



SCART MOUNTAIN WIND FARM, CO. WATERFORD

NATURA IMPACT STATEMENT

December 2024



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1 INTRODUCTION

TOBIN has prepared this Natura Impact Statement (NIS) report, on behalf of FuturEnergy Ireland, to inform the appropriate assessment of the proposed Scart Mountain Wind Farm in County Waterford (which along with all of the associated infrastructure and works including the proposed Grid Connection Route (GCR) and Turbine Delivery Route (TDR) is hereafter referred to as the proposed project).

1.1 DESCRIPTION OF THE PROPOSED PROJECT SITE

The proposed project site is located in County Waterford on the northern border with County Tipperary, in the townlands of Knocknanask, Tooranaraheen, Knocknasheega and Scart Mountain (as presented in Figure 3-1 and Figure 3-2). The project site elevation above sea level ranges from 486m at the summit of Knocknanask (ITM 611600, 607249), to 430 m at the summit Knocknasheega (ITM 613691, 605992) and down to 130 m on the lower slopes of Scart Mountain at Sleveen.

The proposed wind farm site, which is 981.4 ha in size, occurs mostly within a Coillte landholding along with some third-party lands. The main access to the proposed project is via a local access road (L5055) which, along with the L1029, connects the site to the N72 to the south. The site will also be accessed via the L5054, which is only proposed during the operational phase and only for light vehicles.

1.2 BRIEF DESCRIPTION OF THE PROPOSED PROJECT

The proposed project comprises 15 no. wind turbines with an overall blade tip height of 179.5-185 m inclusive, a rotor diameter range from 149-163 m inclusive, a hub height range from 102.5-110.5 m inclusive, and all associated foundations and hard-standing areas in respect of each turbine. These will have an operational life of 35 years.

The proposed GCR for the proposed project comprises 15.5 km of underground cable leading from the southern area of the project site at Sleveen to the existing Dungarvan 110kV substation at Dungarvan, with the route being mostly along local and regional roads.

The proposed TDR follows the public road network from route from Bellevue Harbour via national roads including the N25, N29 and N72. The proposed works to allow for delivery of oversize components to the site are located in the townlands of Crinnaghtaun West, Ballyduff East and Rathpatrick, with sections of minor widening of the local roads and addition of passing bays in Crinnaghtaun West, Lacken and Lackenrea. Minor additional works such as hedgerow trimming and temporary demounting of some signage, etc. will also be required at various locations along the route.

1.3 PURPOSE OF THIS REPORT

The purpose of this report is to provide supporting information to assist the competent authority, in this case An Bord Pleanála, to carry out an appropriate assessment to determine if the proposed project is likely to result in adverse effects on the integrity of European sites¹.

1.4 RELEVANT LEGISLATION

The main pieces of relevant legislation are as follows:

- The Habitats Directive 92/43/EEC
- The Birds Directive 2009/147/EC
- European Communities (Birds and Natural Habitats) Regulations 2011 – 2022 (Unofficial consolidation Updated to 28 July 2022)
- Planning and Development Acts 2000 to 2024 - PART XAB (Updated to 24 September 2024)

¹ Natura 2000 sites, Special Areas of Conservation and Special Protection Areas, are referred to as European Sites in the [Planning and Development Acts 2000 – 2024](#) and [European Communities \(Birds and Natural Habitats\) Regulations 2011 – 2021 \(Unofficial Consolidation-Updated to 28 July 2022\)](#).

2 METHODS

The approach taken in preparing this document is broadly based on standard methods and best practice guidance, as referenced in the document text and listed in the References in Section 8.

2.1 NATURA IMPACT STATEMENT

The approach to preparing the NIS is summarised as follows:

- Describe the elements of the project that are likely to give rise to significant effects on the European Sites.
- Set out the conservation objectives of the European sites.
- Describe how the project will affect the key species and key habitats of the European sites.
- Describe how the integrity of European sites is likely to be affected by the project.
- Describe what measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the European sites.
- Consider findings and determine if potential for adverse effects on European sites remains after such measures have been implemented.

2.2 PROJECT TEAM

This report was prepared by Ria Aherne Project Ecologist with TOBIN. Ria has six years post-graduate experience in ecology and environmental consultancy. Ria has predominantly been involved in the surveying and reporting of large-scale public and private infrastructure projects where she has carried out numerous Screenings for Appropriate Assessments, Natura Impact Statements and Ecological Impact Assessments for proposed projects.

This report was senior reviewed by Áine Sands B.Sc. (Hons), Senior Ecologist with ten years' post graduate experience in ecology and environmental consultancy. Áine has predominantly been involved in large renewable energy projects, such as wind, solar and hydrogen developments, where she has acted as Lead Ecologist. Áine has extensive experience in preparing and reviewing ecological reports such as Screenings for Appropriate Assessments, Natura Impact Statements and Ecological Impact Assessments.

3 DESCRIPTION OF THE PROPOSED PROJECT

A summary of the overall proposed project is as follows:

- Erection of 15 no. wind turbines with an overall blade tip height range from 179.5 m to 185 m inclusive, a rotor diameter range from 149 m to 163 m inclusive, a hub height range from 102.5 m to 110.5 m inclusive, and all associated foundations and hard-standing areas in respect of each turbine;
- Permanent upgrade to the existing forest entrance onto the L5055 local road in the townland of Lackenrea to be used as a construction entrance. It will also be used for operational phase access for HGVs only;
- Construction of 6 no. permanent site entrances to form 3 no. local road crossing points to enable site access during construction (on the L5054, L5055 and L1026 in the townlands of Moneygorm, Knocknasheega and Tooranaraheen respectively). The entrance associated with the crossing point on the L5054 will also function as an operational phase access for light vehicles only;
- Temporary improvements and modifications to 1 no. location at the junction of the N72 and the L1027 (known as Boheravaghera Cross or Affane Cross) to facilitate delivery of oversized loads and turbine delivery, in the townland of Crinnaghtaun West, Co. Waterford;
- Construction of 2 no. temporary construction compounds located within the northern and southern ends of the site, with associated temporary site offices, parking areas and security fencing;
- Erection of 1 no. Meteorological Mast of 100 m above existing ground level for the measuring of meteorological conditions, with a lightning finial extending above the mast;
- 2 no. temporary borrow pits;
- Permanent construction of approximately 12 km new internal site access roads and upgrade of approximately 7.2 km existing internal site roads, to include passing bays and all associated drainage, all within the wind farm site;
- Construction of temporary and permanent drainage and sediment control systems;
- Construction of 1 no. permanent 110kV electrical substation including:
 - 1 no. EirGrid control building containing worker welfare facilities and equipment store;
 - 1 no. Independent Power Producer control building containing high voltage switch room, site offices, kitchen facilities, storeroom and toilet amenities;
 - All electrical plant and infrastructure and grid ancillary services equipment;
 - Parking;
 - Lighting;

-
- Security Fencing;
 - Wastewater holding tank;
 - Rainwater harvesting equipment;
 - All associated infrastructure and services including site works and signage.
- All related site works and ancillary development including signage, berms, landscaping, and soil excavation;
 - Forestry felling (both permanent and temporary) to facilitate construction and operation including biodiversity enhancement measures, of the proposed project and any onsite forestry replanting;
 - All associated underground electrical and communications cabling connecting the wind turbines to the proposed wind farm substation.
 - Temporary improvements and modifications to 4 no. locations adjacent to the public road to facilitate delivery of oversized loads and turbine delivery in the townlands of Crinnaghtaun West, Ballyduff East and Rathpatrick;
 - Permanent widening of sections of the L5055 within the road corridor (to 4.5 m running width) to facilitate delivery of oversized loads/turbines and construction of 9 no. passing bays along the border between the townlands of Crinnaghtaun West, Lacken, Cluttahina, Turbeha, Belleville and Lackenrea;
 - All works associated with the connection of the proposed wind farm to the national electricity grid, which will be via a permanent tail fed 110 kV underground cable connection (approximately 15.5 km cable length of which approximately 13.3 km of which will be in the public road corridor) to the existing 110 kV Dungarvan Substation in the townland of Killadangan, Co. Waterford. There are 4 no. watercourse crossings on the proposed grid connection route (GCR) (of which 3 are classed as rivers and 1 is a stream);

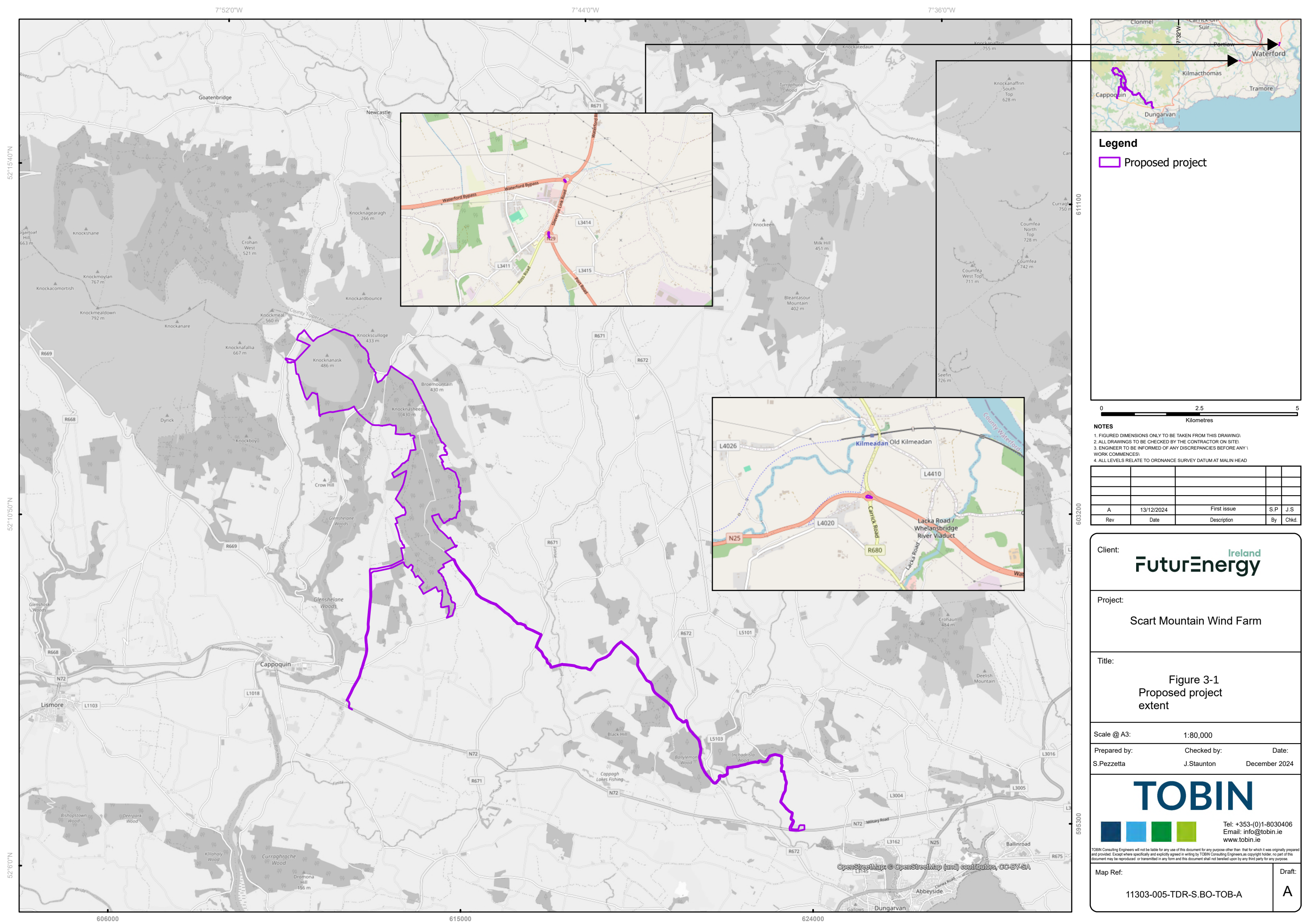
A 35-year operational life from the date of full commissioning of the entire wind farm is being sought for all works (other than temporary and permanent works specified above), and the subsequent decommissioning. Permission is being sought for a period of 10 years. The full proposed project has been considered and has been addressed as part of this EIAR.

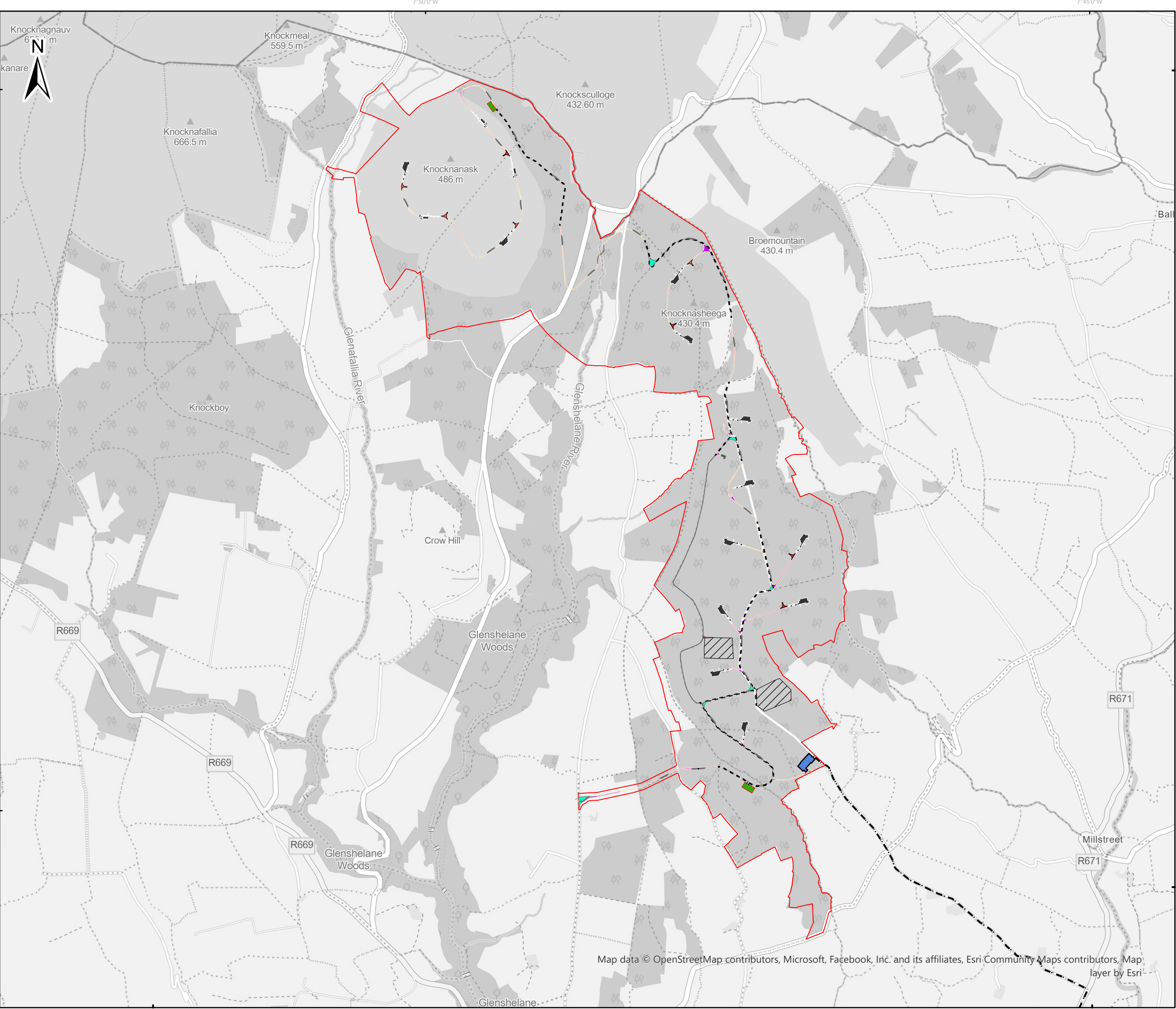
The site of the proposed wind farm (Figure 3-1) has an area of approximately 981.4 ha and comprises an elongated land parcel approximately 8 km long in the north/south direction and is approximately 1.9 km wide in an east/west direction at the widest point. The site lies between the R671 and the R669, on the southeastern side of the Knockmealdown Mountains. The proposed wind farm is located within the townlands of Knocknanask, Tooranaraheen, Knocknasheega, Scartmountain, Coolagortboy, Took, Moneygorm, Moneygorm East, Moneygorm West, Lackenrea Co. Waterford.

The proposed grid connection is located within the townlands of Scartmountain, Newtown, Coolroe, Staigbraud, Graigue Beg, Carrigaun (Hely), Graigue More, Scart (Hely), Scart (Sergeant), Vicarstown South, Glen Lower, Glen Upper, Lisroe, Carrowgarra Beg, Colligan More,

Colliganmountain, Colliganwood, Ballymacmague North, Inchindrislawood, Inchindrisla, and Killadangan Co. Waterford.

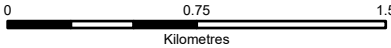
The proposed project works to allow for delivery of oversize components to the site are located in the townlands of Crinnaghtaun West, Ballyduff East and Rathpatrick, with sections of minor widening of the L5055 local road and construction of 9 no. passing bays where it borders Crinnaghtaun West, Lacken, Cluttahina, Turbeha, Belleville and Lackenrea. Hard surfacing and temporary signage demounting is required at the Carrick Road Roundabout on the N25 (where it intersects the R680) in Co. Waterford, as well as at the Slieverue Roundabout on the N29 (where it intersects the R711) and at the Luffany Roundabout on the N25 (where it intersects the N29) in Co. Kilkenny. Minor additional works such as hedgerow trimming and temporary demounting of some signage, etc. will also be required at various locations along the route. At the end of the construction phase, any areas which were given temporary hardcore surfaces will be reinstated. The decommissioning phase for the project would not require the use of the works areas for the proposed TDR, as the turbine components would be cut up on site to sizes that would fit on standard articulated trucks.





Legend

- Proposed Wind Farm Site
- Proposed Grid Connection Route
- Proposed infrastructure footprint within the proposed wind farm site**
- Proposed Site Roads
- Bridges
- Construction Compound
- Existing Site Roads
- Hardstands
- Met Mast Location
- Non turbine access roads
- Proposed Passing Bay
- Temporary Overrun Area
- Turning Bays
- Wheelwash
- Proposed Substation
- Borrow Pits



NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING\
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE\
3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY \
4. ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

A	13/12/2024	First issue	S.P	J.S
Rev	Date	Description	By	Chkd.

Client:

FuturEnergy Ireland

Project:

Scart Mountain Wind Farm

Title:

Figure 3-1:
Proposed wind farm site layout

Scale @ A3: 1:30,000

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4 OVERVIEW OF POTENTIAL IMPACTS

There are a number of elements associated with the proposed project's construction, operational and decommissioning phases that may give rise to direct and indirect impacts that have the potential to result in negative effects on European sites, either alone or in combination with other plans and projects. The significance of these impacts depends on the scale of the impact as well as the ecological condition and the sensitivities of the qualifying interests. Elements of the proposed project that may give rise to impacts which have been considered with regards to potential effects to European sites are discussed hereunder.

4.1 CONSTRUCTION PHASE

Potential construction phase impacts associated with the proposed project are discussed hereunder. The construction phase duration will be approximately 24 months.

4.1.1 *Habitat Loss*

The proposed project will be approximately 981.4 ha in area, however, the total area resulting in direct habitat loss from the proposed project infrastructure (i.e. borrow pits, bridges, construction compound, hardstands, met mast, site roads, substation, temporary overrun areas, turning bays, turbines and wheel wash) will be approximately 31 ha. All habitat loss will occur outside any European site, with the exception of the loss of approximately 0.07 ha of scrub habitat and the temporary loss of artificial surfacing (roads) within the Blackwater (Cork/Waterford) SAC (refer to Figure 4-1 below). As mentioned, the proposed project intercepts the Blackwater (Cork/Waterford) SAC at two locations; along the Glenshelane_010 River in the northern side of the proposed project (where a clear span bridge will be installed) and the where the CGR crosses the Finisk_020 River. Both the scrub and artificial surfaces are not qualifying interests of the Blackwater (Cork/Waterford) SAC.

The Annex I habitats within the 31 ha of land proposed to be permanently replaced by infrastructure include 0.086ha Dry Heath [4030], 0.02ha Dry Heath [4030] (in mosaic with Bracken HD1), 0.057ha of Dry Heath [4030] and Wet Heath [4010] (mosaic) and 1.93ha Wet Heath [4010]. However, these Annex I habitats are not considered qualifying interest habitats nor are they part of the Blackwater (Cork/Waterford) SAC that intersects part of the proposed project, therefore they will not be considered any further in this assessment.



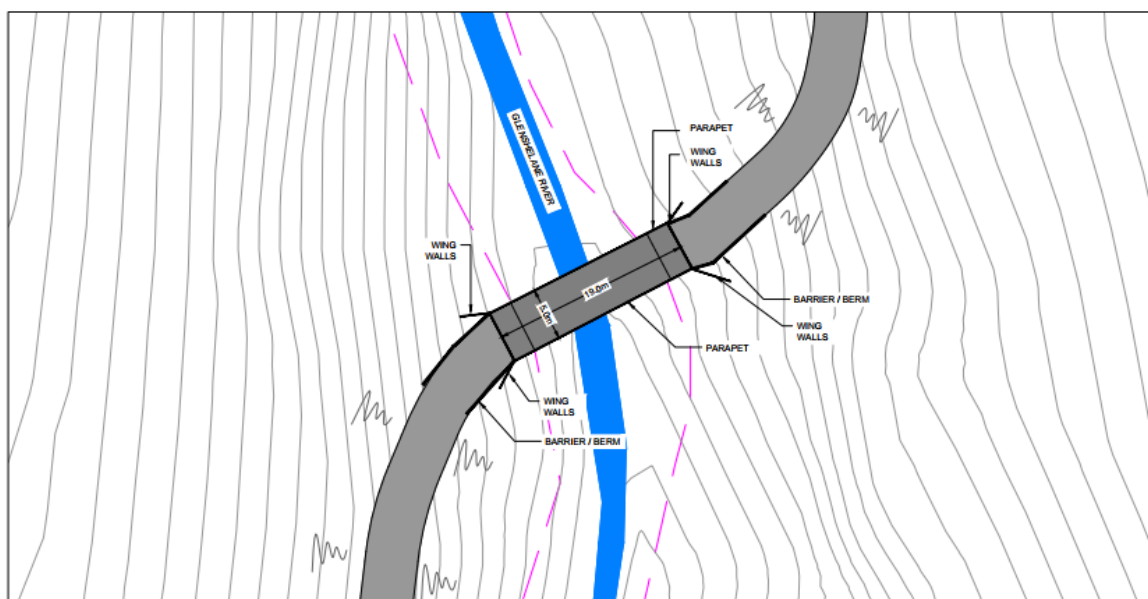


Figure 4-1: Proposed Clear span Bridge Crossing over the Glenshelane_010 River (SAC boundary illustrated in pink)

4.1.2 Habitat Degradation

4.1.2.1 Habitat Degradation due to Water Quality Impacts

It will be necessary to progressively clear the topsoil and subsoils from the proposed project to facilitate the construction activities. Large volumes of topsoil and subsoil will be removed to allow construction of the proposed project, including the turbine hardstand areas, access roads, construction compounds and borrow pits. Site clearance, excavation activities and the stockpiling of material have the potential to result in the runoff of sediment and nutrients, if not appropriately managed, which could result in an increase of suspended solids and nutrients depositing within nearby watercourses.

