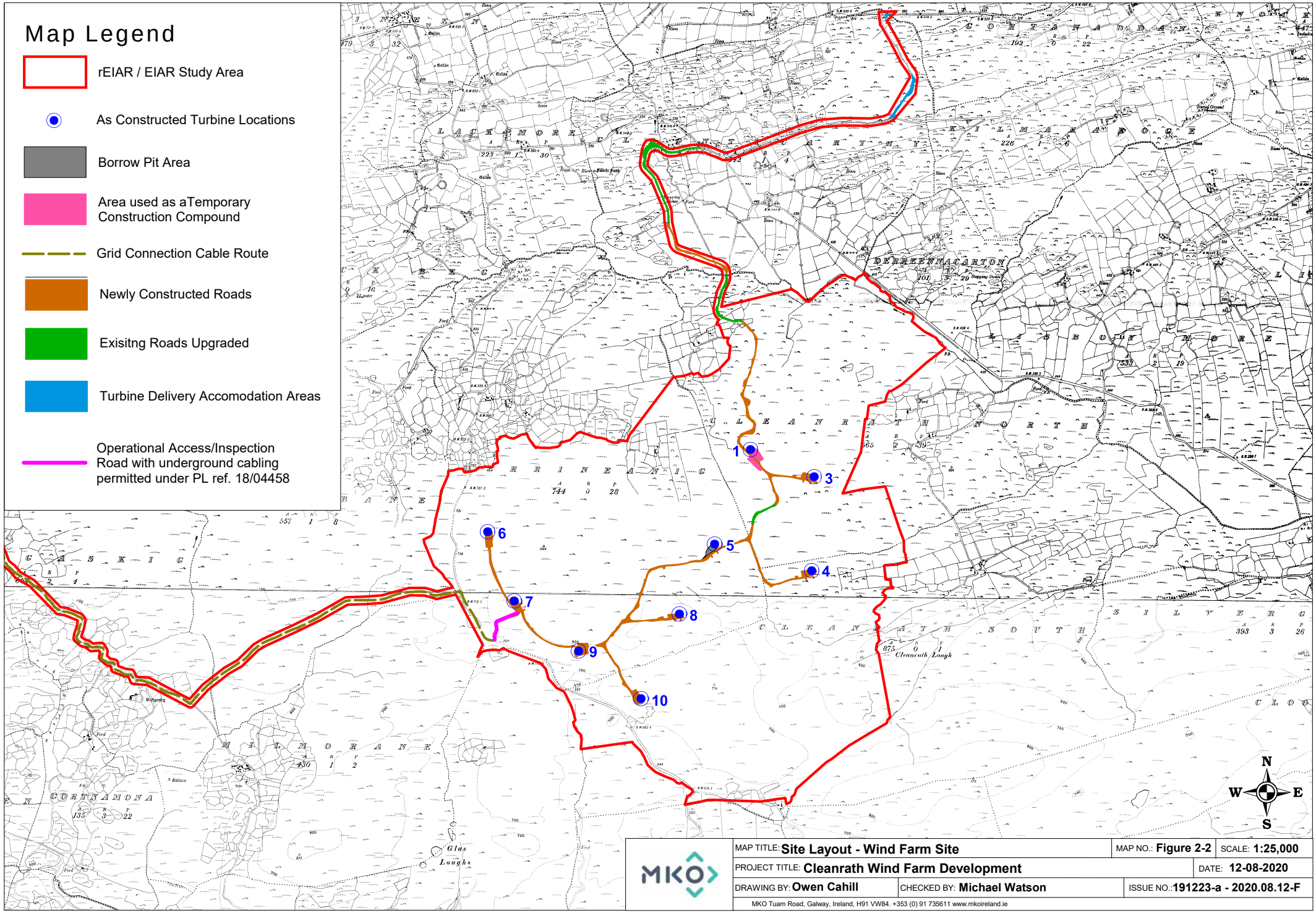

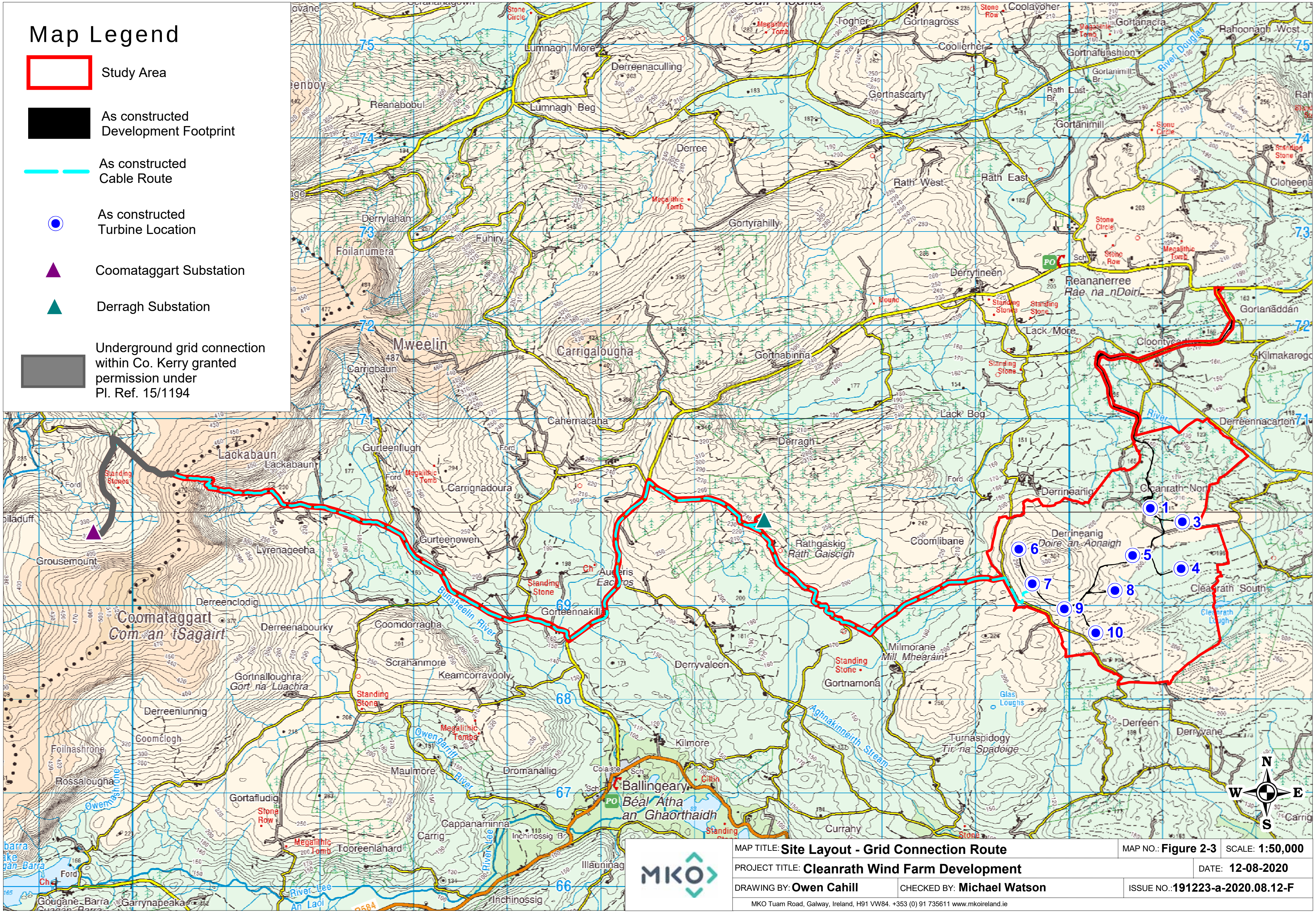

Map Legend

Habitat Legend

- Buildings and artificial surfaces (BL3)
- Improved agricultural grassland (GA1)
- Amenity grassland (improved) (GA2)
- Dry-humid acid grassland (GS3)
- Wet grassland (GS4)
- Wet Heath (HH3), Dry Heath (HH1), Exposed siliceous rock (ER1), Upland Blanket Bog (PB2) and Acid Flush (PF2) mosaic
- Lowland blanket bog (PB3)
- Cutover bog (PB4)
- Conifer plantation (WD4)
- Oak-birch-holly woodland (WN1)
- Bog woodland (WN7)
- Scrub (WS1)
- Site boundary

T1
T3
T4
T5
T6
T7
T8
T9
T10

N

Drawing Title
Habitat Map

Project Title
Cleanrath Wind Farm

Drawn By	Checked By
DMN	PR
Project No. 191223a	Drawing No. Figure 2-4
Scale 1:16000	Date 21.07.2020

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Plate 2-1 Example of plantation forestry (WD4) around T8 with larger rocky outcrops left unplanted. These areas retain patches of wet heath vegetation.

Plate 2-2. Example of Exposed siliceous rock (ER1), Wet Heath and Bog Mosaic to the north of T10

The habitats within the study area include several habitat mosaics where the habitat patterns were too complex to map the individual habitats separately. The peatland mosaics comprised mainly Wet Heath

(HH3), Exposed Siliceous Rock (ER1), Upland Blanket Bog (PB2) and Acid Flush (PF2).Within these mosaics wet heath was the dominant habitat, while exposed siliceous rock was widespread but occupied only a small portion of the overall area. Dry Siliceous Heath (HH1) was only found occasionally within the mosaic and was associated with the Exposed Siliceous Rock (ER1). Other peatland habitats including Cutover Bog (PB4) and small areas of Lowland Blanket Bog (PB3). The Conifer Plantation is mapped as a single habitat but in reality, included several ancillary habitats such as small areas of Mixed Broadleaved Woodland (WD1), Immature Woodland (WS2), Scrub (WS1), and Dry Meadows & Grassy Verges (GS2) that form a small component of the overall conifer plantation habitat and have been mapped and evaluated as a matrix.