There is also the potential for spills and leaks of oils, fuels and chemicals from storage areas or plant and equipment to impact on aquatic habitats. Entry of cement-based products to drains or other surface water features within the proposed project represents a risk to the aquatic environment at and downstream of the release.

There are a number of watercourses occurring throughout the proposed project, which form part of and are hydrologically connected to the Blackwater River (Cork/Waterford) SAC. Further downstream, the proposed project is also hydrologically connected to the Blackwater Estuary SPA and Dungarvan Harbour SPA.

Horizontal directional drilling (HDD) will be required when installing the grid connection cable across the watercourses. Where HDD is required under watercourses, there is a risk of structural fracturing or collapse of rivers/streams. Furthermore, during trenchless construction there is the potential for the frac out drilling lubricant (e.g. bentonite). This is, in effect, very fine suspended solids which can lead to water quality impacts and habitat degradation downstream.

Horizontal directional drilling will be employed at six watercourse crossings along the proposed GCR. All of the proposed HDD sites are either within or hydrologically connected to a European site, a summary of these crossings is outlined in Table 4-1 below.

Table 4-1: Locations of Proposed HDD

WFD River Waterbody	WFD Code	EPA Name	EPA Code	Links to European Designated Sites
Finisk_020	IE_SW_18F020300	Finisk River	18F02	0 m – within the Blackwater River (Cork/Waterford) SAC
Finisk_020	IE_SW_18F020300	Scart 18 Stream	18S06	950 m upstream of Blackwater River (Cork/Waterford) SAC
Finisk_030	IE_SW_18F020500	Boherawillin Stream	18B35	7.5 km upstream of Blackwater River (Cork/Waterford) SAC
Finisk_030	IE_SW_18F020500	Moneygorm East Stream	18M05	7.5 km upstream of Blackwater River (Cork/Waterford) SAC
Finisk_030	IE_SW_18F020500	Ballykerin Middle Stream	18B32	2.6 km upstream of Blackwater River (Cork/Waterford) SAC
Colligan_040	IE_SE_17C010300	River Colligan	17C01	4 km upstream of Dungarvan Harbour SPA

4.1.2.2 Habitat Degradation due to Air Quality Impacts

Excavation activities can result in the temporary generation of dust in the locality of the works area. The Institute of Air Quality Management provide guidelines (Holman *et al.*, 2014), which prescribes potential dust emission risk classes to ecological receptors. The guidelines indicate that an assessment will be required where there is an ecological receptor within 50m of the boundary of a site; or 50 m of the route(s) used by construction vehicles.

The Blackwater River (Cork/Waterford) SAC is located within 50 m of the proposed project where construction works associated with the proposed clear span bridge will be undertaken directly adjacent to the site. Despite the proximity of the construction works to the SAC, there are no qualifying interest habitats located within 50 m of the works. There is therefore no potential for the generation of dust to result in any impacts to European sites and will not be considered further.

4.1.2.3 Habitat Degradation due to the Introduction of Invasive Alien Plant Species

Two invasive alien plant species (IAPS) were recorded within the proposed project during the ecological surveys; Himalayan balsam (*Impatiens glandulifera*) and rhododendron (*Rhododendron ponticum*). Although the two IAPS were identified within the boundary of the proposed project, they will not be disturbed by the construction works. There is therefore no potential for the IAPS to result in any impacts to European sites and will not be considered further.

4.1.3 Peat Slippage

A planning stage Peat Stability Risk Assessment was undertaken for the proposed project.

The findings of the assessment indicated a 'low' to 'negligible' hazard ranking for instability. Deterministic stability assessments indicated that the materials are considered to be stable in the short (undrained) and long (drained) term, including under the influence of extreme weather events, hence justifying the 'low' to 'negligible' hazard rankings assigned.

There is therefore for peat slippage to result in any impacts to European sites and will not be considered further.

4.1.4 Disturbance (Noise and Lighting)

The proposed construction works will result in an increase in noise levels during the construction phase, as well as an increase in personnel and traffic movement to and from the proposed project. It is proposed to use rock breaking and rock blasting to extract materials from the borrow pits.

It is likely that temporary construction lighting will be required during the construction works. Fugitive lighting could deter movement of species in the area. A temporary increase in noise levels, disturbance and lighting within the proposed project may result in disturbance to wildlife within the immediate vicinity of the site.

4.2 OPERATIONAL PHASE

Potential operational phase impacts associated with the proposed project are discussed hereunder. The proposed project is expected to be operational for at least 35 years.

4.2.1 Habitat Loss

There will be no additional loss of habitats during the operational phase. During wind farm operation, with the exception of maintenance vegetation clearance around the proposed turbines. Maintenance activity will be infrequent and low intensity, such maintenance activities will be confined to turbine locations, substations and other hardstanding infrastructures and will not require any additional habitat clearance.

4.2.2 Habitat Degradation due to Water Quality Impacts

During the operational phase of the proposed project, the management of surface water will be carried out in accordance with the proposed design and associated management features such as settlement ponds and SuDS which will have been installed during the construction phase and will be maintained through the operational phase. The drainage design will ensure that any surface water arising from the proposed project during operation will be contained and treated to ensure it can be dispersed out from the proposed project without any impact on existing downstream activities. Therefore, there is no potential for water quality impacts during the Operational Phase.

4.2.3 Disturbance (Noise and Lighting)

During the operational phase the level of operational traffic and ongoing maintenance is expected to be low, below 43 dB LA90. New lighting will be installed at the proposed substation site. The new lighting will result in a localised increase in artificial lighting within the immediate surrounding area.

4.2.4 Collision Risk

Wind farms have the potential to result in collision or interaction with birds during their operation (SNH, 2017). It was concluded in the Appropriate Assessment Screening Report (Appendix A-V), however, that none of the bird species recorded within the proposed project were associated with a population designated within a SPA. This was established due to the separation distance between the proposed project and SPAs which are all located outside the core foraging range of designated species (SNH, 2016).

4.3 DECOMMISSIONING PHASE

Decommissioning will include the dismantling of infrastructure, minor excavation activities and the removal of waste offsite. Impacts during decommissioning phase on habitats are expected to be of a lesser extent and magnitude to those anticipated during the construction phase, and of a shorter duration. The decommissioning phase is expected to last for approximately 12 months.



5 CONCLUSION OF APPROPRIATE ASSESSMENT SCREENING REPORT

An Appropriate Assessment (AA) Screening Report was prepared by TOBIN, on behalf of FuturEnergy Ireland. The conclusion of the AA Screening report is as follows:

“Likely significant effects on the three European sites (Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA) cannot be excluded. Therefore, it is considered that the proposed project should progress to the next stage of the process to determine if it will adversely affect the integrity of the three European sites”.

The AA screening report was prepared following standard good practice guidance and considered the potential for likely significant effects on European sites arising from the proposed project. Three European sites were identified as within the zone of influence of the proposed project are the Blackwater River (Cork/Waterford) SAC (002170), the Dungarvan Harbour SPA (004032), and the Blackwater Estuary SPA (004028). A total of thirteen watercourses drain from the proposed project, and all eventually flow into rivers that form part of the Blackwater River (Cork/Waterford) SAC, Blackwater Estuary SPA, and the Dungarvan Harbour SPA.

The potential impacts and effects on European sites associated with all phases of the development, construction, operation and decommissioning, were therefore identified for Blackwater River (Cork/Waterford) SAC, Blackwater Estuary SPA, and the Dungarvan Harbour SPA as these were considered to be within the zone of influence of the proposed project.

Thus, this NIS was prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act 2000, as amended, providing information to enable the competent authority to perform its statutory function to undertake an AA in respect of the proposed project.



6 NATURA IMPACT STATEMENT

The Natura Impact Statement sets out the potential effects of the proposed project (either alone or in combination with other projects or plans) on the integrity of the European sites 'screened in' due to the potential of likely significant effects or where the significance of potential effects is uncertain. The potential to undermine the integrity of the European sites is determined with respect to the conservation objectives of the sites and to their structure and function. The focus is on demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of the Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA should the proposed project proceed.

6.1 ASSESSMENT OF THE EFFECTS OF THE PROJECT ON THE INTEGRITY OF EUROPEAN SITES

The Competent Authority, in this case An Bord Pleanála, will be required to carry out an appropriate assessment to determine whether the proposed project would adversely affect the integrity of the three European sites screened in, Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA, should the proposed project proceed.

6.1.1 Describe the elements of the project that are likely to give rise to significant effects on the environment

The proposed project involves the construction, operation and decommissioning of a wind farm and all associated elements as described in Section 3 of this document. Potential impacts, as described in Section 4 of this document, which have the potential to affect the Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA are described hereunder.

6.1.1.1 Blackwater River (Cork/Waterford) SAC

The proposed project includes a clear span bridge over the Glenshelane_010 River which forms part of the Blackwater River (Cork/Waterford) SAC. The proposed GCR passes under (via directional drilling) a number of watercourses that also flow into the Blackwater River (Cork/Waterford) SAC.

There will be a loss of approximately 0.07 ha of scrub habitat within the boundary of the Blackwater (Cork/Waterford) SAC to facilitate the clear span bridge over the Glenshelane_010 River, and the temporary loss of artificial surfacing (roads) within the Blackwater (Cork/Waterford) SAC to facilitate works across the Finisk_020 River. Neither of these habitats are qualifying interests of the SAC. There will be no direct or indirect loss of any habitat listed as a qualifying interest of Blackwater (Cork/Waterford) SAC. The temporary construction works associated with the clear span bridge however may result in a temporary barrier to commuting otter along the bank of the river.

The release of sediment laden water or hydrocarbons was identified as a source of likely effects on water quality in the watercourses draining the proposed project that flow into, or from part of, the Blackwater River (Cork/Waterford) SAC. This SAC is designated for aquatic species and habitats that could be affected by a reduction in water quality.

6.1.1.2 Dungarvan Harbour SPA and Blackwater Estuary SPA

The watercourses draining the proposed project also flow into the Blackwater Estuary SPA and Dungarvan Harbour SPA. The Dungarvan Harbour SPA and Blackwater Estuary SPA are 13 km and 16 km respectively from the closest point of the proposed project.

There will be no direct loss of habitats within either of these two SPA sites and no risk of disturbance due to the distance from the proposed project and any associated works. It was also concluded that the proposed project will not result in any impacts on ex situ species which may forage, nest or roost outside the SPA, considering the separation distance between the proposed project and the two SPAs.

The proposed project however has the potential to result in a degradation of water quality due to the potential release of sediment laden surface water and/ or hydrocarbons into watercourses draining the proposed project. The release of sediment laden water or otherwise polluted surface water has the potential to reduce water quality in the watercourses draining the proposed project that flow into Blackwater Estuary SPA and Dungarvan Harbour SPA. The reduction in water quality, if severe enough, has the potential to affect food resources of the SPA species.

6.1.2 Set out the conservation objectives of the site

The detailed conservation objectives for the Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA were reviewed and are summarised below.

6.1.2.1 Blackwater River (Cork/Waterford) SAC

The conservation objectives for Blackwater River (Cork/Waterford) SAC and the list of specific attributes and targets defining the conservation objectives for each qualifying interest (likely to be affected) is listed within the supporting information available on the NPWS website². Site specific conservation objectives have been set by the NPWS for each of the listed qualifying interests (with the exception of **Taxus baccata* woods of the British Isles [91J0]) of the Blackwater River (Cork/Waterford) SAC (NPWS, 2012a).

The conservation objectives³ for the Blackwater River (Cork/Waterford) SAC can be summarised as follows:

- To maintain the favourable conservation condition of the habitats and species listed as qualifying interests for the Blackwater River (Cork/Waterford) SAC, which is defined by list of specific attributes and targets provided in the supporting documents on the NPWS website.

An assessment of whether the potential impacts, identified in Section 104 could adversely affect the integrity of the SAC was undertaken in relation to the attributes, measures and targets that

² <https://www.npws.ie/protected-sites/sac/002170> (last accessed 23 November 2024)

³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002170.pdf (last accessed 23 November 2024)

would be expected to define the favourable conservation condition of the qualifying interests of the SAC. This assessment is presented in Table 8-1 in Appendix A-I of this report.

6.1.2.2 Blackwater Estuary SPA

Site specific conservation objectives have been set by the NPWS for each of the listed qualifying interests of the Blackwater Estuary SPA (NPWS, 2012b). The NPWS (2012b) conservation objectives were reviewed and considered for the relevant qualifying interests, available on the NPWS site, when preparing this report. The conservation objectives⁴ for the Blackwater Estuary SPA can be summarised as follows:

- To maintain the favourable conservation condition of the habitats and species listed as qualifying interests for the Blackwater Estuary SPA, which is defined by list of specific attributes and targets provided in the supporting documents on the NPWS website.

An assessment of whether the potential impacts, identified in Section 104, could adversely affect the integrity of the SPA was undertaken in relation to the attributes, measures and targets that would be expected to define the favourable conservation condition of the Special conservation interest of the SPA. This assessment is presented in Table 8-2 in Appendix A-II of this report.

6.1.2.3 Dungarvan Harbour SPA

Site specific conservation objectives have been set by the NPWS for each of the listed qualifying interests of the Dungarvan Harbour SPA (NPWS, 2012c). The NPWS conservation objectives (NPWS, 2012c)⁵ for Dungarvan Harbour SPA can be summarised as follows:

- To maintain the favourable conservation condition of the habitats and species listed as qualifying interests for the Dungarvan Harbour SPA, which is defined by list of specific attributes and targets provided in the supporting documents on the NPWS website.

An assessment of whether the potential impacts, identified in Section 104 could adversely affect the integrity of the SPA was undertaken in relation to the attributes, measures and targets that would be expected to define the favourable conservation condition of the Special conservation interest of the SPA. This assessment is presented in Table 8-3 in Appendix A-III of this report.

6.1.3 Describe how the project or plan will affect key species and key habitats

The proposed project has the potential to affect key species and habitats of the Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA. Only the qualifying interests with potential to be affected by the proposed project are considered as other qualifying interests have been excluded due to distance or because they are not sensitive to the identified impacts and effects and thus not likely to be affected. The key species and habitats likely to be affected in the Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA are discussed below.

⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004028.pdf (last accessed November 2024)

⁵ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004032.pdf (last accessed November 2024)



6.1.3.1 Blackwater River (Cork/Waterford) SAC

The proposed project has the potential to result in effects on some of the qualifying interests of the River Blackwater (Cork/Waterford) SAC. The key qualifying interests, habitats and species, likely to be affected by the deterioration in water quality as a result of the proposed project are set out below.

- Water courses of plain to montane levels with the *Ranuncullion fluitantis* and *Callitricho-Batrachion* vegetation [3260]
- Estuaries [1130]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]
- Sea lamprey (*Petromyzon marinus*) [1095]
- Brook lamprey (*Lampetra planeri*) [1096]
- River lamprey (*Lampetra fluviatilis*) [1099]
- Twait shad (*Alosa fallax fallax*) [1103]
- Atlantic salmon (*Salmo salar*) [1106]
- Otter (*Lutra lutra*) [1355]

6.1.3.1.1 Water courses of plain to montane levels with the *Ranuncullion fluitantis* and *Callitricho-Batrachion* vegetation

The exact locations of this habitat within the Blackwater River (Cork/Waterford) SAC is not known. Therefore, for the purposes of this assessment it is assumed this habitat is present throughout the SAC. Modifications of watercourse depth and flow, changes in water quality and increases in sedimentation can negatively affect this aquatic habitat (Ní Bhroin, 2006). The proposed project has the potential to result in the reduction of water quality due to the release of sediment laden waters and/ or hydrocarbons during the construction and decommissioning phases.

The proposed project has the potential to result in the degradation of water quality within the SAC, which could negatively impact *Ranuncullion fluitantis* and *Callitricho-batrachion* vegetation (Ní Bhroin, 2016).

As outlined in Table 8-1 in Appendix A-I, the release of large amounts of suspended solids and a degradation in water quality has the potential to impact the substratum and alter the vegetation composition, which would constitute an **adverse effect on the integrity of the site**.

6.1.3.1.2 Estuaries

Estuaries are coastal inlets with significant freshwater influence, they are a diverse habitat that help maintain coastal ecosystems (NPWS, 2019a). This habitat stretches from the Blackwater [Munster] transitional water body at Cappoquin to the southernmost reaches of the Lower Blackwater Estuary transitional waterbody at Youghal Harbour (NPWS, 2012a) and is approximately 8km downstream from the proposed project. Most of the pressures on this habitat comes from various sources of pollution including domestic wastewater, agriculture and marine aquaculture (NPWS, 2019a).

As outlined in Table 8-1 in Appendix A-I, a target of the qualifying interest habitat is to conserve the high quality of the *Mytilus edulis*-dominated community, subject to natural processes. *Mytilus edulis* are sensitive to changes in water quality and turbidity (Beyer *et al.*, 2017).

Impacts to the water quality could result in a decrease in the area and distribution of the habitat area and of the community extent and structure of *Mytilus edulis* and other aquatic organisms which would constitute an **adverse effect on the integrity of the site**.

6.1.3.1.3 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*)

Alluvial forests occur on heavy soils which are periodically inundated by the annual rise of river levels, but otherwise well-drained and aerated during low water (NPWS, 2019a). This Annex I habitat occurs along stretches of the Blackwater River and the Upper Blackwater Estuary Barrow (NPWS, 2012a). The closest area of alluvial forest to the proposed project is located approximately 11km downstream (NPWS, 2012a). O'Neill (2013) notes the main impacts to alluvial forests is invasive non-native species, the dumping of garbage and solid waste, grazing and pollution to surface water.

The proposed project has the potential to result in the degradation of water quality within the SAC. Surface water pollution can negatively impact aquatic or alluvial plants. As outlined in Table 8-1 in Appendix A-I, impacts to the forest could result in a decrease in the habitat area and distribution of the woodland which would constitute an **adverse effect on the integrity of the site**.

6.1.3.1.4 Lamprey (Sea, Brook and River)

Suitable silt habitat for lamprey was recorded present within the Glenshelane_010 River, Finisk_030 River, Finisk_020 River and the Farnane_010 River during the aquatic surveys carried out by TOBIN. The remaining survey sites within the study area did not contain suitable soft substrate. The site surveyed within the Finisk_030 river contained six lamprey ammocoetes, ranging from 1.5 cm-7 cm (Site 18). The site surveyed on the Finisk_020 river contained four lamprey ammocoetes that were all 2cm in length (Site 21).

These watercourses drain the proposed project and flow into the Blackwater River (Cork/Waterford_ SAC. It is likely that these recorded species form part of the SAC population. Maitland (2003) notes that the critical freshwater habitat requirements of lamprey relate to the availability of clean spawning gravels and nursery silts.

As outlined in Table 8-1 in Appendix A-I, the degradation of water quality can reduce the availability of suitable habitat such as fine sediment and spawning habitat for lamprey which would reduce the carrying capacity of the SAC to support lamprey. A reduction in fine spawning habitat would constitute an **adverse effect on the integrity of the site**.

6.1.3.1.5 Twaite shad

The twaite shad is a diadromous species that spends most of its life in estuaries and coastal waters expect when it returns upstream to spawn in late May/early June (NPWS, 2019b). More than 75% of the main stem length of rivers are accessible by this species within this SAC (NPWS, 2012a). Therefore, it is assumed that this species occurs throughout the Blackwater River SAC.

The proposed project has the potential to result in the reduction of water quality during the construction and decommissioning phases. As outlined in Table 8-1 in Appendix A-I a degradation of water quality can reduce the availability of suitable habitat such as clean spawning habitat for twaite shad which would reduce the carrying capacity of the SAC to

support this species. A reduction in clean gravel and spawning habitat would constitute an **adverse effect on the integrity of the site**.

6.1.3.1.6 Atlantic Salmon

Following the habitat suitability survey carried out by TOBIN, it was determined that the watercourses within the proposed project boundary offer limited spawning, holding or nursery habitat for salmonids. However, the survey sites located on watercourses downstream of the proposed project, offer improved salmonid habitat due to the low-lying topography, substrate composition and lower energy nature of the watercourses

NASCO (2010) notes salmon habitat requirements as clean spawning gravels with adequate flow and well oxygenated water. The proposed project has the potential to result in release of sediment laden water and reduction of water quality during the construction and decommissioning phases of the proposed project.

As outlined in Table 8-1 in Appendix A-I, the Blackwater is currently exceeding its CL for one sea winter salmon and its multi sea winter CL for 2012 (NPWS, 2012a), however, the proposed project has the potential to result in the degradation of water quality and habitat, which could result in further impacts on the CL of the Blackwater River. A decrease in adult spawning fish, spawning sites and degradation in water quality would all constitute an **adverse effect on the integrity of the site**.

6.1.3.1.7 Otter

Otter has previously been recorded on the upper reaches of the Glenshelane_010 River, upstream of the proposed clear span bridge location, and on the Finisk_030 River, approximately 3km downstream of the proposed project⁶. Considering the previous recordings of otter and the suitable habitat present, it is considered likely that otter use the connected streams and rivers that drain from the proposed project for foraging and commuting.

As outlined in Table 8-1 in Appendix A-I, a significant pollution event from the works area could result in a decline in available feeding resources for otter. In addition, the installation of the clear span bridge across the Glenshelane_010 River could result in barrier to commuting otter.

A significant decline in fish biomass available for otter and a barrier to connectivity would constitute an **adverse effect on the integrity of the site**.

6.1.3.2 Blackwater Estuary SPA

This SPA is designated for eight Annex I bird species as well as being recognised for its wetlands and waterbirds which are listed and discussed in relation to the proposed project below:

- Wigeon (*Anas penelope*) [A050]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Lapwing (*Vanellus vanellus*) [A142]
- Dunlin (*Calidris alpina*) [A149]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Bar-tailed Godwit (*Limosa lapponica*) [A157]
- Curlew (*Numenius arquata*) [A160]
- Redshank (*Tringa totanus*) [A162]

⁶ <https://maps.biodiversityireland.ie/> [Accessed November 2024]



-
- Wetland and Waterbirds [A999]

The above special conservation interests are known to forage largely on intertidal mud and sandflats (with the exception of wigeon that also feed on shallow subtidal areas and saltmarsh).

As outlined in Table 8-2, the potential degradation of water quality due to the construction and decommissioning phases of the proposed project could potentially result in a decrease in suitable foraging habitats for the special conservation interests. A decrease in foraging habitats would result in a decrease in carrying capacity of the special conservation interests within the SPA. This could potentially affect the long-term population of the SCI species within the site and change their distribution range. A significant decline in feeding resources available for these SCIs and changes to their distribution would constitute an **adverse effect on the integrity of the site**.

6.1.3.3 Dungarvan Harbour SPA

The proposed project is hydrologically connected to the Dungarvan Harbour SPA through the Colligan_040 River which intersects the proposed GCR. The Dungarvan Harbour SPA includes Dungarvan Harbour as far east as Ballynacourty Point and west to include tidal sections of the River Brickey (NPWS, 2014b).

This SPA is designated for 15 Annex I bird species as well as being recognised for its wetlands and waterbirds which are listed and discussed in relation to the proposed project below:

- Great Crested Grebe (*Podiceps cristatus*) [A005]
- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Shelduck (*Tadorna tadorna*) [A048]
- Red-breasted Merganser (*Mergus serrator*) [A069]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Grey Plover (*Pluvialis squatarola*) [A141]
- Lapwing (*Vanellus vanellus*) [A142]
- Knot (*Calidris canutus*) [A143]
- Dunlin (*Calidris alpina*) [A149]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Bar-tailed Godwit (*Limosa lapponica*) [A157]
- Curlew (*Numenius arquata*) [A160]
- Redshank (*Tringa totanus*) [A162]
- Turnstone (*Arenaria interpres*) [A169]
- Wetland and Waterbirds [A999]

The proposed project has potential to cause release of sediment contaminated surface water during the construction and operation phases. The discharge of contaminated surface water has the potential to cause negative effects through the deterioration of water quality, increases in siltation or suspended solids, and potential reduction in the availability of suitable prey species.

As outlined in Table 8-2, the potential degradation of water quality due to the construction and decommissioning phases of the proposed project could potentially result in a decrease in suitable foraging habitats for the special conservation interests. A decrease in foraging habitats would result in a decrease in carrying capacity of the special conservation interests within the SPA. This could potentially affect the long-term population of the special conservation interests

within the site and change their distribution range. A significant decline in feeding resources available for these special conservation interests and changes to their distribution would constitute an **adverse effect on the integrity of the site**.

6.1.4 Describe how the integrity of the European site is likely to be affected by the project or plan

The European guidance (2019) on Managing Natura 2000 sites defines integrity of the site as *'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified'*⁷. The guidance also goes on to describe the integrity of the site as involving its constitutive characteristics and ecological functions and advises that the decision as to whether it is adversely affected should focus on and be limited to the habitats and species for which the site has been designated and the site's conservation objectives.

6.1.4.1 Blackwater River (Cork/Waterford) SAC

The integrity of the Blackwater River (Cork/Waterford) SAC could be undermined if the accidental emissions of sediment and/or hydrocarbons from the proposed project during construction and decommissioning. The proposed project could cause deterioration in water quality or deposition of sediment on suitable spawning habitat of key species causing population reduction of key species through mortality or reduction in the distribution of habitat. The key habitats likely to be affected by sediment release into the aquatic environment may be reduced in area or potentially could disappear from the worst affected stretches of the SAC. In addition, the construction works associated with the proposed clear span bridge across the Glenshelane_010 River could result in a temporary barrier to commuting otter.

The impacts and effects described could undermine the conservation objectives for the qualifying interests likely to be affected which would adversely affect the integrity of Blackwater River (Cork/Waterford) SAC.

6.1.4.2 Blackwater Estuary SPA

The integrity of the Blackwater Estuary SPA is not likely to be affected through accidental emissions of sediment from the proposed project during construction and decommissioning. While the proposed project could result in release of sediment causing a deterioration in water quality this impact is not likely to directly affect the population trend and distribution of the qualifying interests of the SPA some 16 km downstream. Indirect effects on supporting habitat and prey species however could potentially cause reduction of key species through mortality or reduction in the distribution of suitable foraging habitat. The effects described could undermine the conservation objectives for the qualifying Interests affected which would adversely affect the integrity of Blackwater Estuary SPA.

6.1.4.3 Dungarvan Harbour SPA

The integrity of the Dungarvan Harbour SPA is not likely to be affected through accidental emissions of sediment from the proposed project during construction and decommissioning.

⁷ Available to download at this link <https://op.europa.eu/en/publication-detail/-/publication/11e4ee91-2a8a-11e9-8d04-01aa75ed71a1> (last accessed 25 November 2024)

While the proposed project could result in release of sediment causing a deterioration in water quality this impact is not likely to directly affect the population trend and distribution of the qualifying interests of the SPA some 13 km downstream. Indirect effects on supporting habitat and prey species however could potentially cause reduction of key species through mortality or reduction in the distribution of suitable foraging habitat. The effects described could undermine the conservation objectives for the qualifying Interests affected which would adversely affect the integrity of Dungarvan Harbour SPA.

6.2 MITIGATION

6.2.1 *Describe what mitigation measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the site*

The mitigation measures are proposed have regard to the EC Guidance (2021) and the mitigation hierarchy more generally. The guidelines states that:

‘The hierarchy of mitigation measures suggests first avoidance (i.e. preventing significant impacts from happening in the first place) and then reduction of impact (i.e. reducing the magnitude and/or likelihood of an impact)’

In addition, the guidelines further states that:

‘Each mitigation measure must be described in detail, specifying how it will eliminate or reduce the adverse impacts identified, and how, when and by whom it will be implemented. The following aspects must be indicated:

The recently published (2024) Institute of Environmental Management and Assessment (IEMA) Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction has been used in describing and defining mitigation measures to be implemented.

6.2.1.1 *Standard Good Working Practices*

Good work practices will be employed at all times on site during all phases of the proposed project. However, good practice to protect watercourses from sediment contamination will be particularly important during the construction and decommissioning of the proposed project. Good practice working practices to protect watercourses are embedded in the design of the wind farm project and include measures such as those set out in, but not limited to, the following documents:

- Guidelines on Protection of Fisheries During Construction Works In and Adjacent to Waters (IFI, 2016),
- Environmental Good Practice on Site Guide (CIRIA, 2015).
- Scart Mountain Wind Farm Construction and Environmental Management Plan (CEMP).
- Scart Mountain Wind Farm Surface Water Management Plan (SWMP)

The CEMP submitted as part of the documentation supporting the planning application will be revised as required by the appointed contractor and will be treated as a live document to be updated as required throughout the construction of the development. The CEMP, SWMP and detailed drainage design for the proposed project incorporates a large number of tried and tested measures that are used as standard by industry for protection of water quality.

6.2.1.2 Surface Water Quality Mitigation Measures

During the construction phase of the proposed project surface water quality measures will be installed and maintained to ensure the protection of watercourses located within and downstream of the proposed project. Specific mitigation measures associated with the protection of water quality are further described below.

6.2.1.2.1 Sediment Control Measures

Pollution control measures which will be implemented during the construction phase are summarised below:

- No instream works will be permitted during the construction works. Where stream crossing occurs on site, a clear-span design bridge will be used.
- Culverting will only be used for minor forestry/field drains and will be carried out in dry weather periods.
- Prior to any excavation works commencing, silt fences will be erected along all areas where the construction works are within 10 m of a stream/river and 10 m around stockpiled to ensure sedimentation is prevented. The silt fencing will be maintained until all ground disturbance has ceased and vegetation re-established.
- Borrow pits and stockpiled material will be designated and located at least 50 m from any water body or drainage ditch under supervision of an ECoW.
- The temporary construction compound and welfare facilities will be set back a minimum of 50m from all waterbodies.
- Excavation works will not be carried out during or following heavy rainfall (i.e. if there is a yellow weather warning in place or 5-mm in a 1-hour period).
- Excavations will be covered with tarp or similar material, during high rainfall to avoid the creation of surface water with high concentrations of suspended solids.
- Settlement ponds have been designed to accommodate Greenfield runoff rates + 20% for climate change.

The location of the proposed surface water management controls such as silt fences, silt traps and settlement ponds are show on Sheets 1-3 in Appendix IV.

6.2.1.2.2 Pollution Control Measures

The following are measures which will be implemented by the appointed contractor to minimise and avoid the effects of water pollution during the proposed construction phase:

- Spill-kits and hydrocarbon absorbent packs will be stored in the cabins of all construction vehicles. All machine operators and site staff will be fully trained in the use of this equipment.
- All machinery will be regularly maintained and checked for leaks. Services will only be undertaken within the construction compound or offsite.
- Re-fuelling onsite of construction equipment and the addition of hydraulic oil or lubricants to vehicles / equipment will take place in designated hard surface, bunded areas within the construction compound. If it is not possible to bring machinery to the refuelling point, fuel will be delivered in a double-skinned mobile fuel bowser. A drip tray will be used beneath the fill point during refuelling operations in order to contain any spillages that may occur.
- All concrete will be mixed off site and will be brought in as required and poured in place at site. No on-site batching will be permitted within the proposed project.
- All concrete browsers will be washed down at a dedicated concrete washout area located within the construction compound or off site at a licensed facility. No chemicals



that are deleterious to aquatic organisms will be used in cleaning works. All raw, uncured waste concrete will be cured at a designated location within the construction compound or off site.

- All concrete works will be scheduled during dry weather conditions only, to reduce the elevated risk of runoff.
- All waste will be removed from the site and disposed of by an approved waste contractor in accordance with prevailing waste management regulations.
- Water intercepted from constructed roads and hardstanding areas will be similarly managed to ensure that uncontrolled water discharges do not take place to the receiving environment.

6.2.1.2.3 Horizontal Directional Drilling Measures

Specific mitigation measures which will be implemented during the horizontal directional drilling works are summarised hereunder:

- A competent and experienced Contractor will be appointed to undertake the horizontal directional drilling works.
- The Contractor will prepare a directional drilling Method Statement which will outline the standard approach for the construction. The Method Statement will include a contingency plan for frac-out and for excessive ground settlement.
- The Contractor will undertake the directional drilling in accordance with industry best practice including British Standard EN 16191:2014 Tunnelling machinery, safety requirements and CIRIA C648 "*Control of water pollution from linear construction projects Technical Guidance*".
- To prevent loss of bentonite or 'frac-out' from occurring, a series of actions will be implemented; the drill fluids operator will monitor drill fluid density, viscosity and solids content on an ongoing basis, to ensure that the fluid does not increase in viscosity, requiring additional pressure to maintain mobility.
- In critical cases, viscometers will be used to measure drill fluid gel strength and shear strength. Filtrate can also be measured to calculate the amount of filter cake building up on the internal wall of the bore. Any increases in pump pressure experienced by the drill operator will be investigated immediately to prevent the risk of pressure build up within the annulus. In some circumstances, dependant on the drilling equipment used, the pilot drill borehole assembly will be fitted with a down hole pressure monitor to measure pressure in the annulus between the drill and the bore wall. This will give an early indication of pressure build up in the hole and allow the drill operator to prevent a 'frac-out'. If there is a risk of a 'frac-out' a number of measures will be implemented including:
 - pumping a pill of drilling fluid with a higher density to the risk zone; and
 - circulate and pump loss circulation material (typically cork or manufactured inert polymers) to the risk zone to seal the risk zone, grouting of the risk zone, and, or launch a packer before the risk zone.
- The Contractor will implement procedures to maximise the recirculation or reuse of drilling fluid to minimise waste disposal.
- Disposal of drilling fluids will be the responsibility of the Contractor to an approved and licenced waste facility.
- Monitoring of the drilling operations will be undertaken at all times by the Contractor. The monitoring will include visual inspection of the pits and monitoring of the volume of returns flowing back to the entry pit. The monitoring personnel will be in constant communication with the drilling rig operator and thus will be able to immediately cease drilling if necessary.

- Buffer strips of natural uncleared vegetation shall be preserved between construction activity. Reception pits will be situated outside of the riparian zone. A buffer zone width for smaller channels (< 10 m) of 20 m or greater will be maintained.
- The Contractor will prescribe silt fencing around the reception pits if deemed necessary.

6.2.1.3 Clear Span Bridge Measures

The following mitigation measures will be implemented during the construction works associated with the bridge crossing over the Blackwater (Cork/Waterford) SAC:

- The bridge construction works will be undertaken outside the Annual Close Season for instream works, i.e. no works will be undertaken between October to April.
- The works programme will also take account of weather forecasts and predicted rainfall. All large excavations, subsoil and vegetation stripping will be avoided during adverse weather.
- A Method Statement detailing the proposed works will be prepared in advance, and in agreement with Inland Fisheries Ireland (IFI).
- Temporary fencing will be erected, allowing a 3 m setback buffer from the riverbanks, creating an exclusion zone. The exclusion zone will protect the riverbanks and maintain safe passage of wildlife (otter) along the banks. The fences will also act as a safe working zone for construction personnel. The fencing will also ensure that no material is stored in proximity to the river's edge. All material will be stored a minimum of 20 m from the bank of the river.
- Silt fences will be installed between the abutment works and the edge of the riverbank, on either side of the banks. The silt fencing will be erected as per the manufacturer's guidelines, under the ECoW supervision and will be maintained until all ground disturbance has ceased and vegetation re-established. Once installed, the silt fence will be inspected regularly during construction and more frequently during heavy rainfall events.
- The false bridge decking and fine mesh netting, which will be established below the existing bridge will ensure that any debris from the cutting of the existing bridge deck and abutments, will be captured on the decking and collected and removed offsite. No debris will be allowed to deposit within the watercourse.
- Appropriate dust suppression system to prevent dust and debris from entering the watercourse will be used during the duration of the works. The dust suppression system will consist of electrical tools with continuous supplied water to suppress dust. A suitable vacuum system will be put in place on the bridge decking to remove the slurry from the cutting surfaces and ensure none is deposited within the watercourse.
- All concrete will be mixed off site and will be brought in as required and poured in place at site. All concrete works will be scheduled during dry weather conditions only. Only once the concrete has adequately cured, the precast bridge decks will be installed using a crawler crane positioned outside the exclusion zone on the west bank.
- Only water and environmentally friendly joint sealants will be used on the bridge.
- Riparian vegetation will be left intact where practicable. Protection will be afforded to riparian vegetation by fencing prior to commencement of the works. The natural channel width will be maintained, which will ensure the adequate water depth and velocity for fish passage at all times during the duration of the works.
- All construction lighting will be directed away from the river to maintain a dark corridor
- Following the completion of works, all material will be removed from site. The false bridge decking will be carefully cleaned, before dismantling, to ensure any residual debris does not deposit within the watercourse.



6.2.1.4 Monitoring Measures

6.2.1.4.1 Pre-Construction Otter Survey

In the event that construction works are carried out more than 12 months after the initial survey (July 2023), pre-construction otter surveys will be undertaken within the proposed project (focussing on the proposed clear span bridge location and at the HDD locations), by an appropriately experienced ecologist, to identify any changes to protected mammal activity, such as the establishment of new holts. The pre-construction survey will be conducted no more than 10-12 months in advance of the construction works, as per the NRA (2005) guidelines. In the event that otter holts are identified within 150 m of the footprint of the works, an appropriate wildlife (derogation) license will be sought from the NPWS.

6.2.1.4.2 Surface Water Monitoring

Pre-construction, construction and post-construction phase surface water monitoring will be carried out. All surface water features will be monitored in order to record any variations in the quality of the local surface water environment related to the proposed project. The main water parameters in terms of their potential to cause damage to aquatic life, ecosystems, human health, and water quality in the receiving waters are outlined in Table 6-1 below.

Table 6-1 Surface Water Monitoring Schedule for Scart Mountain Wind Farm

Phase	Preconstruction	Construction	Post construction
Monitoring Period	3 Months	24 Months	3 Months
Frequency	Continuous		
Parameters	Turbidity	Turbidity	Turbidity
Frequency	Daily		
Surface Water Parameters		Turbidity and visual checks (examination of surface drainage/sediment control measures/watercourses)	Turbidity and visual checks (examination of surface drainage/sediment control measures/watercourses)
Frequency	Weekly		
Surface Water Parameters	pH, Electrical Conductivity, Turbidity, Temperature (Handheld Meter)	pH, Electrical Conductivity, Turbidity, Temperature (Handheld Meter) Monitoring during clearance phase and construction works at Turbines	N/A
Frequency	Monthly		
Surface Water Parameters	Conductivity, Chloride, Dissolved Oxygen, Molybdate, Reactive Phosphorus, Mineral Oil, pH, Turbidity, Total Ammonia, Total Phosphorus, Total Suspended Solids (Grab Samples)	Conductivity, Chloride, Dissolved Oxygen, Molybdate, Reactive Phosphorus, Mineral Oil, pH, Turbidity, Total Ammonia, Total Phosphorus, Total Suspended Solids (Grab Samples)	Conductivity, Chloride, Dissolved Oxygen, Molybdate, Reactive Phosphorus, Mineral Oil, pH, Turbidity, Total Ammonia, Total Phosphorus, Total Suspended Solids (Grab Samples)
Frequency	Quarterly		

Surface Water Parameters	N/A	Conductivity, Chloride, Dissolved Oxygen, Molybdate, Reactive Phosphorus, Mineral Oil, BTEX, pH, Turbidity, Nitrate, Total Ammonia, Total Phosphorus, Total Suspended Solids (Grab Samples)	N/A
Frequency	Pre-Construction Report	Monthly and Quarterly Monitoring Report	Final Monitoring Report
Surface Water Parameters	Upgrade limits/trigger values for construction phase water monitoring	Results screened against construction phase surface water monitoring trigger levels	Results screened against construction phase surface water monitoring trigger levels

6.2.1.5 Roles and Responsibilities

The Applicant (FuturEnergy Ireland) will appoint an Owners Engineer (OE) to represent them during the construction of the proposed project. The appointed OE will have access to and / or employ various specialist advisors such as an archaeologist, ecologist, hydrologist and geotechnical engineer. The role of these specialist advisors will be defined in detail in the Owners Engineer specifications but in summary it is expected that they will review and approve method statements and other documents relating to their specialisms.

The Applicant will appoint a contractor to construct the wind farm and the contractor will be required to provide a suite of specialists, including an Ecological Clerk of Works (ECoW), as part of their delivery team. The role of the Ecological Clerk of Works (ECoW) is defined by British Standard BS 42020:2013⁸ as “*person who has the ecological qualifications, training, skills and relevant experience to undertake appropriate monitoring and to provide specialist advice to “development” site personnel on necessary working practices required to i) safeguard ecological features on site and ii) aid compliance with any consents and relevant wildlife legislation related to the works.*”

The ECoW will be responsible for monitoring compliance with the mitigation measures and construction phase monitoring requirements relating to ecology / biodiversity as set out in the project EIAR, CEMP, SWMP and NIS. The ECoW will have authority over the content of routine reports and will act independently in determining instances of non-compliance with the consents and licenses or any breaches of environmental legislation. The ECoW will also be required to document activities using photographs and log information to registers / logs. The Environmental Manager and ECoW will work as a team and are expected to be in contact daily with the ECoW relaying any identified concerns or issues on site to the Environmental Manager. The ECoW will inform the OE of any information that could increase the risk of a non-compliance and/ or require a new licence, consent or approval.

The contractor appointed to construct the proposed wind farm and grid route will be required to designate a member of staff, or engage a specific person, to assume responsibility for implementation of all environmental protective measures during the construction phase. It is recommended that the responsibility for environmental protection and compliance with the

⁸ BS 42020:2013 is the Biodiversity – Code of practice for planning and development. Published by British Standards Institute (Currently being updated by BSI).

required protective measures is assigned to an environmental manager appointed by the contractor.

The appointed contractor will be responsible for the implementation of good working practice during construction and mitigation measures as set out in this document. The appointed contractor will be responsible for providing a briefing on environmental protection measures and ecological sensitivities of the Site to all site personnel in advance of commencement of enabling works. The appointed contractor and OE (on behalf of the Applicant) will be responsible for ensuring all mitigation measures set out in this document, in the CEMP and any site-specific method statements are fully and correctly implemented.

On completion of construction FuturEnergy Ireland, or their appointed agents, will be responsible for managing and operating the development in line with the requirements of the planning conditions and mitigation measures required for the operational and decommissioning phases. The names and contact details of the individuals with responsibility for implementation and supervision of mitigation measures during all phases of the development will be clearly identified and set out in documents such as the CEMP and site-specific method statements as appropriate.

6.2.1.6 Decommissioning Phase Mitigation Measures

The expected life span of the proposed project is at least 35 years. The decommissioning works will comprise the removal of all over ground elements of the wind farm.

Given the classification of the potential impacts from the proposed project's decommissioning phase (i.e., of same nature as the potential impacts during the construction phase), the mitigation measures proposed for the construction phase of the proposed project, are also proposed for the proposed project's decommissioning phase.