The access road to the site crosses the Toon River to the north of the development site. The river is classified as eroding/upland river (FW2) habitat. The river was 3-4 m in width, with a gravel/cobble substrate (Plate 2-3). Several other watercourses, which are tributaries of the Toon River flow through the forestry plantation in the northern section of the site. These are generally very small streams with eroding/upland river (FW2) habitat with steep gradients and usually heavily shaded and lacking significant in-channel vegetation. The forestry plantations also have numerous drainage ditches, with some of these functioning as seasonal streams. A number of watercourses flow through the bog habitats in the eastern section of the wind farm site, ultimately feeding into Cleanrath Lough. Close to the development footprint, the watercourses are artificially created, very narrow and flow through deeply cut, or straightened channels. The steeper sections have gravelly substrates, while level sections have deep silt/peat substrates with extensive growth of Bog Pondweed (*Potomogeton polygonifolius*). The south-western section of the wind farm site has a number of small watercourses, often associated with areas of acid flush habitat (PF2; see above), see Plate 2-4. Within the habitat survey area, these are mainly artificial Drainage Ditches (FW4) that have been excavated to improve drainage. These watercourses usually have very steep gradients and generally lack distinct vegetation communities (although many wetland plant species occur in the associated flush habitat; see above). Many are seasonal watercourses with no flow during dry periods.

Plate 2-3 The Toon River adjacent to the access route

Plate 2-4 Example of small watercourse (FW2), associated with acid flush habitat to the south of T9

The constructed development footprint comprises mainly of Buildings and artificial surfaces (BL3) as the turbine hardstands, foundations, access roads and blade set down areas comprise of recently constructed infrastructure.

In some areas, the lands surrounding the constructed development have been temporarily disturbed and are in the early stages of post-construction restoration. These areas are classified as Recolonising Bare Ground (ED3) or where they are less vegetated, Spoil and Bare Ground (ED2). In some areas, the disturbed ground is recolonising with typical heathland species such as tormentil, deergrass, purple moor grass and sweet vernal grass. In other areas it is was slower to recover (with sparse vegetation at the time of the surveys in May 2020 or, in the wetter areas, becoming colonised with rushy vegetation. Bare rock habitats have been created within the temporarily disturbed area in order to recreate the habitat mosaic that surrounds the development. Plate 2-5 shows a typical area of temporarily disturbed habitat surrounding the built wind farm infrastructure. This shows the surrounding undisturbed habitat along with the reinstated and recolonising area. It also shows the inclusion of bare rock habitat in the restoration design.

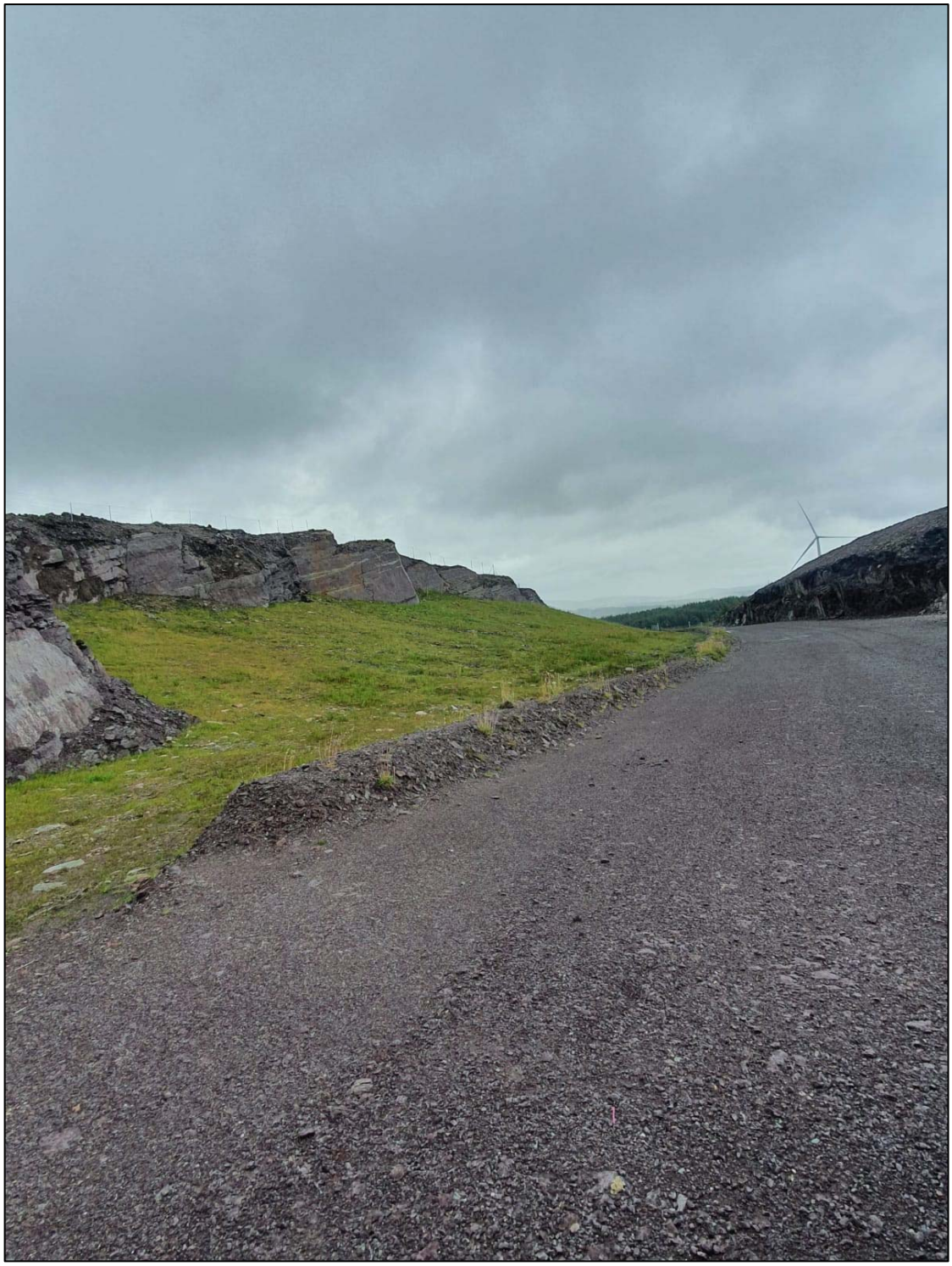

Plate 2-5 Example of Spoil and bare ground (ED2) following reinstatement of roadside verges along the site access track infrastructure classified as Buildings and artificial surfaces (BL3).

The grid connection cable route comprises electricity cabling (33kV) from Turbine no. 7 within cable ducting along the permitted Operational Access/Inspection Road (Pl Ref. 18/04458) southwest of Turbine no. 7 and on to the local public road until it turns onto the access track of the constructed Derragh Wind Farm development and connects to the constructed 38kV electricity substation, which is located within a forestry plantation approximately 3km west of the Cleanrath wind farm development in the townland of Rathgaskig (Plate 2-6). The grid connection is approximately c15km in length. The cabling loops back out of the Derragh Wind Farm Substation (38kV) and runs mainly within the public road corridor on to the 110kV Coomataggart substation located in the townland of Grousemount, Co.

Kerry. The final 1.5km of the cable route within Co. Cork and the 2km of the cabling in Co. Kerry is located on existing private access tracks. The first section runs from the south western boundary of the wind farm site on an unbound road through a large conifer plantation (WD4), much of which has been recently clearfelled (Plate 2-7) The next section continues on public roads, which are surrounded by coniferous forestry and open agricultural land mainly occupied by improved agricultural grassland (GA1) with heath (HH) habitat on rock outcrops, and a larger area of wet heath (HH3) on the ridge south of the forestry plantation at Rathgaskig. A short section of the road is surrounded by a strip of birch-dominated oak-birch holly woodland (WN1). The roadside boundaries along this section of the route are mainly earth banks (BL2), and lack well-developed hedgerows/treelines, although there are occasional small Ash trees and conifers. In the next section, the road in which the cable is laid is surrounded by another large conifer plantation to the west of Rathgaskig.

The grid connection route then follows a series of local roads through a largely improved agricultural landscape before reaching an upland landscape at Lackabaun, at the foothills of the Coomataggart Substation S in the Townland of Grousemount. The road margins comprise largely of Dry meadows and grassy verges (GS2) and Dry-humid acid grassland (GS3).

The grid connection route then follows a steep upland track from the termination of the public road to the boundary with Co. Cork and continuing until it reaches the infrastructure associated with the Grousemount Wind Farm and associated sub-station. This track is surrounded by Acid Grassland, Bog and Heath habitats. This section of the route passes through edge of the Sillahertane Bog NHA at the Kerry border but is confined to the existing track with no encroachment onto the adjacent bog and heath habitats. The habitats along the grid connection route are provided in plates 2-8 – 2-11.

The entire grid connection cable is located within the curtilage of existing roads and tracks with no encroachment onto adjacent habitats. During the walkover surveys undertaken in May 2020, no signs of habitat loss or degradation were identified, with all signs of any disturbance at all located within the footprint of the existing roads.
The grid connection route crosses a number of streams between the windfarm site and the sub-station at Grousemount. These are in the Lee Catchment. There were no instream works undertaken as part of the construction of the grid connection and during surveys undertaken in May 2020, no evidence of any water pollution in the watercourses that were crossed was identified.

Plate 2-6 Constructed Derragh Substation - located within forestry plantation.