Table 6-2: Summary of Proposed Mitigation Measures

Project Phase	Effect Identified	Proposed mitigation measure	Timescale for implementation	Monitoring Requirements	How the measures will avoid / reduce effects	Confidence in effectiveness to avoid/reduce effects
Construction Phase	Surface water quality impacts	Mitigation measures are outlined in Section 6.2.1.2 and Section 6.2.1.4.	All mitigation measures will be implemented prior to and throughout the duration of the construction phase.	The appointed ECoW will carry out daily monitoring of all water quality protection measures.	The proposed mitigation and monitoring measures will ensure there is no impacts to surface water quality, thus there is no potential for adverse effects.	The measures outlined are in line with current guidelines (CIRIA, 2001, CIRIA, 2006 & IFI, 2016) and are standard good practice working methods used to protect water quality.
	Barrier to commuting otter	Mitigation measures are outlined in Section 6.2.1.3.	All mitigation measures will be implemented prior to and throughout the duration of the construction phase.	Monitoring will be undertaken by the appointed ECoW	By minimising works within the SAC and maintaining an exclusion zone will allow safe passage of otter along the river banks.	The measures outlined are in line with current guidelines (NRA, 2006).
Decommissioning Phase	Impacts during decommissioning are expected to be of similar type and magnitude to those anticipated during the	Mitigation measures are outlined in Section 6.2.1.6.	The monitoring and maintenance measures will be implemented throughout the duration of the decommissioning phase.	The same monitoring requirements undertaken during the construction phase will be undertaken during the	Mitigation and monitoring measures will ensure there is no potential for adverse effects.	The measures outlined are in line with current guidelines (CIRIA, 2001, CIRIA, 2006 & IFI, 2016) and are standard proven technologies /

Project Phase	Effect Identified	Proposed mitigation measure	Timescale for implementation	Monitoring Requirements	How the measures will avoid / reduce effects	Confidence in effectiveness to avoid/reduce effects
	construction phase, but generally of a shorter duration.			decommissioning phase.		methods in ensuring the protection of water quality.

6.3 IN - COMBINATION EFFECTS

Plans and projects within of the Zol of the proposed project were reviewed for potential to act in-combination with the proposed project. The EIA portal⁹ and Waterford County Council Planning Portal¹⁰ was accessed to examine planning applications with potential to act in – combination with the proposed project.

6.3.1 Projects

Dyrick Hill Wind Farm (Planning Ref: ABP317265)

The proposed Dyrick Hill Wind Farm (ABP Ref. 317265), the site of which is located directly adjacent to the currently proposed Scart Mountain Wind Farm site, was recently (October 2024) refused planning permission by An Bord Pleanála. As there is still a potential for judicial review at the time of writing this EIAR chapter (November 2024), it has been decided to include the project in this assessment. In the event that the refusal of the Dyrick Hill Wind Farm application is confirmed prior to the determination of the current application, then any discussions around the in-combination effects for this project in this EIAR can be removed from consideration by An Bord Pleanála.

Dyrick Hill Wind Farm Ltd. are proposing to develop a 12 no. 6.0 – 7.2 MW turbine wind farm and grid connection at Dyrick Hill, Co Waterford. A Screening for AA report and a NIS of the Dyrick Hill Wind Farm were prepared (Doherty Environmental, 2023). The NIS identified the potential for adverse effects on six European sites; Blackwater River SAC, Dungarven Harbour SPA, Ballymacoda Bay SPA, Ballycotton Bay SPA, Cork Harbour SPA and the Saltee Island SPA, due to water quality and disturbance impacts. The NIS goes on to prescribe targeted mitigation measures to safeguard the abovementioned European sites and concludes that; ‘A range of mitigation measures have been prescribed that, once implemented in full, will remove the risk of adverse effects posed by the proposed project to these qualifying features of interest’ and that the ‘project will not, alone or in-combination with other plans or projects, result in adverse effects to the integrity and conservation status of European Sites in view of their Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion’. Considering the conclusion of the Dyrick Hill Wind Farm NIS, there is no potential for in-combination effects with the proposed project under appraisal in this report.

Coumnagappul Wind Farm

Coumnagappul Wind Farm Limited are proposing the development of 10 no. wind turbines with a blade tip height of 185 m, a hub height of 104 m and a rotor diameter of 162 m. A Screening for AA report and a NIS of the Coumnagappul Wind Farm were prepared (Fehily Timoney, 2023).

The NIS identified a pathway for effect between four European sites which include the Lower River Suir SAC, the Blackwater River (Cork/Waterford) SAC, the Dungarvan Harbour SPA and Mid-Waterford Coast SPA.

⁹ <https://www.gov.ie/en/publication/9f9e7-eia-portal/> [Accessed: September, 2024]

¹⁰ <https://waterfordcouncil.ie/services/planning/online-planning-enquiries/> [Accessed: September 2024]

The NIS concluded however that taking cognisance of the project design and mitigation measures to avoid effects, the proposed project (Counmagappul Wind Farm) will not have any residual adverse effect on the integrity of those four European sites. Considering the Counmagappul Wind Farm project will not result in any residual adverse effects, there is no potential for in-combination effects with the proposed project under appraisal in this report.

Other Smaller Developments

There are a number of small projects and applications in the area surrounding the proposed project that involve the construction or extension of small residential properties (e.g. application no's: 22624, 19484, 19724 and 19726). Due to the lack of connectivity, there will be no significant impacts on any designated sites and therefore there is no potential for in combination effects with the proposed project under appraisal in this report.

6.3.2 Plans

The proposed project is located within the Waterford County administrative area. Chapter 9 (Climate Action, Biodiversity & Environment) of the Waterford City and County Development Plan (WCCDP) 2022 – 2028 includes objectives and policies (BD01, BD04 and BD05) which are associated with the protection of European sites. All new plans and projects proposed within the county must adhere to the abovementioned policies and objectives, as well as all other objectives associated with the protection of the environment, which ensures that all plans and projects proposed will not result in significant effects on biodiversity and European sites and includes the requirement that any future proposed plans or projects to be subject to Appropriate Assessment to examine and assess their effects on European sites, alone and in-combination with other plans and projects.



7 CONCLUSION

In absence of mitigation, the potential risks to the Blackwater River (Cork/Waterford) SAC, the Blackwater Estuary SPA and the Dungarvan Harbour SPA is the potential reduction in water quality and barrier to commuting otter. However, following the application of the detailed mitigation measures, potential adverse effects will be avoided, and it can be determined that there will be no risk of adverse effects on the qualifying interest habitats and species, or on overall site integrity in light of the conservation objectives for the Blackwater River (Cork/Waterford) SAC, the Blackwater Estuary SPA and the Dungarvan Harbour SPA.

There will be no adverse effects on the integrity of any European sites during development and operation of the proposed project, either alone or in-combination with any other plans or projects.



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Appendix A-I ADVERSE EFFECTS ON SITE INTEGRITY – BLACKWATER RIVER
(CORK/WATERFORD) SAC



Table 8-1: Assessment of the Potential for Adverse Effects on the Qualifying Interests of the Blackwater River (Cork/Waterford) SAC (NPWS, 2012a)

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Estuaries			
Conservation Objectives: To maintain the favourable conservation condition of Estuaries in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	The permanent area is stable or increasing, subject to natural processes.	The proposed project has the potential to result in the degradation of water quality within the SAC. <i>Mytilus edulis</i> are sensitive to changes in water quality and turbidity (Beyer <i>et al.</i> , 2017). Therefore, impacts to the water quality could result in a decrease in the area and distribution of the habitat area and of the community extent and structure of <i>Mytilus edulis</i> and other aquatic organisms which would constitute an adverse effect on the integrity of the site.
Community Extent	Hectares	Maintain the extent of the <i>Mytilus edulis</i> -dominated community, subject to natural processes.	
Community Structure: <i>Mytilus edulis</i> density	Individuals/m ²	Conserve the high quality of the <i>Mytilus edulis</i> -dominated community, subject to natural processes.	
Community Distribution	Hectares	Conserve the following community types in a natural condition: intertidal estuarine sandy mud community complex; subtidal estuarine fine sand with <i>Bathyporeia spp.</i> Community complex; sand and mixed sediment with polychaetes and crustaceans' community complex.	
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>			
Conservation Objectives: To restore the favourable conservation condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	Area stable or increasing, subject to natural processes, at least 19.2 ha for sites surveyed	The proposed project has the potential to result in the degradation of water quality within the SAC. Surface water pollution can negatively impact aquatic or alluvial plants. Impacts to the forest could result in a decrease in the habitat area and distribution of the woodland which would constitute an adverse effect on the integrity of the site.
Habitat distribution	Occurrence	No decline	
Woodland size	Hectares	Area stable of increasing. Where topographically possible, "large" woods at least 25 ha in size and "small" woods at least 3 ha in size	
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees;	

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
		subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	
Hydrological regime: Flooding depth/height of water table for maintenance of alluvial vegetation	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	The proposed project will not result in any changes to the existing flow regime of the Blackwater River or any associated tributaries. There is no potential for adverse effects.
Woodland structure: dead wood	m ³ per hectare; number per hectare	At least 30 m ³ /ha of fallen timber greater than 10 cm diameter; 30 snags/ha; both categories should include stems greater than 40 cm diameter (greater than 20 cm diameter in the case of alder)	The proposed project will not result in a change in the area of dead wood or veteran trees within the woodlands, as no works will occur outside the proposed project boundary, and this habitat type does not exist within the proposed project. There is no potential for adverse effects.
Woodland structure: veteran trees	Number per hectare	No decline	
Woodland structure: indicators of local distinctiveness	Occurrence	No decline	The proposed project will not result in the change in local distinctiveness or native tree cover, as no works will occur outside the proposed project boundary, and this habitat type does not exist within the proposed project. There is no potential for adverse effects.
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%	
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including alder (<i>Alnus glutinosa</i>), willows (<i>Salix spp</i>) and locally, oak (<i>Quercus robur</i>) and ash (<i>Fraxinus excelsior</i>)	The proposed project will not result in the change of typical native species or in the introduction of negative indicator species within the woodlands as no works will occur outside the proposed project boundary, and this habitat type does not exist within the proposed project. There is no potential for adverse effects.

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	
Watercourses of plain to montane levels with the <i>Ranuncullion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation			
Conservation Objectives: <i>To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranuncullion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets</i>			
Habitat distribution	Occurrence	No decline, subject to natural process	The proposed project has the potential to result in the degradation of water quality within the SAC, which could negatively impact <i>Ranuncullion fluitantis</i> and <i>Callitricho-batrachion</i> vegetation (Ní Bhroin, 2016). Impacts to the vegetation would result in a change of the area and distribution of the habitat which would constitute an adverse effect on the integrity of the site.
Habitat area	Kilometres	Area stable or increasing, subject to natural process	
Hydrological regime: river flow	Metres per second	Maintain appropriate hydrological regimes	The proposed project will not result in any changes to the existing flow regime of the Blackwater River or any associated tributaries. There is no potential for adverse effects.
Hydrological regime: tidal influence	Daily water level fluctuations - metres	Maintain natural tidal regime	The proposed project will not result in a change or impact to the tidal influence of the SAC. The proposed project occurs at an inland location and approximately 4 km away from the nearest tidal influenced waterbody (Upper Blackwater Estuary). Therefore, there is no potential for adverse effects.
Substratum composition: particle size range	Millimetres	The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (typically sands, gravels and cobbles).	The proposed project has the potential to result in the release of suspended solids into watercourses located downstream. The release of large amounts of suspended solids has the potential to impact the substratum which would constitute an adverse effect on the integrity of the site.
Water quality: nutrients	Milligrams per litre	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition.	The proposed project has the potential to result in the degradation of water quality and the release of suspended solids into watercourses located downstream. <i>Ranuncullion fluitantis</i> can tolerate slight pollution but is sensitive to rises in water turbidity (Ní Bhroin, 2016). The release of suspended solids and/or construction pollution has the potential to impact water quality and alter the
Vegetation composition: typical species	Occurrence	Typical species of the relevant habitat sub-type should be present and in good condition	

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
			vegetation composition, which would constitute an adverse effect on the integrity of the site.
Floodplain connectivity: area	Hectares	The area of active floodplain at and upstream of the habitat should be maintained	The proposed project will not result in a change in the river connectivity to the floodplains. There is no potential for adverse effects.
Sea Lamprey			
Conservation Objectives: <i>To restore the favourable conservation conditions of Sea lamprey in the Blackwater River (Cork/Waterford) SAC</i>			
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem and major tributaries down to second order accessible from estuary	No instream works will be undertaken within the SAC as part of the proposed project. There is no potential for the proposed project to inhibit accessibility through river channels, therefore, there is no potential for adverse effects.
Population structure of juveniles	Number of age/size groups	At least three age/size groups of lamprey present	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality can reduce the availability of suitable habitat such as fine sediment and spawning habitat for lamprey which would reduce the carrying capacity of the SAC to support sea lamprey. A reduction in fine sediment and spawning habitat would constitute an adverse effect on the integrity of the site.
Juvenile density in fine sediment	Juveniles/m ²	Juvenile density at least 1/m ²	
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds	
Availability of juvenile habitat	Number of positive sites in 3rd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality could reduce the availability of suitable habitat in the Glennafallia_010, Glennafallia_020, Glenshelane_010, Fernane_010, the Finisk_030, Moneygorm_010 and Finisk_020 WFD waterbodies and further downstream, thereby reducing the number of positive samples to below 50%. This would constitute an adverse effect on the integrity of the site.
Brook Lamprey			
Conservation Objectives: <i>To maintain the favourable conservation condition of brook lamprey in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets:</i>			
Distribution	% of river accessible	Access to all watercourses down to first order streams	No instream works will be undertaken within the SAC as part of the proposed project. No construction works will be undertaken outside the proposed project boundary. There is no potential for the proposed project to inhibit accessibility

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
			through river channels within the SAC, therefore, there is no potential for adverse effects.
Population structure of juveniles	Number of age/size groups	At least three age/size groups of brook/river lamprey present	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality can reduce the availability of suitable habitat, such as fine sediment and spawning habitat for lamprey, which would reduce the carrying capacity of the SAC to support brook lamprey. A reduction in fine sediment and spawning habitat would constitute an adverse effect on the integrity of the site.
Juvenile density in fine sediment	Juveniles/m ²	Mean catchment juvenile density of brook/river lamprey at least 2/m ²	
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds	
Availability of juvenile habitat	Number of positive sites in 2nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	The degradation of water quality could reduce the availability of suitable habitat in the Glennafallia_010, Glennafallia_020, Glenshelane_010, Fernane_010, the Finisk_030, Moneygorm_010 and Finisk_020 WFD waterbodies and further downstream, thereby reducing the number of positive samples to below 50%. This would constitute an adverse effect on the integrity of the site.
River Lamprey			
Conservation Objectives: <i>To maintain the favourable conservation condition of River lamprey in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets:</i>			
Distribution	% of river accessible	Greater than 75% of main stem and major tributaries down to second order accessible from estuary	No instream works will be undertaken within the SAC as part of the proposed project. There is no potential for the proposed project to inhibit accessibility through river channels, therefore, there is no potential for adverse effects.
Population structure of juveniles	Number of age/size groups	At least three age/size groups of brook/river lamprey present	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality can reduce the availability of suitable habitat such as fine sediment and spawning habitat for lamprey which would reduce the carrying capacity of the SAC to support river lamprey. A reduction in fine sediment and spawning habitat would constitute an adverse effect on the integrity of the site.
Juvenile density in fine sediment	Juveniles/m ²	Mean catchment juvenile density of brook/river lamprey at least 2/m ²	
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds	

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Availability of juvenile habitat	Number of positive sites in 2nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality could reduce the availability of suitable habitat in the Glennafallia_010, Glennafallia_020, Glenshelane_010, Fernane_010, the Finisk_030, Moneygorm_010 and Finisk_020 WFD waterbodies and further downstream within the Blackwater River, thereby reducing the number of positive samples to below 50%. This would constitute an adverse effect on the integrity of the site.
Twaite Shad			
Conservation Objectives: <i>To restore the favourable conservation condition of Twaite Shad in the Blackwater River (Cork/Waterford), which is defined by the following list of attributes and targets:</i>			
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary.	No instream works will be undertaken within the SAC as part of the proposed project. There is no potential for the proposed project to inhibit accessibility through river channels therefore, there is no potential for adverse effects.
Population structure: age classes	Number of age classes	More than one age class present	The proposed project has the potential to result in the degradation of water quality within the SAC. The degradation of water quality can reduce the availability of suitable habitat such as clean spawning habitat for twaite shad which would reduce the carrying capacity of the SAC to support this species. A reduction in clean gravel and spawning habitat would constitute an adverse effect on the integrity of the site.
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning habitats	
Water quality: oxygen levels	Milligrams per litre	No lower than 5mg/l	
Spawning habitat quality: filamentous algae; macrophytes; sediment	Occurrence	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plant) growth.	
Atlantic Salmon			
Conservation Objectives: <i>To restore the favourable conservation condition of Salmon in the Blackwater River (Cork/Waterford), which is defined by the following list of attributes and targets:</i>			
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary	No instream works will be undertaken within the SAC as part of the proposed project. There is no potential for the proposed project to inhibit accessibility through river channels therefore, there is no potential for adverse effects.

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded	The Blackwater is currently exceeding its CL for one sea winter salmon and its multi sea winter CL for 2012 (NPWS, 2012a), however, the proposed project has the potential to result in the degradation of water quality and habitat, which could result in further impacts on the CL of the Blackwater River. A decrease in adult spawning fish would constitute an adverse effect on the integrity of the site.
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	Crisp (2000) notes that ' <i>salmon spawning site selection is governed by complex environmental factors, which are all essential for successful spawning, egg survival and hatching, including intra-gravel flow, gravel size, water depth, as well as stream velocity and cover</i> ' and that ' <i>one of the most important factors for salmon egg survival is oxygen supply, which is dependent upon dissolved oxygen concentration and inter-gravel flow</i> '. High concentrations of suspended solids in the river are undesirable as they are likely to result in infilling of the gravel pores with fine material. The release of suspended solids and/or pollution has the potential to impact spawning sites which would constitute an adverse effect on the integrity of the site.
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes	
Out-migrating smolt abundance	Number	No significant decline	No instream works will be undertaken within the proposed project or within the SAC. The proposed project will therefore not inhibit smolt out migration. There is no potential for adverse effects on out-migrating smolt abundance.
Water quality	EPA Q Value	At least Q4 at all sites sampled by EPA	The proposed project may result in the degradation of water quality within the Glennafallia_010, Glennafallia_020, Glenshelane_010, Fernane_010, the Finisk_030, Moneygorm_010 and Finisk_020 WFD waterbodies and further downstream within the Blackwater River. The degradation of water quality due to the proposed project could prevent the watercourse from achieving Q4 water quality status. A degradation in water quality would constitute an adverse effect on the integrity of the site.
Otter			
Conservation Objectives: <i>To restore the favourable conservation condition of Otter in the Blackwater River (Cork/Waterford) SAC, which is defined by the following list of attributes and targets:</i>			

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Distribution	Percentage positive survey sites	No significant decline	The proposed project will not result in the loss of any holts or resting sites. There is no potential for changes in their distribution or a significant decline. There is, therefore, no potential for adverse effects.
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 103 ha above high water mark (HWM); 1165.7 ha along riverbanks / around ponds	The proposed project will result in a loss of scrub habitat along the banks of the Glenshelane_010 River where the clear span bridge is proposed. A loss of this habitat would constitute an adverse effect on the integrity of the site.
Extent of marine habitat	Hectares	No significant decline. Area mapped and calculated as 647.2 ha	The proposed project will not result in any decline in marine habitat, as no works (including the clearance of vegetation) will occur outside the proposed project. There is, therefore, no potential for adverse effects.
Extent of freshwater (river) habitat	Kilometres	No significant decline. Length mapped and calculated as 599.54 km	The proposed project will not result in any decline in the freshwater river habitat within the SAC, as no instream works are proposed. There is therefore no potential for adverse effects.
Extent of freshwater (lake) habitat	Hectares	No significant decline. Area mapped and calculated as 2.6 ha	The proposed project will not result in any decline in the freshwater lake habitat, as no works (including the clearance of vegetation) will occur outside the proposed project. There is, therefore, no potential for adverse effects.
Couching sites and holts	Number	No significant decline	No holts or couching sites were recorded within the proposed project. The proposed project will not result in the loss or decline in couching sites or holts, as none were recorded within the survey area. There is, therefore, no potential for adverse effects.
Fish biomass available	Kilograms	No significant decline	The proposed project may result in the degradation of water quality within the Glennafallia_010, Glennafallia_020, Glenshelane_010, Fernane_010, the Finisk_030, Moneygorm_010 and Finisk_020 WFD waterbodies and further downstream within the Blackwater River. The potential degradation of water quality within this SAC could affect the availability of fish biomass to otter. A significant pollution event from the works area could result in a decline in available feeding resources for otter. A significant decline in fish biomass

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
			available for otter would constitute an adverse effect on the integrity of the site.
Barriers to connectivity	Number	No significant increase	The installation of the clear span bridge across the Glenshelane_010 River could result in a temporary barrier to commuting otter. A barrier to connectivity would constitute an adverse effect on the integrity of the site.



Table 8-2: Assessment of the Potential for Adverse Effects on the Special Conservation Interests (SCI) of the Blackwater Estuary SPA (NPWS, 2012b)

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Wigeon, Golden Plover, Lapwing, Dunlin, Blacktailed Godwit, Bar-tailed Godwit, Curlew, and Redshank			
Conservation Objectives: To maintain the favourable conservation condition of these SCIs in the Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Population trend	Percentage change	Long term population trend stable or increasing	The proposed project has the potential to result in the degradation of water quality of waterbodies which are within and hydrologically connected to this SPA. The potential degradation of water quality due to the construction and decommissioning phases of the proposed project could potentially result in a decrease in suitable foraging habitats for the SCI species. A decrease in foraging habitats would result in a decrease in carrying capacity of the SCI species within the SPA. This could potentially affect the long-term population of the SCI species within the site and change their distribution range. A significant decline in feeding resources available for these SCIs and changes to their distribution would constitute an adverse effect on the integrity of the site.
Distribution	Range, timing, and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by these species, other than that occurring from natural patterns of variation.	
Wetlands and Waterbirds			
Conservation Objectives: To maintain the favourable conservation condition of the wetland habitat within the Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Wetland habitat	Area	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 871 ha, other than that occurring from natural patterns of variation.	No works will be undertaken within the SPA boundary, therefore, there will be no loss of the wetland habitat area. There is no potential for adverse effects on site integrity.