Plate 2-7 *Example of unbound (WD4) access track along the grid connection route outside the south of the site (Cal's road).*

Plate 2-8. *Cable laid within the road carriageway*

Plate 2-9 Cable duct attached to side of bridge along cable route

Plate 2-10 Upgrade of mountain track at Lackabaun to facilitate cable connection

Plate 2-11. *Location of grid connection in local track at edge of Sillahertane Bog NHA.*

3. IDENTIFICATION OF RELEVANT EUROPEAN SITES

3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) on the 08/04/2020. The datasets were utilised to identify European Sites which could feasibly be affected by the development.
- All European Sites within a distance of 15km surrounding the development site were identified and are shown on Figure 3-1. In addition, the potential for connectivity with European Sites at distances of greater than 15km from the development was also considered in this initial assessment. In this case, no potential for significant effect a European Site that is located at a distance of over 15km from the development was identified due to the lack of hydraulic connectivity with any European Sites that are located further than this distance.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the development and any European Sites. The hydrological catchments are also shown in Figure 3-1.
- Table 3-1 provides details of all relevant European Sites as identified in the preceding steps and assesses which are within the likely Zone of Impact.
- The results of the extensive bird surveys carried out in advance of the construction between February 2015 and March 2019 considered in the course of this screening exercise and provided information on whether the birds recorded on the site could potentially be associated with any European Site. Additional pre-commencement and operational surveys undertaken in 2018, 2019 and 2020 were also considered.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report. Figure 3-1 shows the location of the development in relation to all European sites within 15km of the development.
- Where potential pathways for Likely Significant Effects such as habitat or hydrological connectivity are identified, the site is included within the Likely Zone of Impact.
- There is absolutely no reliance placed in this AASR on (a) measures intended to avoid/reduce harmful effects on the European sites, (b) construction management/best practice measures, or (c) any other measures (such as SUDS) which are proposed with no relation to the *intention* of avoiding or reducing any potentially harmful effect of the development on any European site.

3.2 Assessment of Potential for Significant Effects on European Sites

This Appropriate Assessment Screening Report considers any potential for likely significant direct or indirect impacts to occur as a result of the constructed development, both alone and in combination with other plans and projects, on European Sites. These impacts may occur by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements. It assesses the potential for significant effects to occur in the future operation of the development should planning permission be granted.

Table 3-1 below identifies which European Sites are located within the Zone of Likely Impact and identifies pathways by which impacts may occur. All European Sites that are within the Zone of Likely Impact are Screened In following the precautionary principle and assessed further within the Natura Impact Statement. In addition, the individual pathways by which effects may occur are identified in Table 3-1 below. Where no potential for significant effects on individual Qualifying Interests or Special Conservation Interests (QI or SCI) was identified, this is highlighted in the table and these features are not considered further in the AA Screening Report (AASR) or Natura Impact Statement (NIS).

Map Legend

- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- 15km buffer from site boundary
- Grid connection route
- Development footprint
- WFD water catchments
- WFD river waterbodies
- Site boundary

Sheheree (Ardagh) Bog SAC
Blackwater River (Cork/Waterford) SAC
Blackwater
Blackwater River (Cork/Waterford) SAC
Killarney National Park, Macgillycuddy's Reeks And Caragh River Catchment SAC
Killarney National Park SPA
Laune
Killarney National Park, Macgillycuddy's Reeks And Caragh River Catchment SAC
Mullaghanish Bog SAC
Mullaghanish to Musheramore Mountains SPA
Old Domestic Building, Curraglass Wood SAC
St. Gobnet's Wood SAC
Inny
Roughty
Kilgarvan Ice House SAC
Lee
The Gearagh SPA
The Gearagh SAC
Glanlough Woods SAC
Mucksna Wood SAC
Derryclogher (Knockboy) Bog SAC
Owvane-Mealagh-Glengarriff-Coastal
Bandon
Bandon River SAC
WHIDDY ISLAND
Ilen
Argideen

N

Drawing Title: Site in relation to EU designated sites

Project Title: Cleanrath EIAR

Drawn By	Checked By
DMN	PR
Project No.	Drawing No.
191223a	Figure 3-1
Scale	Date
1:145000	18.05.2020

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Table 3-1 Identification of Designated Sites within the Likely Zone of Impact and assessment of potential for significant effects

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
Special Area of Conservation/candidate Special Area of Conservation			
St. Gobnet's Wood cSAC (000106) **Distance:** 4.6 km from Wind farm site 7.5km from Grid Connection Route	› Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	This site has the generic conservation objective, *'To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.'* (NPWS (2020) Generic Version 7.0)	There is no potential for, and there have been no direct effects as the development is located entirely outside and approximately 4.6km distant from the European Site, as no pathway for such effects exists. This site is designated for a terrestrial habitat and there is no connectivity between the development and the site by which any significant effect could occur. No potential pathway for indirect effects on the QI 'Old sessile oak woods with Ilex and Blechnum in the British Isles' was identified. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**
The Gearagh cSAC (000106) **Distance:** 7.4km by land & 9.4km via surface water from Wind farm site 9.7km from Grid Connection Route	› Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] › Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation [3270] › Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	Detailed conservation objectives for this site (Version 1, Sept 2016) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 7.4km distant from the designated site, as no pathway for such effects exists.

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
	› Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae, Salicion albae*) [91E0] › *Lutra lutra* (Otter) [1355]		This cSAC is located hydrologically downstream of the development via the River Toon which flows through the development site and via the River Lee which is located downstream of the site and grid connection route. Therefore, taking a precautionary approach, a potential pathway for indirect effects to occur or have occurred on the following aquatic QI's was identified in the form of potential deterioration of surface water quality resulting from pollution, associated with the construction and operational phases of the development: › Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation [3260] › Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation [3270] › Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] › *Lutra lutra* (Otter) [1355] This site is considered to be **within the Likely Zone of Impact**. As there is potential for indirect effects on certain QIs of this European site to occur or have occurred via the Toon River and River Lee in the form of deterioration of surface water quality resulting from pollution associated with the construction and operational phases of the development, **it cannot be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other**

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			plans or projects, will not have in the future and has not had in the past, a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required. No potential for indirect effects to have occurred was identified for the terrestrial habitat 'Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]'.
Derryclogher (Knockboy) Bog cSAC (001873) **Distance:** 15.4 km from Wind farm site 7.4km from Grid Connection Route	› Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this site (Version 1, May 2017) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 15.4km distant from the designated site, as no pathway for such effects exists. There is no hydrological connectivity between the development and the European Site and they are in separate surface water catchments. Given the distance from the development and the absence of hydrological connectivity, there is no potential for indirect effects on the QI's of this cSAC, as there is no impact source-pathway-receptor chain was identified. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
Glanlough Woods cSAC (002315) **Distance:** 18.0 km from Wind farm site 8.5km from Grid Connection Route	› *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]	Detailed conservation objectives for this site (Version 1, September 2018) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 8.5km distant from the designated site, as no pathway for such effects exists. This site is designated for lesser horseshoe bat. The development is outside the identified 2.5km foraging range for the known lesser horseshoe roosts for which the site is designated as mapped in Map 2 of the detailed conservation objectives for the site. Therefore, there is no potential for indirect impacts as a result of disturbance to occur or have occurred. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**
Mullaghanish Bog cSAC (001890) **Distance:** 9.1 km from Wind farm site 12.4km from Grid Connection Route	› Blanket bogs (* if active bog) [7130]	Detailed conservation objectives for this site (Version 1, May 2017) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 9.1km distant from the designated site, as no pathway for such effects exists. There is no hydrological connectivity between the development and the European Site and they are located in separate surface water sub-catchments. Given the

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			distance from the development and the absence of connectivity there is no potential for indirect effects on the QI's of this cSAC to occur or have occurred. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment cSAC (000365) **Distance :** 11.4 km from Wind farm site 8.3km from Grid Connection Route	› Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] › Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130] › Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] › Northern Atlantic wet heaths with *Erica tetralix* [4010] › European dry heaths [4030] › Alpine and Boreal heaths [4060] › *Juniperus communis* formations on heaths or calcareous grasslands [5130] › Calaminarian grasslands of the *Violetalia calaminariae* [6130]	Detailed conservation objectives for this site (Version 1, October 2017) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 8.3km distant from the designated site, as no pathway for such effects exists. There is no hydrological connectivity between the development and the European Site and it is in a separate surface water catchment from the development. Given the distance from the development and the absence of connectivity there is no potential for indirect effects on the QI's of this cSAC to occur or have occurred. The development is outside the 2.5km identified foraging range of the known lesser horseshoe roosts for which the site is designated as mapped in Map 10 of the detailed conservation objectives for this cSAC. Therefore there is

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
	› *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] › Blanket bogs (* if active bog) [7130] › Depressions on peat substrates of the *Rhynchosporion* [7150] › Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] › Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] › *Taxus baccata* woods of the British Isles [91J0] › *Geomalacus maculosus* (Kerry Slug) [1024] › *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] › *Euphydryas aurinia* (Marsh Fritillary) [1065] › *Petromyzon marinus* (Sea Lamprey) [1095] › *Lampetra planeri* (Brook Lamprey) [1096] › *Lampetra fluviatilis* (River Lamprey) [1099] › *Salmo salar* (Salmon) [1106] › *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] › *Lutra lutra* (Otter) [1355] › *Trichomanes speciosum* (Killarney Fern) [1421] › *Najas flexilis* (Slender Naiad) [1833] › *Alosa fallax killarnensis* (Killarney Shad) [5046]		no potential for indirect impacts as a result of disturbance to occur or have occurred. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**
Bandon River cSAC (002171) **Distance:** 9.9 km from Wind farm site	› Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation [3260]	This site has the generic conservation objective, *'To maintain or restore the favourable conservation*	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 9.9km distant from the designated site, as no pathway for such effects exists.