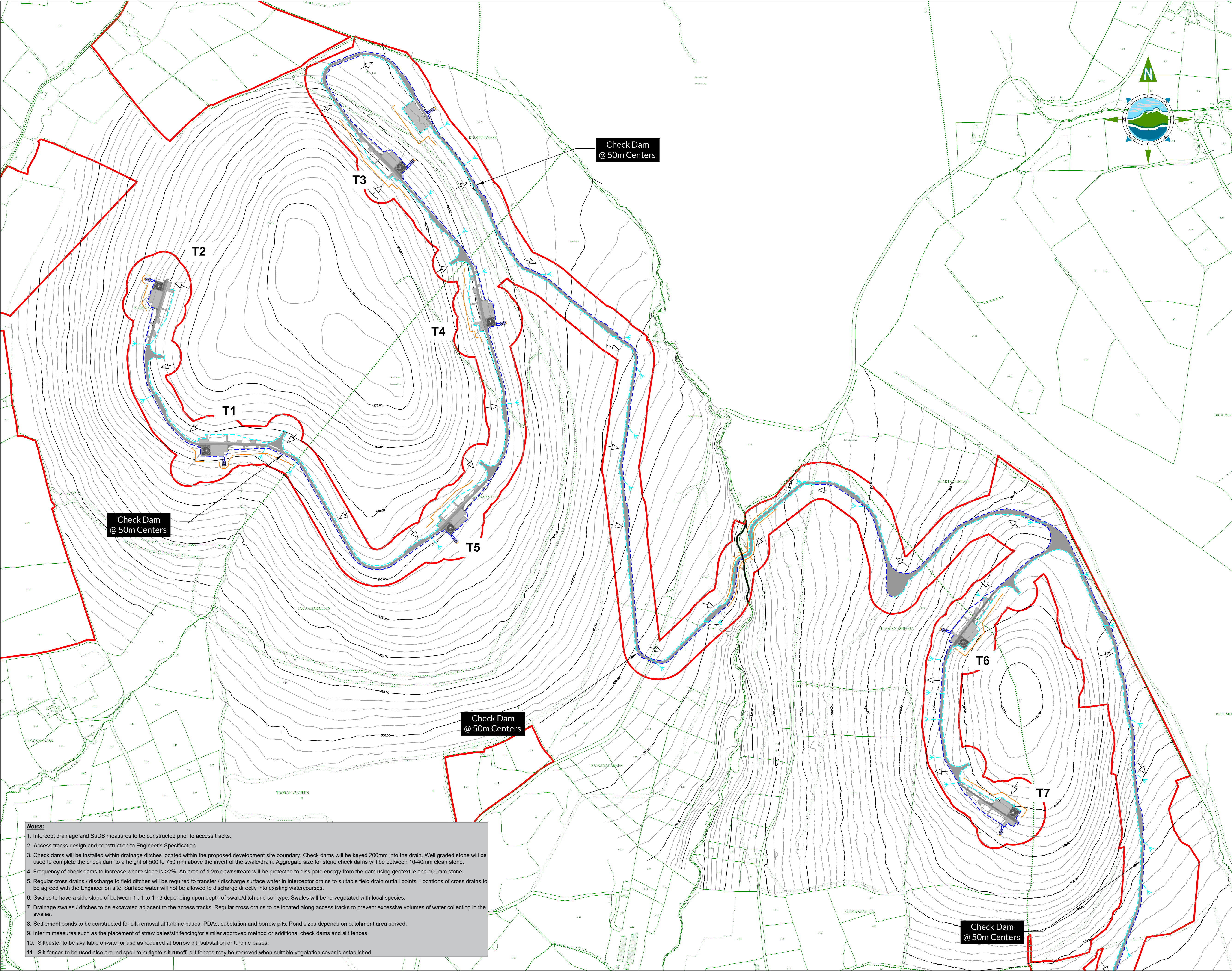
Appendix A-III ADVERSE EFFECTS ON SITE INTEGRITY – DUNGARVAN HARBOUR SPA



Table 8-3: Assessment of the Potential for Adverse Effects on the Special Conservation Interests (SCI) of the Dungarvan Harbour SPA (NPWS, 2012c)

Attributes	Measures	Target	Potential for Adverse Effects on Site Integrity
Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank and Turnstone			
Conservation Objectives: <i>To maintain the favourable conservation condition of these SCIs in the Dungarvan Harbour SPA, which is defined by the following list of attributes and targets:</i>			
Population trend	Percentage change	Long term population trend stable or increasing	The proposed project has the potential to result in the degradation of water quality to waterbodies which are within and hydrologically connected to this SPA. The potential degradation of water quality due to the construction and decommissioning phases of the proposed project could potentially result in a decrease in suitable foraging habitats for these SCI species. A decrease in foraging habitats would result in a decrease in carrying capacity of the SCI species within the SPA. This could potentially affect the long-term population of the SCI species within the site and change the distribution range of the SCI species. A significant decline in feeding resources available for these SCIs and changes to their distribution would constitute an adverse effect on the integrity of the site.
Distribution	Number and range of areas used by waterbirds	There should be no significant decrease in the range, timing or intensity of use of areas by waterbird species, other than that occurring from natural patterns of variation.	
Wetlands and Waterbirds			
Conservation Objectives: <i>To maintain the favourable conservation condition of the wetland habitat within the Dungarvan Harbour SPA, which is defined by the following list of attributes and targets:</i>			
Wetland habitat	Area	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,219 ha, other than that occurring from natural patterns of variation.	No works will be undertaken within the SPA boundary, therefore, there will be no loss of the wetland habitat area. There is no potential for adverse effects on site integrity.





GENERAL LEGEND

APPLICATION BOUNDARY

PROPOSED TURBINE HARDSTAND

ROADSIDE FILTER DRAIN

PROPOSED SILT FENCING

RIVER LOCATION

OVERLAND FLOW DIRECTION

EXISTING CONTOURS

PROPOSED TURBINE LOCATION

INTERCEPTOR DRAIN

SURFACE WATER SETTLEMENT POND

SILT TRAP & LEVEL SPREADER

PROPOSED CHECK DAMS

KEY PLAN

- NOTES:**
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 - 5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD.

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SCARTMOUNTAIN WIND FARM

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DRAINAGE LAYOUT PLAN
- Sheet 1 of 3 -

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ABP xx.09.23

Prepared by:

M. Nolan

Checked by:

J. Dillon

Date:

November '24

Drawing Status:

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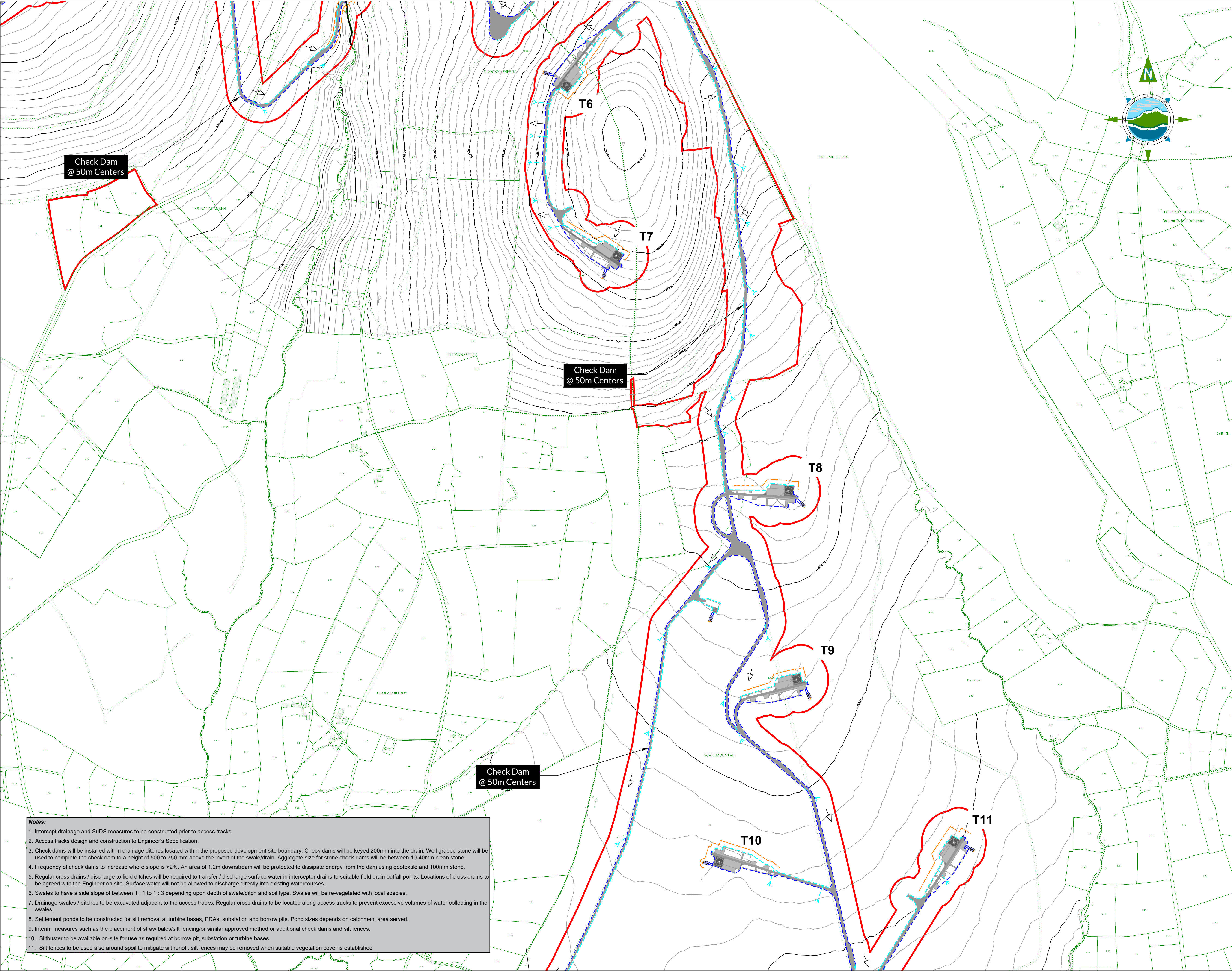
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GENERAL LEGEND

APPLICATION BOUNDARY

PROPOSED TURBINE HARDSTAND

ROADSIDE FILTER DRAIN

PROPOSED SILT FENCING

RIVER LOCATION

OVERLAND FLOW DIRECTION

EXISTING CONTOURS

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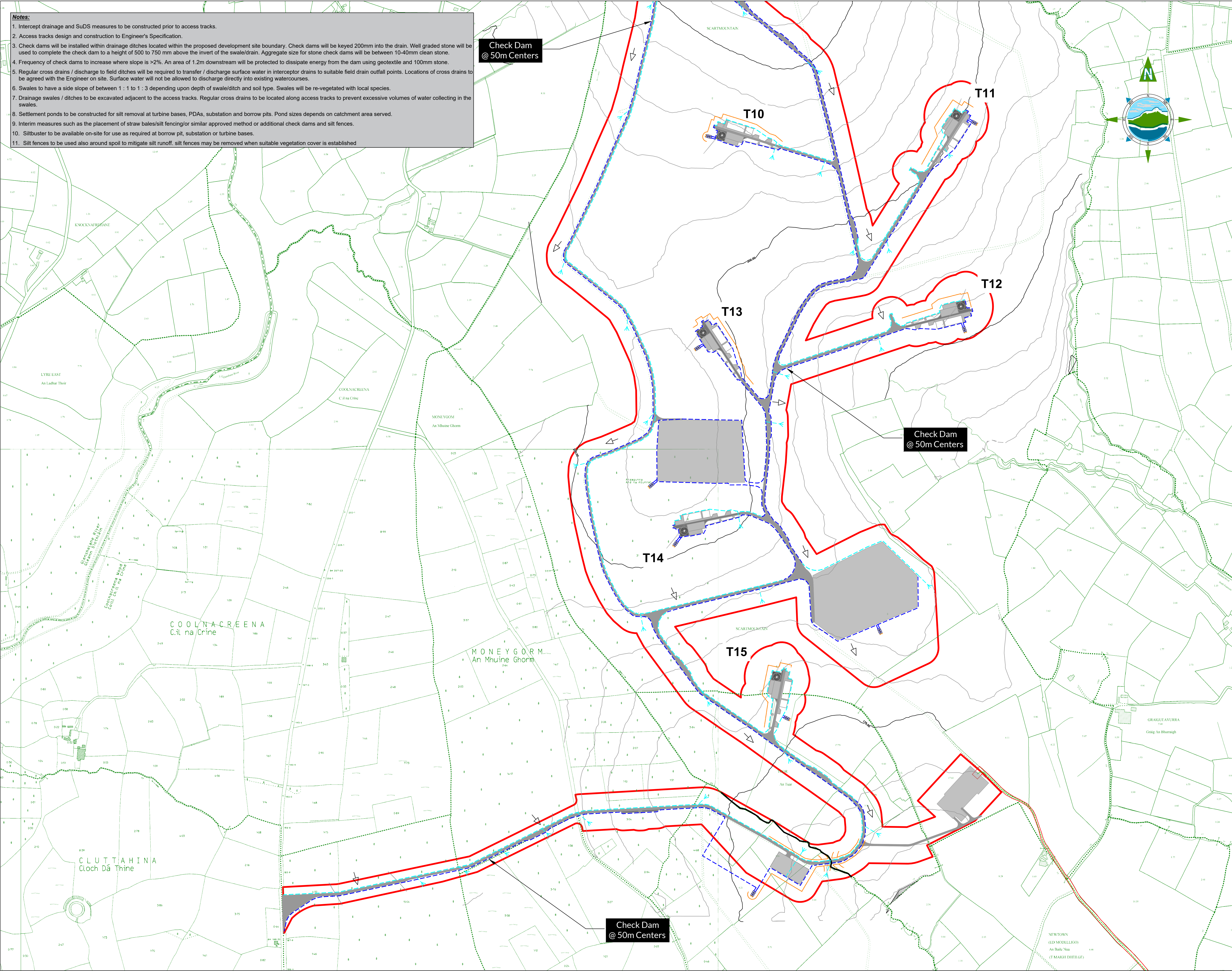
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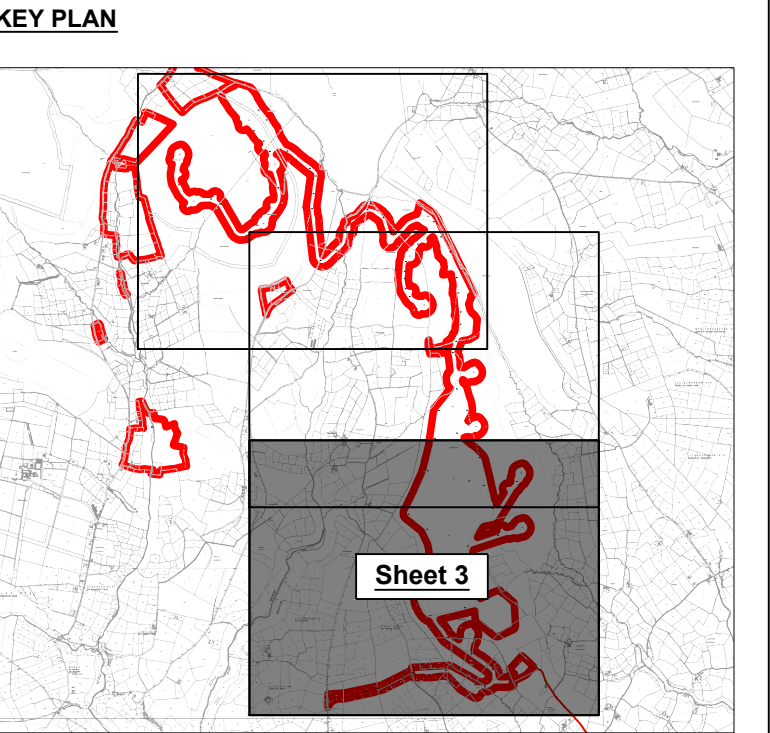
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GENERAL LEGEND

APPLICATION BOUNDARY	EXISTING CONTOURS
PROPOSED TURBINE HARDSTAND	PROPOSED TURBINE LOCATION
ROADSIDE FILTER DRAIN	INTERCEPTOR DRAIN
PROPOSED SILT FENCING	SURFACE WATER SETTLEMENT POND
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Project: **SCARTMOUNTAIN WIND FARM**

Title: **DRAINAGE LAYOUT PLAN - Sheet 3 of 3 -**

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Prepared by: **M. Nolan** Checked by: **J. Dillon** Date: **November '24**

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SCART MOUNTAIN WIND FARM
APPROPRIATE ASSESSMENT SCREENING REPORT

December 2024



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1. INTRODUCTION

TOBIN was commissioned by FuturEnergy Ireland to prepare a report to inform screening for appropriate assessment for submission to the competent authority as part of a planning application for the proposed Scart Mountain Wind Farm in County Waterford and all associated infrastructure (“the proposed project”¹).

1.1 DESCRIPTION OF THE PROPOSED PROJECT SITE

The proposed project site is located in County Waterford on the northern border with County Tipperary, in the townlands of Knocknask, Tooranaraheen, Knocknasheega and Scartmountain (as presented in Figure 3-1 and Figure 3-2). The project site elevation above sea level ranges from 486m at the summit of Knocknask (ITM 611600, 607249), to 430m at the summit Knocknasheega (ITM 613691, 605992) and down to 125m on the lower slopes of Scartmountain at Sleveen.

The proposed wind farm site, which is approximately 970 ha in size, occurs mostly within a Coillte landholding along with some third-party lands. The main access to the proposed project site is via a local access road (L5055) which, along with the L1029, connects the site to the N72 to the south. The site will also be accessed via the L5054, which is only proposed during the operational phase and only for light vehicles.

1.2 BRIEF DESCRIPTION OF THE PROPOSED PROJECT

The proposed project comprises a wind farm site that will include the erection of 15 no. wind turbines with an overall blade tip height of 179.5-185m inclusive, a rotor diameter ranges from 149m to 163m inclusive, a hub height ranges from 102.5m to 110.5m inclusive, and all associated foundations and hard-standing areas in respect of each turbine. These will have an operational life of 35 years.

The proposed grid connection route (GCR) for the proposed project comprises 15.5km of underground cable leading from the southern area of the project site at Sleveen to the existing Dungarvan 110kV substation at Dungarvan, with the route being mostly along local and regional roads.

The proposed turbine delivery route (TDR) follows the public road network from route from Bellevue Harbour via national roads including the N25, N29 and N72. The proposed works to

¹ Reference to the ‘proposed project’ refers to the whole project which includes the wind farm site and all associated infrastructure (e.g. grid connection route and turbine delivery route).

allow for delivery of oversize components to the site are located in the townlands of Bergery, Crinnaghtaun West and Lacken, with sections of minor widening of the local roads and addition of passing bays in Crinnaghtaun West, Lacken and Lackenrea. Minor additional works such as hedgerow trimming and temporary demounting of some signage, etc. will also be required at various locations along the route.

1.3 PURPOSE OF THIS REPORT

In Ireland, the Natura 2000 network of European sites comprises Special Areas of Conservation (SACs, including candidate SACs), and Special Protection Areas (SPAs, including proposed SPAs) (EHLG, 2009).

The purpose of this report is to provide supporting information to assist the competent authority, in this case An Bord Pleanála to carry out screening for likely significant effects on European sites arising from the proposed project.

1.4 RELEVANT LEGISLATION

The main pieces of relevant legislation are as follows:

- The Habitats Directive 92/43/EEC
- The Birds Directive 2009/147/EC
- European Communities (Birds and Natural Habitats) Regulations 2011 – 2021
- Planning and Development Acts 2000 to 2022 - PART XAB



2. METHODS

The approach taken in preparing this document is broadly based on standard methods and best practice guidance, as listed in the references in Section 7.

2.1 SCOPE

The scope of this report to inform screening for appropriate assessment is to identify potential impacts that may arise as a result of the proposed project and to determine the likelihood of significant effects, if any, that the project could have on European sites.

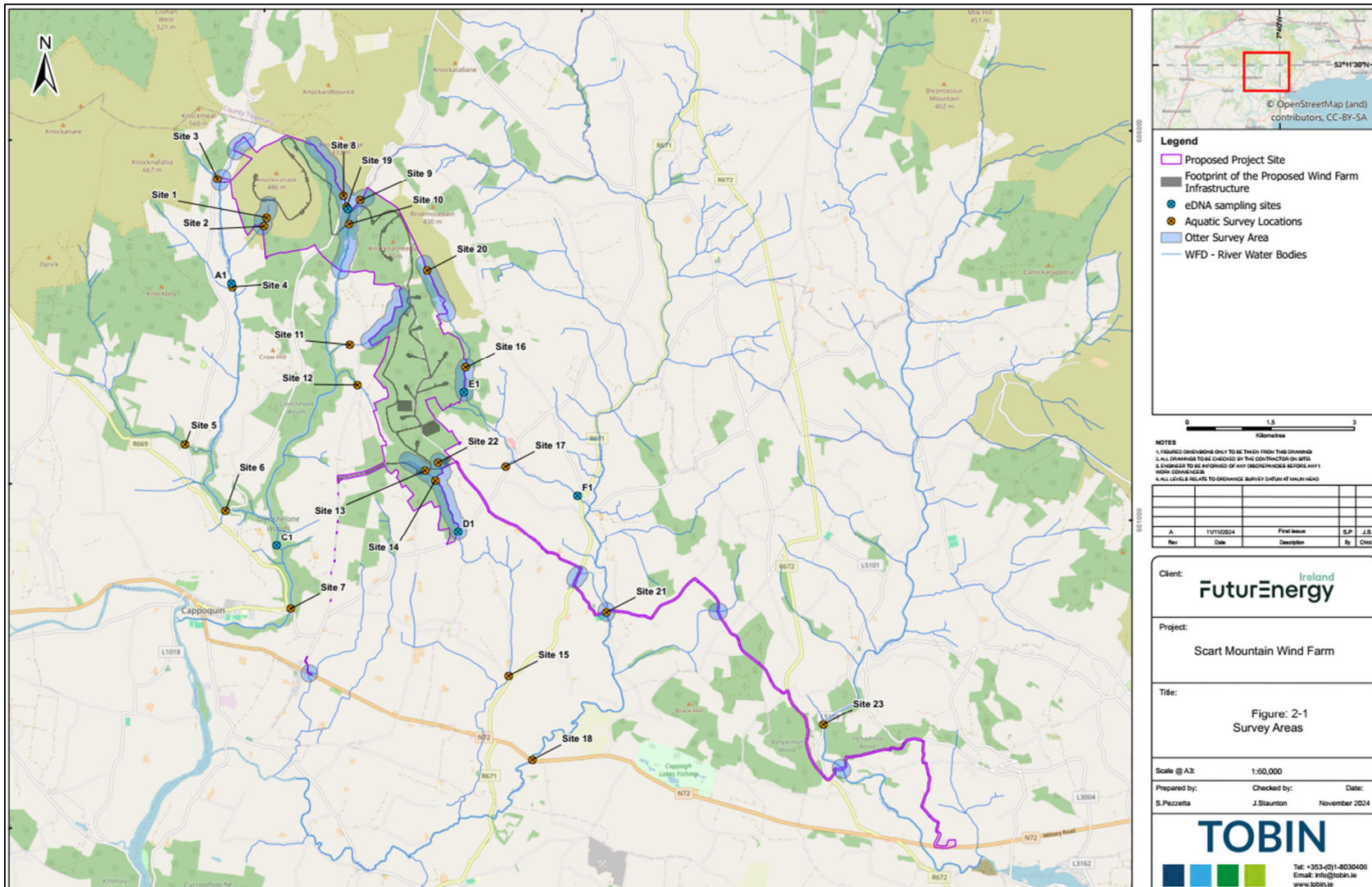
The approach can be summarised as follows:

- Identify the zone of influence of the proposed project and European sites within this area.
- Identify the Qualifying Interests of the European sites and review their conservation objectives.
- Review whether there is potential for the qualifying interests to be affected by the proposed project based on information such as the vulnerabilities of the European site, proximity to the proposed project site, and the nature and scale of the works associated with the proposed project.
- Consider the likelihood of the identified potential impacts occurring based on the information collated and professional judgement.
- Identify any Likely Significant Effects on European sites.