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
11.2km from Grid Connection Route	› Alluvial forests with *Alnus glutinosa and Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] › *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] › *Lampetra planeri* (Brook Lamprey) [1096]	*condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.'* (NPWS (2018) Generic Version 6.0)	There is no hydrological connectivity between the development and the site and they are in separate surface water catchments. No potential pathway for indirect effects on the QI's of this site to occur or have occurred was identified. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**
Kilgarvan Ice House cSAC (000364) **Distance:** 16.4km from Wind farm site 7.2km from Grid Connection Route	› *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]	Detailed conservation objectives for this site (Version 1, November 2018) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 7.2km distant from the designated site, as no pathway for such effects exists. This site is designated for lesser horseshoe bat. The development is outside the identified 2.5km foraging range of the known lesser horseshoe roosts for which the site is designated, as mapped in Map 2 of the detailed conservation objectives for the cSAC. Therefore there is no potential for indirect impacts to occur or have occurred as a result of disturbance. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis**

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.
Old Domestic Building, Curraglass Wood cSAC (002041) **Distance:** 17.5km from Wind farm site 9.8km from Grid Connection Route	› *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]	Detailed conservation objectives for this site (Version 1, August 2018) were reviewed as part of the assessment and are available at www.npws.ie	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 9.8km distant from the designated site, as no pathway for such effects exists. This site is designated for lesser horseshoe bat. The development is outside the identified 2.5km foraging range of the known lesser horseshoe roosts for which the site is designated, as mapped in Map 2 of the detailed conservation objectives for the cSAC. Therefore there is no potential for indirect impacts to occur or have occurred as a result of disturbance. **The site is not in the Likely Zone of Impact and no further assessment is required. It can be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, could have in the future or have had in the past, any significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is not required.**

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
Special Protection Area (SPA)/proposed Special Protection Area			
Mullaghanish to Musheramore Mountains SPA (004162) Distance: 4.7km from Wind farm site 8.3km from Grid Connection Route	› Hen Harrier (*Circus cyaneus*) [A082]	This site has the generic conservation objective, *'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.'* (NPWS (2020) Generic Version 7.0)	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 4.7km distant from the designated site, as no pathway for such effects exists. Notwithstanding the fact that the development lies outside the 2km core foraging range for the SCI species hen harrier as per Scottish Natural Heritage guidance (2016), the species was recorded on the site during the extensive bird surveys undertaken. No breeding activity was recorded and all except one of the records were from the winter months. It is identified as a Key Ornithological Receptor of high sensitivity and following a precautionary approach, individuals recorded could potentially be associated with the population within the SPA and further assessment of the effects that may occur or have occurred on this species is required. Consequently, the potential for significant indirect effects on this European Site cannot be excluded. This site is considered to be **within the Likely Zone of Impact**. **It cannot be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, will not have or has not had a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required.**

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
The Gearagh pSPA (004109) **Distance:** 7.6km by land & 9.3km via surface water from Wind farm site 10.1km from Grid Connection Route	• Wigeon (*Anas penelope*) [A050] • Teal (*Anas crecca*) [A052] • Mallard (*Anas platyrhynchos*) [A053] • Coot (*Fulica atra*) [A125] • Wetland and Waterbirds [A999]	This site has the generic conservation objectives, *'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.'* *and* *'To maintain or restore the favourable conservation condition of the wetland habitat at The Gearagh SPA as a resource for the regularly-occurring migratory waterbirds that utilise it'* (NPWS (2020) Generic Version 7.0)	There is no potential for, and there have been no, direct effects as the development is located entirely outside and approximately 7.6km distant from the designated site, as no pathway for such effects exists. The development site does not provide significant supporting habitat for any of the SCI species for which the SPA is designated. None of the SCI species were assigned as Key Ornithological Receptors during the extensive bird surveys that were undertaken on the site. Therefore, no potential for indirect impacts on the SPA population to occur or have occurred as a result of disturbance/displacement or collision risk were identified. This SPA is located hydrologically downstream of the development via the River Toon which runs through the development site and via the River Lee, which is located downstream of the development site. Therefore, taking a precautionary approach, a potential pathway for indirect effects on supporting wetland and Waterbird [A999] habitat to occur or have occurred, in the form of deterioration of surface water quality resulting from pollution, associated with the construction and operational phases of the development was identified. Consequently, the potential for significant indirect effects on this European Site cannot be excluded. This site is considered to be **within the Likely Zone of Impact**.

Designated Sites and distance from development	Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 17/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			It cannot be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, will not have or has not had a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required.

3.3 European Sites with the Potential to be Significantly Affected by the Cleanrath wind farm Development

The following European Sites have the potential to be significantly affected by the operation of the Cleanrath wind farm development:

The Gearagh cSAC

This cSAC is located hydrologically downstream of the development via the River Toon which runs through the development site and via the River Lee, which is located downstream of the development site. Therefore, taking a precautionary approach, a potential pathway for indirect effects to occur on the following QI habitats and species, in the form of deterioration of surface water quality resulting from pollution, associated with operation of the development was identified:

- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]
- Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
- *Lutra lutra* (Otter) [1355]

It cannot be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, will not have a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required.

The Gearagh pSPA

This SPA is located hydrologically downstream of the development via the River Toon which runs through the development site and via the River Lee, which is located downstream of the development site. Therefore, taking a precautionary approach, a potential pathway for indirect effects to occur or have occurred on the following SCI habitat, in the form of deterioration of surface water quality resulting from pollution, associated with the operation of the Cleanrath wind farm development was identified:

- Wetland and Waterbird [A999]

It cannot be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, will not have a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required.