2.2 STUDY AREA AND SURVEY AREA

The study areas for the desk study and field surveys were identified through considering the nature of the proposed development, the size and location of the proposed project and the ecological features likely, or known, to be present. Further details describing the survey area for the surveys undertaken is provided in Section 2.6.

Figure 2-1: Survey Area



2.3 ZONE OF INFLUENCE

The Zol is defined by the Chartered Institute of Ecology and Environmental Management (CIEEM) as follows:

“The ‘zone of influence’ for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change.”

Irish guidance (DoEHLG, 2010) states, for the zone of influence of plans:

“A distance of 15 km is currently recommended in the case of plans derives from UK guidance (Scott Wilson et al, 2006)”. The guidance goes on to state that “for projects, the distance could be much less than 15 km, and in some cases less than 100 m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.”

The Zol for the proposed project has been identified through a review of the nature and scale of the project, the project location relative to Natura 2000 sites, presence of ecological and landscape connectivity, such as along waterways, hedgerows and treelines between the proposed project and the Natura 2000 sites, known impacts and effects likely to arise as a result of this type of project, distance from European sites and the qualifying interests of the European sites.

The Zol of the proposed project is discussed in Section 5.1.1 of this report.

2.4 DESK STUDY

A desk study was undertaken to inform this report. The desk study comprised a review of the following key datasets and information sources:

- Review of the National Parks and Wildlife Service (NPWS) site synopsis, conservation objectives for European sites identified through potential pathways from the proposed project (Accessed [October 2024] via <https://www.npws.ie/protected-sites>).
- NPWS datasets and National Biodiversity Data Centre (NBDC) on Annex I habitats and Annex II species (Accessed [October, 2024] via <https://www.npws.ie/protected-sites>).
- Environmental Protection Agency (EPA) Mapping database: [Accessed October, 2024] via <https://gis.epa.ie/EPAMaps/AAGeoTool>).

-
- A review of previous ecological assessments undertaken within the study area was carried out and included, but not limited to the following documents:
 - Dyrick Hill Wind Farm Limited, Screening for Appropriate Assessment (Doherty Environmental, 2023).

In addition, aerial photography (Google Maps, Bing Maps) and mapping (Ordnance Survey of Ireland, Geological Survey of Ireland) were used to identify non-designated habitats such as rivers, woodlands, and drainage ditches that may provide connectivity/corridors to surrounding habitat.

2.5 CONSULTATIONS

The Development Applications Unit (DAU) issued a response on 13th March 2023 (reference G Pre00020/2023) which raised a number of concerns relating to Annex I bird species, Annex I habitat and other protected aquatic and terrestrial species. All concerns raised by the DAU have been fully addressed within this AA Screening report and/or within the accompanying Natura Impact Statement (NIS). Within the NIS, stringent mitigation measures have been outlined, which will be implemented as part of the proposed project to ensure the protection of habitats and species protected under the Habitats Directive.

2.6 FIELD SURVEYS

A range of ecological field surveys were undertaken within the survey area between October 2022 and September 2023 by qualified and experienced TOBIN Ecologists (refer to Figure 2-1). In addition, a number of targeted ecological surveys were also undertaken by third party consultants.

The ecological surveys that were carried out are relevant to the consideration of the potential for the proposed project to affect the conservation objectives of Natura 2000 sites in the ZOI of the proposed project, namely: otter survey and river aquatic survey, all of which are described hereunder. While additional ecological surveys were undertaken, they are not specifically relevant to this Screening Assessment. See the EIAR (contained within the Planning Application) for full details of all ecological surveys undertaken within the proposed project site.

2.6.1 Otter

Otter surveys were carried out following the approach set out in the NRA (2006) guidelines. The otter surveys were conducted along the Glenshelane_010, which forms part of the Blackwater River (Cork/Waterford) SAC, and its tributaries which intersect the proposed project site. The surveyors covered the length of the watercourses within the proposed project site boundary, plus an additional 150m buffer, to account for potential disturbance impacts (refer to Figure

2-1). Any evidence of otter presence or activity, such as holts (breeding and temporary), slides and territorial marking points (spraints), was recorded.

2.6.2 Birds

A suite of ornithological surveys were carried out between the winter of 2022/23 and the summer of 2024. Reference is also made to previous bird survey data dating back to the winter of 2017/18. Surveys undertaken included vantage point surveys and distribution and abundance surveys.

2.6.3 Fish and Aquatic Ecology

Aquatic surveys were carried out by TOBIN Ecologists at a number of streams and rivers (refer to Figure 2-1) that drain the proposed project site and eventually flow into downstream Natura 2000 sites. The European sites concerned are at various distances from the proposed project site. The surveys comprised of an evaluation of the aquatic habitats, physical searching for protected aquatic species and eDNA sampling. A description of the survey methods is provided below.

2.6.3.1 Aquatic Habitat Suitability Survey

An assessment was made on the suitability of the watercourse habitat to support aquatic species of conservation concern, focusing on Annex II species listed as qualifying interests for Natura 2000 sites within the ZOI of the proposed project. Such species included white-clawed crayfish (*Austropotamobius pallipes*), river lamprey (*Lampetra fluviatilis*), brook lamprey (*Lampetra planeri*), Atlantic salmon (*Salmo salar*) and freshwater pearl mussel (FPM) (*Margaritifera margaritifera*). Watercourses surveyed included the Glennallia_010, Glenshelane_010, Glennafallia_010, Glennafallia_020, Farnane_010, Monavugga_010, Finisk_020, Finisk_030 and Colligan_040. All watercourses are located downstream of the proposed project and flow into three European sites; namely Blackwater River (Cork/Waterford) SAC, the Blackwater River (Cork/Waterford) SPA and the Dungarvan Harbour SPA.

2.6.3.2 White-clawed Crayfish

At the aquatic survey locations, as shown on Figure 2-1 and where suitable habitat was identified, white-clawed crayfish surveys were undertaken.

Visual inspections and hand searching following survey methods outlined in the Irish Wildlife Manuals (Reynolds *et al.*, 2010) were undertaken within a 10-15m survey area. Refuge sites

such as spaces under large boulders and crevices or burrows within the riverbanks were investigated by hand using gloves and small nets as required.

2.6.3.3 Lamprey Species

At the aquatic survey locations as identified on Figure 2-1, and where suitable habitat was present, surveys for all life stages of lamprey species (brook, river and sea lamprey) were undertaken. Scoop surveys were undertaken in suitable habitat to identify the presence or absence of the three lamprey species listed as qualifying interests of Natura 2000 sites within the ZOI of the proposed project. This involved taking a sample of the silt (at the edge of the riverbank) with a hand net. The hand net was inserted into the sediment at a 45° angle, and a volume of silt was scooped into the net and the sediment was checked for lamprey (ammocetes, juveniles and adults). Any lamprey caught were then identified using the field guide produced by Gardiner (2003).

2.6.3.4 Freshwater Pearl Mussel

An assessment of habitat to support freshwater pearl mussel was undertaken following methodologies outlined within Moorkens & Killeen (2020) guidance. This included a visual assessment of 1m² areas of habitat and an assessment of the riverbed substrate: physical substrate parameters (assessment of the substrate surface composition), plants cover (presence of excessive filamentous algae and presence/absence of macrophytes) and coarse decomposing organic matter.

2.6.3.5 eDNA Water Sampling

An eDNA sampling survey was carried out at six sites within and downstream of the proposed project site (refer to Figure 2-1), specifically to detect the presence of white-clawed crayfish, Atlantic salmon, and freshwater pearl mussel, which are qualifying interests of the Blackwater River (Cork/Waterford) SAC. The sampling carried out on selected watercourses also sought to confirm if the freshwater pearl mussel population has expanded into the Blackwater [Munster]_SC_140 sub catchment and/ or the Finisk_SC_010 sub catchment from the 'freshwater pearl mussel sensitive areas' located upstream. The eDNA survey methodology followed the SureScreen Scientific Guidance² and all collected samples were sent to a ISO9001 accredited laboratory for analysis.

² <https://www.surescreenscientifics.com/wp-content/uploads/2023/03/Detailed-GCN-Sample-Collection-Guidance-V4-1.pdf> (Accessed September, 2024)



2.7 PROJECT TEAM

This report was prepared by Ciara Byrne B.Sc. (Hons), Graduate Ecologist with TOBIN. Ciara completed her degree in Wildlife Biology with MTU Kerry in 2023 and has been working with TOBIN since. Ciara undertook her college work placement with TOBIN in 2022 for a period of seven months. During that time, she undertook habitat, aquatic, and breeding bird surveys for various projects and assisted with drafting Screenings for Appropriate Assessments, Natura Impact Statements, and Invasive Species Management Plans. Ciara prepared this AA screening report.

This report was senior reviewed by Áine Sands B.Sc. (Hons), Senior Ecologist with TOBIN. Áine has eight years post-graduate experience in ecology and environmental consultancy. Áine has predominantly been involved in large public and private infrastructure projects where she has prepared Screenings for Appropriate Assessments, Natura Impact Statements and Ecological Impact Assessments. Áine technically reviewed and inputted on the preparation of this Screening Report.



3. DETAILS OF THE PROPOSED PROJECT

A summary of the overall proposed project is as follows:

- Erection of 15 no. wind turbines with an overall blade tip height range from 179.5 m to 185 m inclusive, a rotor diameter range from 149 m to 163 m inclusive, a hub height range from 102.5 m to 110.5 m inclusive, and all associated foundations and hard-standing areas in respect of each turbine;
- Permanent upgrade to the existing forest entrance onto the L5055 local road in the townland of Lackenrea to be used as a construction entrance. It will also be used for operational phase access for HGVs only;
- Construction of 6 no. permanent site entrances to form 3 no. local road crossing points to enable site access during construction (on the L5054, L5055 and L1026 in the townlands of Moneygorm, Knocknasheega and Tooranaraheen respectively). The entrance associated with the crossing point on the L5054 will also function as an operational phase access for light vehicles only;
- Temporary improvements and modifications to 1 no. location at the junction of the N72 and the L1027 (known as Boheravaghera Cross or Affane Cross) to facilitate delivery of oversized loads and turbine delivery, in the townland of Crinnaghtaun West, Co. Waterford;
- Construction of 2 no. temporary construction compounds located within the northern and southern ends of the site, with associated temporary site offices, parking areas and security fencing;
- Erection of 1 no. Meteorological Mast of 100 m above existing ground level for the measuring of meteorological conditions, with a lightning finial extending above the mast;
- 2 no. temporary borrow pits;
- Permanent construction of approximately 12 km new internal site access roads and upgrade of approximately 7.2 km existing internal site roads, to include passing bays and all associated drainage, all within the wind farm site;
- Construction of temporary and permanent drainage and sediment control systems;
- Construction of 1 no. permanent 110kV electrical substation including:
 - 1 no. EirGrid control building containing worker welfare facilities and equipment store;
 - 1 no. Independent Power Producer control building containing high voltage switch room, site offices, kitchen facilities, storeroom and toilet amenities;
 - All electrical plant and infrastructure and grid ancillary services equipment;
 - Parking;
 - Lighting;

-
- Security Fencing;
 - Wastewater holding tank;
 - Rainwater harvesting equipment;
 - All associated infrastructure and services including site works and signage.
- All related site works and ancillary development including signage, berms, landscaping, and soil excavation;
 - Forestry felling (both permanent and temporary) to facilitate construction and operation including biodiversity enhancement measures, of the proposed project and any onsite forestry replanting;
 - All associated underground electrical and communications cabling connecting the wind turbines to the proposed wind farm substation.
 - Temporary improvements and modifications to 4 no. locations adjacent to the public road to facilitate delivery of oversized loads and turbine delivery in the townlands of Crinnaghtaun West, Ballyduff East and Rathpatrick;
 - Permanent widening of sections of the L5055 within the road corridor (to 4.5 m running width) to facilitate delivery of oversized loads/turbines and construction of 9 no. passing bays along the border between the townlands of Crinnaghtaun West, Lacken, Cluttahina, Turbeha, Belleville and Lackenrea;
 - All works associated with the connection of the proposed wind farm to the national electricity grid, which will be via a permanent tail fed 110 kV underground cable connection (approximately 15.5 km cable length of which approximately 13.3 km of which will be in the public road corridor) to the existing 110 kV Dungarvan Substation in the townland of Killadangan, Co. Waterford. There are 4 no. watercourse crossings on the proposed grid connection route (GCR) (of which 3 are classed as rivers and 1 is a stream);

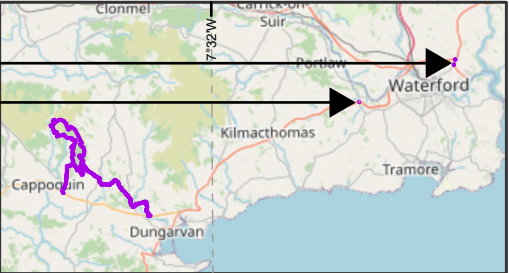
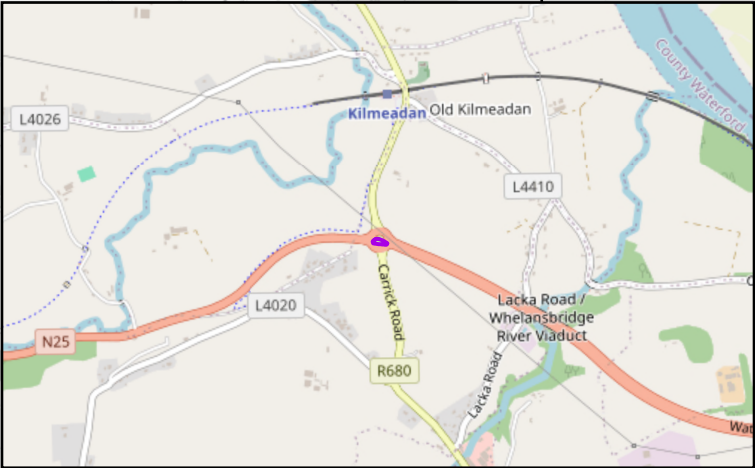
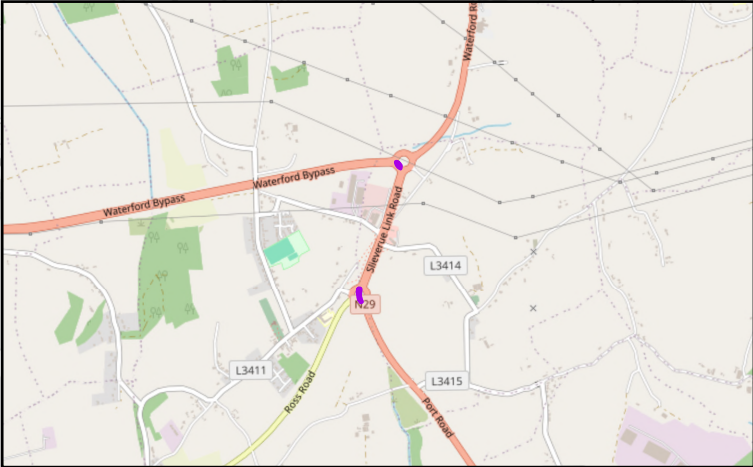
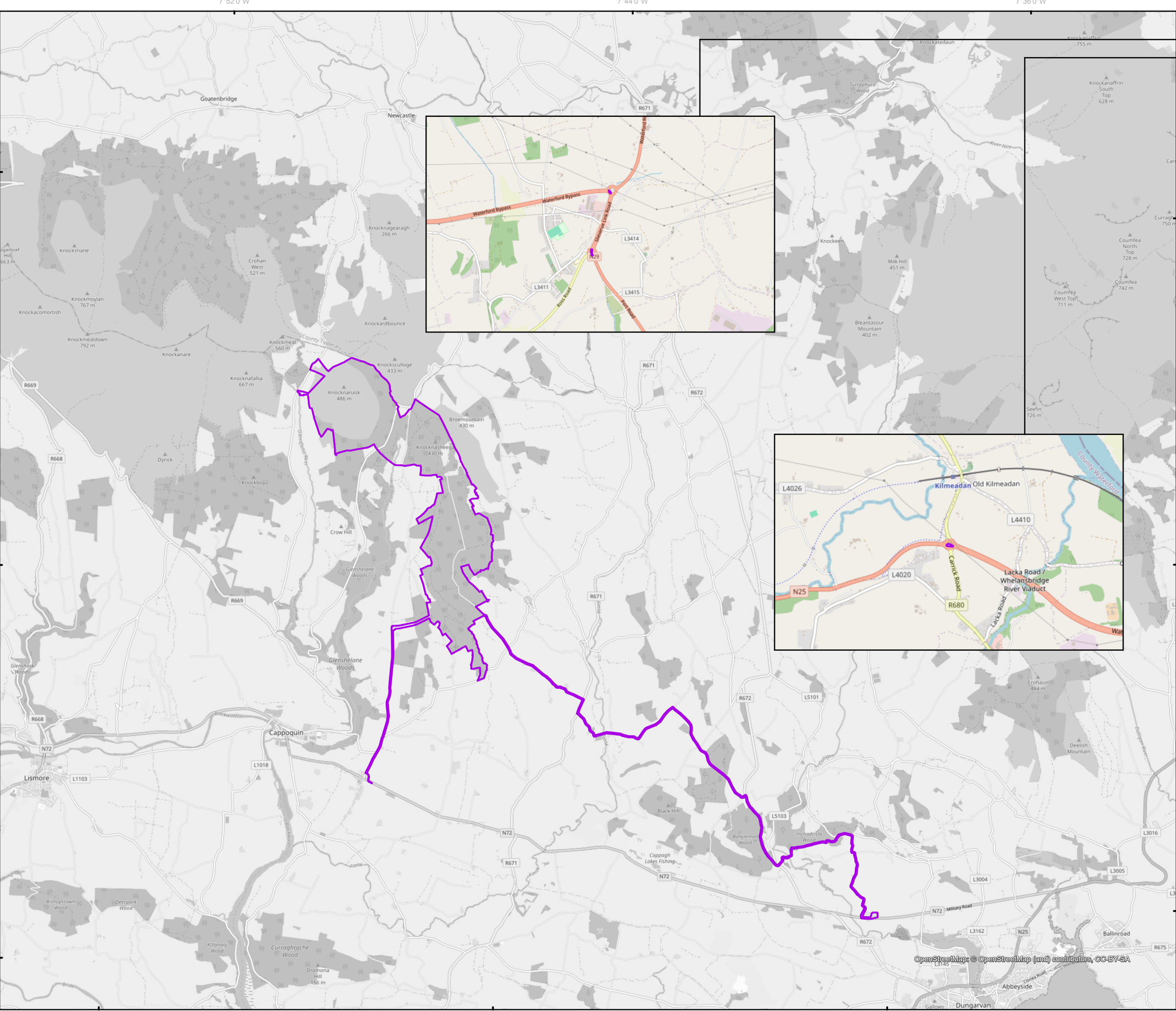
A 35-year operational life from the date of full commissioning of the entire wind farm is being sought for all works (other than temporary and permanent works specified above), and the subsequent decommissioning. Permission is being sought for a period of 10 years. The full proposed project has been considered and has been addressed as part of this EIAR.

The site of the proposed wind farm (Figure 1-2) has an area of approximately 981.4 ha and comprises an elongated land parcel approximately 8 km long in the north/south direction and is approximately 1.9 km wide in an east/west direction at the widest point. The site lies between the R671 and the R669, on the southeastern side of the Knockmealdown Mountains. The proposed wind farm is located within the townlands of Knocknanask, Tooranaraheen, Knocknasheega, Scartmountain, Coolagortboy, Took, Moneygorm, Moneygorm East, Moneygorm West, Lackenrea Co. Waterford.

The proposed grid connection is located within the townlands of Scartmountain, Newtown, Coolroe, Staigbraud, Graigue Beg, Carrigaun (Hely), Graigue More, Scart (Hely), Scart (Sergeant), Vicarstown South, Glen Lower, Glen Upper, Lisroe, Carrowgarra Beg, Colligan More, Colliganmountain, Colliganwood, Ballymacmague North, Inchindrislawood, Inchindrisla, and Killadangan Co. Waterford.

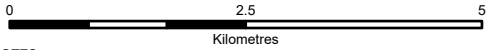
The proposed project works to allow for delivery of oversize components to the site are located in the townlands of Crinnaghtaun West, Ballyduff East and Rathpatrick, with sections of minor widening of the L5055 local road and construction of 9 no. passing bays where it borders Crinnaghtaun West, Lacken, Cluttahina, Turbeha, Belleville and Lackenrea. Minor additional works such as hedgerow trimming and temporary demounting of some signage, etc. will also be required at various locations along the route.





Legend

Proposed project



NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE\
3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY \
4. ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

A	13/12/2024	First issue	S.P	J.S	
Rev	Date	Description	By	Chkd.	

Client:

FuturEnergy Ireland

Project:

Scart Mountain Wind Farm

Title:

Figure 3-1
Proposed project
extent

Scale @ A3: 1:80,000

Prepared by: S.Pezzetta
Checked by: J.Staunton
Date: December 2024

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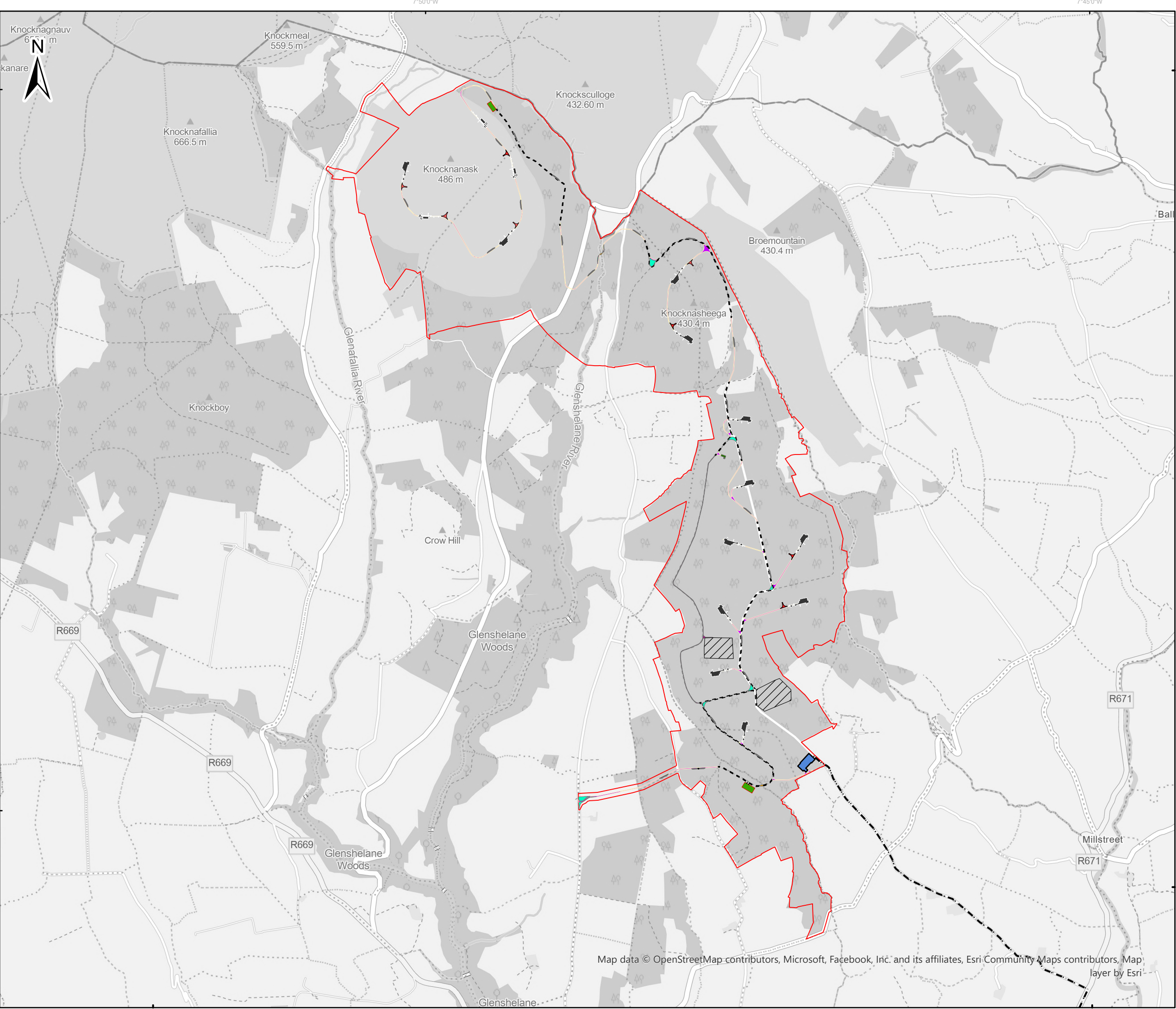
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Map Ref:

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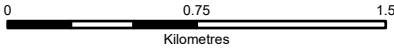
Draft:

A



Legend

- Proposed Wind Farm Site
- Proposed Grid Connection Route
- Proposed infrastructure footprint within the proposed wind farm site**
- Proposed Site Roads
- Bridges
- Construction Compound
- Existing Site Roads
- Hardstands
- Met Mast Location
- Non turbine access roads
- Proposed Passing Bay
- Temporary Overrun Area
- Turning Bays
- Wheelwash
- Proposed Substation
- Borrow Pits



NOTES

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- ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE\
- ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY \
- WORK COMMENCES\
- ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

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Rev	Date	Description	By	Chkd.

Client: **FuturEnergy Ireland**

Project: **Scart Mountain Wind Farm**

Title: **Figure 3-2:
Proposed wind farm site layout**

Scale @ A3: 1:30,000

Prepared by: S.Pezzetta Checked by: J.Staunton Date: December 2024

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Map Ref: 11303-033-LAY.INFR-S.BO-TOB-A Draft: A

4. RESULTS

4.1.1 Otter

All watercourses within the survey area were surveyed for otter (refer to Figure 2-1). No evidence of otter presence or activity, such as holts, couches, tracks, slides, feeding remains or scat, was recorded within the survey area during the field surveys.

A review of the NBDC data records indicated that otter have previously been recorded within the upper reaches of the Glenshelane River, on the River Finisk, approximately 3km downstream of the proposed wind farm site and on the Colligan River, 2.5km downstream of the directional drilling site (NBDC, 2024).

Considering the previous recordings of otter and the suitable habitat present, it is considered likely that otter use the connected streams and rivers that are hydrologically connected to the proposed project site for foraging and commuting.

Otter is a qualifying interest of the Blackwater River (Cork/Waterford) SAC.

4.1.2 Birds

Bird species listed on the EU Birds Directive (2009/147/EC) which were recorded during the surveys are summarised below.

4.1.2.1 Hen Harrier

Up to five hen harrier (*Circus cyaneus*) territories were recorded during the bird surveys carried out in 2023 and 2024. Breeding was confirmed at one location on the edge of the proposed wind farm site in 2023 and territorial activity was recorded at another location at the edge of the site in 2024³. Breeding was also confirmed at a separate locations at least 2km from the proposed project site in 2023 and 2024, and territorial activity was recorded at another location around 1km from the proposed project site in 2023.

In previous years, confirmed breeding was recorded within / adjacent to the proposed wind farm site in 2018-2020. In 2019, territorial activity was also recorded at two further sites, one at the edge of the wind farm site and the other around 1 km from the site. No occupied territories were recorded in 2021. In 2022, the only breeding activity recorded was a confirmed nest over 2km from the proposed project site.

³ Due to sensitivity of Irish hen harrier data, information on their nest sites has been kept confidential. The location of these nest sites can be provided separately following a request.



The closest SPA to the proposed project site, designated for hen harrier, is the Silevefelim to Silvermines Mountain SPA (Site code: 004165) which is located over 55km north and is considered a stronghold for breeding hen harrier (NPWS, 2015). Hen harrier have a core foraging range, during the breeding season, from nest sites of 2km, with a maximum range of 10km (SNH, 2016). Considering their core foraging range, and the significant distance between the closest SPA and the proposed project, it is concluded that the hen harriers using the study area are not a population designated within a SPA.

4.1.2.2 Golden Plover

A total of 50 golden plover (*Pluvialis apricaria*) flightlines were recorded during the vantage point surveys between the winter of 2022/23 and the summer of 2024. It was established that a wintering golden plover population occurs in the vicinity of the proposed wind farm site

There is little information available about the core foraging range of wintering golden plover from their roosts and SNH (2016) guidance does not provide any guidance on this. However, Fuller and Youngman (1979) mapped the distribution of golden plover flock ranges in a lowland study area in southern England and the maximum dimensions of the ranges varied from around 5.5-8.3km, while Gillings and Fuller (1999) noted regular movements by flocks in Norfolk between fields up to 10-12km apart. Therefore, the golden plovers that occurred around the proposed wind farm site are likely associated with the Lower Blackwater River⁴ wintering population located approximately 5.7km south-west of the proposed project site.

There is unlikely to be any connectivity with the Dungarvan Harbour population, designated within the Dungarvan Harbour SPA (004032), as the main golden plover roost associated with this SPA, is located on Whitehouse Bank in Dungarvan Harbour (NPWS, 2011) which is over 19km from the focal areas of golden plover activity around the proposed wind farm site.

Therefore, the golden plover recorded during surveys are not associated with a SPA population.

4.1.2.3 Merlin

There was a very low incidence of merlin (*Falco columbarius*) sightings during surveys carried out around the proposed wind farm site. In 2024, a pair was observed displaying at a different location around 1 km from the site. No nesting merlin were recorded in the proposed wind farm site, or within the 500m buffer around the site.

⁴ The Lower Blackwater River I=Webs Site

https://birdwatchireland.ie/app/uploads/2023/08/iwebs_trends_0M304_Lower_Blackwater_River.html#Golden_Plover

The core foraging range for merlin is within 5km (SNH, 2016). There are no SPAs designated for merlin located within 5km of the proposed project site. Therefore, the merlin recorded during surveys are not associated with a SPA population.

4.1.2.4 Peregrine Falcon

There were occasional records of peregrine falcon (*Falco peregrinus*) during the vantage point surveys. However, no evidence of breeding peregrine was found in any of the surveys carried out within the 2km buffer zone around the proposed wind farm site. The proposed wind farm site does not form part of the core range of a resident or regularly occurring peregrine population.

The core foraging range for peregrine falcon is 2km (SNH, 2016). There are no SPAs designated for peregrine falcon located within 2km of the proposed project site. Therefore, the peregrine falcon recorded during surveys are not associated with a SPA population.

4.1.2.5 Other Species

Other bird species listed on the EU Birds Directive (2009/147/EC) which were recorded during surveys were whooper swan (*Cygnus cygnus*), mallard (*Anas platyrhynchos*), black-throated diver (*Gavia arctica*), cormorant (*Phalacrocorax carbo*), grey heron (*Ardea cinerea*), lapwing (*Vanellus vanellus*), curlew (*Numenius Arquata*), black-headed gull (*Larus ridibundus*), herring gull (*Larus argentatus*), lesser black-backed gull (*Larus fuscus*) and great black-backed gull (*Larus marinus*). Most of these species were recorded infrequently and were not recorded flying within the potential collision height of the proposed wind farm.

4.1.3 Fish and Aquatic Species

Samples for eDNA analysis were collected at six sites (refer to Figure 2-1) across the Glennafallia_010, Glennafallia_020, Glenshelane_010, Finisk_030 and the Franane_010 rivers. All watercourses are hydrologically connected to the proposed project site and the Blackwater River (Cork/Waterford) SAC. In addition to the eDNA analysis, river habitat suitability surveys were also undertaken to identify the presence of suitable habitat to support Annex II species. The results of the surveys in relation to Annex II species is outlined hereunder.

4.1.3.1 Atlantic salmon

Following the habitat suitability survey, it was determined that the watercourses within the proposed project site boundary offer limited spawning, holding or nursery habitat for salmonids. This is mainly due to the high-energy flow, inaccessible reaches, and steep gradient, making them inaccessible for migratory salmon. However, the survey sites located on watercourses downstream of the proposed project site (refer to Figure 2-1), offer improved salmonid habitat

due to the low-lying topography, substrate composition and lower energy nature of the watercourses. This was evident in the lower reaches, where suitable salmonid holding, spawning and nursery habitat was recorded present at Site 21 and 23 on the Finisk and Colligan rivers (i.e. watercourses that would be crossed by the GCR).

The eDNA sampling results showed Atlantic salmon to be present at one location on the Glennafallia_020 (Site C1) and two locations along the Franane_010 (Site E1 and F1). These watercourses are all hydrologically connected to the proposed project site and the Blackwater River (Cork/Waterford) SAC. Considering the close proximity of the Atlantic salmon to the SAC it's likely that these recorded species form part of the SAC population.

4.1.3.2 Lamprey Species

During lamprey scoop surveys undertaken by TOBIN, suitable silt habitat was recorded present within the Glenshelane_010 River, Finisk_030 River, Finisk_020 River and the Farnane_010 River. The remaining sites surveyed across the study area did not contain suitable soft substrate.

The fast-flowing high gradient nature of watercourses in the study area provided unsuitable conditions for lamprey larvae, which require soft substrates into which they can burrow into. Juvenile lamprey brook and river lampreys (ammocoetes) could not be distinguishable from each other.

The site surveyed within the Finisk_030 river contained six lamprey ammocoetes, ranging from 1.5cm-7cm. The site surveyed on the Finisk_020 river contained four lamprey ammocoetes that were all 2cm in length. These watercourses drain the proposed project site and flow into the Blackwater River (Cork/Waterford) SAC. It is likely that these recorded species form part of the SAC population.

4.1.3.3 White-clawed Crayfish

There are currently no records of white-clawed crayfish present within watercourses of the study area⁵. During TOBIN aquatic surveys, no crayfish were recorded. There was also no evidence of crayfish carapace or claw remains on the riverbanks or bridge ledges in the form of otter scat or remains from predation. In addition, their presence/absence was screened for in the eDNA samples. Samples for this species were collected on the Glennafallia_020, Finisk_030 and the Franane_010 which are all watercourses downstream of the proposed project site and upstream of the Blackwater River (Cork/Waterford) SAC. The eDNA sample results showed this species to be absent from these watercourses at the sample sites.

⁵ <https://maps.biodiversityireland.ie/Map/Terrestrial/Species/17487> [Accessed October, 2024]



The streams located within the proposed project did not have suitable habitat for white-clawed crayfish due to unsuitable geology, peatland afforested catchments, high energy channels and unsuitable substrate habitat, especially gravels for crayfish hatchlings. There was also a lack of instream vegetation and suitable burrowing habitat required for crayfish. As such there is no suitable availability of refuges for this species.

A review of the Blackwater River (Cork/Waterford) SAC's conservation objectives indicate that white-clawed crayfish has previously been recorded along the Awbeg [Buttevant] River which is not hydrologically connected to the proposed project site but is within the Blackwater River (Cork/Waterford) SAC (NPWS, 2012). Because white-clawed crayfish was not recorded in any waterbody hydrologically connected to the proposed project site during surveys and considering the lack of connectivity to the Awbeg [Buttevant] River, where crayfish are known to occur, it was determined that white-clawed crayfish do not occur within the Zol of the proposed project and will not be impacted.

4.1.3.4 Freshwater Pearl Mussel

Based on the general riverine habitat, topography, steep gradient, substrate and surrounding habitat, the potential for this species to be present within and downstream of the proposed project was not considered to be likely considering the sub-optimal habitat conditions.

In addition, their presence/absence was screened for in the eDNA samples. Samples for this species were collected on the Glennafallia_020, Finisk_030, and the Franane_010 which are all downstream of the proposed project site and upstream of the SAC. The eDNA sample results showed this species to be absent from these watercourses at the sample sites.

A sensitive data request was sent to the NPWS for records of freshwater pearl mussel within the study area and its sub-catchments. The data received indicated that there are currently no records of freshwater pearl mussel populations present within the sub-catchments of the study area. In addition, a review of the Blackwater River (Cork/Waterford) SAC's conservation objectives indicated that freshwater pearl mussel populations are known to occur in the Owentaraglin and Allow tributaries as well as in the Licky River (NPWS, 2012). There is no hydrological connectivity between the proposed project and these watercourses.

Because freshwater pearl mussel was not recorded in any waterbody hydrologically connected to the proposed project site and considering the lack of connectivity to the Owentaraglin, Allow and Licky rivers, it was determined that freshwater pearl mussel do not occur within the Zol of the proposed project and will not be impacted.



4.1.4 Other Species

No evidence of any other species listed on the EU Habitats Directive (92/43/EEC) or on the EU Birds Directive (2009/147/EC) which were recorded within the proposed project site during surveys.



5. SCREENING FOR APPROPRIATE ASSESSMENT

5.1 IDENTIFICATION OF EUROPEAN SITES

The first step in identification of Natura 2000 sites that could be affected by the proposed project is to determine the potential Zol. When the Zol of the project has been determined, Natura 2000 sites within this area can be identified and the potential for these sites to be affected can be evaluated by considering:

- Scale and type of the project
- Proximity to the project
- Qualifying interests
- Ecological⁶ and Landscape⁷ connectivity

5.1.1 Determining the likely Zone of Influence

The source-pathway-receptor model was used to identify the Zol of the proposed project.

A total of thirteen watercourses drain from the proposed project site, and all eventually flow into rivers that form part of the Blackwater River (Cork/Waterford) SAC, Blackwater Estuary SPA, and the Dungarvan Harbour SPA.

The proposed project includes a clear span bridge over the Glenshelane River which forms part of the Blackwater River (Cork/Waterford) SAC. The proposed grid route passes under (via directional drilling) a number of watercourses that also flow into the Blackwater River (Cork/Waterford) SAC.

The watercourses draining the proposed project site also flow into the Blackwater Estuary SPA, approximately 25km downstream, and Dungarvan Harbour SPA approximately 4.7 km downstream.

The foraging/commuting ranges of the qualifying interests (QIs)/special conservation interests (SCIs) of the European sites within the potential Zol was also considered when determining the actual Zol for the proposed project. European sites considered to have ecological, hydrological

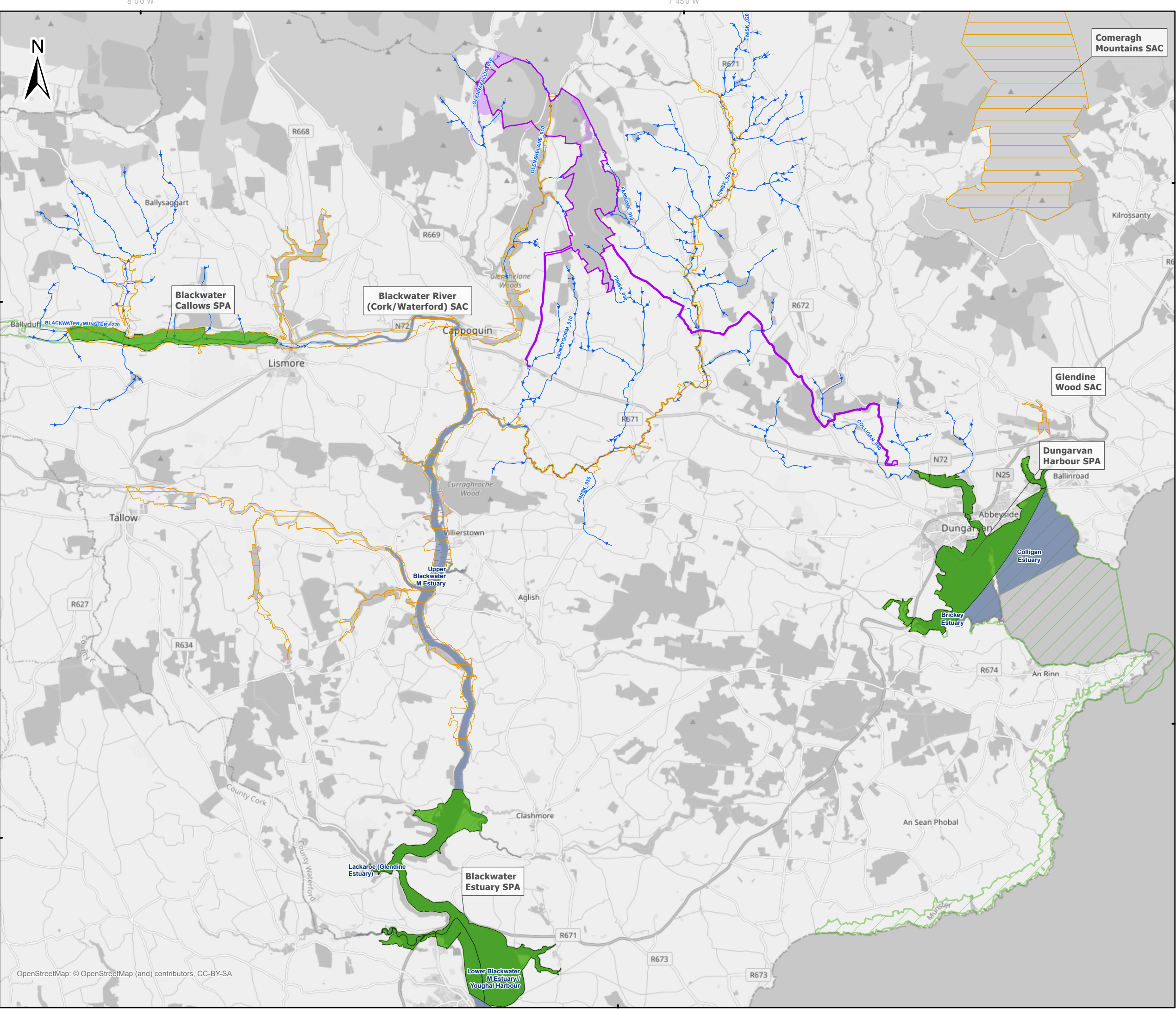
⁶ “Connectivity is defined as a measure of the functional availability of the habitats needed for a particular species to move through a given area. Examples include the flight lines used by bats to travel between roosts and foraging areas or the corridors of appropriate habitat needed by some slow colonising species if they are to spread”(CIEEM, 2018).

⁷ Landscape connectivity is a combined product of structural and functional connectivity, i.e., the effect of physical landscape structure and the actual species use of the landscape (Kettunen *et al.* 2007)

and/or landscape connectivity with the proposed project, were reviewed and are shown in Figure 5-1 and listed in Table 5-1 below.

European sites other than those listed in Table 5-1 are not considered further either due to distance or lack of landscape and ecological connectivity with the proposed project. The ZOI for the proposed project is thus limited to the European sites with connectivity to the proposed project. These European sites are outlined in Table 5-1.