Mullaghanish to Musheramore Mountains SPA

Whilst this European Site is located outside the Core Foraging Range of the SCI Species, hen harrier (as identified in '*Assessing Connectivity with Special Protection Areas'* (Scottish Natural Heritage, 2016)), it is located within the maximum foraging range for this species. As hen harrier were recorded on the wind farm site during the extensive surveys undertaken (occasionally during the winter period), following the precautionary principle, the potential for significant effects on this species could not be excluded:

- Hen harrier [A082]

It cannot not be excluded, on the basis of objective information, that the Cleanrath wind farm development, individually or in combination with other plans or projects, will not have a significant effect on this European site. Accordingly, a Stage Two Appropriate Assessment is required.

3.4 Likely Cumulative Impact of the Works on European Sites, in-combination with other plans and projects

In circumstances where it can be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will not have a significant effect on a number of European sites identified above, there is no possibility of likely cumulative impacts on those particular European sites arising as between the development and other plans and projects.

Where potential pathways for effects have been identified in Table 3-1, then the potential for cumulative effects resulting from the development when considered in combination with other plans and projects, cannot be discounted at the screening stage and the potential cumulative impacts arising as between the development and other plans and projects are required to be considered as part of a Stage Two Appropriate Assessment.

4. ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS

4.1 Concluding Statement

Following an examination, analysis and evaluation of the relevant data and information set out within this Screening Report, it can be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the development, individually or in combination with other plans and projects, will not have a significant effect on the following sites, which may be "screened out" for Appropriate Assessment:

- St. Gobnet's Wood cSAC
- Derryclogher (Knockboy) Bog cSAC
- Glanlough Woods cSAC
- Mullaghanish Bog cSAC
- Bandon River cSAC
- Kilgarvin Ice House cSAC
- Old Domestic Building, Curraglass Wood cSAC

Following an examination, analysis and evaluation of the relevant data and information set out within this Screening Report, it cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the development, individually or in combination with other plans and projects, will not have a significant effect on the following sites, which may be "screened in" for Appropriate Assessment:

- The Gearagh cSAC
- The Gearagh pSPA
- Mullaghanish to Musheramore Mountains SPA

As a result, an Appropriate Assessment is required, and a Natura Impact Statement has been prepared in respect of the Cleanrath wind farm development in order to assess whether the operation and decommissioning of the Cleanrath wind farm development will adversely affect the integrity of these European sites.

5. BIBLIOGRAPHY

Bailey, M. and Rochford J. (2006) Otter Survey of Ireland 2004/2005. Irish Wildlife Manuals, No. 23. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. and Fuller, R.J. (2013). Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland. BTO Books, Thetford, UK.

Barbour, M.T. and J.B. Stribling. (1991) Use of Habitat Assessment in Evaluating the Biological Integrity of Stream Communities. Biological Criteria: Research and Regulation: 25-38. EPA-440/5-91-005. Washington, DC: Office of Water, US EPA.

Birds Directive (2009/47/EC) – http://ec.europa.eu/environment/nature /legislation/birdsdirective /index _en.htm

CIEEM, 2019, Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive 79/409/EEC as amended) (Birds Directive) – transposed into Irish law as European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011).

DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin.

DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February, 2010. Department of the Environment, Heritage and Local Government.

Duffy, Marie (2018). The Corncrake Conservation Project Annual Report 2018. National Parks and Wildlife Service.

EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.

EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC.

EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.

EC (2006) Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg.

EC (2007a) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. Office for Official Publications of the European Communities, Luxembourg. European Commission.

EC (2007b) Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment.

European Communities (Conservation of Wild Birds) Regulations, 1985, SI 291/1985 & amendments – http://www.irishstatutebook.ie.

European Communities (Natural Habitats) Regulations, SI 94/1997, SI 233/1998 & SI 378/2005 – http://www.irishstatutebook.ie.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council.

Habitats Directive (92/43/EEC).

Murphy, D.F. (2004) Requirements for the Protection of Fisheries Habitat During Construction and Development Works at River Sites. Eastern Regional Fisheries Board, Dublin.

NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

NPWS Protected Site Synopses and maps available on http://www.npws.ie/en/ProtectedSites/.

NRA (2004) Environmental Impact Assessment of National Road Schemes – A Practical Guide, National Roads Authority, Dublin.

NRA (2004) Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1 ed.). Dublin: National Roads Authority.

NRA (2005) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. Dublin: National Roads Authority.

NRA (2006) Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes. Dublin: National Roads Authority.

NRA (2009). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes. Dublin: National Roads Authority.

NRA (2008). The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads. Dublin: National Roads Authority.

O'Connor. T. J -Consulting Engineers (2009) Modelling of Cork Harbour.

Scottish Natural Heritage (SNH) (July 2013) Assessing Connectivity with Special Protection Areas (SPA)

Stace, C. A. (1997). New Flora of the British Isles. Cambridge: Cambridge University Press.

Therivel R. (2009) Workshop Material on the Habitats Directive Assessment of Plans Levett-Therivel Sustainability Consultants on behalf of the Heritage Council, Kilkenny.

Therivel, R. (2009) 'Appropriate assessment of plans in England', Environmental Impact Assessment Review 29(4), pp. 261-272.