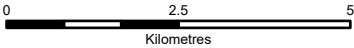


Legend

- Proposed project
- Biodiversity enhancement lands
- WFD - Transitional Water Bodies
- WFD - River Water Bodies

European Sites

- Special Protection Areas (SPAs)
- Special Areas of Conservation (SACs)



NOTES

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Client: **FuturEnergy** Ireland

Project: **Scart Mountain Wind Farm**

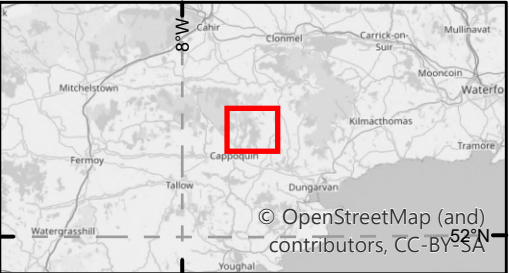
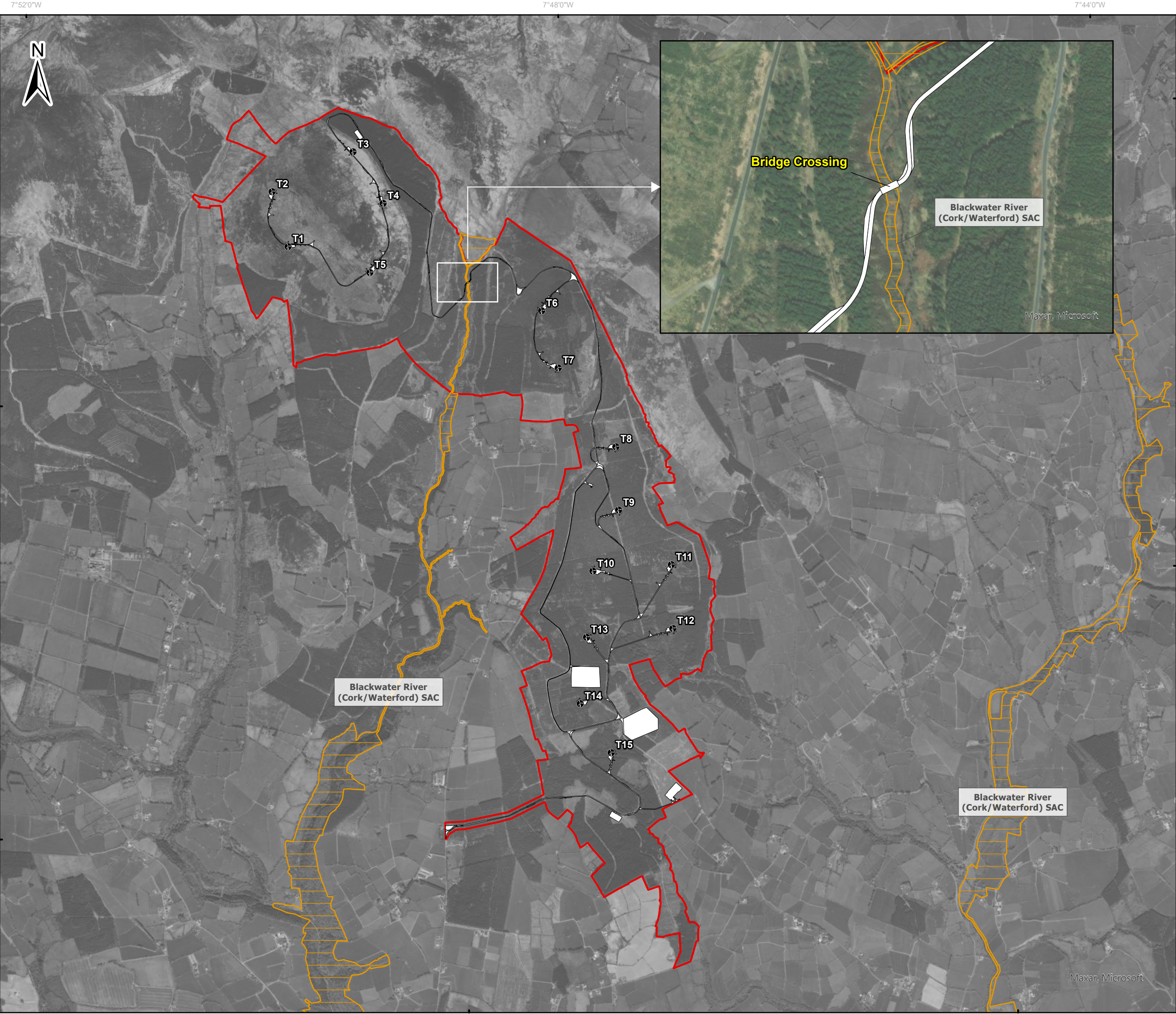
Title: **Figure 5-1:
European Sites within the Zone of
Influence of the proposed project**

Scale @ A3:	1:110,000	
Prepared by:	Checked by:	Date:
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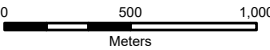
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Map Ref:	Draft:
11303-009-Eu.S-WFD-TOB-A	A



Legend

- Proposed Wind Farm Site
- Turbine Layout
- Footprint of the Proposed Wind Farm Infrastructure
- Special Areas of Conservation (SACs)



NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING\
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE\
3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY \
4. ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

A	16/10/2024	First issue	S.P	J.S
Rev	Date	Description	By	Chkd.

Client:

FuturEnergy

Project:

Scartmountain Wind Farm

Title:

Figure 5-2: Bridge crossing over
the Blackwater River
(Cork/Waterford) SAC

Scale @ A3: 1:30,000

Prepared by: S.Pezzetta
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Date: October 2024

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Map Ref:

11303-029-BRI..SAC-NIS-TOB-A

Draft:

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5.2 DESCRIPTION OF EUROPEAN SITES

A summarised description of the three European sites identified as being within the Zol of the proposed project have been prepared using the supporting information available on the NPWS website⁸. The three European sites are the Blackwater River (Cork/Waterford) SAC (002170), the Dungarvan Harbour SPA (004032), and the Blackwater Estuary SPA (004028).

Blackwater River (Cork/Waterford) SAC

This SAC overlaps with the proposed project site and is also hydrologically connected to the site via a number of watercourses. This SAC '*consists of the freshwater stretches of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries*'(NPWS, 2016).

The SAC is designated for ten Annex I habitats and nine Annex II species which are listed in Table 5-1.

Dungarvan Harbour SPA

The proposed project drains to the Dungarvan Harbour SPA through the Colligan_040 River which crosses the proposed grid connection route. The Dungarvan Harbour SPA includes Dungarvan Harbour as far east as Ballynacourty Point and west to include tidal sections of the River Brickey (NPWS, 2014).

This SPA is classified for 15 Annex I bird species as well as being recognised for its wetlands and waterbirds as listed in Table 5-1.

Blackwater Estuary SPA

The proposed project drains to the Blackwater Estuary SPA. The Blackwater Estuary SPA is comprised of a section of the main channel of the River Blackwater to Ballynnaclash Quay. At low tide, intertidal flats are exposed on both sides of the channel (NPWS, 2014a).

This SPA is classified for eight Annex I bird species as well as being recognised for its wetlands and waterbirds which are listed in Table 5-1.

⁸ <https://www.npws.ie/protected-sites> (accessed September 2024)



Table 5-1: Identification of European sites within the Zone of Influence of the Proposed Project

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
Blackwater River (Cork/Waterford) SAC (002170) Distance: 0 km (overlaps with the proposed project site)	• [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) • [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) • [1095] Sea Lamprey (<i>Petromyzon marinus</i>) • [1096] Brook Lamprey (<i>Lampetra planeri</i>) • [1099] River Lamprey (<i>Lampetra fluviatilis</i>) • [1103] Twaite Shad (<i>Alosa fallax</i>) • [1106] Atlantic Salmon (<i>Salmo salar</i>) (only in fresh water) • [1130] Estuaries • [1140] Mudflats and sandflats not covered by seawater at low tide • [1220] Perennial vegetation of stony banks • [1310] <i>Salicornia</i> and other annuals colonizing mud and sand • [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) • [1355] Otter (<i>Lutra lutra</i>) • [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • [1421] Killarney Fern (<i>Trichomanes speciosum</i>) • [3260] Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation • [91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles • [91E0] *Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) • [91J0] *<i>Taxus baccata</i> woods of the British Isles	Physical: The proposed project overlaps with the boundary of this SAC, and as such physical connectivity exists between the proposed project site and this SAC. Works associated with the bridge installation will occur within the boundary of this SAC, therefore there is potential for direct impacts. Hydrological: This SAC is hydrologically connected to the proposed project. In the absence of mitigation, the proposed project has the potential to result in a degradation of water quality of these hydrologically connected rivers during the construction and decommissioning phases of the proposed project. The SAC is designated for qualifying interests which are sensitive to changes in water quality. Ecological: the proposed project site occurs within the foraging/commuting range of qualifying interests (Atlantic salmon, otter and lamprey species [refer to Section 4.1.3]).	Yes

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
Blackwater Callows SPA (004094) Distance: The SPA is located 5.2km south-west	• [A038] Whooper Swan (<i>Cygnus cygnus</i>) • [A050] Wigeon (<i>Anas Penelope</i>) • [A052] Teal (<i>Anas crecca</i>) • [A156] Black-tailed Godwit (<i>Limosa limosa</i>)	Physical: Considering the distance between this SPA and the proposed project site (ca. 5.2km) there is no potential for direct impacts as the site occurs outside the ZOI for impacts associated with habitat loss and the generation of dust. There is no physical pathway for effects. Hydrological: Both this SPA and the proposed project occur within the same surface water catchment (Blackwater [Munster]). There is, however, no downstream connectivity between the proposed project and this SPA. There is no hydrological pathway for effect. Ecological: The proposed project site does not contain suitable habitat to support the designated SCI species. Furthermore, none of the SCI species (with the exception of whooper swan) were recorded utilising or flying over the proposed project site during bird surveys (refer to Section 4.1.2).	No

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
		Whooper swan were recorded very infrequently and were not recorded flying within the potential collision height of the proposed wind farm. No source-pathway-receptor link exists between the proposed project site and this SPA.	
Dungarvan Harbour SPA (004032) Distance: The SAC is located 13km south-east	• [A005] Great Crested Grebe (<i>Podiceps cristatus</i>) (wintering) • [A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) (wintering) • [A048] Shelduck (<i>Tadorna tadorna</i>) (wintering) • [A069] Red-breasted Merganser (<i>Mergus serrator</i>) (wintering) • [A130] Oystercatcher (<i>Haematopus ostralegus</i>) (wintering) • [A140] Golden Plover (<i>Pluvialis apricaria</i>) (wintering) • [A141] Grey Plover (<i>Pluvialis squatarola</i>) (wintering) • [A142] Lapwing (<i>Vanellus vanellus</i>) (wintering) • [A143] Knot (<i>Calidris canutus</i>) (wintering) • [A149] Dunlin (<i>Calidris alpina</i>) (wintering) • [A156] Black-tailed Godwit (<i>Limosa limosa</i>) (wintering) • [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>) (wintering) • [A160] Curlew (<i>Numenius arquata</i>) (wintering) • [A162] Redshank (<i>Tringa tetanus</i>) (wintering) • [A169] Turnstone (<i>Arenaria interpres</i>) • [A999] Wetlands	Physical: Considering the distance between this SPA and the proposed project site (ca. 13km) there is no potential for direct impacts, as the site occurs outside the Zol for impacts associated with habitat loss and the generation of dust. There is no physical pathway for effects. Hydrological: - This SPA is hydrologically connected to the proposed project site via the grid connection works which cross the Colligan River (Colligan_040). Horizontal Directional Drilling (HDD) will be used to install the cable under the Colligan River	Yes

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
		which has the potential to result in water quality impacts in the event that frac out occurs (i.e. release of drilling fluid). There is therefore potential for water quality impacts on this SPA. This SPA is designated for wintering bird species which may be indirectly impacted by a degradation of water quality. Ecological: The proposed project site does not contain suitable habitat to support the SCI species of this SPA. Furthermore, none of the SCI species (with the exception of golden plover, lapwing and curlew) were recorded utilising or flying over the proposed project site during bird surveys (refer to Section 4.1.2). The population of golden plover using the proposed project site are not connected with the population designated within the Dungarvan Harbour SPA (refer to Section 4.1.2). Additionally, the recordings of	

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
		lapwing and curlew were infrequent and were not recorded flying within the potential collision height of the proposed wind farm.	
Blackwater Estuary SPA (004028) Distance: The SPA is located 16km south	• [A050] Wigeon (<i>Anas penelope</i>) (wintering) • [A140] Golden Plover (<i>Pluvialis apricaria</i>) (wintering) • [A142] Lapwing (<i>Vanellus vanellus</i>) (wintering) • [A149] Dunlin (<i>Calidris alpina</i>) (wintering) • [A156] Black-tailed Godwit (<i>Limosa limosa</i>) (wintering) • [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>) (wintering) • [A160] Curlew (<i>Numenius arquata</i>) (wintering) • [A162] Redshank (<i>Tringa totanus</i>) (wintering)	Physical: Considering the distance between this SPA and the proposed project site (ca. 16km) there is no potential for direct impacts. There is no physical connectivity between this SPA and the proposed project site. Hydrological: - This SPA is hydrologically connected to the proposed project via the Blackwater River (hydrological route ca. 30km). There is therefore potential for water quality impacts on this SPA. This SPA is designated for wintering bird species which may be indirectly impacted by a degradation of water quality. Ecological: The proposed project site does not contain suitable habitat to support the SCI species of this SPA. Furthermore, none	Yes

Designated Site	QIs/ SCIs	Connectivity	Within Zone of Influence Y/N
		of the SCI species were recorded utilising or flying over the proposed project site during bird surveys, with the exception of lapwing and curlew (refer to Section 4.1.2). The recordings of lapwing and curlew however were infrequent and were not recorded flying within the potential collision height of the proposed wind farm.	

5.3 QUALIFYING INTERESTS AND CONSERVATION OBJECTIVES

The qualifying interests for the European sites within the Zol are listed in Table 5-1 above. This information was also obtained from the resources available on the NPWS website.

5.4 IDENTIFICATION OF POTENTIAL IMPACTS ON EUROPEAN SITES

The likelihood of impacts occurring because of the proposed project is established in light of the type and scale of the project, the location of the project with respect to European sites within the Zol and the qualifying interests and conservation objectives of those European sites.

There are several elements associated with the proposed project that may give rise to direct and indirect effects on the receiving environment that have the potential to result in likely significant effects on European sites within the Zol of the proposed project. An overview of these potential impacts is discussed below.

5.4.1 Potential Impacts and Effects

The potential impacts and effects on European sites associated with all phases of the development, construction, operation and decommissioning phases are discussed in this section.

Blackwater (Cork/Waterford) SAC

There will be a loss of approximately 0.017ha of scrub habitat within the boundary of the Blackwater (Cork/Waterford) SAC to facilitate the clear span bridge over the Glenshelane_010 River (refer to Figure 5-2), and the temporary loss of artificial surfacing (roads) within the Blackwater (Cork/Waterford) SAC to facilitate works across the Finisk_020 River. Neither of these habitats are qualifying interests of this SAC.

There will be no direct or indirect loss of any habitat listed as a qualifying interest of Blackwater (Cork/Waterford) SAC.

The construction works at the Glenshelane_010 River to facilitate the clear span bridge could result in a barrier to commuting otter in the area.

The Blackwater River (Cork/Waterford) SAC is immediately adjacent to the proposed project site with a proposed bridge crossing over the Glenshelane River which forms part of the SAC. There were no otter signs, or otter holts recorded at this location and thus there is no risk of disturbance to or displacement of otter during the construction works.

The development of the wind farm will result in site clearance, excavation activities and the stockpiling of material which, if not appropriately managed, has the potential to result in the release of sediment laden surface water or otherwise polluted water to watercourses draining the Proposed Project site.

The release of sediment laden water or otherwise polluted surface water has the potential to reduce water quality in the watercourses draining the proposed project site that flow into, or form part of, Blackwater River (Cork/Waterford) SAC. This SAC is designated for mobile qualifying interests that could be affected by a reduction in water quality through sediment release or other pollutants from the proposed project site.

Dungarvan Harbour SPA and Blackwater Estuary SPA

Dungarvan Harbour SPA and Blackwater Estuary SPA are located 13km and 16km respectively from the closest point of the proposed project. The proposed project site boundary doesn't contain suitable habitat for foraging / roosting bird species listed as special conservation interests of the two SPAs. Furthermore, the proposed project is located outside the core foraging ranges of the SCIs (SNH, 2016). There is no potential for collision risk or disturbance/displacement to the SCI species.

The development of the wind farm however will result in site clearance, excavation activities and the stockpiling of material which, if not appropriately managed, has the potential to result in the release of sediment laden surface water or otherwise polluted water to watercourses draining the proposed project site. The release of sediment laden water or otherwise polluted surface water has the potential to reduce water quality in the watercourses draining the proposed project site that flow into Blackwater Estuary SPA and Dungarvan Harbour SPA. The reduction in water quality, if severe enough, has the potential to effect food resources of the SCI species.

5.4.2 Likely Significant Effects

The development of the wind farm will result in site clearance, excavation activities, and the stockpiling of material which, if not appropriately managed, has the potential to result in the release of sediment laden surface water or otherwise polluted water to watercourses draining the proposed project site. The release of sediment laden water or otherwise polluted surface water has the potential to reduce water quality in the watercourses draining the proposed project site that flow into Blackwater River [Cork/Waterford] SAC, Blackwater Estuary SPA and Dungarvan Harbour SPA.



It is considered that likely significant effects on the three European sites (Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA) as a result of release of sediment laden or contaminated surface water cannot be excluded. Therefore, in line with the recommendations of guidance documents and case law it is considered that the proposed project should progress to the next stage of the process to determine if it will adversely affect the integrity of the three European sites.

5.5 IN-COMBINATION EFFECTS

The potential effects of the proposed project are considered in-combination with any other relevant plans or projects. Projects which have been completed, approved or which are proposed, as well as proposals within county development plans, located within the Zol of the proposed project, have been considered in the in-combination assessment, and are discussed hereunder. To this end, a review of the EIA portal⁹ and Waterford Planning Portal¹⁰ was undertaken and identified projects within the Zol of the proposed project. A summary of the projects is provided in Section 5.5.1.

As well as other projects within the Zol, the in-combination effect considers proposals for plans within county development plans. A summary of relevant plans is provided in Section 5.5.2.

5.5.1 Projects

Dyrick Hill Wind Farm (Planning Ref:

Dyrick Hill Wind Farm Ltd. are proposing to develop 12 no. 6.0 – 7.2 MW turbine wind farm and grid connection at Dyrick Hill, Co Waterford. A Screening for AA report and a NIS of the Dyrick Hill Wind Farm were prepared (Doherty Environmental, 2023). The NIS identified the potential for adverse effects on six European sites; Blackwater River SAC, Dungarven Harbour SPA, Ballymacoda Bay SPA, Ballycotton Bay SPA, Cork Harbour SPA and the Saltee Island SPA, due to water quality and disturbance impacts. The NIS goes on to prescribe targeted mitigation measures to safeguard the abovementioned European sites and concludes that; *‘A range of mitigation measures have been prescribed that, once implemented in full, will remove the risk of adverse effects posed by the proposed development to these qualifying features of interest’* and that the *‘project will not, alone or in combination with other plans or projects, result in adverse effects to the integrity and conservation status of European Sites in view of their*

⁹ <https://www.gov.ie/en/publication/9f9e7-eia-portal/> [Accessed: September 2024]

¹⁰ <https://waterfordcouncil.ie/services/planning/online-planning-enquiries/> [Accessed: September 2024]

Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion' (Doherty Environmental, 2023). Considering the conclusion of the Dyrick Hill Wind Farm NIS, there is no potential for in-combination effects with the proposed project under appraisal in this report.

Coumnagappul Wind Farm

Coumnagappul Wind Farm Limited are proposing the development of 10 no. wind turbines with a blade tip height of 185m, a hub height of 104m and a rotor diameter of 162m. A Screening for AA report and a NIS of the Coumnagappul Wind Farm were prepared (Fehily Timoney, 2023).

The NIS identified a pathway for effect between four European sites which include the Lower River Suir SAC, the Blackwater River (Cork/Waterford) SAC, the Dungarvan Harbour SPA and Mid-Waterford Coast SPA.

The NIS concluded however that taking cognisance of the project design and mitigation measures to avoid effects, the proposed project (Coumnagappul Wind Farm) will not have any residual adverse effect on the integrity of those four European sites. Considering the Coumnagappul Wind Farm project will not result in any residual adverse effects, there is no potential for in-combination effects with the proposed project under appraisal in this report.

Other Smaller Developments:

There are a number of small projects and applications in the area surrounding the proposed project site that involve the construction or extension of small residential properties (e.g. application no's: 22624, 19484, 19724 and 19726). Due to the lack of connectivity, there will be no significant effects on any designated sites and therefore there is no potential for in-combination effects with the proposed project.

5.5.2 Plans

The proposed project site is located within the Waterford County administrative area. Chapter 9 (Climate Action, Biodiversity & Environment) of the Waterford City and County Development Plan (WCCDP) 2022 – 2028 includes objectives and policies (BD01, BD04 and BD05) which are associated with the protection of European sites. All new plans and projects proposed within the county must adhere to the abovementioned policies and objectives, as well as all other objectives associated with the protection of the environment, which ensures that all plans and projects proposed will not result in significant effects on biodiversity and European sites and includes the requirement that any future proposed plans or projects to be subject to

Appropriate Assessment to examine and assess their effects on European sites, alone and in combination with other plans and projects.



6. CONCLUSION

Likely significant effects on the three European sites (Blackwater River [Cork/Waterford] SAC, Dungarvan Harbour SPA and Blackwater Estuary SPA) within the Zol of the proposed project cannot be excluded. Therefore, it is considered that the proposed project should progress to the next stage of the process to determine if it will adversely affect the integrity of the three European sites.

We therefore submit that the competent authority, in this case An Bord Pleanála, can determine that appropriate assessment is required for Blackwater River SAC (002170), the Blackwater River SPA (004028) and the Dungarvan Harbour SPA (004032) and that the proposed project, individually or in-combination with other plans or projects, will not have a significant effect on any other European site.

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